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EIGHTH ANNUAL REPORT

OF THE

BUREAU OF STATISTICS

OF

LABOR AND INDUSTRIES

OF

NEW JERSEY,

FOR THE YEAR ENDING OCTOBER 31st,

1885.

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ERRATA.

Page 10, No. 169, transfer $9 from daily to *weekly* wages.

Page 13, No. 339, read $16.50 for $2.75, under *average weekly wages for others.*

Pages 41–46, highest, lowest and average wages of window glass workers are given for the week, not *month*, as stated.

Page 46, No. 17, read $787.50 for $487.50, average annual earnings of master shearers.

Page 48. In Nos. 36, 37 and 38, wages are given for the week.

Page 145, 17th line, read *Haushalt* for *Hanshalt.*

Page 144, 11th line, read *ouvriers* for *onvriers.*

Page 146, in foot note, schedule for blank, read total *animal* food for total annual food.

Page 147, 9th line, under "Deficiency," read $91 for $81.

Page 168, foot note, last line, read *trade* for *truck.*

Page 265, foot note, 3d line from bottom, read *workshop* for *worship.*

Pages 273–4, read Horace H. *Day* for *Dey.*

STATE OF NEW JERSEY, OFFICE OF BUREAU OF
STATISTICS OF LABOR AND INDUSTRIES,
TRENTON, October 31st, 1885.

To His Excellency, Leon Abbett, Governor:

SIR—I have the honor to submit to the Senate and General Assembly, through you, the Eighth Annual Report of the Bureau of Statistics of Labor and Industries.

JAMES BISHOP,
Chief.

INTRODUCTION.

In the introduction to the Seventh Annual Report of this Bureau, reference was made to the fire which occurred at the State House on the morning of March 21st, 1885. The following message, sent by His Excellency, Governor Abbett, to the State Legislature, then in session, will present briefly the facts connected with that fire; and the communication made to the Governor by the Chief of the Bureau of Statistics will show its disastrous effects upon that department:

To the Assembly:

On Saturday morning, March 21st, a portion of the State House was destroyed by fire. The foundations of the building have been undermined by water and the walls affected by the fire so that the entire northern portion of the State Capitol will have to be rebuilt. Temporary offices have been secured by the Secretary of State, Treasurer, Quartermaster-General, Clerk in Chancery, Chief of the Bureau of Statistics of Labor, and Supreme Court Clerk. The public records and securities in the vaults of the several departments were saved, although, in some instances, partially injured by water.

The highest praise is due to the members of the fire department of the city of Trenton, whose bravery and exertions, under the most trying circumstances, prevented the total destruction of the State House.

At one time when it appeared as though it was impossible to save the building, the Comptroller, who was present, made arrangements for the removal of the records and property in his and adjoining departments, but fortunately the fire was arrested before it reached the offices south of the rotunda.

The Clerk of the Supreme Court, Secretary of State, and Treasurer were enabled to save nearly everything of value in their respective departments. The vaults and safes in their offices were not seriously damaged.

It is a source of great pleasure to the Executive to announce that the Adjutant-General, assisted by the firemen and many old veterans, rescued all the battle flags of the New Jersey regiments under circumstances of great peril.

The employes of the various departments were early upon the ground, and rendered valuable aid in saving the property of the State.

The Legislature should take immediate steps to provide for rebuilding the State House. There is an insurance of $175,000 on the State House, which is probably sufficient to pay any loss on the building occasioned by the fire. There is also an insurance of $5,000 on the furniture and fixtures in the offices, which will partially, if not completely, cover this loss.

After consideration with other State officers and in view of the fact that there was not sufficient accommodation in the State House previous to the fire for the various State officers, and that one of the most important boards (the State Board of Assessors) has been obliged to use rooms outside of the building, I deem it proper to suggest that the northern portion of the State House, when rebuilt, be enlarged so as to accommodate, fully, all the State departments, not only for the present, but also for the future.

The work should be commenced at once. It can be done most advantageously for the State by the selection of a Commission of State officers. They can supervise the work without expense to the State for their services.

I have consulted with the Comptroller with reference to providing the necessary means for securing the money to make the enlargement of the State House, and he has suggested a plan which meets with my approval. It is one which will secure the result without imposing additional taxes on the people of the State.

Notification has been sent to each of the insurance companies affected by the fire, and the experts have been employed to make the proper estimates and investigation preparatory to filing proofs for loss.

I have secured reports from the different State officers whose departments have been affected by the fire, as far as possible, and submit them herewith.

The Legislature should take immediate action in the premises.

Respectfully,

LEON ABBETT,

Governor.

EXECUTIVE DEPARTMENT, Trenton, March 23d, 1885.

STATE OF NEW JERSEY,
TRENTON, March 23d, 1885.

To His Excellency, Leon Abbett, Governor:

SIR—In compliance with a request contained in a note from the Executive Department, of the 21st inst., I will state that everything in the office of the Bureau of Statistics of Labor and Industries was consumed by the fire which occurred at the State House on Saturday morning last.

All the records of the office, the accumulation of seven years, consisting of the books of account, together with the vouchers of bills

paid, the office correspondence, the books containing alphabetical lists of public libraries which had been furnished with reports, as well as those containing the register of names of individuals to whom reports had been sent; in fact, every record connected with the work of the office was destroyed.

In addition to this, a valuable library consisting of about six hundred volumes was either entirely consumed or the books so damaged as to render them worthless. This library consisted of works upon political economy, social science and statistics, many of them being German and French works of value. There were also a large collection of reports from our own government, including the census reports for 1870, and, as far as issued, the report of 1880, together with reports from the Treasury Department, the Department of Agriculture, of the Interior and of Education, all of which were valuable in carrying on the work of the Bureau. A large collection of pamphlets bearing upon the labor question, many of which cannot be replaced, is entirely destroyed.

I very much regret the loss of all the previous reports of the Bureau remaining on hand. There were but few complete sets, but of the reports for the years 1880, 1881, 1882 and 1883, unbound, there were altogether about fifty copies, all of which are destroyed.

Respectfully, your obedient servant,

JAMES BISHOP,
Chief.

The Legislature immediately passed the following act:

AN ACT to provide for the purchase of furniture and appliances rendered necessary by the late fire at the state house, to provide for the care of the public documents and records, and to defray incidental expenses incurred on the occasion of the said fire.

1. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey*, That the governor, treasurer, comptroller and attorney-general of this state shall be and they are hereby empowered to authorize the immediate purchase of such furniture and appliances for the several departments of the state as have been rendered necessary by the late fire, and to defray such incidental expenses as were incurred on the occasion of the said fire, and were immediately consequent thereupon, and the necessary sums to make such purchases and defray such expenses are hereby appropriated, and the comptroller is authorized to draw his warrant for the same upon duly authenticated vouchers.

2. *And be it enacted*, That the said officers shall have power and authority (after consultation with the several state officers and heads of departments) to assign to the use of the several officials such rooms and offices and fire-proof vaults, whether in the present state house or elsewhere, as the said governor, treasurer, comptroller and attorney-general shall deem necessary for the proper and efficient transaction of the business of the state, and for the safe care of the public books, documents and records.

3. *And be it enacted*, That this act shall take effect immediately.

Approved March 26th, 1885.

The committee appointed under this act at once entered upon their duties, and at an early date comfortable rooms were provided, in which the work of the Bureau could be carried on.

The library having been entirely consumed, application was made to the Commission for an appropriation in order to purchase such books as were required for immediate use, and also serve as a nucleus for a new library. The sum of $250 was authorized for the purpose, and of this $155.83 have been expended. During the month of April correspondence was opened with the Chiefs and Commissioners of other State bureaus for the purpose of obtaining as many of the earlier volumes of their respective reports as possible, to replace those which had been destroyed, and so general were these responses that the library was soon supplied with fairly complete sets of all the State bureau reports.

Through the courtesy of the Hon. John R. McPherson, of the United States Senate, the Bureau had been furnished with a complete set of the United States Census Report for 1880. These volumes having been consumed by the fire, a successful application was made to the Hon. J. Hart Brewer for another set.

The importance of co-operative work, as one of the simplest and most direct methods of aiding the workingman in the improvement of his condition, is now generally admitted. The attention of our wage-earners has again and again been directed to the subject in previous reports, and the article comprising Chapter I. of Part 3 but supplements our efforts in this direction. It is somewhat more extended in scope, but embodies the principal features of the paper on "People's Banks in Germany," the copy of which, as was stated in our seventh report, was destroyed in the State House fire.

The workingman is giving more attention to the study of the laws which govern production, and, as he gets to understand these laws, is obtaining a clearer insight of his duty towards his fellow-workmen as well as his obligation towards his employer; and it will surely come to pass, as employer and employed begin to understand their respective duties, and strive to act under a higher moral code, that obstacles which before seemed insurmountable will be removed out of the way and more harmonious relations will exist. Such relations will tend to develop some system of profit-sharing. It is a hopeful sign that quite a number of firms have given full study to the question, and find economy in a division of profits at the end of the year among their

workmen. To quote the language of Mr. Cushman, of the firm of Cushman & Co., shoe manufacturers, at Auburn, Maine, who have recently submitted a plan for profit-sharing to their *seven hundred employes*: "We want to make the business more secure and permanent, and our relations with our workmen more fraternal. We want to avoid the feeling of jealousy and antagonism that exists often between labor and capital with consequent loss to both. In short, we want to secure practical co-operation in spirit and letter, in a thoroughly-organized, efficiently-managed business that shall result in the greatest possible 'gains and honors,' wherein every interest and every individual shall jointly and equitably share."* The firm retains its business in its own management and pays the highest rate of wages, but after setting aside a just amount for interest on capital, depreciation in machinery, and for management of the business, divides the profit that remains "between themselves and their employes, in the proportion that labor contributes to the cost of the goods, the dividend to be based on the amount earned by each." The N. O. Nelson Manufacturing Company, of St. Louis, have issued a circular to their employes, upon the following basis: that "beginning with January 1st, 1886, after allowing seven per cent. interest on actual capital invested, the remainder will be divided equally upon the total amount of wages paid and capital employed." † Many other examples of profit-sharing recently put in operation might be referred to, but this is enough to show that the future is more hopeful for the association of capital and labor in the profits of those industrial enterprises where their combination constitutes the principal element of production.

But "profit-sharing" merely is but a step towards co-operative labor, co-operative production, the goal of the co-operative movement, which means that the workers themselves shall divide all the profit. And some of the leaders do not stop here, but look ahead to far nobler ends. M. Godin who founded the Familstère, a little co-operative Republic,‡

*Lewestown Journal of March 6th, 1886.

†The Age of Steel, St. Louis, March 20th, 1886.

‡At Guise, France, a quarter of a century ago. But there is only one Godin. His Familistere is unique, and has no duplicate. For this reason we have not mentioned it in the article on Co-operation given below. A description will be found in our report for 1882. M. Deynand, a delegate to the Paris Co-operative Congress, mentioned above, gave the following report of the working of co-operation at Guise:

"The Familistere of Guise is an association where co-operation is in action under the most varied forms. The dwellings, the supply of necessaries, education, production, mutual aid, the promotion of wealth and cleanliness; even many forms of employment are organized there on co-operative principles. This group of 2,000 persons possesses a foundry, where apparatus for cooking and heating, and articles of furniture, are made of cast iron. Its social capital is above £240,000. Its business is close upon £160,000 a year. It pays in salaries nearly £80,000. The sales from its shops and rents of habitation are about £24,000. Large reserve funds allow it to realize

recently expressed his ideas of co-operation in an address before "The Co-operative Congress of Consumers' Societies," held at Paris, July, 1885:

"What I especially desire to say to you is, that the future of co-operation depends upon the intelligence and the love of good which the societies apply to the employment of the resources created by co-operation. To become a real source of social improvement, co-operation requires to draw its inspirations from the motto, in the name of which the Congress has been convened—

"'All for each, and each for all.'

"To be thus inspired co-operation must be something else than a mercantile speculation. The idea of gain may enter into the conception of its foundation, but it must at the same time pursue a higher end—the emancipation of the workers. Co-operation may powerfully conduce to this work of emancipation, if it attains (1) the conception how rationally to employ the resources which it is called to realize; (2) the will to act on it.

"This is in fact the difficult part of the problem. For the success of co-operative societies greatly depends on the immediate advantages that they offer to their members, of whom many are more eager to enjoy at once a slight benefit than to seek the means of obtaining all that the societies, if well directed, might do to realize the elevation of the laboring masses. The disposition to divide profits as soon as they are made, and to make of them an object of pecuniary individual appropriation, comes from the egotistical thought of 'Every one for himself,' which is far removed from 'Each for all, and all for each.' This disposition must be reformed; this ignorance be enlightened. The art of constituting co-operative societies, so as to make them really conduce to improve the condition of the working class, consists in converting this egotistical sentiment into a more intelligent conception of the common interest; in making the mass comprehend that what they should seek is the permanent benefit of institutions securing the independence of the workers, and guaranteeing them against misery and want.

"To attain this object, the co-operative societies must in the first

at any moment in its machinery and plant every improvement called for by the advance of science and industry. Its funds for mutual aid, maintained by regular subscriptions, by liberal contributions, and other revenue of a reserve fund continually growing, which already exceeds £38,000, spends more than £1,000 a year in mutual help, in pensions, and in guaranteeing in cases of distress a minimum of subsistence. The dwellings of the Familistere are divided among three social palaces, inhabited by more than 600 families. The association is proprietor of its schools. Its staff of instructors includes seventeen masters and mistresses. Its educational budget exceeds £1,400. A theatre completely fitted up which can accommodate more than 1,200 spectators belongs to the association, which, besides, maintains spacious lawns and beautiful gardens for the recreation of its members, to whom it also lets special garden plots. A laundry, a washing house, baths provided with all conveniences, and a plunging bath fed by a constant stream of warm water, minister to the care of health. Societies for music, for gymnastics, for archery, for bowls, &c., constitute numerous groups, organized according to the likings of their members; each special group obtaining from the association the space and accommodation necessary for its exercise and games. Every year we hold with much solemnity the festivals of labor and of infancy."

place never lose sight of the necessity of all their members being united by a fraternal bond. From the beginning of a society, its rules should establish mutuality among its members, by their subjecting themselves to a special monthly subscription, destined to create among them a system of mutuality, capable of assuring them the assistance required during sickness, or in old age. The co-operative society should then make a grant in aid of this mutuality, in the form of a fixed percentage on these subscriptions, as a first charge upon its profits. Thus would be formed a bond of union—the bond of co-operative fraternity. What is more necessary than that we should assist one another in misfortune? Is it not one of the first duties of a co-operative society to organize mutuality among its members, and guarantee them against want?

"Then comes the important problem of the division and employment of profits, a subject which at present is little more than sketched out in co-operative societies. To this point, also, I desire to call your most serious attention, for the future power of co-operation lies in the mode of division, or rather in the employment, of these profits.

"In my judgment, co-operative societies ought not to part with the profits that they make. They ought to enter them to the credit of each of their members entitled to them, and to give them only certificates of shares, carrying interest at an agreed rate—for instance, that borne by the funds of the State. In this way co-operators, while put into possession of their dividends, would leave the value of them in the co-operative movement. The co-operative societies would thus soon be in command of important amounts of capital. They would be able to pass from co-operation for consumption to that for production; that is to say, to found co-operative centres of work in manufacture and agriculture, establishments in which all the workers should be considered as co-operators in the proportion of their work or salaries.

"Nor should the co-operative societies, when grown rich, stop at these efforts. They should go on to found alongside of their workshops and farms, palaces for habitation, foundations which would represent the funds constituting the collective capital of the co-operators.

"The profits of commerce, the profits of industry, and the receipts for rent, would then enter into co-operative distribution; work and the worker would no longer be excluded from sharing in the profits which they are the principal agents in producing. Co-operation would thus be at once commercial, industrial, and proprietary. Applied in this way to production, habitation, and consumption, it would become the association of human resources and powers, and by thus solidarizing individuals and families, would effectually contribute to give to work and the workers the securities of which they are now destitute.

"Such, in large outlines, is the scheme to which I desire to draw the attention of co-operators; such is the goal to which the co-operative societies should turn, if they would seriously seek after the improve-

ment of the position of their members, and the greatest good of society as a whole."

That ideal may never be realized. But most of us would be satisfied with a social improvement far short of it. A half loaf is always better than no bread at all; and whatever may be the future of co-operative production, it is certain that distributive co-operation, which, unlike it, has advanced beyond the experimental stage, would greatly reduce the outlay of consumers, and thus indirectly increase the wage-earner's income. The data, given in our article on "The Cost of Living," shows that many now but just make both ends meet, while a few run considerably behind. These statistics, tabulated in Chapter I. of Part 2, as well as the comments of the workingmen gathered in Chapter III., are worthy of the careful study of those taking an interest in the great labor question, which is *the* question of the day. A sketch of its historical development in New Jersey is attempted in Chapter II. of Part 3, while, in the Appendix, will be found a compilation of labor legislation, directly and indirectly affecting the workingmen of this State.

A review of our "Iron Industry," including the latest statistics, is given in Part 4, and followed by a report on our "Sugar Industry." The collated statistics from employes, giving information concerning their individual condition, are tabulated in Part 1. A summary of these is here appended. The apparent discrepancy between some of these average incomes and those noted on page 147 is explained by the fact that the latter are selected ones, as many of the budgets, especially those of the more poorly paid workers, were incomplete and not used.

The State census of 1885 was more complete than those of previous years, and allows some interesting comparisons with the figures given in the latest United States population returns. In 1880, the whole State, which comprises 7,455 square miles, averaged 151.73 persons to the square mile; in 1885, we have 171.43. There also has been more crowding into houses; that is, while the population has advanced twelve per cent., the number of dwellings has increased but ten per cent. In 1880, there were 5.94, and in 1885, 6.07 individuals to each house, although the number of persons to the family had actually declined from 4.87 to 4.77. These figures are only an average for the State as a whole, and will not hold good in many of the localities, as will be seen from the following tables, showing the—

POPULATION, DWELLINGS AND FAMILIES.

CIVIL DIVISIONS.	POPULATION.		DWELLINGS.		FAMILIES.	
	1885.	1880.	1885.	1880.	1885.	1880.
The State	1,278,033	1,131,116	210,267	190,403	267,394	232,309
Atlantic County	22,356	18,704	4,844	.....	4,987	.....
Bergen County	39,880	36,786	7,360	.....	8,285	.....
Burlington County	57,558	55,402	11,579	.....	12,100	.....
Camden County	76,685	62,942	15,114	.....	15,547	.....
Cape May County	10,744	9,765	2,186	.....	2,348	.....
Cumberland County	41,982	37,687	8,816	.....	9,431	.....
Essex County	213,764	189,929	29,221	.....	46,010	.....
Gloucester County	27,603	25,886	5,741	.....	6,013	.....
Hudson County	240,342	187,944	25,768	.....	48,135	.....
Hunterdon County	37,420	38,570	7,959	.....	8,571	.....
Mercer County	66,785	58,061	12,656	.....	13,501	.....
Middlesex County	56,180	52,286	9,379	.....	11,412	.....
Monmouth County	62,324	55,538	12,524	.....	13,457	.....
Morris County	50,675	50,861	8,897	.....	10,122	.....
Ocean County	15,586	14,455	3,284	.....	3,405	.....
Passaic County	83,374	68,860	11,863	.....	17,013	.....
Salem County	25,373	24,579	5,323	.....	5,599	.....
Somerset County	27,425	27,162	5,250	.....	5,753	.....
Sussex County	22,401	23,539	4,291	.....	4,752	.....
Union County	61,839	55,571	10,316	.....	12,659	.....
Warren County	37,737	36,589	7,896	.....	8,294	.....
Jersey City	153,513	120,722	16,114	14,049	30,707	23,957
Newark	152,988	136,508	19,467	18,796	34,496	28,386
Paterson	63,273	51,031	8,686	6,712	13,105	10,679
Camden	52,884	41,659	10,524	8,246	10,852	8,772
Hoboken	37,721	30,999	2,601	2,695	7,928	6,717
Trenton	34,386	29,910	6,546	5,115	6,893	5,472
Elizabeth	32,119	28,229	4,960	4,308	6,404	5,332
New Brunswick	18,258	17,166	2,732	.....	3,682	.....
Orange	15,231	13,207	2,177	.....	2,904	.....
Bayonne	13,080	9,372	1,779	.....	2,413	.....
Bridgeton	10,065	8,722	2,093	.....	2,273	.....
Millville	8,824	7,660	1,804	.....	1,866	.....
Plainfield	8,913	8,125	1,474	.....	1,975	.....

POPULATION, DWELLINGS AND FAMILIES.

CIVIL DIVISIONS.	PERSONS TO A DWELLING.		PERSONS TO A FAMILY.		FAMILIES TO A DWELLING.	
	1885.	1880.	1885.	1880.	1885.	1880.
The State	6.07	5.94	4.77	4.87	1.27	1.22
Atlantic County	4.62	.....	4.48	.....	1.03	.....
Bergen County	5.42	.....	4.80	.....	1.12	.....
Burlington County	4.97	.....	4.75	.....	1.04	.....
Camden County	5.07	.....	4.93	.....	1.03	.....
Cape May County	4.91	.....	4.57	.....	1.07	.....
Cumberland County	4.76	.....	4.45	.....	1.07	.....
Essex County	7.31	.....	4.64	.....	1.57	.....
Gloucester County	4.81	.....	4.59	.....	1.04	.....
Hudson County	9.32	.....	4.99	.....	1.86	.....
Hunterdon County	4.70	.....	4.36	.....	1.07	.....
Mercer County	5.27	.....	4.95	.....	1.06	.....
Middlesex County	5.99	.....	4.92	.....	1.21	.....
Monmouth County	4.98	.....	4.63	.....	1.07	.....
Morris County	5.58	.....	5.00	.....	1.13	.....
Ocean County	4.74	.....	4.57	.....	1.03	.....
Passaic County	7.03	.....	4.90	.....	1.43	.....
Salem County	4.76	.....	4.53	.....	1.05	.....
Somerset County	5.22	.....	4.76	.....	1.09	.....
Sussex County	5.22	.....	4.71	.....	1.10	.....
Union County	5.99	.....	4.88	.....	1.22	.....
Warren County	4.78	.....	4.55	.....	1.05	.....
Jersey City	9.52	8.59	5.00	5.04	1.90	1.70
Newark	7.85	7.26	4.43	4.81	1.77	1.51
Paterson	7.28	7.60	4.82	4.78	1.50	1.59
Camden	5.02	5.05	4.87	4.75	1.03	1.06
Hoboken	14.50	11.50	4.75	4.62	3.04	2.49
Trenton	5.25	5.85	4.98	5.47	1.05	1.07
Elizabeth	6.47	6.55	5.01	5.29	1.29	1.23
New Brunswick	6.68	.....	4.95	.....	1.34	.....
Orange	6.99	.....	5.24	.....	1.33	.....
Bayonne	7.29	.....	5.42	.....	1.35	.....
Bridgeton	4.81	.....	4.42	.....	1.08	.....
Millville	4.89	.....	4.72	.....	1.03	.....
Plainfield	6.04	.....	4.51	.....	1.34	.....

SUMMARY OF COLLATED STATISTICS.*

TABLE No. 1—INDIVIDUAL EMPLOYES.

SUBDIVISION OF TRADE.	Number of persons reporting.	Average number of hours employed daily.	AVERAGE EARNINGS. Weekly.	Monthly.	Actual earnings from July 1st, 1884, to July 1st, 1885.	Average number of days unemployed during the year, excluding legal holidays	Average cost of living for self and family during the year.	AVERAGE WEEKLY WAGES OF OTHERS IN SUBDIVISION. Men.	Women.	Children.	NUMBER EMPLOYED IN SUBDIVISION Men.	Women.	Children.
Glass Workers:													
Blowers (bottle & vial, g. glass)	46	.....	$27 72	$107 46	$984 18	79	$694 18	$24 83	.....	$3 48	620	.....	1100
Blowers (flint, covered pots)..	9	9	.....	117 15	1,115 55	58½	863 33	25 28	.....	4 80	49	15	25
Blowers (window glass).....	11	9½	.....	106 00	996 41	137	748 66	26 66	.....	3 50	122	.....	48
Window glass gatherers.....	3	9½	18 00	69 50	656 66	115	662 00	17 00	.....	.....	32	.....	.....
Window glass flatteners.....	3	12	22 50	103 06	809 33	141	501 66	27 00	.....	.....	4	.....	.....
Window glass cutters.....	4	10	25 00	.....	938 75	.....	668 75	24 00	.....	.....	16	.....	.....
Glass workers, miscellaneous.	32	12¼	14 05	77 00	693 54	43	579 33	11 54	.....	.....	264	.....	.....
Foundry and Rolling Mill employes.....	25	9¾	12 10	.....	391 77	102	508 42	11 33	.....	.....	106	.....	.....
Shoemakers	38	10	12 85	.....	521 08	52½	552 90	12 03	$8 00	5 00	192	3	5
Blacksmiths.....	14	10	14 04	.....	683 50	43	586 70	13 19	.....	.....	20	.....	.....
Carpenters	22	10	13 62	.....	547 79	69	574 00	12 61	.....	.....	277	.....	.....
Ship carpenters.....	7	10	16 76	.....	660 76	77	677 71	16 15	.....	.....	45	.....	.....
Cigarmakers.....	6	9½	13 66	.....	659 46	23½	673 33	12 92	.....	.....	34	.....	.....
Machinists	32	10	12 07	.....	418 38	98	503 23	11 62	.....	.....	276	.....	.....
Tailors.....	12	10⅔	12 40	.....	396 66	106	483 33	8 91	4 62	.....	12	.....	.....
Sewing machine employes.....	23	9⅔	11 40	.....	490 56	60	502 39	10 78	.....	4 33	788	.....	400
Cotton Mill Employes:													
Weavers, female.....	3	10	4 60	.....	196 00	58	245 33	.....	3 75	.....	.....	.....	.....
Weavers, male.....	2	10	6 00	.....	225 00	75	455 00	5 00	.....	.....	42	.....	.....
Others, men.....	2	9½	12 00	.....	575 00	23	766 00	10 00	.....	.....	.....	.....	.....
Woolen mill employes.....	7	10	19 50	.....	405 76	55	370 43	9 50	.....	.....	55	.....	.....
Silk Workers:													
Weavers, ribbon.....	27	10	12 84	.....	371 15	130	491 92	10 45	.....	.....	624	60	4
Weavers, hand loom.....	3	10	11 00	.....	318 66	130	501 00	7 66	.....	.....	40	21	.....
Others	22	10	8 54	.....	272 55	103	399 26	7 72	5 12	3 25	572	343	21
Flax dressers.....	23	10	10 22	.....	387 82	73	484 22	8 00	4 56	2 40	80	.....	.....
Flax workers, miscellaneous..	14	10	7 34	.....	305 21	58	414 21	7 50	.....	.....	137	.....	.....
Railroad employes.....	11	10½	.....	48 27	589 00	.....	565 91	.....	.....	.....	89	.....	.....
Painters	7	10	15 64	.....	402 14	137	489 71	16 50	.....	.....	17	.....	.....
Boiler makers.....	5	10	9 57	.....	371 71	83	425 51	9 42	.....	.....	79	.....	.....
Rubber workers.....	8	10	9 82	.....	339 19	81	467 45	10 75	$5–$7	.....	44	.....	.....
Bricklayers and masons.....	5	10	18 60	.....	793 40	64	688 25	18 72	.....	.....	50	.....	.....
Hod carriers.....	4	10	12 72	.....	456 75	75	489 25	12 00	.....	.....	16	.....	.....
Hat finishers.....	9	10	15 55	.....	563 14	92	575 28	12 20	$4–$7	.....	124	40	.....
Hat makers, pouncers & sizers.	10	10	10 08	.....	410 17	.....	548 33	11 66	4 00	.....	4	.....	.....
Pearl-button makers.....	7	10	12 50	.....	312 29	137	510 80	9 50	6 00	.....	47	8	.....
Printers	8	9⅔	15 34	.....	696 43	50	724 83	14 81	.....	.....	79	.....	.....
File makers.....	6	10	10 00	.....	407 28	69	400 00	9 45	.....	.....	5	.....	4
Miscellaneous workmen, sk'd	60	10⅓	12 92	.....	538 07	70	549 92	11 93	.....	.....	177	.....	.....
Laborers	52	10	7 62	.....	325 45	66	426 42	7 46	.....	.....	254	.....	.....
Potters	7	10	15 88	.....	585 94	83	582 95	13 83	$4–$7	.....	25	5	10
Iron miners.....	25	.....	6 38	.....	383 60	.....	481 74	.....	.....	.....	94	.....	.....

*See Part 1, pages 4 to 110.

TABLE No. 2—ESTABLISHMENTS.

Occupations.	Number employed.	Average weekly wages.	Average annual earnings.
Glass Factory Employes:			
Blowers (bottle and vial, green glass)	548	$26 07	$978 46
Blowers (flint, cov'd pots)	150	22 73	1,018 10
" (window glass)	160	25 61	989 12
Window glass gatherers	160	17 20	675 51
" " flatteners	38	24 55	990 34
" " cutters	74	22 95	825 83
Master shearer (green glass)	28	17 79	694 26
" " (wind'w ")	16	24 49	890 31
" " (flint ")	13	17 94	753 75
Shearers	106	10 38	398 61
Packers	91	9 41	364 25
Box makers	30	11 53	452 68
Pot makers	23	17 25	810 93
Mould makers	26	12 62	618 00
Shoemakers:			
Cutting	207	12 55	551 71
Lasting	266	12 48	540 35
Heeling	196	13 16	600 80
Finishing	137	13 19	587 07
Burnishing	196	12 76	571 90
Operating (machine)	47	13 22	611 60
Stock fitting	140	11 80	505 50
Fitting (female)	623	6 65	287 90
Others (female)	203	5 98	264 46
Iron Workers:			
Moulders	345	14 83	742 60
Core makers	108	14 66	745 17
Moulders' helpers	461	8 08	410 00
Cupola men	45	10 25	508 50
Boiler makers	71	16 69	836 16
Blacksmiths	340	14 72	691 54
Machinists	472	12 99	633 66
Rubber Workers:			
Boots and shoes	57	9 75	444 00
" " " (female)	326	6 75	312 00
Cutters	95	11 36	466 00
Belting and hose	24	11 00	550 00
Cotton Mill Employes:			
Weavers	278	4 99	223 32
" (female)	646	4 22	188 79
Card tenders	111	4 64	215 25
" " (female)	143	3 89	178 00
Card Strippers	11	5 87	261 75
Spinners	49	5 00	225 00
" (female)	133	3 94	178 44
Warpers	4	9 66	446 00
Cotton Mill Employes:			
Warpers (female)	23	$6 20	$300 50
Frame tenders	25	7 50	333 00
" " (female)	110	4 94	232 88
Loom fixers	15	10 62	477 70
Bleachery Employes:			
Dyers	63	10 50	508 50
Bleachers	14	9 25	448 00
Folders and packers	60	10 00	485 00
Finishers	35	7 50	376 00
Woolen Mill Employes:			
Weavers	85	7 33	370 67
" (female)	145	5 66	269 60
Spinners	10	7 50	374 00
Silk Mill Employes:			
Throwsters	16	7 33	400 00
Weavers	116	9 66	.....
Printers:			
Compositors	31	16 00	833 00
Pressman	33	10 66	563 00
Cigarmakers:			
Makers	365	11 64	579 42
Wrapper mak's and pack's.	37	13 00	690 50
Plumbers and gas fitters	38	14 04	783 00
House and sign painters	39	16 60	645 00
Sash and blind makers	47	12 61	648 00
Hatters:			
Making	68	15 75	666 00
Forming, coloring and pouncing	31	12 75	594 00
Finishing	43	16 00	683 33
Trimming (female)	41	6 36	350 00
Stone cutters	87	16 33	774 00
Oil cloth workers (skilled)	242	14 00	611 25
" " " (unsk'd)	255	7 91	339 33
Carriage makers (skilled)	44	13 07	666 40
Engineers (stationary)	52	11 34	523 62
Laborers	1891	7 64	366 13

PART I.

INFORMATION CONCERNING WAGE-EARNERS.

Based on Blank No. 3 for Employes.

TABLE No. 1.—COLLATED STATISTICS FROM INDIVIDUAL EMPLOYES, SHOWING THE NUMBER OF HOURS EMPLOYED DAILY, TIME LOST, EARNINGS OF SELF AND FAMILY, AND TOTAL EXPENDITURES OF THE SAME DURING THE YEAR, AND THE NUMBER AND AVERAGE WEEKLY WAGES OF OTHERS EMPLOYED IN THE SUBDIVISIONS OF LABOR.

TABLE No. 2.—COLLATED STATISTICS FROM VARIOUS INDUSTRIAL ESTABLISHMENTS, SHOWING THE NUMBER OF HANDS EMPLOYED—MEN, WOMEN AND CHILDREN—EARNINGS OF THE SAME, NUMBER OF HOURS OF DAILY WORK, MOVEMENT OF WAGES AND TIME NOT IN OPERATION.

TABLE No. 3.—COLLATED STATISTICS, SHOWING THE PRICES RECEIVED BY PIECE-WORKERS, AND THE QUANTITY PRODUCED DAILY OR WEEKLY; ALSO, THE AGES AT WHICH EMPLOYES BEGIN TO WORK, DECLINE OR BECOME INCAPACITATED, AND THE GREATEST AGE TO WHICH THEY LIVE, AS WELL AS THE DISEASES PECULIAR TO THE VARIOUS TRADES.

STATE OF NEW JERSEY,
BUREAU OF STATISTICS OF LABOR AND INDUSTRIES,
TRENTON, July 1st, 1885.

[BLANK No. 3—FOR INDIVIDUAL EMPLOYES.]

Without knowledge based on the evidence of statistics, no intelligent action can be taken towards ameliorating the condition of working people; and this Bureau would suggest to every individual worker that it is to his or her own interest, both immediate and remote, to furnish the fullest possible replies to the questions asked in this blank. The itemized cost of living, although apparently insignificant, is of the utmost importance, because by means of household budgets we can most readily determine the purchasing power of wages. Of especial weight in all comparative wage-statistics is also the efficiency of labor—the quantity of work performed in a given period of time; wages, whether nominally high or low, are by themselves no measure of the cost of labor, or of the fact that the workman is well or poorly paid for services rendered. In order to obtain reliable and complete information, the organized bodies of wage-earners in this State are earnestly requested to lend the aid of their opportunities and experience in forwarding this work in which they are so directly interested.

C. H. SIMMERMAN, *Secretary.* JAMES BISHOP, *Chief.*

1. Name in full.....
2. Place of birth.....
3. Residence—Post office address.....
4. Occupation.....
5. By whom and where employed.....
6. Subdivision of trade in which you are engaged.....
7. Number employed in your subdivision: Total..... Men..... Women..... Children.....
8. Number of hours employed daily.....
9. If paid by the piece, state the price you received for the piece.....
10. What constitutes a piece, or what may be termed a unit of production, in your subdivision?.....
11. Quantity produced in a day, or other period of time.....
12. Your wages: Per day..... Per week..... Per month.....
13. Your total earnings, *i. e.*, your actual income from July 1st, 1884, to July 1st, 1885.....
14. Number of days unemployed during the year, exclusive of legal holidays: Total..... How many of these from sickness?..... Inability to obtain work?..... Other causes?.....
15. Earnings of all others in your family during the year: Wife..... Children.....
16. Total number in your family..... Of these how many are young persons?..... How many adults?..... .....
17. Number engaged in working for wages.....
18. What was the total cost of living for yourself and family during the year?..... How much of this was spent for rent?..... Food?..... Clothing?..... Light and fuel?..... Sundries, including amusement?.....
19. If possible, give the itemized expenditures for meat..... Breadstuffs..... Groceries..... Dairy products..... Vegetables.....
20. What were the average weekly wages of others employed in your subdivision of trade? Men..... Women..... Children.....
21. Have you accumulated any savings during the past year?..... In former years?.....
22. Have you run in debt during the past year?..... ...
23. How many families live in the same house in which you reside?.....
24. What is the average number of rooms occupied by each family?.....
25. What are the diseases peculiar to your occupation?.....
26. At what age do persons begin to work at your trade?..... At what age do those engaged therein begin to decline?..... At what age do they become incapacitated for active work?..... What is the greatest age to which they live?.....
27. Has the immigation of foreign laborers, under the contract system or otherwise, had any effect on your trade? If so, in what respect?.....
28. Remarks on any subject of interest to wage-earners, especially in relation to the financial, physical, intellectual and moral condition of your fellow-workmen and their families; and suggestions as to what measures could be taken to improve such condition.....

TABLE No. 1.—INDIVIDUAL EMPLOYES.*

BOTTLE AND VIAL BLOWERS (Green Glass).

Blowers do not work during July and August. These months are included in time reported lost.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
1	Millville	New Jersey	Gaffer	8	$4 50	$26 00	$125 00
2	"	"	Blow in shop	8½	6 00	36 00	144 00
3	"	"	"	.....	5 00	30 00	125 00
4	"	"	"	.....	4 00	24 00	100 00
5	"	"	Gaffer	8½	5 50	33 00	140 00
6	"	"	Blow in shop	8½	5 10	30 00	125 00
7	Clayton	"	"	8½	5 70	33 00	135 00
8	"	"	"	8½	5 18	30 00	125 00
9	"	"	Gaffer	8½	5 70	30 00	135 00
10	"	"	Blow in shop	8½	5 70	33 00	135 00
11	"	"	Gaffer	9	4 25	25 00	95 00
12	Glassboro	"	Blow in shop	9	4 32	26 00	105 00
13	"	"	"	9	4 27	25 00	100 00
14	"	"	"	9	4 00	24 00	100 00
15	"	"	"	9	5 40	30 00	120 00
16	"	"	Blow on footbench	8½	4 68	28 00	112 00
18	Woodbury	"	Blow in shop	8½	5 00	30 00	128 00
19	"	"	Gaffer	9	5 23	30 00	125 00
20	"	"	"	.....	5 25	31 50	130 00
21	"	"	Blow in shop	9	5 25	31 50	130 00
22	Bridgeton	"	"	8½	4 75	27 00	110 00
23	"	"	Blow on footbench	8	3 57	22 00	90 00
24	"	"	Blow in shop	8	3 60	21 60	90 00
25	"	"	Gaffer	8	3 00	18 00	75 00
26	"	"	Blow in shop	8	5 00	30 00	120 00
27	"	"	Bottle blower, footbench	8	3 57	22 00	92 00
28	"	"	Gaffer	8	4 50	23 00	90 00
29	Salem	"	Blow in shop	7½	5 18	30 00	125 00
30	"	"	Gaffer	8	5 55	30 00	125 00
31	"	"	Blow on footbench	8	4 59	27 00	.....
32	"	"	Blow in shop	8	5 40	32 00	135 00
33	"	"	Blow on footbench	8¼	5 04	30 00	125 00
34	Williamstown	"	Blow in shop	8¾	4 64	27 84	116 17
35	"	"	"	8½	4 50	23 00	100 20
36	"	"	Blow on footbench	7½	4 77	28 00	.....
37	Winslow	"	" "	7½	4 50	27 00	100 00
38	"	"	" "	7½	4 32	.....	100 00
39	Wilton	"	" "	6	.....	.....	80 00
40	"	"	Blow in shop	8½	.....	.....	75 00
41	"	"	Blow on footbench	7	.....	.....	80 00
42	"	"	" "	7½	.....	.....	.....
43	"	"	" "	7½	3 50	.....	70 00
44	"	"	Blow in shop	.....	3 50	21 00	71 00
45	"	"	"	8	1 71	.....	30 00
46	"	"	"	7½	4 50	.....	80 00

* For summary, see introduction.

TABLE No. 1.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL BLOWERS (Green Glass).

Blowers do not work during July and August. These months are included in time reported lost.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$1,400 00	80	.....	.....	.....	.....	.....	1	$800 00	$23 00	.....	$4 50	3	.....	5
1,296 00	78	12	66	.....	.....	.....	1	.....	30 00	.....	.....	49	.....	.....
1,240 00	54	2	52	.....	.....	.....	1	800 00	31 00	.....	.....	49	.....	.....
1,000 00	52	.....	.....	.....	.....	$200 00	2	700 00	.....	.....	.....	.....	.....	100
1,400 00	65	4	52	11	.....	.....	1	1,010 00	.....	.....	.....	27	.....	4
1,200 00	55	.....	52	.....	.....	.....	1	950 00	.....	.....	.....	3	.....	.....
1,300 00	57	.....	52	.....	.....	.....	1	450 00	.....	.....	.....	34	.....	66
1,250 00	52	.....	52	.....	.....	.....	1	1,000 00	25 00	.....	.....	34	.....	66
1,300 00	60	5	52	3	.....	.....	1	526 00	25 00	.....	3 50	17	.....	66
1,300 00	58	.....	52	6	.....	.....	1	600 00	25 00	.....	3 50	34	.....	66
870 00	72	20	.....	.....	.....	.....	1	690 00	27 00	.....	3 00	25	.....	60
970 00	72	.....	64	.....	.....	.....	1	700 00	25 00	.....	.....	.....	.....	.....
950 00	68	3	65	.....	.....	.....	1	800 00	25 00	.....	.....	25	.....	60
905 52	79	8	52	19	.....	.....	1	700 00	.....	.....	.....	.....	.....	.....
1,100 00	65	1	64	.....	.....	.....	1	600 00	28 00	.....	.....	25	.....	60
1,000 00	65	.....	65	.....	.....	.....	1	500 00	25 00	.....	.....	24	.....	50
1,100 00	78	5	72	.....	.....	500 00	2	600 00	10 00	.....	3 00	.....	.....	.....
1,075 00	87	6	81	.....	.....	400 00	2	1,000 00	30 00	.....	.....	12	.....	.....
1,175 00	95	18	77	.....	.....	.....	1	600 00	30 00	.....	3 00	12	.....	50
1,130 00	83	1	25	6	.....	.....	1	800 00	30 00	.....	3 75	24	.....	50
800 00	118	18	100	.....	.....	.....	1	675 00	26 00	.....	.....	12	.....	40
900 00	72	2	70	.....	.....	.....	1	450 00	22 00	.....	.....	18	.....	20
600 00	130	.....	130	.....	.....	.....	1	485 00	22 00	.....	3 50	10	.....	30
272 00	202	.....	202	.....	.....	480 00	3	960 00	23 00	.....	3 50	18	.....	60
790 00	126	.....	126	.....	.....	.....	1	590 00	25 00	.....	.....	10	.....	35
900 00	72	1	52	19	.....	.....	1	500 00	23 00	.....	.....	18	.....	30
675 00	114	.....	114	.....	.....	.....	1	500 00	24 00	.....	.....	8	.....	30
1,125 00	78	1	52	25	.....	.....	1	1,000 00	27 00	.....	.....	12	.....	.....
1,125 00	89	5	72	12	.....	.....	1	750 00	27 00	.....	.....	12	.....	48
1,100 00	64	9	54	1	.....	.....	1	700 00	27 00	.....	.....	22	.....	18
†774 00	87	25	52	10	.....	.....	1	400 00	.....	.....	.....	.....	.....	.....
1,200 00	54	2	52	.....	.....	.....	1	700 00	27 00	.....	.....	18	.....	22
1,287 70	102	.....	52	.....	.....	237 00	3	1,100 00	24 00	.....	.....	15	.....	.....
1,202 00	52	.....	.....	.....	.....	115 76	2	1,000 00	27 00	.....	.....	.....	.....	.....
1,176 00	58	.....	58	.....	.....	.....	1	876 00	27 00	.....	.....	16	.....	32
950 00	69	7	62	.....	.....	.....	1	600 00	27 00	.....	3 50	.....	.....	.....
950 00	64	.....	64	.....	.....	120 00	...	740 00	25 00	.....	.....	14	.....	.....
800 00	72	.....	.....	.....	.....	.....	1	600 00	20 00	.....	.....	12	.....	8
700 00	100	.....	52	.....	.....	200 00	2	649 00	20 00	.....	3 50	3	.....	12
800 00	72	.....	72	.....	.....	.....	1	634 00	20 00	.....	.....	.....	.....	.....
700 00	77	.....	77	.....	.....	150 00	2	734 00	22 00	.....	3 50	.....	.....	.....
700 00	77	.....	72	.....	.....	.....	1	475 00	.....	.....	.....	9	.....	12
750 00	72	.....	72	.....	.....	.....	1	600 00	20 00	.....	.....	.....	.....	.....
300 00	.....	.....	.....	.....	.....	.....	1	400 00	.....	.....	.....	.....	.....	.....
750 00	72	.....	.....	.....	.....	.....	...	600 00	.....	.....	.....	.....	.....	.....

† An apprentice; work for 50 per cent. less journeyman's wages.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

FLINT-GLASS BLOWERS (Covered Pots).

Office number.	Location.	Place of birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
47	Millville	New Jersey	Blow in shop	9			$125 00
48	"	"	"	9			125 00
49	"	"	"	9			130 00
50	Glassboro	"	"	9			105 00
51	Millville	"	"	9			120 00
52	Glassboro	"	"	9			100 00
53	Millville	"	Bohemian blower	10		$18 00	
54	"	"	"	10		18 00	
55	"	"	Draw tubes	7	$5 00	30 00	

WINDOW-GLASS BLOWERS.

56	Millville	New Jersey	Blower	10	$5 00	$25 00	$100 00
57	Glassboro	"	"	10			100 00
58	Winslow	"	"	8½		26 50	
59	Bridgeton	"	"	9		26 00	
60	Malaga	"	"	9¾			108 00
61	"	"	"	9¾			108 00
62	"	England	"	9¾			108 00
63	"	New Jersey	"	9¾			108 00
64	"	"	"	9¾			108 00
65	"	"	"	9¾			108 00
66	"	"	"	9¾			108 00

GATHERERS (Window Glass).

67	Winslow	New Jersey	Gatherer	10	$3 00	$18 00	
68	Malaga	"	"	9¾			$72 00
69	Millville	"	"	10			67 00

FLATTENERS (Window Glass).

70	Malaga	New Jersey	Flattener	12			$108 00
71	Glassboro	"	"	12	$3 76	$22 50	91 18
72	Bridgeton	Ireland	"	12			110 00

CUTTERS (Glass).

73	Malaga	New Jersey	Cutter (window)	10			$90 00
74	Glassboro	"	"	10			105 00
75	Millville	"	" (flint)	10		$25 00	
381	"	"	"	10			

TABLE. No 1.—INDIVIDUAL EMPLOYES—*Continued.*

FLINT-GLASS BLOWERS (Covered Pots).

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all others in the family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$1,250 00	50	25	25	.....	.....	$150 00	2	$800 00	$30 00	.....	.....	.....	.....	.....
1,250 00	57	12	25	20	.....	.....	1	900 00	27 50	.....	.....	.....	.....	.....
1,300 00	.....	10	26	16	.....	.....	1	900 00	30 00	.....	.....	.....	.....	.....
900 00	.....	.....	12	20	.....	.....	1	850 00	25 00	.....	.....	.....	.....	.....
900 00	.....	25	25	25	.....	100	3	1,000 00	30 00	.....	.....	.....	.....	.....
950 00	63	6	58	7	.....	.....	1	800 00	25 00	.....	.....	.....	.....	.....
920 00	.....	.....	.....	4	.....	.....	1	700 00	18 00	.....	.....	40	15	10
900 00	64	.....	52	12	.....	.....	1	750 00	18 00	$4 50	$4 50	.....	.....	.....
1,370 00	.....	.....	.....	.....	.....	.....	1	1,070 00	24 00	.....	5 10	9	.....	15

WINDOW-GLASS BLOWERS.

$800 00	120	10	.....	.....	.....	.....	1	.....	$16-$25	.....	$3 50	42	.....	16
800 00	106	2	104	.....	.....	$500 00	2	$1,100 00	.....	.....	.....	16	.....	16
1,139 50	102	25	77	.....	.....	.....	1	826 00	26 00	.....	.....	16	.....	16
1,092 00	64	.....	64	.....	.....	.....	1	600 00	27 00	.....	.....	16	.....	.....
1,080 00	153	1	.....	.....	.....	.....	...	580 00	27 00	.....	.....	16	.....	.....
1,080 00	153	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
1,080 00	153	.....	.....	.....	.....	.....	1	796 00	27 00	.....	.....	.....	.....	.....
1,080 00	153	.....	.....	.....	.....	.....	2	900 00	27 00	.....	.....	16	.....	.....
640 00	200	.....	.....	.....	.....	640 00	2	900 00	27 00	.....	.....	.....	.....	.....
1,080 00	153	.....	.....	.....	.....	.....	1	425 00	27 00	.....	.....	.....	.....	.....
1,080 00	153	.....	.....	.....	.....	.....	...	611 00	27 00	.....	.....	.....	.....	.....

GATHERERS (Window Glass).

$650 00	.....	.....	.....	.....	.....	$150 00	2	$800 00	.....	.....	.....	.....	.....	.....
720 00	153	.....	.....	.....	.....	.....	1	486 00	$18 00	.....	.....	16	.....	.....
600 00	77	3	.....	.....	.....	200 00	2	700 00	16 00	.....	.....	16	.....	.....

FLATTENERS (Window Glass).

$1,080 00	100	.....	.....	.....	.....	.....	1	$405 00	$27 00	.....	.....	4	.....	.....
918 00	101	.....	.....	.....	$25 00	.....	2	600 00	.....	.....	.....	.....	.....	.....
430 00	221	.....	.....	.....	.....	.....	...	500 00	.....	.....	.....	.....	.....	.....

CUTTERS (Glass).

$630 00	.....	.....	.....	.....	.....	.....	...	$375 00	$23 00	.....	.....	8	.....	.....
800 00	78	.....	.....	.....	.....	.....	1	900 00	25 00	.....	.....	8	.....	.....
1,125 00	42	12	25	5	.....	.....	1	800 00	25 00	.....	.....	.....	.....	.....
1,200 00	.....	.....	.....	.....	.....	.....	1	600 00	.....	.....	.....	.....	.....	.....

TABLE No. 1—INDIVIDUAL EMPLOYES—*Continued.*

MISCELLANEOUS WORKMEN IN GLASS FACTORIES.

Office number.	Location.	Place of birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
76	Clayton	New Jersey	Mould maker	10		$21 00	
77	Millville	"	Making plates	10	$2 00		
78	"	"	Lathe hand	10	2 75		
79	"	"	"	10	2 25		
80	"	"	Mould maker	10	2 75		
81	"	"	Stopper grinder (flint glass)	10		15 00	
82	Glassboro	"	" (green glass)	10		15 00	
83	Millville	"	" "	8-10		16 50	
84	"	"	" "	8		16 50	
85	Williamstown	Germany	Pot maker	10			$70 00
86	Clayton	Switzerla'd	"	10			85 00
87	Winslow	New Jersey	Box maker	10	2 00	12 00	48 00
88	Millville	"	"	10		20 00	
89	Williamstown	"	Packer	10	1 65		
90	Clayton	"	"	7	1 40		
91	Millville	England	"	10		10 00	
92	"	New Jersey	"	9	2 51	15 00	
93	Williamstown	"	Master shearer	15			85 00
94	Bridgeton	Germany	"	15			100 00
95	Winslow	New Jersey	"	15			100 00
96	Millville	Germany	"	13			80 00
97	Salem	New Jersey	"	14			75 00
98	Millville	"	Night shearer	10		12 00	50 00
99	Winslow	"	"	12		10 00	
100	Clayton	"	"	...	1 50	9 00	
101	Millville	"	"	12		13 92	
102	"	"	Engraver	10		20 00	
487	"	"	"	10		20 00	
488	"	"	"	10		13 50	
103	Winslow	"	Gatherer in bottle house	7½		8 00	
104	Millville	"	Watchman	10		10 50	
105	Clayton	"	Batchmaker	8		9 00	

FOUNDRY AND ROLLING MILL EMPLOYES.

504	Newark	New Jersey	Moulder	10		$12 50	
505	New Brunswick	Maine	"	10		13 50	
506	Millville	New Jersey	" (pipe)	8		16 00	
507	Florence	"	" "	9		16 00	
508	Camden	New York	" iron worker	10		15 00	
509	"	Maine	" "	10		14 00	
510	Millville	New Jersey	" (pipe)	9½		15 00	
511	Paterson	Ireland	"	10		9 00	
512	Burlington	New Jersey	Core maker	8		18 00	
513	Florence	"	"	8½		21 00	
514	Millville	"	"	9		15 00	

TABLE No. 1—INDIVIDUAL EMPLOYES—*Continued.*

MISCELLANEOUS WORKMEN IN GLASS FACTORIES.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed during Year—Excluding Legal Holidays.				Earnings of All Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$1,071 00	3	3	.....	.....	.....	.....	1	$850 00	$16 50	.....	.....	4	.....	.....
516 00	52	8	32	12	.....	.....	1	360 00	12 00	.....	.....	17	.....	.....
715 00	50	30	.....	20	.....	.....	3	715 00	.....	.....	.....	16	.....	.....
634 60	30	2	.....	29	.....	.....	1	460 90	.....	.....	.....	.....	.....	.....
775 50	30	6	18	6	.....	.....	1	775 50	$12–$14	.....	.....	18	.....	.....
660 00	48	18	25	8	.....	$110 00	2	600 00	15 00	.....	.....	50	.....	.....
600 00	18	12	.....	6	.....	.....	1	550 00	15 00	.....	.....	1	.....	.....
627 00	30	.....	30	.....	.....	.....	1	827 00	16 50	.....	.....	5	.....	.....
627 00	30	.....	30	.....	.....	.....	1	802 00	16 50	.....	.....	.....	.....	.....
840 00	52	.....	.....	.....	.....	.....	1	740 00	.....	.....	.....	.....	.....	.....
1020 00	.....	.....	.....	.....	.....	.....	1	510 00	8 00	.....	.....	10	.....	.....
500 00	.....	.....	.....	.....	.....	200 00	2	640 00	9 00	.....	.....	5	.....	.....
840 00	.....	.....	.....	.....	.....	350 00	2	800 00	15 00	.....	.....	5	.....	.....
450 00	40	.....	36	4	.....	.....	1	450 00	9 00	.....	.....	1	.....	.....
364 00	.....	.....	10	.....	.....	.....	1	360 00	8 40	.....	.....	5	.....	.....
500 00	14	.....	.....	14	.....	300 00	3	533 00	8 00	.....	.....	11	.....	.....
625 50	11	11	.....	.....	.....	600 00	1	600 00	10 00	.....	.....	13	.....	.....
*850 00	60	.....	.....	.....	.....	540 00	3	1,245 00	.....	.....	.....	3	.....	.....
†1,000 00	60	.....	.....	.....	.....	.....	1	600 00	.....	.....	.....	6	.....	.....
950 00	64	.....	12	.....	.....	.....	1	579 00	.....	.....	.....	6	.....	.....
560 00	75	75	.....	.....	.....	50 00	2	610 00	18 48	.....	.....	3	.....	.....
700 00	72	3	69	.....	.....	.....	1	700 00	.....	.....	.....	2	.....	.....
500 00	62	10	.....	.....	.....	.....	1	410 00	12 00	.....	.....	6	.....	.....
400 00	64	12	.....	.....	.....	250 00	2	650 00	10 00	.....	.....	4	.....	.....
420 00	40	.....	.....	.....	.....	350 00	1	350 00	8 00	.....	.....	2	.....	.....
600 00	60	.....	.....	.....	.....	200 00	3	595 00	12 00	.....	.....	30	.....	.....
950 00	24	12	12	.....	.....	.....	1	700 00	20 00	.....	.....	9	.....	.....
950 00	.....	18	.....	.....	.....	.....	...	700 00	20 00	.....	.....	10	.....	.....
607 50	42	24	18	.....	.....	.....	...	300 00	.....	.....	.....	.....	.....	.....
350 00	64	.....	.....	.....	.....	.....	1	350 00	6 90	.....	.....	14	.....	.....
540 00	.....	.....	.....	.....	.....	800 00	4	1,000 00	.....	.....	.....	.....	.....	.....
450 00	12	.....	.....	.....	.....	240 00	3	690 00	9 00	.....	.....	10	.....	.....

FOUNDRY AND ROLLING MILL EMPLOYES.

$550 00	12	.....	.....	12	.....	.....	1	$550 00	$10 00	.....	.....	32	.....	.....
620 00	36	2	30	4	.....	.....	1	620 00	14 25	.....	.....	6	.....	.....
776 00	24	12	.....	12	.....	.....	1	625 00	16–18	.....	.....	.....	.....	.....
800 00	12	.....	.....	12	.....	.....	1	616 00	15 00	.....	.....	.....	.....	.....
735 00	18	12	.....	6	.....	$200 00	2	800 00	12–15	.....	.....	40	.....	.....
700 00	.....	.....	.....	.....	.....	.....	1	800 00	14 00	.....	.....	.....	.....	.....
660 00	27	3	20	4	.....	.....	1	660 00	15 00	.....	.....	26	.....	.....
75 00	250	.....	250	.....	.....	400 00	3	520 00	10 50	.....	.....	.....	.....	.....
828 00	36	24	12	.....	.....	.....	1	590 00	15–18	.....	.....	.....	.....	.....
833 00	43	.....	.....	.....	.....	.....	1	406 00	.....	.....	.....	.....	.....	.....
645 00	31	8	20	3	.....	.....	1	286 00	15 00	.....	.....	13	.....	.....

*Have other source of income beside wages.
†Have $100.00 income beside wages.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

FOUNDRY AND ROLLING MILL EMPLOYES.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
515	Paterson	Ireland	Driller	10		$7 50	
516	Bridgeton	New Jersey	Heater	11	$2 10		
517	"	"	Roller	10		8 80	
518	"	"	Machine Roller	12		6 60	
519	Jersey City	Penna	Roller	10		12 00	
520	Bridgeton	New Jersey	Puddler	12		10 00	
521	"	"	Shearer nail iron	10		7 50	
522	Florence	Penna	Foundryman	8		8 22	
523	New Brunswick	New York	Stoker	10		9 00	
524	Burlington	Mass.	Helper	8		8 00	
525	Bridgeton	New Jersey	Nail maker	10		8 26	
526	"	"	" cutter			5 11	
527	"	New York	" "	10		16 50	
528	Boonton	New Jersey	Nailer	10		18 00	

SHOEMAKERS.

159	Camden	Conn	Cutter	10		$17 50	
160	Vineland	America	"	10	$2 16	13 00	
161	Newark	New Jersey	Stock cutter	10	2 25	13 00	
162	"	Mass	Cutter	10	2 00	10 00	
163	Vineland	N. H.	Laster	10	2 20	13 20	
164	"	Conn	"	10	2 25		
165	"	England	"	10		12 50	
166	Newark	New Jersey	"	10	1 75	10 50	
167	"	"	"	10	2 00	11 00	
168	"	"	"	10	2 25		
169	"	Ireland	"	9	9 00		
170	"	New Jersey	"	10	2 25	13 50	
171	"	"	"	10		11 00	
172	New Brunswick	New York	"	8	1 75	10 00	
173	Camden	Penna	Heeler	10		12 00	
174	"	Mass	"	10		16 00	
383	"	Penna	"	9			
175	"	Kentucky	Finisher	10		18 50	
176	Vineland	New Jersey	Bottom Finisher	10		12 00	
177	Newark	Ireland	Finisher	10	1 60	9 00	
178	"	New Jersey	"	10		13 50	
179	Camden	New York	Stock Fitting	10		10 00	
180	Vineland	"		10		11 00	
182	"	"	Nailing and breasting	10		11 00	
183	"	England	Edge setting	10	2 50	15 00	
394	Camden	New Jersey	Stock fitting	10½		13 00	
185	Butler	Ireland		10		12 00	
186	Jersey City	New York	Fitter	10		14 00	
187	Camden	Maryland	Burnisher	10		16 00	

TABLE NO. 1.—INDIVIDUAL EMPLOYES—*Continued.*

FOUNDRY AND ROLLING MILL EMPLOYES.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all others in the family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$50 00	258	.....	.....	.....	.....	.....	1	$298 00	.....	.....	.....	.....	.....	.....
300 00	160	.....	160	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
228 80	160	.....	160	.....	.....	.....	1	300 00	.....	.....	.....	8	.....	.....
172 80	144	.....	144	.....	.....	.....	1	392 00	.....	.....	.....	.....	.....	.....
98 00	264	.....	.....	.....	.....	.....	1	350 00	$12 00	.....	.....	.....	.....	.....
268 00	177	7	160	10	$20 00	$25 00	3	323 00	.....	.....	.....	.....	.....	.....
125 00	175	.....	175	.....	.....	320 00	3	445 00	7 50	.....	.....	7	.....	.....
386 37	28	24	1	3	.....	.....	1	284 00	8 22	.....	.....	9	.....	.....
422 00	30	8	18	4	.....	156 00	2	581 00	8 25	.....	.....	2	.....	.....
400 00	10	.....	.....	10	.....	.....	1	400 00	8 00	.....	.....	.....	.....	.....
231 56	154	.....	154	.....	.....	.....	1	360 00	.....	.....	.....	15	.....	.....
271 87	117	.....	.....	.....	.....	.....	...	396 00	.....	.....	.....	.....	.....	.....
528 00	91	.....	88	3	.....	74 00	2	600 00	16 50	.....	.....	30	.....	.....
290 00	200	.....	.....	.....	.....	510 00	9	800 00	.....	.....	.....	.....	.....	.....

SHOEMAKERS.

$700 00	72	.....	72	.....	.....	$180 00	2	$800 00	$12 to 15	.....	.....	8	.....	.....
598 00	40	14	14	12	.....	.....	1	372 50	11 00	.....	$5 00	7	.....	5
616 00	30	.....	30	.....	.....	.....	1	616 00	13 00	.....	.....	2	.....	.....
450 00	34	18	.....	16	.....	.....	1	450 00	12 00	$9 00	.....	6	1	.....
500 00	56	.....	56	.....	.....	.....	1	500 00	11 50	.....	.....	12	.....	.....
538 50	48	.....	48	.....	.....	.....	1	478 00	13 00	.....	.....	.....	.....	.....
575 00	10	.....	10	.....	.....	.....	1	450 00	12 00	.....	.....	.....	.....	.....
450 00	40	.....	30	10	.....	.....	1	460 00	11 00	.....	.....	22	1	.....
500 00	30	.....	24	6	.....	.....	1	500 00	11 00	.....	.....	.....	.....	.....
500 00	30	14	.....	.....	.....	.....	1	500 00	10 00	.....	.....	28	.....	.....
400 00	31	1	28	2	$100 00	30 00	3	550 00	10 00	.....	.....	.....	.....	.....
500 00	48	24	12	12	.....	.....	1	470 00	15 00	8 00	.....	.....	1	.....
550 00	26	.....	.....	.....	.....	.....	1	375 00	15 00	7 00	.....	12	.....	.....
.....	280	.....	.....	.....	.....	.....	...	.....	8 to 11	.....	.....	5	.....	.....
500 00	60	.....	48	12	.....	.....	1	500 00	12 to 15	.....	.....	.....	.....	.....
640 00	72	.....	72	.....	.....	.....	1	640 00	16 00	.....	.....	7	.....	.....
491 00	18	.....	18	.....	.....	.....	1	491 00	.....	.....	.....	.....	.....	.....
832 50	42	12	24	6	.....	.....	1	800 00	12 to 15	.....	.....	6	.....	.....
550 00	36	12	24	.....	.....	100 00	2	690 00	9 to 12	.....	.....	3	.....	.....
410 00	32	4	24	6	.....	600 00	3	550 00	10 00	.....	.....	.....	.....	.....
500 00	34	.....	.....	.....	.....	.....	1	500 00	12 00	.....	.....	18	.....	.....
400 00	72	.....	72	.....	.....	200 00	2	600 00	12 00	.....	.....	3	.....	.....
484 00	52	.....	.....	.....	.....	96 00	2	550 00	8 00	.....	.....	8	.....	.....
450 00	48	.....	.....	.....	.....	.....	1	450 00	10 to 12	.....	.....	.....	.....	.....
640 00	58	24	.....	34	.....	.....	1	484 00	9 to 12	.....	.....	3	.....	.....
600 00	38	21	7	.....	112 00	.....	2	.....	.....	.....	.....	.....	.....	.....
200 00	200	.....	200	.....	.....	.....	1	400 00	12 00	.....	.....	.....	.....	.....
*650 00	30	.....	24	6	.....	.....	1	826 00	15 00	.....	.....	.....	.....	.....
778 00	24	12	12	.....	.....	100 00	2	700 00	12 to 18	.....	.....	6	.....	.....

* Have other income; total income, $900.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

SHOEMAKERS.

Office number.	Location.	Place of birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
188	Camden	Virginia	Trimmer	10		$14 50	
189	"	New Jersey	Operator	10		12 50	
386	"	Penna	Burnisher	10			
190	"	New York		10		15 00	
191	Newark	"	Cleaner	10		12 00	
192	Orange	Ireland	Sewing	10	$1 75	10 50	
193	New Brunswick	New Jersey	Custom and repairing	10			
194	Jersey City	Germany	Boot and shoemaker	12			
195	Paterson	America	General work	10		12 00	
382	Camden	New Jersey	Benchman	9		16 50	

BLACKSMITHS.

303	Newark	England	Electric Light Company	9	$3 60		
304	Rahway	Ireland	Horseshoer	10		$12 00	
305	Burlington	New Jersey	Foundry work	10		15 00	
306	"	"	"	10		15 00	
307	Bridgeton	"	Blacksmith	10		16 00	
308	Camden	Penna	Dredging Company	10		15 00	
309	"	"	Shipyard	10		15 00	
310	Clayton	New Jersey	Glass house work	10			$90 00
311	Millville	"	"	10		12 00	
312	Camden	Penna	Job work	10		20 00	
314	Rahway	New Jersey	Helper			9 00	
316	Summit	New York	Wagon shop			14 00	
315	Paterson	Ireland	Regular work	10		13 50	
317	New Brunswick	New Jersey	Horseshoeing	10		12 00	

CARPENTERS.

318	Millville	New Jersey	Mostly repairing	10		$15 00	
319	Paterson	New York	General work	10		12 00	
320	Newark	England	Stair building	10		16 50	
321	Orange	New Jersey	Hard-wood work	10	$2 75		
322	Newark	"	General work	10	2 75	16 50	
323	Orange	Scotland	Carpenter and joiner	10	2 75		
324	"	Germany	Cabinet work	10	2 75		
325	"	New York	Carpenter	10	2 75		
326	"	Germany	House work	10		16 50	
327	"	"	"	10		16 50	
328	New Brunswick	New Jersey	General work	10		15 00	
329	Perth Amboy	"	"	10		14 00	
330	Jersey City	New York	Railroad repair-shop	9		11 88	
331	Elizabethport	New Jersey	" "	10		10 20	
332	Elizabeth	Penna	" shop	9		12 42	
333	Metuchen	New Jersey	" repair-shop	9	1 70		
334	Bloomingdale	"	General work	10		9 00	
335	Butler	"	Rubber factory	10		15 00	
337	Vineland	New York	Sash and door factory	10		12 00	
338	"	New Jersey	General work	10	2 00	12 00	
339	Camden	New York	Jobbing	10	2 75		
340	Rahway	"	"	10		13 50	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

SHOEMAKERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$600 00	60	12	48	.....	.....	.....	1	$600 00	$12-$16	.....	.....	.....	.....	.....
562 50	42	24	12	6	.....	.....	1	500 00	$12 00	.....	.....	2	.....	.....
634 00	6	.....	.....	.....	.....	.....	1	634 00	.....	.....	.....	.....	.....	.....
600 00	72	.....	72	.....	.....	$100 00	2	700 00	14 00	.....	.....	.....	.....	.....
576 00	30	.....	.....	.....	.....	.....	1	576 00	12 00	.....	.....	.....	.....	.....
426 76	20	5	.....	.....	.....	341 50	3	.....	10 50	.....	.....	30	.....	.....
550 00	33	.....	28	5	.....	.....	1	500 00	.....	.....	.....	.....	.....	.....
611 00	30	.....	18	12	.....	.....	1	627 00	13 00	.....	.....	3	.....	.....
365 00	90	.....	.....	.....	.....	.....	1	405 00	.....	.....	.....	.....	.....	.....
660 00	72	.....	.....	.....	.....	.....	1	660 00	.....	.....	.....	.....	.....	.....

BLACKSMITHS.

$900 00	20	20	.....	.....	.....	.....	3	$900 00	.....	.....	.....	.....	.....	.....
576 00	.....	.....	.....	.....	.....	.....	1	.....	$15-$18	.....	.....	2	.....	.....
750 00	.....	.....	.....	.....	.....	.....	1	405 00	.....	.....	.....	.....	.....	.....
750 00	.....	.....	.....	.....	.....	.....	1	650 00	$15 00	.....	.....	8	.....	.....
768 00	24	12	.....	12	.....	.....	1	680 00	.....	.....	.....	.....	.....	.....
705 00	30	25	.....	5	.....	.....	1	705 00	15 00	.....	.....	.....	.....	.....
750 00	12	.....	.....	12	.....	.....	1	675 00	12 00	.....	.....	4	.....	.....
1,057 00	6	.....	.....	6	.....	.....	1	1,000 00	.....	.....	.....	.....	.....	.....
450 00	25	6	.....	18	.....	$200 00	3	650 00	.....	.....	.....	.....	.....	.....
1,000 00	.....	.....	.....	.....	.....	.....	1	794 00	.....	.....	.....	.....	.....	.....
414 00	60	10	20	30	.....	.....	1	414 00	.....	.....	.....	.....	.....	.....
700 00	12	.....	12	.....	.....	.....	1	700 00	13 00	.....	.....	2	.....	.....
324 00	150	.....	150	.....	.....	400 00	5	664 00	12 00	.....	.....	1	.....	.....
425 00	90	.....	.....	.....	.....	.....	1	420 00	14 00	.....	.....	3	.....	.....

CARPENTERS.

$595 00	25	6	12	7	.....	.....	1	$600 00	$15 00	.....	.....	3	.....	.....
335 00	126	.....	126	.....	.....	.....	1	310 00	12 00	.....	.....	.....	.....	.....
700 00	12	.....	.....	.....	.....	.....	...	700 00	16 00	.....	.....	.....	.....	.....
726 00	49	25	.....	24	.....	$120 00	2	865 00	14 00	.....	.....	20	.....	.....
525 00	100	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....
731 00	.....	.....	.....	.....	.....	.....	1	624 00	.....	.....	.....	.....	.....	.....
700 00	45	.....	.....	.....	.....	.....	...	500 00	$15-$16	.....	.....	20	.....	.....
695 00	.....	.....	.....	.....	.....	.....	1	695 00	$12-$15	.....	.....	.....	.....	.....
740 00	46	40	6	.....	.....	.....	...	.....	$9-16 50	.....	.....	60	.....	.....
646 25	81	28	20	33	.....	.....	1	580 00	.....	.....	.....	.....	.....	.....
600 00	60	5	45	10	.....	.....	1	600 00	$15 00	.....	.....	14	.....	.....
518 00	90	10	75	5	.....	.....	1	350 00	15 00	.....	.....	3	.....	.....
558 24	.....	.....	.....	.....	.....	572 00	3	977 00	11 50	.....	.....	66	.....	.....
300 00	.....	15	.....	.....	.....	.....	1	425 00	11 00	.....	.....	50	.....	.....
425 00	.....	30	.....	.....	.....	.....	1	500 00	9 50	.....	.....	.....	.....	.....
475 00	6	.....	.....	.....	.....	.....	1	475 00	8 50	.....	.....	25	.....	.....
200 00	175	.....	175	.....	.....	500 00	...	775 00	9 00	.....	.....	.....	.....	.....
480 00	100	.....	.....	.....	.....	.....	1	480 00	.....	.....	.....	.....	.....	.....
550 00	25	12	.....	13	.....	.....	2	400 00	9 00	.....	.....	10	.....	.....
400 00	93	.....	.....	.....	.....	96 00	3	496 00	12 00	.....	.....	.....	.....	.....
600 00	.....	.....	.....	.....	$200 00	.....	2	600 00	2 75	.....	.....	2	.....	.....
540 00	60	.....	60	.....	.....	.....	1	460 00	10 00	.....	.....	4	.....	.....

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

SHIP CARPENTERS.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
341	Camden	New Jersey	Ship carpenter	10	$2 75	$16 50	
342	"	New Hamp	Old work	10	2 80		
343	"	New Jersey	Ship building	10	2 80		
344	"	Virginia	"	10	2 80		
345	"	New York.	"	10		16 80	
346	"	Penna	"	10		16 80	
347	"	New Jersey	"	10	2 80		

CIGAR MAKERS.

260	Newark	England	Cigar maker	9	$2 00	$13 50	
261	Paterson	New Jersey	"	9		12 00	
262	Jersey City	England	"	10	1 40	8 40	
263	"	New York	Hand work	9½	3 00	18 00	
264	"	"	"	9½		19 80	
265	"	New Jersey	"	9½	1 65	9 90	

MACHINISTS.

266	Paterson	New Jersey	General work	10	$2 50	$15 00	
267	"	"	Railroad shop	10	2 35	14 00	
268	"	England	Locomotive work	10	1 40	8 40	
269	Elizabethport	Penna	Railroad shop	10	2 18		
270	Newark	New Jersey	General work	10	3 00	18 00	
271	"	New York	Electric Co., lamps	10		12 00	
272	Rahway	"	Press works	10	2 50	15 00	
273	Jersey City	France	Vise hand	10	3 00	18 00	
274	Camden	Maryland	Iron works	10		14 00	
275	"	Wales	Machine shop	10		12 00	
276	"	Maryland	Press moulds	10		10 50	
277	Florence	New Jersey	Foundry	10		14 40	
278	Camden	"	Iron works	10		12 00	
279	"	England	Machine shop	10		12 00	
280	"	Kentucky	"	10		13 00	
281	Millville	New Jersey	"	10		13 00	
282	Gloucester	Virginia	Job work	10		12 00	
283	Camden	Ireland	Iron works	10		12 00	
284	Paterson	"	Machinist	10		13 50	
289	"	New Jersey	General work	10		15 00	
290	"	Ireland	"	10		12 00	
291	"	New Jersey	Locomotive works	10		10 40	
292	"	Germany	Planer works	10		10 40	
293	"	New York	"	10		9 60	
294	"	England	Lathe hand	10		11 00	
295	"	Ireland	Brass burnishing	10	1 16	7 00	
296	"	Germany	Rolling mill	10		7 80	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

SHIP CARPENTERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$850 00	38	.....	.....	.....	.....	.....	1	$850 00	$16 50	.....	.....	.....	.....	.....
700 00	70	.....	70	.....	.....	.....	1	700 00	16 80	.....	.....	25	.....	.....
650 00	77	.....	77	.....	.....	.....	1	650 00	16 80	.....	.....	.....	.....	.....
600 00	.....	.....	.....	.....	.....	$100 00	...	600 00	16 80	.....	.....	.....	.....	.....
504 00	132	.....	.....	.....	.....	100 00	...	650 00	15 00	.....	.....	20	.....	.....
672 00	72	12	48	12	.....	.....	1	644 00	15 00	.....	.....	.....	.....	.....
650 00	76	.....	.....	.....	.....	.....	1	650 00	.....	.....	.....	.....	.....	.....

CIGAR MAKERS.

$600 00	17	.....	7	10	.....	.....	1	$600 00	$9 00	.....	.....	16	.....	.....
600 00	52	.....	.....	.....	.....	.....	...	450 00	$10-$15	.....	.....	.....	.....	.....
411 60	18	.....	18	.....	.....	.....	1	318 00	10 40	.....	.....	.....	.....	.....
900 00	12	8	.....	4	.....	.....	1	861 00	15 00	.....	.....	.....	.....	.....
970 20	18	12	.....	6	.....	$410 00	3	1,239 00	15 00	.....	.....	18	.....	.....
475 00	24	.....	.....	.....	.....	416 00	2	712 00	.....	.....	.....	.....	.....	.....

MACHINISTS.

$350 00	112	.....	112	.....	.....	.....	...	$350 00	$10 40	.....	.....	.....	.....	.....
500 00	90	.....	90	.....	.....	.....	1	530 00	13 50	.....	.....	12	.....	.....
165 00	175	.....	175	.....	.....	.....	1	275 00	8 50	.....	.....	.....	.....	.....
575 00	.....	.....	.....	.....	.....	.....	1	575 00	.....	.....	.....	.....	.....	.....
925 00	.....	.....	.....	.....	.....	$50 00	3	1,025 00	$12-$16	.....	.....	.....	.....	.....
578 00	20	20	.....	.....	.....	140 00	2	718 00	12 00	.....	.....	34	.....	.....
705 00	30	10	15	5	.....	.....	1	600 00	13 00	.....	.....	4	.....	.....
900 00	12	.....	.....	12	.....	.....	1	1,046 00	18 00	.....	.....	3	.....	.....
700 00	12	.....	.....	12	.....	.....	1	700 00	12 00	.....	.....	.....	.....	.....
540 00	42	.....	30	12	.....	250 00	3	700 00	12 00	.....	.....	10	.....	.....
*450 00	50	.....	10	.....	.....	.....	1	375 00	12 00	.....	.....	1	.....	.....
660 40	25	.....	13	12	.....	.....	1	352 00	15 00	.....	.....	35	.....	.....
600 00	12	.....	.....	12	.....	.....	1	600 00	12 00	.....	.....	.....	.....	.....
600 00	.....	.....	.....	12	.....	75 00	2	675 00	12 00	.....	.....	.....	.....	.....
520 00	72	20	42	12	$100 00	.....	2	700 00	12 00	.....	.....	.....	.....	.....
650 00	.....	.....	.....	.....	.....	300 00	2	650 00	12 00	.....	.....	.....	.....	.....
576 00	24	12	.....	12	.....	150 00	2	726 00	12 00	.....	.....	20	.....	.....
600 00	12	.....	.....	12	.....	.....	1	600 00	12 00	.....	.....	.....	.....	.....
100 00	250	.....	250	.....	120 00	.....	2	.....	10 00	.....	.....	.....	.....	.....
†240 00	150	.....	150	.....	.....	.....	1	624 00	12 00	.....	.....	.....	.....	.....
600 00	.....	.....	.....	.....	.....	50 00	2	952 00	10 00	.....	.....	10	.....	.....
270 00	150	.....	150	.....	.....	260 00	4	580 00	9 00	.....	.....	40	.....	.....
300 00	120	.....	120	.....	.....	.....	1	350 00	10 00	.....	.....	30	.....	.....
100 00	270	.....	270	.....	.....	.....	...	400 00	10 00	.....	.....	24	.....	.....
90 00	210	.....	210	.....	.....	400 00	3	586 00	10 00	.....	.....	10	.....	.....
210 00	140	.....	140	.....	.....	.....	1	291 00	.....	.....	.....	.....	.....	.....
250 00	130	.....	130	.....	.....	.....	1	320 00	8 00	.....	.....	3	.....	.....

* $200 additional as janitor; total income, $650. † At other business; total income, $560.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

MACHINISTS.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
298	Paterson	New York	Rolling mill	10		$7 80	
300	Elizabethport	Germany	Sewing machine works			10 44	
301	"	"	" " "	10		11 00	
302	"	"	" " "	10		10 00	
427	New Brunswick	New York	Erecting machinery	10	$2 50		

TAILORS.

348	Paterson	Ireland	General work	10-17	$1 75	$10 50	
349	"	"	"	10	2 25	13 50	
350	"	England	"	10-18	2 25	13 50	
351	"	Ireland	Coat maker	13	2 25	13 50	
352	"	"	General work	10-20	2 20	13 20	
353	"	"	Pantaloon maker	14	2 25	13 50	
354	"	New York	" "	13	1 75	10 50	
355	"	Ireland	Coat maker	13	2 00	12 00	
356	"	"	General work		1 59	9 00	
357	"		"		2 50	15 00	
358	Union Hill	Saxony	Custom work	13		14 50	
359	New Brunswick	Ireland	Coat maker	10		15 00	

SEWING MACHINE EMPLOYES.

360	Elizabeth	Germany	Milling department	9⅓		$10 50	
361	"	"	" "	9⅔		11 25	
362	Elizabethport	Denmark	" "	10		9 00	
363	Elizabeth	Scotland	" "	9⅓		12 00	
364	"	Germany	Moulder	10		13 50	
366	"	"	Assembly department	9⅔		8 00	
367	"	"	" "	10		12 00	
368	"	"	Finisher	9⅔		9 30	
369	"	"	Repairer	9⅔		8 70	
370	"	"	Polisher	9⅔		11 00	
371	"	Prussia	Laborer	9⅔		8 92	
372	"	Bohemia	Machinist	10		12 00	
373	"	Germany	"	10		12 00	
374	"	"	Tool department	10		13 00	
375	"	"	" "	10		10 44	
376	"	Ireland	Automatic machinery	9⅔		16 20	
378	"	Switzerl'd	Screw department	9⅔		12 60	
379	"	Germany	Milling "	9⅔		12 00	
380	"	New Jersey	Polisher	10		16 17	
381	"	Germany	Shuttle cases	9⅔		11 12	
382	"	"	Tool department	9⅔		13 00	
383	"	"	Fitting "	10		8 00	
384	"	New York	Finishing "	9			

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

MACHINISTS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$227 00	125	.....	125	.....	.....	.....	1	$500 00	.....	.....	.....	.....	.....	.....
525 00	29	.....	29	.....	.....	.....	1	600 00	$10 44	.....	.....	26	.....	.....
400 00	52	.....	52	.....	.....	.....	...	400 00	10 00	.....	.....	10	.....	.....
300 00	84	.....	.....	.....	.....	.....	...	300 00	.....	.....	.....	.....	.....	.....
700 00	40	30	.....	.....	.....	.....	1	490 00	13 50	.....	.....	4	.....	.....

TAILORS.

$385 00	90	.....	90	.....	.....	.....	1	$385 00	$8 00	$6 00	.....	.....	.....	.....
508 00	40	.....	40	.....	.....	.....	1	508 00	10 00	.....	.....	4	.....	.....
362 00	110	20	90	.....	.....	.....	1	362 00	$7-$8	.....	.....	.....	.....	.....
352 00	120	.....	125	.....	.....	$175 00	3	553 00	7 00	4 00	.....	2	.....	.....
350 00	125	.....	125	.....	.....	.....	1	365 00	7 00	5 00	.....	.....	.....	.....
308 00	150	.....	150	.....	.....	.....	1	343 00	7 00	.....	.....	.....	.....	.....
252 00	180	.....	180	.....	.....	.....	1	359 00	6 50	3 50	.....	4	.....	.....
430 00	90	.....	90	.....	.....	.....	1	430 00	9 00	.....	.....	.....	.....	.....
300 00	140	10	.....	.....	.....	.....	1	600 00	7 00	.....	.....	.....	.....	.....
425 00	95	.....	.....	.....	.....	.....	1	425 00	8 00	.....	.....	1	.....	.....
696 00	24	.....	.....	.....	.....	400 00	2	850 00	14 00	.....	.....	.....	.....	.....
432 00	.....	.....	.....	.....	.....	100 00	2	620 00	12 00	.....	.....	1	.....	.....

SEWING MACHINE EMPLOYES.

$500 00	80	.....	80	.....	.....	.....	2	$572 00	$8-$11	.....	$3 50-$6	350	.....	100
550 00	80	.....	80	.....	.....	.....	1	572 00	.....	.....	.....	.....	.....	.....
225 00	130	.....	.....	.....	.....	.....	1	285 00	10 00	.....	$4 00-$5	.....	.....	.....
576 00	24	.....	21	3	.....	.....	1	604 00	12 00	.....	.....	.....	.....	.....
475 00	104	.....	104	.....	.....	.....	1	475 00	12- 14	.....	.....	12	.....	.....
350 00	.....	.....	.....	.....	.....	.....	1	400 00	9 00	.....	.....	.....	.....	.....
500 00	80	20	60	.....	.....	.....	1	500 00	9 00	.....	.....	.....	.....	.....
428 00	40	.....	.....	.....	.....	.....	1	428 00	10 00	.....	4 00	.....	.....	.....
377 00	29	.....	.....	.....	.....	.....	1	377 00	.....	.....	.....	.....	.....	.....
491 00	29	.....	.....	.....	.....	.....	1	570 00	11 00	.....	.....	.....	.....	.....
*458 00	.....	.....	.....	.....	.....	$150 00	2	*500 00	.....	.....	.....	.....	.....	.....
468 00	91	.....	91	.....	.....	.....	1	450 00	.....	.....	.....	.....	.....	.....
612 00	.....	.....	.....	.....	.....	.....	1	612 00	8- 14	.....	.....	6	.....	.....
600 00	.....	.....	.....	.....	.....	.....	1	600 00	12 00	.....	.....	.....	.....	300
400 00	72	.....	72	.....	.....	.....	1	425 00	.....	.....	.....	.....	.....	.....
800 00	12	12	.....	.....	.....	.....	1	800 00	14 00	.....	.....	100	.....	.....
450 00	98	50	48	.....	.....	.....	1	475 00	10- 12	.....	.....	200	.....	.....
500 00	36	.....	.....	.....	.....	.....	1	500 00	9- 10	.....	.....	.....	.....	.....
700 00	30	1	1	.....	.....	.....	1	500 00	.....	.....	.....	.....	.....	.....
450 00	50	.....	.....	.....	.....	.....	1	450 00	10- 13	.....	.....	60	.....	.....
600 00	8	8	.....	.....	.....	.....	1	600 00	.....	.....	.....	.....	.....	.....
264 00	114	.....	.....	.....	.....	.....	1	360 00	10 00	.....	.....	60	35	.....
500 00	30	.....	.....	.....	.....	.....	1	500 00	11 00	.....	.....	.....	.....	.....

*Earned $200 extra as watchman.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

COTTON MILL EMPLOYES.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
386	Millville	England	Weaver (female)	10		$4 00	
387	"	New Jersey	" "	10		3 80	
388	"	"	" "	10		6 00	
607	Paterson	"	Weaver, mosquito nets	10		6 00	
389	"	"	" "	10		6 00	
390	Millville	England	Loom fixer	10		10 00	
391	Orange	New York	Spinner	9		14 00	

WOOLEN MILL EMPLOYES.

392	Orange	England	Wash cloth	11		$10 50	
393	Rahway	Germany	Cloth presser	10		7 50	
394	"	U. S.	Cloth finisher	10		9 00	
395	Passaic	Mass.	Wool sorter	10		12 00	
396	"	New York	"	10		12 00	
397	"	Penna	"	10		12 00	
398	Camden	England	Cloth weaver	10			

SILK WORKERS.

106	Paterson	England	Ribbon weaver	10	$2 40	$14 40	
107	"	New York	"	10	2 40		
108	"	Germany	"	10	2 70		
109	"	Switzerla'd	"	10	1 75	10 50	
110	"	"	"	10	2 30	13 80	
111	"	"	"	10	1 25	7 50	
112	"	"	"	10	1 66	10 00	
113	"	"	"	10	2 00	12 00	
114	"	"	"	10	1 90	11 40	
116	"	"	"	10	2 00	12 00	
115	"	Germany	"	10	2 10		
117	"	"	"	10	2 30	13 80	
118	"	Alsace	"	10	2 50	15 00	
119	"	Germany	"	10	2 00		
120	"	"	"	10	2 00		
121	"	Switzerla'd	"	19	2 00	12 00	
122	"	"	"	10	2 00	12 00	
123	"	"	"	10	2 50	15 00	
124	"	England	"	10	2 00	12 00	
125	"	"	"	10	2 25	13 50	
126	"	Ireland	"	10	2 62	15 75	
127	"	Alsace	"	10	2 27	13 65	
128	"	New York	"	10	2 75	16 50	
129	"	Switzerla'd	"	10	2 64	15 75	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

COTTON MILL EMPLOYES.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$160 00	72	.....	72	.....	.....	.....	1	$160 00	.....	$4 00	.....	.....	.....	.....
*152 00	66	20	40	6	.....	.....	1	200 00	.....	3 50	.....	.....	.....	.....
276 00	36	.....	36	.....	.....	$100 00	2	376 00	$6 00	.....	.....	42	.....	.....
225 00	75	.....	.....	.....	.....	.....	1	455 00	.....	.....	.....	.....	.....	.....
225 00	75	.....	75	.....	.....	.....	1	455 00	5 00	.....	.....	.....	.....	.....
450 00	40	4	36	.....	.....	100 00	2	550 00	10 00	.....	.....	.....	.....	.....
700 00	6	.....	.....	.....	.....	298 00	3	982 00	.....	.....	.....	.....	.....	.....

WOOLEN MILL EMPLOYES.

$480 00	30	.....	30	.....	.....	.....	1	$400 00	$8 00	.....	.....	16	.....	.....
300 00	40	20	10	10	.....	.....	1	300 00	7 50	.....	.....	6	.....	.....
370 00	60	10	45	5	.....	.....	1	420 00	9 00	.....	.....	12	.....	.....
240 00	125	.....	.....	.....	.....	.....	1	270 00	12 00	.....	.....	11	.....	.....
480 00	50	40	10	.....	.....	.....	1	480 00	12 00	.....	.....	.....	.....	.....
528 00	25	.....	25	.....	.....	.....	1	528 00	.....	.....	.....	.....	.....	.....
443 00	.....	.....	.....	.....	.....	.....	1	395 00	.....	.....	.....	.....	.....	.....

SILK WORKERS.

$160 00	270	.....	270	.....	.....	.....	1	$266 00	$9 75	.....	.....	43	.....	.....
185 00	250	.....	250	.....	.....	.....	1	340 00	10 00	.....	.....	.....	.....	.....
384 00	150	.....	150	.....	.....	.....	1	384 00	10 00	.....	.....	.....	.....	.....
210 00	175	.....	175	.....	.....	.....	1	334 00	9 00	.....	.....	140	.....	.....
275 00	175	.....	175	.....	.....	.....	1	434 00	12 00	.....	.....	12	.....	.....
240 00	100	.....	100	.....	.....	.....	1	284 00	8 00	.....	.....	.....	.....	.....
330 00	100	.....	100	.....	.....	.....	1	360 00	10 00	.....	.....	.....	.....	.....
336 00	150	.....	150	.....	.....	.....	1	585 00	10 00	.....	.....	11	.....	.....
360 00	110	.....	110	.....	.....	.....	1	555 00	10 00	.....	.....	.....	.....	.....
400 00	100	.....	100	.....	.....	$200 00	2	704 00	9 00	.....	.....	.....	.....	.....
205 00	200	.....	200	.....	.....	.....	1	589 00	9 00	.....	.....	.....	.....	.....
451 60	100	.....	100	.....	.....	.....	1	472 00	10 00	.....	.....	.....	.....	.....
480 00	100	.....	100	.....	.....	.....	1	698 00	10 00	.....	.....	.....	.....	.....
340 00	130	.....	130	.....	.....	.....	1	492 00	9 00	.....	.....	.....	.....	.....
500 00	50	.....	50	.....	.....	.....	1	500 00	12 00	.....	.....	.....	.....	.....
411 00	100	.....	100	.....	.....	.....	1	411 00	12 00	.....	.....	30	.....	.....
400 00	100	.....	100	.....	.....	.....	1	400 00	12 00	.....	.....	48	.....	.....
420 00	125	.....	125	.....	.....	.....	1	505 00	11 00	.....	.....	.....	.....	.....
300 00	150	.....	150	.....	.....	.....	1	483 00	10 00	.....	.....	130	.....	.....
335 00	150	.....	150	.....	.....	.....	1	525 00	12 00	.....	.....	.....	.....	.....
736 00	18	.....	18	.....	.....	.....	1	540 00	13 00	.....	.....	50	.....	.....
330 00	150	.....	150	.....	.....	.....	1	480 00	9 00	.....	.....	.....	.....	.....
660 00	60	.....	60	.....	.....	.....	1	660 00	12 00	.....	.....	.....	.....	.....
500 00	100	.....	100	.....	.....	.....	1	650 00	12 00	.....	.....	.....	.....	.....

*$50 extra given by father.

TABLE No. 1—INDIVIDUAL EMPLOYES—*Continued.*

SILK WORKERS.

Office number.	Location.	Place of birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
130	Paterson	Germany	Ribbon weaver	10	$2 35	$14 00	
131	"	Switzerla'd	"	10	1 50	9 00	
132	"	France	"	10	2 00	12 00	
133	"	England	Hand loom weaver	10	2 10	12 00	
134	"	Scotland	" "	10	2 00	12 00	
135	"	Ireland	" "	10	1 50	9 00	
136	"	England	" "	10	90		
137	"	New Jersey	Warper	10	2 00	12 00	
138	"	Nova Scotia	"	10	2 40	14 40	
139	"	England	Doubler	10	85	5 00	
140	"	New Jersey	Finisher	10	1 83	11 00	
141	"	"	"	10	2 00	12 00	
142	"	"	"	10	1 66	10 00	
143	"	New York	"	10		9 00	
144	"	England	Winder (female)	10		5 00	
145	"	New York	Throwing	10	1 16	7 00	
146	"	New Jersey	Reeler	10	75	4 50	
147	"	Mass	Throwing	10	1 33	8 00	
148	"	Switzerla'd	Dyer	10½	1 66	10 00	
149	"	New Jersey	"	10	1 50	9 00	
150	"	Ireland	Power loom weaver	10	1 50	9 00	
151	"	Scotland	Broad silk "	10	1 20	7 20	
152	"	England	" " "	10	1 50	9 00	
153	"	Ireland	Power loom "	10		6 00	
154	"	England	" " "	10		6 00	
155	"	Bohemia	Broad silk "	10		9 00	
156	"	Ireland	Power loom "	10		7 00	
157	"	England	" " "	10	1 50	9 00	
158	"	New Jersey	" " "	10	1 50	9 00	

FLAX WORKERS.

196	Paterson	Ireland	Flax dresser	10	$1 70	$10 22	
197	"	"	"	10		10 22	
198	"	"	"	10		10 20	
199	"	Scotland	"	10		10 20	
200	"	Ireland	"	10		10 22	
201	"	"	"	10		10 20	
202	"	"	"	10		10 22	
203	"	"	"	10		10 22	
204	"	"	"	10		10 22	
205	"	Scotland	"	10		10 22	
206	"	Ireland	"	10		10 22	
207	"	"	"	10		10 22	
208	"	"	"	10		10 22	
209	"	"	"	10		10 22	
210	"	Scotland	"	10		10 22	
211	"	Ireland	"	10		10 20	

TABLE No. 1—INDIVIDUAL EMPLOYES—*Continued.*

SILK WORKERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$450 00	100	.....	100	.....	.....	.....	1	$550 00	$10 00	.....	.....	30	.....	.....
225 00	162	.....	162	.....	.....	$226 00	1	480 00	9 00	.....	.....	130	60	4
600 00	.....	.....	.....	.....	.....	.....	1	700 00	12 00	.....	.....	.....	.....	.....
490 00	60	.....	60	.....	.....	210 00	2	700 00	9 00	.....	.....	20	21	.....
176 00	230	.....	230	.....	.....	125 00	2	450 00	7 00	.....	.....	.....	.....	.....
290 00	100	.....	100	.....	.....	.....	1	353 00	7 00	.....	.....	20	.....	.....
175 00	120	.....	120	.....	.....	.....	1	495 00	7 50	.....	.....	100	.....	.....
300 00	150	.....	150	.....	.....	.....	1	375 00	12 00	.....	.....	4	.....	.....
500 00	90	.....	90	.....	.....	.....	1	600 00	7 00	.....	.....	3	11	.....
200 00	60	.....	60	.....	.....	200 00	2	430 00	.....	$5 00	$3 25	.....	15	10
440 00	50	50	.....	.....	.....	.....	1	440 00	9 50	.....	.....	40	.....	.....
400 00	50	.....	.....	.....	.....	.....	1	407 00	10 00	.....	.....	14	.....	.....
320 00	120	.....	120	.....	.....	.....	1	320 00	9 00	.....	.....	.....	.....	.....
290 00	120	.....	120	.....	.....	.....	1	340 00	9 00	.....	.....	.....	.....	.....
195 00	90	.....	90	.....	.....	150 00	2	369 00	.....	4 75	3 25	.....	15	11
200 00	125	.....	.....	.....	.....	.....	1	294 00	.....	.....	.....	20	.....	.....
162 00	90	30	60	.....	.....	350 00	2	563 00	5 50	.....	.....	8	.....	.....
320 00	40	.....	40	.....	.....	.....	1	320 00	6 50	.....	.....	.....	.....	.....
365 00	75	.....	75	.....	$160 00	.....	2	525 00	7 50	.....	.....	40	.....	.....
315 00	37	.....	37	.....	.....	.....	1	360 00	9 00	.....	.....	.....	.....	.....
252 00	150	.....	150	.....	.....	.....	1	337 00	7 00	.....	.....	70	70	.....
120 00	250	.....	250	.....	.....	.....	1	332 00	.....	.....	.....	.....	.....	.....
300 00	90	.....	90	.....	.....	300 00	3	690 00	5 00	4 50	.....	48	7	.....
175 00	125	.....	125	.....	.....	.....	1	264 00	7 00	6 00	.....	.....	.....	.....
125 00	175	.....	175	.....	.....	.....	1	258 00	6 50	5 50	.....	70	80	.....
400 00	30	.....	.....	.....	.....	.....	1	400 00	.....	.....	.....	.....	.....	.....
280 00	100	.....	100	.....	.....	.....	1	350 00	6 00	5 00	.....	75	75	.....
190 00	175	.....	175	.....	50 00	.....	2	389 00	6 00	.....	.....	.....	.....	.....
325 00	75	.....	.....	.....	.....	.....	1	325 00	9 00	.....	.....	80	70	.....

FLAX WORKERS.

$287 00	125	.....	125	.....	.....	.....	1	$383 00	$8 00	.....	.....	70	.....	.....
330 00	100	.....	100	.....	.....	$200 00	2	550 00	8 00	.....	.....	.....	.....	.....
390 00	78	.....	.....	.....	.....	.....	1	420 00	.....	.....	.....	.....	.....	.....
433 00	55	.....	.....	.....	.....	.....	1	440 00	8 50	.....	.....	.....	.....	.....
368 00	78	.....	.....	.....	.....	100 00	2	528 00	.....	.....	.....	.....	.....	.....
328 00	100	.....	100	.....	.....	.....	1	328 00	8 50	.....	.....	.....	.....	.....
368 00	90	.....	90	.....	.....	185 00	2	553 00	.....	.....	.....	60	.....	.....
240 00	150	.....	150	.....	$180 00	.....	2	420 00	7 50	$4 50	$2 40	56	.....	.....
430 00	60	.....	60	.....	.....	.....	1	430 00	8 00	.....	.....	.....	.....	.....
430 00	60	.....	60	.....	.....	.....	1	430 00	.....	.....	.....	.....	.....	.....
430 00	60	.....	60	.....	.....	.....	1	440 00	8 00	.....	.....	.....	.....	.....
360 00	90	.....	90	.....	.....	160 00	2	572 00	7 50	.....	.....	.....	.....	.....
280 00	125	.....	125	.....	.....	600 00	3	850 00	7 50	4 75	2 40	.....	.....	.....
369 00	70	.....	70	.....	.....	.....	1	314 00	7 50	.....	.....	.....	.....	.....
400 00	60	6	54	.....	250 00	.....	2	364 00	7 50	5 00	2 40	.....	.....	.....
435 00	75	.....	75	.....	.....	.....	1	450 00	.....	.....	.....	.....	.....	.....

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

FLAX WORKERS.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
212	Paterson	Ireland	Flax dresser	10		$10 25	
213	"	Scotland	"	10		10 20	
214	"	"	"	10		10 20	
215	"	"	"	10		10 20	
216	"	"	"	10		10 20	
217	"	"	"	10		10 20	
218	"	"	"	10		10 50	
219	"	Ireland	Dyer	10	$1 25	7 50	
220	"	"	"	10	1 25	7 50	
221	"	Scotland	"	10	1 25	7 50	
222	"	Ireland	Dye-house work	10	1 25	7 50	
223	"	"	"	10	1 25	7 50	
224	"	England	Jute dyer	10	1 83	11 00	
225	"	Scotland	Stripping	10		7 00	
226	"	Ireland	Attending flumer	10		7 50	
227	"	"	Bleacher	10		7 00	
228	"	"	"	10		7 50	
229	"	"	Speeder (female)	10		4 75	
230	"	"	Bundling	10		7 50	
231	"	New Jersey	Helper	10		7 00	
232	"	Germany	"	10		6 00	

RAILROAD EMPLOYES.

399	Jersey City	New York	Engineer	10	$2 00	$12 00	$52 00
400	Millville	New Jersey	Conductor				72 00
401	"	N. C.	Brakeman				36 00
402	"	New Jersey	Platform hand	10			35 00
403	Jersey City	"	Clerk	9½			55 00
404	"	"	Conductor	12			69 00
405	Cape May	Ireland	Fireman				45 00
406	Perth Amboy	Penna	"				65 00
407	Millville	New Jersey	Baggage master				40 00
408	Perth Amboy	Ireland	Laborer	10			39 00
409	Rahway	"	Janitor	12			43 00

PAINTERS.

410	Paterson	New York	General work	10	$2 50	$15 00	
411	"	New Jersey	"	10	3 50		
412	Orange	Virginia	House and sign	10		16 50	
413	"	Germany	House painting	10		15 00	
414	New Brunswick	New York	"	10		15 00	
415	Boonton	Germany	"	10		13 50	
416	Orange	"	"	10		13 50	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

FLAX WORKERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$469 00	30	.....	30	.....	.....	.....	1	$460 00	.....	.....	.....	60	.....	.....
420 00	67	7	60	.....	.....	.....	1	450 00	.....	.....	.....	.....	.....	.....
424 00	67	.....	.....	.....	$61 40	.....	2	515 00	$8 00	.....	.....	.....	.....	.....
430 00	60	.....	.....	.....	.....	$260 00	2	700 00	8 00	.....	.....	.....	.....	.....
439 00	60	.....	60	.....	.....	.....	...	464 00	7 50	.....	.....	60	.....	.....
430 00	60	.....	60	.....	.....	170 00	2	630 00	8 00	.....	.....	70	.....	.....
430 00	63	13	50	.....	.....	.....	1	446 00	10 00	.....	.....	80	.....	.....
331 00	5	5	.....	.....	120 00	.....	2	500 00	7 50	.....	.....	10	.....	.....
331 00	12	.....	.....	.....	.....	.....	1	378 00	7 50	.....	.....	10	.....	.....
331 00	.....	.....	12	.....	.....	.....	1	340 00	7 50	.....	.....	10	.....	.....
300 00	50	5	45	.....	.....	.....	1	300 00	7 50	.....	.....	30	.....	.....
331 00	10	.....	10	.....	110 00	.....	2	590 00	7 50	.....	.....	.....	.....	.....
366 10	110	.....	110	.....	.....	.....	1	416 00	7 00	.....	.....	2	.....	.....
335 00	30	.....	14	16	.....	.....	1	412 00	7 00	.....	.....	12	.....	.....
360 00	.....	.....	.....	.....	.....	.....	2	360 00	7 50	.....	.....	1	.....	.....
350 00	.....	.....	.....	.....	.....	325 00	3	675 00	7 00	.....	.....	4	.....	.....
345 00	15	.....	.....	.....	.....	350 00	5	695 00	7 50	.....	.....	3	.....	.....
162 00	90	.....	90	.....	.....	.....	...	186 00	.....	.....	.....	.....	.....	.....
360 00	12	.....	.....	.....	.....	.....	1	360 00	7 50	.....	.....	5	.....	.....
224 00	120	.....	120	.....	.....	.....	1	315 00	.....	.....	.....	20	.....	.....
144 00	186	.....	186	.....	.....	.....	1	243 00	6 00	.....	.....	30	.....	.....

RAILROAD EMPLOYES.

$624 00	.....	.....	.....	.....	.....	$260 00	2	$731 00	.....	.....	.....	2	.....	.....
864 00	.....	.....	.....	.....	.....	.....	1	600 00	$65 00	.....	.....	.....	.....	.....
406 00	25	.....	.....	.....	$50 00	.....	2	500 00	35 00	.....	.....	.....	.....	.....
400 00	15	15	.....	.....	.....	.....	1	400 00	35 00	.....	.....	30	.....	.....
660 00	.....	.....	.....	.....	390 00	.....	2	746 00	$40-$70	.....	.....	38	.....	.....
828 00	.....	.....	.....	.....	.....	.....	1	828 00	69 00	.....	.....	.....	.....	.....
540 00	.....	.....	.....	.....	.....	.....	1	600 00	45 00	.....	.....	.....	.....	.....
745 00	15	.....	.....	15	.....	.....	1	535 00	$60-$70	.....	.....	.....	.....	.....
480 00	.....	.....	.....	.....	.....	.....	1	375 00	35 00	.....	.....	15	.....	.....
430 00	30	.....	.....	.....	.....	.....	1	400 00	.....	.....	.....	4	.....	.....
510 00	.....	.....	.....	.....	.....	.....	1	510 00	.....	.....	.....	.....	.....	.....

PAINTERS.

$110 00	270	.....	.....	.....	.....	.....	1	$464 00	.....	.....	.....	4	.....	.....
255 00	225	.....	.....	.....	.....	.....	1	520 00	$18 00	.....	.....	.....	.....	.....
620 00	100	12	18	70	.....	$400 00	3	660 00	15 00	.....	.....	8	.....	.....
480 00	72	.....	72	.....	.....	.....	1	435 00	$12-$16	.....	.....	.....	.....	.....
500 00	104	.....	.....	.....	.....	.....	1	500 00	$12-$15	.....	.....	5	.....	.....
400 00	120	.....	120	.....	.....	.....	1	450 00	12 00	.....	.....	.....	.....	.....
450 00	71	.....	.....	.....	.....	.....	1	399 00	.....	.....	.....	.....	.....	.....

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

BOILER MAKERS.

Office number.	Location.	Place of birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
417	Elizabeth	Ireland		12		$14 35	
418	"	New Jersey	Railroad shop	10		8 00	
419	Paterson	New York	Locomotive works	10		9 60	
420	"	Ireland	Riveter	10		7 50	
421	"	New Jersey	Rolling mill	10		9 00	

RUBBER WORKERS.

422	Boonton	New Jersey	Comb cutting	10		$12 00	
423	Butler	Ireland		10		12 00	
424	New Brunswick	New Jersey	Bootmaker	10			$38 00
425	Butler	"	Comb cutting	10		9 00	
426	New Brunswick	"	Arctic shoes	10		6 48	
427	"	"	"	10			32 00
428	"	"	Plain shoes	10			25 96
429	"	"	Sole cutter				12 72

BRICKLAYERS, MASONS AND HODCARRIERS.

430	Jersey City	New York	Brick and stone	8½		$21 00	
431	Paterson	Ireland	Bricklayer	10		18 00	
432	New Brunswick	"	"	10		18 00	
433	"	"	" and mason	10		18 00	
434	Woodbury	New Jersey	Mason	10		18 00	
435	New Brunswick	Maine		10		13 50	
436	Newark	Ireland		10		12 00	
437	Camden	New Jersey		10		12 00	
438	Newark	Ireland	Masons' laborer	10		12 00	

HATTERS.

233	East Orange	New Jersey	Finishing	10	$2 75	$16 50	
234	"	"	"	10	2 50	15 00	
235	"	Ireland	"	10	1 87	11 00	
236	Newark	Missouri	"				
237	Orange	New Jersey	"	10	3 00	12 38	
239	Newark	Switzerla'd	"	10			
240	"	New York	"	10	3 00		
241	"	Conn	"	10	3 00		
242	"	New York	"	10	3 00		
380	Paterson	Ireland	General work	7		11 00	
243	Orange	New Jersey	Maker	10		8 31	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

BOILER MAKERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$700 58	30	10	.....	20	.....	.....	1	$700 58	.....	.....	.....	2	.....	.....
408 00	10	8	.....	2	.....	.....	1	408 00	$12 18	.....	.....	28	.....	.....
280 00	125	.....	125	.....	.....	.....	1	309 00	10 00	.....	.....	25	.....	.....
180 00	150	.....	150	.....	.....	.....	1	380 00	7 50	.....	.....	20	.....	.....
290 00	100	.....	150	.....	.....	.....	1	330 00	8 00	.....	.....	4	.....	.....

RUBBER WORKERS.

$200 00	200	.....	200	.....	.....	$500 00	7	$700 00	.....	.....	.....	14	.....	.....
500 00	60	.....	60	.....	.....	.....	1	600 00	$12 00	.....	.....	10	.....	.....
418 00	30	.....	21	9	.....	.....	1	485 00	12 00	.....	.....	.....	.....	.....
150 00	200	.....	200	.....	.....	200 00	1	380 00	.....	.....	.....	14	.....	.....
292 00	42	3	39	.....	.....	.....	...	292 60	9 00	.....	.....	.....	.....	.....
336 00	36	.....	.....	.....	.....	.....	...	336 00	.....	.....	.....	.....	.....	.....
*296 00	42	.....	.....	.....	.....	.....	1	296 00	.....	$5-$7	.....	.....	.....	.....
521 52	42	.....	.....	.....	$100 00	25 00	3	650 00	10 00	.....	.....	6	.....	.....

BRICKLAYERS, MASONS AND HODCARRIERS.

$987 00	30	.....	.....	.....	.....	.....	1	$809 00	$21 00	.....	.....	30	.....	.....
520 00	100	.....	.....	.....	.....	.....	1	620 00	18 00	.....	.....	.....	.....	.....
680 00	80	.....	.....	.....	.....	.....	1	570 00	18 00	.....	.....	20	.....	.....
756 00	60	10	50	.....	.....	.....	1	.....	18 00	.....	.....	.....	.....	.....
754 00	48	.....	48	.....	.....	.....	1	754 00	.....	.....	.....	.....	.....	.....
540 00	72	10	58	4	.....	.....	1	470 00	.....	.....	.....	6	.....	.....
432 00	50	.....	30	.....	.....	$20 00	...	460 00	.....	.....	.....	.....	.....	.....
480 00	68	8	60	.....	$50 00	.....	2	530 00	12 00	.....	.....	10	.....	.....
375 00	112	.....	75	37	.....	120 00	2	497 00	.....	.....	.....	.....	.....	.....

HATTERS.

†$257 00	50	.....	.....	.....	.....	.....	1	†$227 00	$10-$20	.....	.....	.....	.....	.....
†239 00	50	.....	.....	.....	$312 00	.....	3	.....	.....	$4-$7	.....	50	40	.....
400 00	104	.....	.....	.....	.....	.....	1	475 00	.....	.....	.....	.....	.....	.....
435 00	.....	.....	.....	.....	.....	.....	1	435 00	$9-$12	.....	.....	20	.....	.....
672 00	.....	.....	.....	.....	.....	.....	1	672 00	.....	.....	.....	.....	.....	.....
610 00	106	.....	.....	.....	.....	.....	1	610 00	$9-$14	.....	.....	45	.....	.....
625 00	.....	.....	.....	.....	.....	.....	1	625 00	$12 00	.....	.....	9	.....	.....
600 00	.....	.....	.....	.....	.....	.....	1	600 00	12 00	.....	.....	.....	.....	.....
600 00	150	.....	.....	.....	.....	.....	1	600 00	.....	.....	.....	.....	.....	.....
550 00	.....	.....	.....	.....	.....	$145 00	3	779 00	.....	.....	.....	.....	.....	.....
299 16	200	.....	78	.....	.....	.....	1	326 00	$8-$9	$4-$6	.....	36	14	.....

* Female. † From January 1st to July 1st, 1885.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

HATTERS.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
244	Orange	Ireland	Maker	10		$9 00	
245	"	"	"	10		8 00	
246	Newark	New York	"	10		8 50	
247	Orange	New Jersey	"	10		9 00	
248	"	England	Blocking	10		10 00	
249	"		Pouncing	10		12 00	
250	"	New Jersey	"	10		10 00	
251	Newark	Austria	Sizing	10		10 07	
299	Orange	Virginia	"	10		15 00	

PEARL BUTTON MAKERS.

253	Newark	Penna	Turner	10	$2 00	$12 00	
254	"	Ireland	"	10		12 00	
255	"	England	"	10	2 33	14 00	
256	"	Ireland	Collar-button maker	10	2 25	13 50	
257	"	"	Blank cutting	10		13 50	
258	"	England	Button maker	10		12 00	
259	"	"	Piece maker	10		11 00	

PRINTERS.

530	Newark	NovaScotia	Compositor			$15 00	
531	"	Canada	"	10		18 00	
532	Jersey City	New York	"	9		18 24	
533	"	Penna	"	8		18 00	
534	"	New York	"	9		18 50	
535	Paterson	Wales	Book	9		12 00	
536	"	England	Book compositor	10		12 00	
537	Jersey City	New York	Pressman	9		11 00	

FILE MAKERS.

538	Woodside	Austria	Rasp cutter	10			
539	Newark	U. S.	File cutter			$10 50	
540	"	Germany	" machine	10			
541	Belleville	"	Rasp cutter	10			
542	Paterson	New Jersey	File grinding	10		9 00	
543	Woodside	"	Rasp pincher	10			

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

HATTERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$336 00	.....	.....	.....	.....	.....	.....	1	$359 00	.....	.....	.....	.....	.....	.....
388 80	.....	.....	.....	.....	$350 00	.....	2	650 00	$12–$14	.....	.....	.....	.....	.....
450 00	.....	.....	.....	.....	.....	.....	1	600 00	.....	.....	.....	.....	.....	.....
400 00	.....	.....	.....	.....	.....	.....	...	.....	10 00	$4 00	.....	.....	.....	.....
500 00	26	.....	18	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
320 00	150	.....	.....	.....	.....	.....	1	526 00	12 00	.....	.....	4	.....	.....
538 00	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
375 00	.....	.....	.....	.....	.....	.....	...	400 00	.....	.....	.....	.....	.....	.....
355 00	138	.....	.....	.....	148 00	$252 00	3	755 00	.....	.....	.....	.....	.....	.....

PEARL BUTTON MAKERS.

$275 00	156	.....	156	.....	.....	.....	...	.....	$5–$12	.....	.....	11	.....	.....
500 00	40	25	15	.....	.....	.....	1	$530 00	$7–$12	.....	.....	13	.....	.....
364 00	.....	.....	.....	.....	.....	.....	1	441 00	10 00	.....	.....	6	.....	.....
192 00	156	.....	.....	.....	$50 00	.....	2	369 00	10 00	.....	.....	2	.....	.....
420 00	.....	.....	.....	.....	.....	.....	1	500 00	.....	.....	.....	.....	.....	.....
260 00	130	.....	.....	.....	.....	.....	1	714 00	10 00	$6 00	.....	9	8	.....
175 00	204	.....	.....	.....	.....	.....	...	.....	$5–$12	.....	.....	6	.....	.....

PRINTERS.

.....	.....	.....	.....	.....	.....	.....	...	.....	$15–$18	.....	.....	16	.....	.....
$830 00	.....	.....	.....	.....	.....	.....	1	.....	15 50	.....	.....	15	.....	.....
1,000 00	1	.....	1	.....	.....	.....	1	$1,000 00	18 00	.....	.....	16	.....	.....
880 00	18	5	3	.....	.....	.....	1	880 00	16 00	.....	.....	14	.....	.....
915 00	20	.....	12	8	.....	.....	1	915 00	18 00	.....	.....	16	.....	.....
250 00	175	.....	175	.....	.....	$200 00	...	500 00	12 00	.....	.....	.....	.....	.....
450 00	75	.....	75	.....	.....	.....	1	450 00	12 00	.....	.....	.....	.....	.....
550 00	12	4	6	2	.....	.....	1	604 00	10 50	.....	.....	2	.....	.....

FILE MAKERS.

$555 75	98	20	78	.....	.....	.....	...	$675 00	$13 50	.....	.....	2	.....	4
447 00	30	.....	.....	.....	.....	.....	1	350 00	9 00	.....	.....	3	.....	.....
*237 00	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
400 68	80	.....	80	.....	.....	.....	1	375 00	.....	.....	.....	.....	.....	.....
360 00	60	.....	60	.....	.....	.....	1	450 00	8 50	.....	.....	.....	.....	.....
273 00	78	.....	.....	.....	.....	.....	...	350 00	8 00	.....	.....	.....	.....	.....

* For six months.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

MISCELLANEOUS EMPLOYES.

Office number.	Location.	Place of birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
544	Newark	Kentucky	Brass finisher	10		$15 00	
545	Paterson	Scotland	"	10		12 00	
546	"	Ireland	"	10		14 00	
547	Elizabethport	Germany	Toolmaker	10		11 00	
548	Paterson	Ireland	Plasterer	10		13 50	
606	"	"	"	10		18 00	
549	Jersey City	Germany	Baker	13		12 00	
550	Millville	New Jersey	Wheelwright	10		18 00	
551	"	"	"	10		16 00	
552	Rahway	Germany	Cabinet maker	10		15 00	
553	Jersey City	New York	Barber	13		12 00	
554	"	England	"	13		11 00	
555	Bloomingdale	Germany	"	14		12 00	
556	Newark	New Jersey	Bag and satchel maker	10		11 00	
557	"	Germany	" " "	10	$2 50		
558	"	"	Satchels				
440	"	Ireland	Plumber	10		21 00	
441	Rahway	New Jersey	" and gasfitter	10		18 00	
442	Jersey City	New York	" "	9		18 00	
443	Newark	"	Harness fitting	10			
446	"	New Jersey	" stitcher	10			
447	"	"	" "	10		6 00	
448	"	"	Japanner, foreman	10	3 25	20 00	
449	"	"	" finisher		2 00	12 00	
450	"	"	" dobbin	10		11 40	
559	Bloomingdale	Penna	Drug clerk	14	2 50	15 00	
560	Jersey City	New Jersey	Bookkeeping	10		10 50	
561	Paterson	"	" grocer	10		15 00	
562	Camden	Ohio	Insurance agent	10			
563	Newark	New Jersey	Shipping clerk	10		8 10	
564	"	"	Grocer "	13		11 00	
565	Millville	"	Manager sand works	10			
567	Paterson	"	Tinsmith	10		15 00	
568	Jersey City	New York	Steel die maker	10		13 00	
569	Cranford	Ireland	Felter	10	1 50	9 00	
570	New Brunswick	"	Paper stainer	10		18 00	
571	Jersey City		Driver	12		12 00	
572	Paterson	Germany	Butcher, bologna maker	15		10 00	
573	Jersey City		Steamfitter	9		18 00	
574	Vineland	Mass	Dressmaker (female)	12		17 00	
575	Paterson	England	" "	10		5 00	
576	Camden	Penna	Steel pen finisher	10		10 00	
577	Elizabethport	Germany	Brewer, wash house			12 50	
578	Newark	New Jersey	Lineman, telegraph	10		15 00	
579	Hoboken	Delaware	Paperhanger	8½		21 00	
580	Newark	France	Jeweler	10		22 00	
581	New Brunswick	Ireland	Polisher	10		9 60	
582	"	"	Metal spinner	10		16 50	
583	Newark	Ohio	Electric light works	10		10 20	
590	Elizabethport	New Jersey	Blacksmith's helper	10		7 02	
591	Passaic	"	Dye works	10		9 00	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

MISCELLANEOUS EMPLOYES.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$445 00	.....	.....	.....	.....	.....	.....	...	$460 00	$9-$15	.....	.....	.....	.....	.....
428 00	20	.....	20	.....	.....	.....	1	428 00	.....	.....	.....	.....	.....	.....
560 00	50	.....	.....	.....	.....	.....	1	560 00	12 00	.....	.....	.....	.....	.....
300 00	110	.....	110	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....
360 00	168	.....	168	.....	.....	$25 00	2	435 00	12 00	.....	.....	.....	.....	.....
432 00	150	.....	150	.....	.....	250 00	2	682 00	18 00	.....	.....	.....	.....	.....
624 00	.....	.....	.....	.....	.....	.....	1	527 30	12 00	.....	.....	4	.....	.....
450 00	150	.....	.....	150	.....	.....	1	500 00	18 00	.....	.....	3	.....	.....
800 00	12	.....	.....	12	.....	.....	1	650 00	15 00	.....	.....	3	.....	.....
316 00	150	.....	.....	.....	.....	.....	...	316 00	.....	.....	.....	.....	.....	.....
624 00	.....	.....	.....	.....	.....	540 00	3	964 00	11 50	.....	.....	3	.....	.....
572 00	.....	.....	.....	.....	.....	.....	1	595 00	11 33	.....	.....	3	.....	.....
600 00	.....	.....	.....	.....	.....	.....	1	600 00	.....	.....	.....	.....	.....	.....
505 00	36	.....	12	24	.....	.....	1	470 00	.....	.....	.....	.....	.....	.....
520 00	36	.....	.....	.....	.....	.....	...	520 00	.....	.....	.....	.....	.....	.....
371 00	27	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....
1,083 00	.....	.....	.....	.....	.....	120 00	2	1,083 00	.....	.....	.....	.....	.....	.....
900 00	10	10	.....	.....	.....	.....	1	450 00	15 00	.....	.....	2	.....	.....
864 00	24	6	.....	18	.....	.....	1	728 00	16 50	.....	.....	6	.....	.....
400 00	80	.....	.....	.....	.....	.....	1	400 00	12 00	.....	.....	7	.....	.....
407 00	120	.....	.....	.....	.....	.....	1	450 00	.....	.....	.....	.....	.....	.....
312 00	.....	.....	.....	.....	.....	.....	1	342 00	8 00	.....	.....	10	.....	.....
600 00	130	.....	130	.....	.....	.....	1	600 00	12 00	.....	.....	8	.....	.....
524 00	.....	10	25	.....	.....	.....	...	610 00	12 00	.....	.....	6	.....	.....
500 00	56	10	46	.....	.....	.....	1	535 00	11 00	.....	.....	10	.....	.....
750 00	.....	.....	.....	.....	.....	.....	2	750 00	15 00	.....	.....	1	.....	.....
546 00	.....	.....	.....	.....	.....	.....	1	315 00	10 00	.....	.....	7	.....	.....
720 00	.....	.....	.....	.....	.....	.....	1	720 00	.....	.....	.....	6	.....	.....
800 00	.....	.....	.....	.....	.....	.....	...	800 00	.....	.....	.....	.....	.....	.....
425 00	25	.....	.....	15	.....	.....	...	.....	$8-$10	.....	.....	3	.....	.....
572 00	.....	.....	.....	.....	.....	.....	1	639 00	10 00	.....	.....	2	.....	.....
800 00	.....	.....	.....	.....	.....	.....	1	500 00	7 50	.....	.....	15	.....	.....
.....	.....	.....	.....	.....	$150 00	300 00	3	495 00	.....	.....	.....	.....	.....	.....
624 00	.....	.....	.....	.....	.....	336 00	...	.....	.....	.....	.....	.....	.....	.....
360 00	60	.....	60	.....	.....	.....	1	360 00	9 00	.....	.....	12	.....	.....
900 00	12	.....	12	.....	.....	.....	1	565 00	8 00	.....	.....	6	.....	.....
612 00	6	6	.....	.....	.....	.....	1	685 00	$12-$14	.....	.....	12	.....	.....
360 00	75	.....	75	.....	.....	.....	...	380 00	8 00	.....	.....	.....	.....	.....
846 00	30	4	15	11	.....	460 00	2	1,046 00	16 50	.....	.....	10	.....	.....
280 00	72	.....	.....	.....	.....	.....	...	200 00	.....	.....	.....	.....	.....	.....
190 00	75	35	45	.....	.....	.....	...	190 00	.....	.....	.....	.....	.....	.....
520 00	.....	.....	.....	.....	.....	.....	1	520 00	.....	.....	.....	.....	.....	.....
550 00	.....	.....	.....	.....	.....	.....	1	550 00	$10-$11	.....	.....	4	.....	.....
540 00	96	.....	96	.....	.....	.....	1	650 00	15 00	.....	.....	1	.....	.....
677 00	90	.....	50	40	.....	.....	1	782 00	$18-$26	.....	.....	5	.....	.....
1,035 00	16	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
420 00	30	10	20	.....	.....	.....	1	460 00	9 60	.....	.....	4	.....	.....
726 00	30	5	10	15	.....	.....	1	500 00	14 25	.....	.....	15	.....	.....
375 00	36	.....	36	.....	.....	.....	...	.....	9 00	.....	.....	.....	.....	.....
365 00	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
262 00	150	.....	150	.....	.....	.....	1	262 00	7 50	.....	.....	.....	.....	.....

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

MISCELLANEOUS EMPLOYES.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
592	Newark	New York	Veneering	10		$7 50	
593	Passaic	England	Hostler	17		7 00	
594	Paterson	Ireland	Watchman	13		7 00	
595	New Brunswick	New Jersey	Solderer	10		12 00	
596	Rahway	England	Teamster	10		9 00	
597	Paterson	New Jersey	Driver, coal wagon	10		9 00	
598	"	Ireland	Hostler (foreman)	10		15 00	
603	Butler	"	Bartender			7 00	
604	"	"	Paper maker	12		9 00	
605	Newark	New York	Brown stone cutter	9		20 50	

LABORERS.

451	Paterson	Ireland	Moulder's laborer		$1 20	$7 20	
452	Bloomingdale	"	General laborer	12	1 25	7 50	
453	New Brunswick	Penna	Railroad	11			$45 00
454	Jersey City	Rhode Isl'd	"	9		8 82	
455	"	New York	"	10	1 10	*7 70	
456	Millville	Ireland	Repairing railroad	10			30 00
457	Butler	New Jersey	Rubber works	10	1 75		
458	"	"	"	10		9 00	
459	"	Ireland	"	10		7 50	
460	"	New Jersey	"	10		7 50	
461	"	"	"	10		7 50	
462	Paterson	"	Driver	2-24		10 00	
463	Newark	"	General work	10		9 00	
464	Millville	"	Digging sand	10		9 00	
465	"	"	Wash sand	10	1 50		
466	"	France	Digging sand	10		9 00	
467	S. Vineland	New York	"	10			†25 00
468	"	Penna	"	10	1 25		
469	Cross Keys	New Jersey	Farm laborer	12			†18 00
470	Turnerville	"	"	10	1 00		
471	Burlington	New Hamp	Iron foundry	10		7 00	
472	Florence	Canada	"	10		7 00	
473	Millville	Maine	Glass house	10		7 50	
474	Camden	England	Iron works	10		7 50	
475	"	Rhode Isl'd	Work on streets	10		7 50	
476	"	Canada	Iron works	10		7 00	
477	"	New York	"	10		7 05	
478	Millville	New Jersey	Glass house	10	1 25	7 50	
479	"	Penna	"	10		8 52	
480	Winslow	New Jersey	"	10	1 15		
481	Clayton	"	"	10	1 25		
482	Woodbury	Penna	"	10	1 25		
483	Williamstown		Strapping boxer	10	1 10		
484	Vineland	New York	General work	10		8 00	
485	Paterson	Ireland	Flax mill		1 25		
486	"	New Jersey	Public	10		7 50	

* Work seven days in a week. † Per month and board.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

MISCELLANEOUS EMPLOYES.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all Others in the Family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$240 00	90	1	89				1	$250 00						
335 00							1	335 00						
365 00						$420 00	3	842 00						
468 00	60	15	40	5			1	424 00	$11 00			8		
468 00							1	468 00						
450 00	6						1	450 00	9 00			1		
750 00							1	750 00						
365 00						215 00	2	615 00						
180 00	200		200				1	379 00	9 00					
850 00	78						1	700 00						

LABORERS.

$95 00	225		225		$130 00	$100 00	3	$385 00	$7 00					
90 00	200		200				1	230 00						
540 00					200 00		2	726 00	*45 00			14		
449 82	6			6	160 00	200 00	3	794 00	8 50			40		
400 80					220 00		2	542 00	7 10					
345 00	12			12	50 00	200 00	3	550 00	*32 00					
265 00	150		150				1	350 00	7 50					
450 00							1	400 00				40		
180 00	150				200 00	200 00	4	600 00	7 50					
360 00							1	360 00						
360 00							1	400 00						
500 00							1	500 00	9 00					
450 00							1	450 00	9 00			15		
400 00	33	25		8			1	450 00						
450 00							1	450 00	9 00			15		
424 00	16	16					1	400 00						
250 00	50		50				1	150 00	7 00			7		
300 00	60		60		50 00		2	350 00	7 50			8		
216 00							1	175 00						
250 00	50		50				1	250 00						
350 00	6	6					1	350 00	7 00					
350 00	12					100 00	2	450 00	7 00					
375 00	12		12			300 00	3	675 00	7 50					
375 00	12				50 00	125 00	3	550 00	7 50					
337 00	42					400 00	3	737 00						
350 00	12			12		300 00	2	650 00	7 00					
366 60	6			6		200 00	3	550 00	7 00			9		
375 00	12		12			300 00	3	675 00	7 50			47		
375 00	60						1	400 00						
307 00	22	10	12			200 00	2	500 00	6 90					
358 00	30			24			1	335 00	7 50					
375 00	12			12		200 00	3	475 00	7 50					
477 00							2	477 00	7 00			3		
320 00	72		72				1	250 00						
375 00	15		15			165 00	2	540 00	7 50					
150 00	175						1	208 00						

*Month.

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

LABORERS.

Office number.	Location.	Place of Birth.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.
489	Paterson	Ireland	Public	10		$7 50	
490	"	New York	Stone breaker	10		7 50	
492	"	Germany	Jobbing	10		7 50	
493	"	Ireland	General work	10		6 00	
494	"	England	"	10		9 00	
496	"	Ireland	"	10		7 50	
497	"	"	Laborers' work	10		7 50	
602	"	"	Flax mill	10		6 00	
603	"	New Jersey	"	10		6 00	
498	Cranford	Ireland	Dye house	10		7 50	
499	Rahway	"	"	10		7 50	
500	Cranford	"	In mill	10		6 00	
501	Woodside	Germany		10		9 00	
502	East Orange	Ireland	Road board	10		12 00	
503	Newark	"	Mason's laborer	10	$2 00		
599	Trenton	England	Wire drawer	10	2 52	15 12	
596	"		Potter, hollow-ware presser	10		17 00	
595	"	New Jersey	" " "	10			
600	"	England	" thrower	10		27 00	
601	"	New Jersey	" handler	10		10 33	
602	"	Ireland	" "	10		11 00	
598	"	New Jersey	Decorator	10		15 00	
597	"	"	"	10		15 00	

MINERS.

604	Port Oram	England	Miner, iron ore	8	$1 00		
605	"	New Jersey	" "	8	1 00		
606	"	England	" "	8	1 00		
607	"	Ireland	" " by ton	10	1 10		
611	"	England	" "	8	1 00		
614	"	Ireland	" "	8	1 00		
615	"	England	" " by ton	8			
616	"	"	" "				
617	"	Ireland	" "				
618	"	England	" "	8	1 10	$6 60	
619	"	"	" " by ton	10			
622	"	"	" " "	8			
623	"	"	Laborer, loading ore	10	1 25	7 50	
625	"	New Jersey	Miner	8			
626	"	Ireland	"	8			
627	"	England	" by ton	8			
628	"	"	"			6 60	
629	"	New Jersey	"	8			
620	"	England	Timbering mine	8			
621	"	"	Miner				
624	"	"	Tilling	8			
639	"	Ireland	"	8			
610	"	"	"	8			
612	"	"	Looking after engine	12		7 35	
608	"	New Jersey	Blacksmith	10		9 00	

TABLE No. 1.—INDIVIDUAL EMPLOYES—*Continued.*

LABORERS.

Actual earnings from July 1st, 1884, to July 1st, 1885.	Days Unemployed During Year—Excluding Legal Holidays.				Earnings of all others in the family.		Number working for wages.	Total expenditures for self and family during the year.	Average Weekly Wages of Others in Subdivision.			Number Employed in Subdivision.		
	Total.	From sickness.	From inability to obtain work.	Other causes.	Wife.	Children.			Men.	Women.	Children.	Men.	Women.	Children.
$320 00	36		36				1	$350 00	$7 50					
375 00	10		10				1	375 00	6 25			23		
270 00	90		90		$200 00		2	482 00	7 00					
25 00	275		275				1	208 00						
300 00	96		96			$100 00	2	400 00	7 00					
215 00	125						1	320 00						
187 00	150				225 00		2	560 00	6 00					
264 00	30		30				1	264 00						
264 00	30		30			160 00	3	454 00	7 50			10		
300 00							1	216 00						
368 00	25						1	216 00	7 50			20		
240 00	60						1	240 00						
365 00	78		78				1	402 00	9 00			3		
390 00	110	3	95	12			1	400 00						
312 00	156					208 00	3	553 00						
519 12	103		103				1	567 00	15 00			40		
808 75	42					250 00	2	952 50				16		
525 00	72		24	48			1	453 00						
657 00	146		146				1							
484 00	48		48											
321 15	172		169	3		76 25	2	462 00	$15–$18	$7 00		5	5	10
730 00	18	3		15			1	452 45	$8–$12	4 00	$3 00			

MINERS.

$360 00						$360 00	2	$600 00	$6 00			16		
360 00						360 00	3	650 00	6 00					
360 00							1	360 00	6 00			16		
342 00						240 00	2	583 00	6 60			40		
300 00	8					250 00		500 00						
360 00						300 00	2	500 00	6 00			16		
360 00														
420 00							1	380 00						
360 00						360 00	2	600 00						
400 00							1	400 00						
500 00								400 00						
380 00							1	380 00	7 50			6		
400 00														
420 00														
420 00						300 00	2	600 00						
360 00								400 00						
275 00														
360 00								360 00						
400 00						312 00	2	600 00						
420 00						500 00	3	580 00						
400 00								400 00						
480 00								380 00						
480 00								480 00						
384 00						240 00	2	600 00						
480 00						800 00	5	1,090 00						

TABLE No. 2.—ESTABLISHMENTS.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
1	Millville	Total	374	195		163			107	267	3		
	Green glass (bottle and vial). Three factories.	Blowers		80				19	99			†$90 00	1
		Stopper grinders		3					3			18 00	3
		Master shearers		3						3		18 48	4
		Shearers		6						6		18 00	3
		Mould makers		13						13		24 00	2
		Blacksmiths		2						2		17 28	1
		Packers		13						13		18 00	3
		Engineers		2						2		13 92	1
		Laborers		47						47		9 00	4
		Take out ware		6		3				9		10 38	2
		Masons		3						3		18 00	
		Box makers		5					5			20 00	1
		Pot makers		2						2			
		Tending boys				160				160		9 00	1
		Lear tenders		3						3		12 00	3
		Mill house		4						4		15 00	1

No. 1.—Wages are here given for the week.

According to the league statistics the average monthly wages of blowers were only $115. Our averages exceed this sum, because the pay of supernumeraries are not included; nor has allowance been made in these reports for individual lost time, except where expressly stated. This lost time averages about five per cent. Our *monthly* wages are for a full month's work. Glass factories are idle during July and August; but some of the hands work all the year, viz., mould makers, pot makers, mill-house men, blacksmiths, masons, laborers, &c. Blowers, and those whose work depends on them only, are engaged forty-three weeks of the year.

2	Salem	Total	234	116				30	80	154	2-3		
	Green glass (bottle and vial).	Blowers		50				30				$130 00	
		Tending boys				98						26 00	20
		Packers		12								40 00	3
		Master shearers		4									
		Shearers		8								45 00	
		Box makers		3									
		Blacksmiths		2								70 00	1
		Engineers		2									
		Mill hands		6									
		Carpenter		1									
		Pot maker		1									
		Mould maker		1									
		Laborers		16									

No. 2.—This factory was in operation for 9½ months. See remarks under No. 1.

4	Bridgeton	Total	99	64		25		10	52	46	3		
	Green glass (bottle and vial). Two factories	Blowers		42				10				$140 00	6
		Tending boys				25						22 00	5
		Packers		4								40 00	2
		Master shearer		1									
		Shearers		2								40 00	1
		Box maker		1									

* For summary, see introduction. † Wages are given for the week; unless expressly stated, monthly wages are reported below.

TABLE No. 2.—ESTABLISHMENTS.

GREEN GLASS (Bottle and Vial) FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$3 00 5 00	.....	No	No	.....
$22 00	10	$30 00	$1230 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	13
18 00	3	18 00	758 00	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	8
.....	.....	18 48	781 86	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	16 50	688 07	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	18
12 00	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	18
10 38	.....	14 33	716 50	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
10 02	4	13 08	533 78	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	13
10 38	1	12 15	607 50	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	13
8 52	6	8 76	420 48	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
6 76	2	8 58	343 20	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	18 00	900 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	18
12 00	1	15 00	615 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	20 00	1000 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	12
.....	.....	12 00	492 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	13
10 00	1	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 50 6 00	.....	No	No	.....
$90 00	.....	$105 00	$997 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	.....
11 00	48	16 00	152 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	.....
35 00	4	38 00	361 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
.....	.....	80 00	760 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
40 00	.....	42 50	403 75	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	50 00	475 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
50 00	1	60 00	690 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	50 00	576 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	60 00	690 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	75 00	862 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	50 00	576 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 00 5 00	.....	No	No	.....
$95 00	3	$120 00	$1140 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	13
10 00	6	14 00	133 00	.....	.....	.....	.....	.....	.....	2 00 5 00	8½	.....	.....	13
30 00	2	35 00	333 50	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	75 00	712 50	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	13
30 00	1	35 00	333 50	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	13
.....	.....	50 00	475 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
4	Bridgeton	Blacksmith		1									
	Green glass	Engineer		1									
	(bottle and	Mill hands		2								$30 00	1
	vial).	Carpenter		1									
	Two factories	Pot maker		1									
		Mould maker		1									
		Laborers		5									
		Mason		1									
		Stopper grinder		1									

No. 4.—See remarks under No. 1.

The average yearly wages are given for only one of the factories; the second ran only during five months.

5	Bridgeton	Total	203	95		80		28	112	91			
	Green glass	Blowers		44				28				*$50 00	2
	(bottle and vial).	Tending boys				80						9 00	20
	Two factories	Packers		8								8 00	4
		Box makers		4								9 50	2
		Master shearers		2								18 50	1
		Shearers		4								10 40	2
		Helpers		2								7 50	
		Get out ware		3							3	11 00	2
		Grinders		4								7 50	
		Batch makers		2								8 00	
		Pot maker		1								13 00	
		Clay hands		2							2	7 50	
		Blacksmith		1									
		Engineer		1									
		Shipper		1									
		Lear taker off		1									
		Wood sawyers		2									
		Team drivers		4								7 80	
		Yardmen		3									
		Machinists		3								18 00	
		Watchman		1									
		Carpenter		1		1							

No. 5.—Wages here given for the week.

The average time made by all the employes was eight and one-half months. Average time of blowers thirty-two weeks.

9	Woodbury	Total	136	66		60		10	47	89			
	Green glass	Blowers		37				10				$175 00	6
	(bottle and	Tending boys				60						27 00	4
	vial).	Packers		6								60 00	3
		Master shearers		2									
		Shearers		4								45 00	2
		Box making		2									
		Blacksmith		1									
		Engineers		2									

*Wages here given for the week.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	$60 00	$692 31	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	50 00	576 93	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
$20 00	1	25 00	288 56	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	60 00	992 31	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	75 00	865 68	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	60 00	672 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	20
.....	.....	26 00	286 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	60 00	691 31	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	60 00	720 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$10 00	10	$21 00	$672 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	.....
2 65	50	3 00	96 00	.....	.....	.....	.....	.....	.....	$2 65 5 00	8½	.....	.....	.....
7 50	4	7 75	248 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
6 00	2	7 62	243 84	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
14 00	1	16 00	512 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
6 50	2	8 45	270 40	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
7 50	.....	7 50	240 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
8 00	1	10 00	320 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	7 50	240 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	8 00	272 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	13 00	442 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	7 50	255 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	18 00	612 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	9 00	306 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	8 00	272 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	6 00	204 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	6 00	204 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	7 50	255 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	7 50	255 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	4 00	136 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	8 00	282 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	10 00	340 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$100 00	6	$125 00	$1187 50	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	13
12 00	21	18 00	171 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	13
45 00	3	52 50	478 75	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	80 00	760 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	13
40 00	.....	42 50	382 50	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	13
.....	.....	50 00	475 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	60 00	570 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	50 00	575 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	13

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
9	Woodbury	Mill hands		2									
	Green glass	Pot maker		1									
	(bottle and	Laborers		8									
	vial).	Mason		1									

No. 9.—See remarks under No. 1.

10	Glassboro	Total	304	139		125		40	116	183			
	Green glass	Blowers		76				40				$130 00	6
	(bottle and	Tending boys				125						25 00	11
	vial).	Packers		15								40 00	4
		Master shearers		4								100 00	1
		Shearers		8								50 00	4
		Box makers		3									
		Blacksmiths		2									
		Engineers		2									
		Mill hands		4									
		Carpenter		1									
		Pot maker		1									
		Mould maker		1									
		Laborers		20									
		Masons		2									

No. 10.—See remarks under No. 1. The low average wages are owing to the fact that firm was experimenting with a new kind of furnace. The average run of these four factories was nine months.

11	Williamstown	Total	179	81		60		38					
	Green glass	Blowers		47				38				$130 00	6
	(bottle and	Tending boys				60						20 00	20
	vial).	Packers		7								40 00	3
		Master shearers		2									
		Shearers		4								45 00	2
		Box maker		1									
		Blacksmith		1									
		Engineers		2									
		Mill hands		4								32 00	2
		Pot maker		1									
		Laborers		10								35 00	5
		Masons		2									

No. 11.—See remarks under No. 1.

12	Clayton	Total	243	123		90		30	98	145			
	Green glass	Blowers		68				30				$150 00	12
	(bottle and	Tending boys				90						25 00	15
	vial).	Packers		10								40 00	2
		Master shearers		4									
		Shearers		8								45 00	1
		Box makers		4								45 00	2
		Blacksmiths		2								90 00	1
		Engineers		2									
		Mill hands		4								30 00	2
		Carpenter		1									

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	$30 00	$345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	75 00	863 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	13
.....	.....	65 00	715 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$80 00	9	$100 00	$950 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	.....
11 00	.....	15 00	135 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	.....
35 00	4	36 00	324 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
80 00	3	85 00	765 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
40 00	4	45 00	405 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
.....	.....	50 00	450 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	50 00	550 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	50 00	550 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	30 00	330 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	60 00	660 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	80 00	800 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	50 00	550 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	30 00	330 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	60 00	660 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$90 00	10	$110 00	$1000 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	25
11 00	24	15 00	135 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	25
35 00	4	37 00	333 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	75 00	665 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	25
35 00	2	40 00	360 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	25
.....	.....	50 00	450 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	60 00	540 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	50 00	600 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	12
28 00	2	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	80 00	920 00	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	12
25 00	5	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	60 00	690 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$100 00	9	$120 00	$1080 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	25
11 00	60	15 00	135 00	.....	.....	.....	.....	.....	.....	.....	8½	.....	.....	25
35 00	8	36 00	324 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	75 00	675 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	25
35 00	1	40 00	360 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	25
55 00	2	50 00	450 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	25
45 00	...	67 50	776 25	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	50 00	600 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
28 00	2	29 00	327 93	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	18
.....	.....	60 00	660 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
12	Clayton	Pot maker	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Green glass (bottle and vial).	Mould makers	.....	2	.....	.....	.....	.....	.....	.....	.....	$60 00	1
		Laborers	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Masons	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 12.—See remarks under No. 1.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
3, 6, 7, 8, 13, 14, 15, 16	Salem	Total	488	228	.....	167	.....	93	.....	.....	.....	.....	.....
	Bridgeton	Blowers	.....	104	.....	.....	.....	93	.....	.....	.....	$115 00	27
	Clayton	Tending boys	.....	.....	.....	167	.....	.....	.....	.....	.....	24 25	30
	Winslow	Packers	.....	16	.....	.....	.....	.....	.....	.....	.....	45 00	.....
	Wilton and Port Elizabeth.	Master shearers	.....	8	.....	.....	.....	.....	.....	.....	.....	85 00	.....
		Shearers	.....	16	.....	.....	.....	.....	.....	.....	.....	44 37	5
	Green glass (bottle and vial). Eight firms.	Box makers	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmiths	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineers	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Mill hands	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Pot makers	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Mould maker	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	41	.....	.....	.....	.....	.....	.....	.....	30 00	.....

Nos. 3, 6, 7, 8, 13, 14, 15, 16.—Several of these factories only ran part time of the season. The average loss time for the year was one hundred days, and consequent low annual earnings.

WINDOW-GLASS FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
20	Millville	Total	92	74	.....	18	.....	.....	47	45	.....	.....	.....
	Window-glass	Blowers	.....	16	.....	.....	.....	.....	.....	.....	.....	$40 00	1
		Gatherers	.....	16	.....	.....	.....	.....	.....	.....	.....	22 00	.....
		Flatteners	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Flatteners' helpers	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Second hands	.....	.....	.....	16	.....	.....	.....	.....	.....	.....	.....
		Roller boys	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
		Cutters	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Master shearers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shearers	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Box makers	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 20.—The factory was in operation for ten months, and the months of July and August are not included in the time lost by the blowers, gatherers, flatteners, flatteners' helpers, cutters, master shearers and shearers; the balance of employes was employed twelve months.

The piece-workers are the blowers, gatherers, flatteners, cutters, and, in some factories, the master shearers. The gatherers get sixty-seven per cent. of the blowers' prices. A flattener works for four blowers and gets one-quarter of blowers' prices, making his wages the same. Master shearers get same wages as blowers. Double-thick blowers get one and three-quarters prices, and their gatherers, fifty-five per cent., but not out of the blowers' wages. Cutters get twenty-five plus two and one-half per cent. and three-quarters extra for double-thick. Forty-eight boxes are a full day's work; the average being forty-six of one hundred feet.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GREEN GLASS (Bottle and Vial) FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	$75 00	$840 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	20
$50 00	1	55 00	621 93	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	18
.....	.....	30 00	339 21	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	18
.....	.....	60 00	678 46	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	18
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$68 00	25	$86 00	$711 00	.....	.....	.....	.....	.....	.....	.....	8⅓	.....	.....	.....
12 00	55	17 10	141 53	.....	.....	.....	.....	.....	.....	.....	8⅓	.....	.....	.....
37 50	.....	39 50	343 19	.....	.....	.....	.....	.....	.....	.....	9½	.....	.....	.....
60 00	.....	75 63	618 06	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
37 90	5	40 44	328 56	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	51 60	441 08	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	58 00	574 28	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	49 88	483 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	28 00	265 50	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	77 00	729 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	60 00	690 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
25 00	.....	28 50	266 67	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....

WINDOW-GLASS FACTORIES.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 p. c.	.....
$22 00	6	$27 00	$999 00	.....	.....	.....	.....	.....	.....	.....	9½	.....	.....	36
14 74	.....	18 04	613 48	.....	.....	.....	.....	.....	.....	.....	9½	.....	.....	36
.....	.....	27 00	999 00	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	36
.....	.....	10 75	397 75	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	36
.....	.....	2 50	92 50	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	36
.....	.....	4 00	148 35	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	36
.....	.....	22 55	834 35	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	36
.....	.....	25 00	925 00	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	36
.....	.....	10 00	370 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	36
.....	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	12
.....	.....	8 00	400 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	12
.....	.....	12 00	444 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WINDOW-GLASS FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
21	Bridgeton	Total	113	95		18			48	65			
	Window-glass	Blowers		24								$40 00	2
		Gatherers		24								22 00	2
		Flatteners		6									
		Flatteners' helpers		9									
		Second hands				16							
		Roller boys				2							
		Cutters		12									
		Master shearers		3									
		Shearers		6									
		Box makers		3									
		Blacksmith		1									
		Engineer		1									
		Laborers		6									

No. 21.—The factory was in operation ten months. See No. 20.

22	Bridgeton	Total	135	108		27			71	54			
	Window-glass	Blowers		24					24			$40 00	1
		Gatherers		24					24			22 00	1
		Second hands				16				16		4 00	1
		Flatteners		6					6				
		Flatteners' helpers				9						9 00	1
		Roller boys				2				2			
		Cutters		12					12				
		Packers		3						3		10 00	1
		Box makers		3					3			9 00	
		Master shearers		3						3			
		Shearers		6						6			
		Shearers' helpers		3						3			
		Batch makers		3						3			
		Pot maker		1						1			
		Clay-room men		2						2			
		Blacksmith		1						1			
		Engineer		1						1			
		Grinders		4						4			
		Shipper		1									
		Wood sawyers		2					2				
		Teamsters		5						5			
		Yard men		3						3			
		Carpenter		1						1			

No. 22.—The factory in operation ten months. See No. 20.

23	Glassboro	Total	44	44					44				
	Window-glass	Blowers		16								$39 00	2
		Gatherers		16								21 45	
		Flatteners		4									
		Cutters		8									

No. 23.—See No. 20.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WINDOW-GLASS FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
													5 p. c.	
$24 00	2	$26 00	$1014 00								9½			24
16 08	2	17 60	686 79								9½			24
		26 00	1014 00								11			24
		10 75	419 25								11			24
		2 50	97 50								11			24
		4 00	156 00								11			24
		22 55	524 55								10			12
		25 00	725 00								15			24
		10 00	390 00								12			24
		12 00	576 00								10			24
		12 00	600 00								10			12
		11 00	550 00								12			12
		7 50	390 00								10			12
													5 p. c.	
$20 00	8	$22 70	$839 90								7½			36
13 40	8	15 20	562 40								7½			36
2 50	6	3 00	111 00								11			36
		22 70	839 40								11			36
4 62	3		296 00								11			36
		3 70	136 90								11			36
		23 57	919 23								10			24
6 00	1	8 00	296 00								8			36
6 00		7 50	277 50								8			36
		23 00	851 00								18			36
		12 00	444 00								14			36
		8 00	216 00								8			36
		8 00	296 00								7			36
		13 25	662 50								8			12
		7 50	375 00								9			12
		17 30	865 00								9			12
		8 00	400 00								14			12
		9 00	333 00								12			36
		9 00	450 00								8			12
		6 00	300 00								8			12
		7 60	380 00								10			12
		7 50	375 00								10			12
		7 50	375 00								10			12
													5 p. c.	
$23 00		$25 00	$925 00								9			6
15 45		16 75	619 75								9			6
		25 00	925 00								10			6
		22 96	887 64								10			6

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WINDOW-GLASS FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
24	Winslow	Total	44	44									
	Window-glass	Blowers		16								$37 50	2
		Gatherers		16								20 62	
		Flatteners		4									
		Cutters		8									
25	Malaga	Total	44	44					44				
	Window-glass	Blowers		16					16			$40 00	2
		Gatherers		16					16			22 00	2
		Flatteners		4					4				
		Cutters		8					8				
26	Quinton	Total	44	44					38				
	Window-glass	Blowers		16					16			$40 00	2
		Gatherers		16								22 00	2
		Flatteners		4					4				
		Cutters		8					8				
27	Atco	Total	22	22					19	30			
	Window-glass	Blowers		8								$40 00	1
		Gatherers		8								22 00	1
		Flatteners		2									
		Cutters		4									
28	Bridgeton	Total	22	22					22	28			
	Window-glass	Blowers		8								$40 00	1
		Gatherers		8								22 00	
		Flatteners		2									
		Cutters		4									

Nos. 24, 25, 26, 27, 28.—See No. 20 for the above.

29	Bridgeton	Total	22	22					22	28			
	Window-glass	Blowers		8								$40 00	1
		Gatherers		8								22 00	
		Flatteners		2									
		Cutters		4									

No. 29.—This concern was in operation but five months in the year.

30	Bridgeton	Total	22	22					22	26			
	Window-glass	Blowers		8								$40 00	
		Gatherers		8								22 00	
		Flatteners		2									
		Cutters		4									

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WINDOW-GLASS FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
													5 p. c.	
$25 00	14	$26 56	$1142 08								9			
16 75		17 79	769 97								9			
		25 56	1142 08								10			
		23 98	1031 14								11			
													5 p. c.	
$22 00	6	$27 00	$1080 00								9			18
14 74	6	17 55	702 00								9			18
		27 00	1080 00								10			18
		22 55	802 00								10			18
													5 p. c.	
$23 00	6	$27 25	$1171 75								10			
15 41		18 25	784 25								10			
		27 25	1171 75								11			
		22 60	971 80								10			
													5 p. c.	
$20 00	3	$28 00	$1204 00								10			
13 40		18 76	806 68								10			
		28 00	1204 00								11			
		23 98	1022 54								10			
													5 p. c.	
$23 00	2	$25 12	$978 48								9½			24
15 41		16 83	656 37								9½			24
		25 12	978 48								11			24
		22 75	887 25								10			24
													5 p. c.	
$25 00	2	$26 50	$550 00								10			
15 00		16 86	368 50								10			
		26 50	550 00								11			
		22 50	410 00								10			
$25 00		$26 50	$990 00											
15 00		16 80	663 30											
		26 50	990 00											
		21 00	779 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WINDOW-GLASS FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
23-30	.....	Total	248	140	.....	108	.....	.....	.....	.....	.....	.....	.....
	Miscellaneous workmen in window-glass factories. See *supra*.	Flatteners' helpers	.....	60	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Second hands	.....	.....	.....	96	.....	.....	.....	.....	.....	.....	.....
		Roller boys	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....
		Master shearers	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shearers	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Box makers	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmiths	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineers	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborer	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FLINT-GLASS FACTORIES.

17	Millville Flint-glass.	Total	750	390	.....	320	.....	40	200	550	.....	.....	.....
		Blowers	.....	130	.....	.....	.....	35	.....	.....	3	$140 00	15
		Tending boys	.....	.....	.....	320	.....	.....	.....	.....	.....	25 00	25
		Packers	.....	30	.....	.....	.....	.....	.....	.....	.....	42 00	15
		Master shearers	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Lamp workers	.....	35	.....	.....	.....	.....	.....	.....	.....	75 00	.....
		Box makers	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmiths	.....	6	.....	.....	.....	1	.....	.....	.....	80 00	3
		Engineers	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Mill hands	.....	4	.....	.....	.....	.....	.....	.....	.....	40 00	2
		Carpenters	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Pot makers	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Lear tenders	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Mould makers	.....	22	.....	.....	.....	4	.....	.....	.....	80 00	1
		Laborers	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Masons	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Stopper grinders	.....	20	.....	.....	.....	.....	.....	.....	.....	100 00	.....
		Engravers	.....	6	.....	.....	.....	.....	.....	.....	.....	125 00	.....
		Blowers in wooden moulds	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Tube blowers	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Pressers	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 17.—The factories were in operation ten and one-half months. And this was full time for the blowers, tending boys, packers, master shearers and lear tenders. The rest were employed all the year round. See No. 1.

18	Glassboro Flint-glass.	Total	82	40	.....	34	.....	8	28	54	.....	.....	.....
		Blowers	.....	20	.....	.....	.....	8	20	.....	3	$115 00	6
		Tending boys	.....	.....	.....	34	.....	.....	8	.....	.....	25 00	4
		Packers	.....	3	.....	.....	.....	.....	.....	.....	.....	40 00	1
		Master shearer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shearers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Box makers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Mill hands	.....	4	.....	.....	.....	.....	.....	.....	.....	32 00	.....
		Pot maker	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 18.—Factory ran nine months. The blacksmith, engineer, mill hands, pot maker and laborers made eleven and one-half months' time during the year.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WINDOW-GLASS FACTORIES.

Lowest wages paid to men per month.	Number receiving the lowest wages.	Average wages of men for a full month's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	$10 78	$423 53	.....	.....	.....	.....	.....	.....	.....	10½	.....	.....	22
.....	.....	3 16	115 52	.....	.....	.....	.....	.....	.....	.....	10½	.....	.....	22
.....	.....	3 81	144 04	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	22
.....	.....	24 97	990 25	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	25
.....	.....	10 31	396 59	.....	.....	.....	.....	.....	.....	.....	12½	.....	.....	25
.....	.....	11 34	446 72	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25
.....	.....	12 50	573 12	.....	.....	.....	.....	.....	.....	.....	10 4/10	.....	.....	27
.....	.....	11 62	543 50	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	25
.....	.....	7 33	314 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	25

FLINT-GLASS FACTORIES.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$2 50 5 00	.....	No	No	.....
$80 00	20	$100 00	$1050 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
11 00	60	16 00	168 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
38 00	15	40 00	420 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	75 00	487 50	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
75 00	.....	75 00	900 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	75 00	780 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
60 00	3	70 00	800 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	50 00	575 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
35 00	2	37 50	431 25	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	65 00	750 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	80 00	910 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	60 00	630 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
50 00	10	55 00	600 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	35 00	400 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	75 00	837 50	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
60 00	.....	75 00	825 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
100 00	.....	110 00	1000 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	100 00	1050 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
.....	.....	125 00	1300 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
.....	.....	80 00	840 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$2 50 5 00	.....	No	No	.....
$75 00	1	$90 00	$810 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
11 00	.....	16 00	144 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
35 00	.....	38 00	342 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	80 00	720 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	40 00	360 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	50 00	450 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	50 00	575 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	50 00	575 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
25 00	.....	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	75 00	837 50	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	30 00	345 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

ROUGH PLATE-GLASS FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per month, not including superintendents and clerks.	Number receiving the highest wages.
19	Bridgeton	Total	24	.....	.....	.....	.....	.....	.....	24	.....	.....	.....
	Plate-glass.	Master shearer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shearers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Cutter	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 19.—No piece-work, and not really skilled. It only requires a few weeks' practice. Factory in operation ten months.

BOOT AND SHOE FACTORIES.

36	Camden	Total	71	40	27	2	2	.....	60	11	.....	.....	.....
	Women's,	Cutting	.....	6	.....	.....	.....	.....	.....	.....	.....	$18 00	2
	misses' and	Finishing	.....	6	.....	.....	.....	.....	.....	.....	.....	20 00	2
	infants'	Burnishing	.....	6	.....	.....	.....	.....	.....	.....	.....	20 00	2
	shoes.	Heeling	.....	6	.....	.....	.....	.....	.....	.....	.....	16 00	3
		Operating	.....	2	.....	.....	.....	.....	.....	.....	.....	16 00	1
		Lasting	.....	6	.....	.....	.....	.....	.....	.....	.....	18 00	3
		Fitting	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....
		Stock fitting	.....	3	.....	.....	.....	.....	.....	.....	.....	16 00	1
		Edge setting	.....	4	.....	.....	.....	.....	.....	.....	.....	18 00	2
		Others	.....	1	2	2	2	.....	.....	.....	.....	.....	.....

No. 36.—In busy times many of the hands worked from twelve to fifteen hours daily.

37	Camden	Total	119	69	50	.....	.....	.....	100	19	.....	.....	.....
	Women's,	Lasting	.....	12	.....	.....	.....	.....	.....	.....	.....	$20 00	6
	misses' and	Operating	.....	6	.....	.....	.....	.....	.....	.....	.....	20 00	2
	children's.	Edge setting and trimming	.....	3	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Finishing	.....	12	.....	.....	.....	.....	.....	.....	.....	20 00	4
		Heeling	.....	9	.....	.....	.....	.....	.....	.....	.....	20 00	2
		Trimming	.....	6	.....	.....	.....	.....	.....	.....	.....	18 00	3
		Burnishing	.....	8	.....	.....	.....	.....	.....	.....	.....	20 00	2
		Cutting	.....	8	.....	.....	.....	.....	.....	.....	.....	18 00	4
		Stock fitting	.....	5	.....	.....	.....	.....	.....	.....	.....	16 00	1
		Fitting	.....	.....	50	.....	.....	.....	.....	.....	.....	.....	.....

No. 37.—The earnings here given are those of the hands that belong to the union; the others work from ten to twenty per cent. less. The factory was in operation for forty-eight weeks during the year, although not full handed all of that time. Wages increased and reduced in special cases, not generally.

38	Camden	Total	82	50	25	3	4	.....	.....	.....	.....	.....	.....
	Women's and	Lasting	.....	9	.....	.....	.....	.....	.....	.....	.....	$20 00	5
	children's.	Heeling	.....	7	.....	.....	.....	.....	.....	.....	.....	20 00	3
		Trimming	.....	4	.....	.....	.....	.....	.....	.....	.....	20 00	2
		Burnishing	.....	6	.....	.....	.....	.....	.....	.....	.....	20 00	3
		Operating	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	1

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

ROUGH PLATE-GLASS FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
												No	No	
		$75 00	$750 00								12			50
		50 00	500 00								12			50
		75 00	900 00								10			
		30 00	350 00								10			8

BOOT AND SHOE FACTORIES.

											10	No	No	24
$10 00	4	$13 00	$624 00											
12 00	4	14 50	696 00											
12 00	4	14 50	696 00											
11 00	3	13 50	648 00											
12 00	1	14 00	672 00											
12 00	3	15 00	720 00											
				$8 00	6	$5 00	6	$6 00	$288 00	$2 50 3 50				
10 00	1	13 00	624 00											
12 00	2	15 00	720 00											
		8 00	384 00					5 00	240 00					
											10	Yes	Yes	24
$14 00	6	$17 00	$816 00											
12 00	2	15 00	720 00											
12 00	2	14 00	672 00											
12 00	4	15 00	720 00											
12 00	3	15 00	720 00											
11 00	1	14 00	672 00											
15 00	1	16 00	768 00											
12 00	4	15 00	720 00											
9 00	1	12 00	575 00											
				$10 00	6	$5 00	10	$7 50	$360 00	$2 00 4 00				
										$3–$4	10	No	No	72
$14 00	2	$18 00	$720 00											
14 00	1	16 00	640 00											
12 00	2	16 00	640 00											
16 00	3	18 00	720 00											
14 00	1	16 00	640 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
38	Camden ..... Women's and children's.	Finishing	.....	8	.....	.....	.....	.....	.....	.....	.....	$20 00	6
		Cutting	.....	6	.....	.....	.....	.....	.....	.....	.....	20 00	3
		Stock fitting.....	.....	3	.....	.....	.....	.....	.....	.....	.....	16 00	1
		Fitting.....	.....	.....	24	.....	.....	.....	.....	.....	.....	.....	.....
		Edge setting.....	.....	4	.....	.....	.....	.....	.....	.....	.....	20 00	2
		Others.....	.....	1	1	3	4	.....	.....	.....	.....	.....	.....

No. 38.—This shop was not in operation during the months of January, February and March, but many of the workmen were employed elsewhere a part of that time. All of the hands belong to the union and receive full union prices for their labor.

40	Camden ..... Infants'. 100 small firms.	Total.....	1000	600	300	50	50	.....	.....	.....	.....	.....	.....
		Cutting.....	.....	100	.....	.....	.....	.....	.....	.....	.....	$12 00	.....
		Lasting.....	.....	100	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Heeling.....	.....	100	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Burnishing.....	.....	100	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Fitting.....	.....	.....	250	.....	.....	.....	.....	.....	.....	.....	.....
		Stock fitting.....	.....	100	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Edge setting.....	.....	50	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Finishing	.....	50	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Others.....	.....	.....	50	50	50	.....	.....	.....	.....	.....	.....

No. 40.—While there was no general reduction in these small shops, there were special reductions in most of them. The hands do not belong to the union, and the employers are constantly reducing the wages to the detriment of the whole trade. The figures given are estimated only from the best information that could be obtained by our agents.

41	Camden	Total.....	20	9	8	3	.....	10	14	.....	.....	.....	.....
		Tacking	.....	2	.....	.....	.....	.....	.....	.....	.....	$18 00	1
		Heeling.....	.....	1	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Trimming	.....	1	.....	.....	.....	.....	.....	.....	.....	20 00	.....
		Operating.....	.....	1	.....	.....	.....	.....	.....	.....	.....	20 00	.....
		Finishing	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Cutting	.....	1	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Stock fitting.....	.....	1	.....	.....	.....	.....	.....	.....	.....	11 00	.....
		Fitting..	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....
		Others.....	.....	.....	.....	3	.....	.....	.....	.....	.....	8 00	1
42	Burlington..... Women's, misses' and infants' shoes.	Total	42	24	18	.....	.....	.....	40	2	.....	.....	.....
		First laster.....	.....	2	.....	.....	.....	.....	.....	.....	.....	$18 00	1
		Second laster.....	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Edge setting.....	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Finishing	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Heeling.....	.....	4	.....	.....	.....	.....	.....	.....	.....	20 00	1
		Burnishing.....	.....	4	.....	.....	.....	.....	.....	.....	.....	20 00	1
		Operating.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Stock fitting.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Fitting.....	.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....
		Cutting.....	.....	3	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Others.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....

No. 42.—This factory was in operation but twenty-five weeks in the year, but some of the hands found employment elsewhere. The figures given do not account for that, nor is the time lost by individuals taken into account; but the earnings were the amount possible to be made if the employes worked full time the factory was in operation.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$15 00	2	$18 75	$750 00											
15 00	3	17 50	700 00											
10 00	2	12 00	480 00											
				$12 00	4	$6 00	10	$7 50	$300 00					
16 00	2	18 00	720 00											
		8 00	320 00			6 00		6 00	240 00					
										$2 00 4 00	10 13		No	72
$7 00		$10 00	$400 00											
7 00		10 00	400 00											
7 00		10 00	400 00											
10 00		12 00	480 00											
				$6 00		$4 00		$5 00	$200 00					
6 00		9 00	360 00											
7 00		9 00	360 00											
8 00		10 00	400 00											
									160 00					
										$2 50 3 00	10	No	No	48
$10 00	1	$14 00	$616 00											
		16 00	704 00											
		20 00	880 00											
		20 00	880 00											
12 00		15 00	660 00											
		18 00	792 00											
		11 00	484 00											
				$10 00	4	$5 00	4	$7 50	$286 00					
6 00	1	7 00	308 00	6 00	1	4 00	1	5 00	220 00					
											10	No	No	
$12 00	1	$15 00	$375 00											
12 00	1	15 00	375 00											
12 00	1	15 00	375 00											
12 00	1	15 00	375 00											
12 00	1	16 00	400 00											
12 00	1	16 00	400 00											
		13 00	325 00											
		13 00	325 00											
				$9 00	4	$6 00	3	$7 00	$175 00					
12 00		14 00	350 00											
		7 00	175 00					6 00	150 00					

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
43	Burlington ..... Women's, misses' and infants' shoes.	Total	158	98	60	.....	.....	.....	148	10	.....	.....	.....
		First lasting	.....	8	.....	.....	.....	.....	.....	.....	.....	$18 00	4
		Second lasting	.....	8	.....	.....	.....	.....	.....	.....	.....	18 00	4
		Edge setting	.....	8	.....	.....	.....	.....	.....	.....	.....	18 00	4
		Finishing	.....	8	.....	.....	.....	.....	.....	.....	.....	18 00	4
		Heeling	.....	12	.....	.....	.....	.....	.....	.....	.....	20 00	4
		Burnishing	.....	12	.....	.....	.....	.....	.....	.....	.....	20 00	3
		Operating	.....	10	.....	.....	.....	.....	.....	.....	.....	16 00	3
		Stock fitting	.....	10	.....	.....	.....	.....	.....	.....	.....	16 00	4
		Cutting	.....	12	.....	.....	.....	.....	.....	.....	.....	16 00	3
		Fitting	.....	.....	50	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	10	10	.....	.....	.....	.....	.....	.....	.....	.....

No. 43.—This factory ran for fifty weeks, and the yearly wages were reckoned accordingly. The actual earnings were probably less, as observation has convinced us that the individual lost time, through sickness and other causes, fully equals five per cent., even when no stoppage at the establishment takes place.

44	Burlington ..... Infants'. Ten firms.	Total	352	182	170	.....	.....	.....	.....	.....	.....	.....	.....
		First laster	.....	24	.....	.....	.....	.....	.....	.....	.....	$15 00	.....
		Second laster	.....	24	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Edge setting	.....	24	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Finishing	.....	24	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Heeling	.....	30	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Burnishing	.....	30	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Operating	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Stock fitting	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Cutting	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Fitting	.....	.....	150	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	20	20	.....	.....	.....	.....	.....	.....	.....	.....

No. 44.—This blank comprises estimated wages from ten small firms. These, it will be seen, are below those of the larger establishments, where there is improved machinery with an abundant capital to operate.

45	Lumberton ..... Infants' shoes	Total	62	39	23	.....	.....	.....	40	22	.....	.....	.....
		Burnishing	.....	6	.....	.....	.....	.....	.....	.....	.....	$16 00	.....
		Heeling	.....	6	.....	.....	.....	.....	.....	.....	.....	14 00	.....
		Cutting	.....	4	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Lasting	.....	6	.....	.....	.....	.....	.....	.....	.....	14 00	.....
		Operating	.....	2	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Trimming	.....	6	.....	.....	.....	.....	.....	.....	.....	14 00	.....
		Fitting	.....	.....	20	.....	.....	.....	.....	.....	.....	.....	.....
		Finishing	.....	6	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Others	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....

No. 45.—Mostly time-work.

46	Lumberton ..... Infants' and children's shoes.	Total	80	45	35	.....	.....	.....	.....	.....	.....	.....	.....
		Burnishing	.....	6	.....	.....	.....	.....	.....	.....	.....	$16 00	2
		Heeling	.....	6	.....	.....	.....	.....	.....	.....	.....	15 00	1
		Lasting	.....	6	.....	.....	.....	.....	.....	.....	.....	15 00	2
		Cutting	.....	4	.....	.....	.....	.....	.....	.....	.....	12 00	2
		Operating	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
											10	No	No	12
$12 00	4	$15 00	$750 00											
12 00	4	15 00	750 00											
12 00	4	15 00	750 00											
12 00	4	15 00	750 00											
12 00	4	16 00	800 00											
12 00	3	16 00	800 00											
10 00	2	13 00	650 00											
10 00	3	13 00	650 00											
12 00	4	14 00	700 00											
				$9 00	20	$6 00	15	$7 00	$350 00					
		7 00	350 00					6 00	300 00					
											10		10–15 p. c.	12
$10 00		$12 00	$600 00											
10 00		12 00	600 00											
10 00		12 00	600 00											
10 00		12 00	600 00											
11 00		13 00	650 00											
11 00		13 00	650 00											
		12 00	600 00											
		11 00	550 00											
		12 00	600 00											
				$8 00		$5 00		$6 00	$300 00					
		7 00	350 00					5 00	250 00					
											9		10 p.c.	45
$8 00		$12 00	$540 00											
7 00		10 00	450 00											
8 00		10 00	450 00											
7 00		10 00	450 00											
8 00		10 00	450 00											
8 00		11 00	495 00											
				$8 00		$5 00		$6 00	$270 00					
10 00		12 00	540 00											
		7 00	315 00					5 00	225 00					
											9	av 1 p. c.		
$8 00	2	$11 00	$572 00											
8 00	1	10 50	546 00											
8 00	2	10 00	520 00											
10 00	2	11 00	572 00											
		10 00	520 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
46	Lumberton ..... Infants' and children's shoes.	Trimming	.....	6	.....	.....	.....	.....	.....	.....	.....	$14 00	.....
		Finishing	.....	6	.....	.....	.....	.....	.....	.....	.....	16 00	3
		Fitting	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	9	5	.....	.....	.....	.....	.....	.....	.....	.....

No. 46.—Factory ran full time. Average wages $7 per week.

47	Lumberton ..... Infants' shoes	Total	82	50	32	.....	.....	.....	75	7	.....	.....	.....
		Burnishing	.....	8	.....	.....	.....	.....	.....	.....	.....	$15 00	5
		Heeling	.....	8	.....	.....	.....	.....	.....	.....	.....	15 00	3
		Lasting	.....	8	.....	.....	.....	.....	.....	.....	.....	15 00	3
		Cutting	.....	6	.....	.....	.....	.....	.....	.....	.....	14 00	4
		Operating	.....	4	.....	.....	.....	.....	.....	.....	.....	12 00	2
		Trimming	.....	8	.....	.....	.....	.....	.....	.....	.....	15 00	4
		Fitting	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	8	2	.....	.....	.....	.....	.....	.....	10 00	6

No. 47.—The employer says: "Our work people seem better off here than anywhere we know of. They dress and live better, especially those who are settled; and all are so with rare exception." Most of the work is machine turn-work, and few of the workmen are fully skilled workmen.

49	Newark ..... Boots and shoes.	Total	65	55	.....	10	.....	.....	35	30	.....	.....	.....
		Upper cutting	.....	11	.....	.....	.....	.....	.....	11	.....	$12 00	4
		Stock cutting	.....	1	.....	1	.....	.....	.....	2	.....	10 00	1
		Stock channeling	.....	1	.....	.....	.....	.....	.....	1	.....	10 00	1
		Stock fitting	.....	2	.....	1	.....	.....	.....	3	.....	12 00	2
		Lasting	.....	20	.....	.....	.....	.....	20	.....	.....	11 00	2
		McKay machine	.....	1	.....	.....	.....	.....	.....	1	.....	15 00	1
		Leveling	.....	.....	.....	1	.....	.....	.....	1	.....	5 00	1
		Heeling	.....	1	.....	.....	.....	.....	.....	1	.....	15 00	1
		Trimming	.....	2	.....	.....	.....	.....	.....	2	.....	12 00	2
		Second lasting	.....	.....	.....	3	.....	.....	.....	3	.....	5 00	3
		Edge burnishing	.....	3	.....	.....	.....	.....	3	.....	.....	12 00	2
		Heel burnishing	.....	2	.....	.....	.....	.....	2	.....	.....	12 00	.....
		Finishing	.....	10	.....	.....	.....	.....	10	.....	.....	14 00	2
		Treeing	.....	1	.....	4	.....	.....	.....	5	.....	12 00	1

No. 49.—In this factory there was considerable time lost by what is known as one-half or three-quarter time, but the shop was in operation all but twenty-four full days.

50	Newark ..... Shoes.	Total	67	57	2	8	.....	.....	.....	.....	.....	.....	.....
		Stock cutting	.....	4	.....	2	.....	.....	3	1	.....	$15 00	1
		Stock channeling	.....	1	.....	1	.....	.....	1	1	.....	12 00	1
		Lasting, hand	.....	21	1	.....	.....	.....	22	.....	.....	16 00	2
		Sewing, machine	.....	2	.....	.....	.....	.....	2	.....	.....	25 00	2
		Leveling, machine	.....	1	.....	1	.....	.....	1	1	.....	25 00	1
		Edge trim'g, machine	.....	2	.....	.....	.....	.....	2	.....	.....	16 00	2
		Heel trim'g, machine	.....	1	.....	.....	.....	.....	1	.....	.....	25 00	.....
		Edge burn'g, machine	.....	4	.....	.....	.....	.....	4	.....	.....	14 00	2
		Heel burn'g, machine	.....	3	.....	.....	.....	.....	3	.....	.....	12 00	.....
		Bottom slicking	.....	1	.....	1	.....	.....	1	1	.....	.....	.....
		Finishing	.....	10	.....	.....	.....	.....	10	.....	.....	14 00	2
		Upper cutting	.....	3	1	1	.....	.....	5	.....	.....	15 00	.....
		Lining cutting	.....	1	.....	.....	.....	.....	1	.....	.....	14 00	.....
		Trimming cutting	.....	1	.....	.....	.....	.....	.....	1	.....	9 00	.....
		Heeling	.....	2	.....	2	.....	.....	.....	4	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$8 00		$11 00	$572 00											
8 00	3	12 00	624 00											
				$10 00		$6 00		$7 00	$390 00					
		7 50	390 00					7 00	390 00					
											8	av. 1 p. c.		24
$8 00	4	$11 00	$550 00											
7 00	2	10 00	500 00											
8 00	2	10 00	500 00											
8 00	2	10 00	500 00											
7 00	1	8 00	400 00											
9 00	2	11 00	550 00											
				$9 00	15	$5 00	15	$7 00	$350 00					
6 00		7 50		7 00		5 00		6 00	300 00					
											10	No	No	24
$6 00	11	$10 00	$400 00											
		10 00	400 00											
10 00	1	10 00	400 00											
12 00	2	12 00	430 00							$4 50				
6 00	10	8 00	360 00											
15 00	1	15 00	780 00											
5 00	1	5 00	230 00							5 00				
15 00		15 00	780 00											
12 00	2	12 00	430 00											
5 00	3	5 00	230 00							5 00				
9 00	1	11 00	430 00											
9 00	2	11 00	430 00											
9 00	5	10 00	400 00											
12 00		12 00	560 00							3 50				
												No		30
$9 00	1	$13 00	$540 00							$4 00	10			
12 00		12 00	510 00							3 00	10			
7 00	4	10 00	450 00	$9 00		$7 00		$8 00	$360 00		9		10 p.c.	
14 00		18 00	810 00								9			
14 00	1	18 00	810 00							4 00	10			
10 00	2	12 00	510 00								10			
15 00		20 00	905 00								10			
8 00	2	10 00	450 00								10			
8 00		10 00	450 00								10			
		15 00	625 00							4 00	10			
6 00	10	10 00	450 00								10			
7 00		10 00	450 00	12 00	1	8 00		10 00	420 00		10			
		12 00	510 00								10			
		9 00	440 00								10			
		10 00	450 00							5 00	10			

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
33	Vineland	Total	24	11	12		1		19				
	Women's, misses' and children's shoes.	Lasting		3					3				
		Heel stocking		1									
		Heeling		1					1				
		Trimming		1					1				
		Shaving		1					1				
		Edge setting		1					1				
		Heel burnishing		2									
		Finishing		1									
		Closing			1				1				
		Staying			1				1				
		Closing-on			1				1				
		Quarter-stitching			1				1				
		Vamping			1				1				
		Lining making			1				1				
		End sewing			1				1				
		Button sewing			2				2				
		Pasting			1				1				
		Button-hole working			2				2				
		Floor girl					1						
34	Vineland	Total	79	33	43	3							
	Women's, misses' and children's shoes.	Cutters		10								$15 00	2
		Lasters		11								15 00	3
		Tacker		1									
		McKay machine		1									
		Beater out		1									
		Heeler		1									
		Second laster		1									
		Trimmer		1									
		Shaver		1									
		Heel scourer				1							
		Edge setter											
		Heel burnisher		1									
		Others		4		2							
		Closing			2								
		Staying			3								
		Vamping			3								
		Pasting			10								
		Button-hole making			14								
		Blacking			3								
		Boys' shoes			2								
		Others			6								
31	Vineland	Total	58	35		9	4	1					
	Women's, misses' and children's shoes.	Cutters		6								$15 00	1
		Lasters		8								14 00	2
		Tackers		1		1		1				13 00	1
		McKay machine		1								15 00	
		Beater out		1								15 00	
		Heeling		1		1						9 00	
		Breasting and nailing		1									
		Trimming		1									

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
										$3 50	10	No	No	25
		$9 00	$432 00											
		5 50	264 00											
		12 00	576 00											
		12 00	576 00											
		12 00	576 00											
		12 00	576 00											
		7 50	360 00											
		10 00	480 00											
								$5 50	$264 00					
								4 50	216 00					
								5 50	264 00					
								5 00	240 00					
								5 50	264 00					
								6 50	312 00					
								4 00	192 00					
								5 50	264 00					
								5 00	240 00					
								6 00	288 00					
								3 50	168 00					
	4									$2 00 3 50	10	No	No	31
$10 00	5	$11 50	$540 50											
11 00		11 80	554 60											
		12 00	564 00											
		9 00	473 00											
		9 80	460 60											
		15 84	744 48											
		8 04	377 88											
		15 00	705 00											
		14 40	676 80											
		4 00	188 00											
		14 00	658 00											
		10 50	493 50											
		10 00	470 00											
				$8 00	1	$4 00	1	$5 60	$263 32					
				9 00	1	5 00	1	8 00	376 00					
				6 00	1	3 00	1	4 00	188 00					
				4 00	3	2 00	4	2 50	127 50					
				4 00	4	2 00	5	2 50	127 50					
								2 50	127 50					
				3 00	1	2 00	1	2 50	127 50					
				4 00	3	2 00	3	3 00	144 00					
										$3–$4	10	No	No	25
$9 00	2	$13 00	$624 00											
10 00	3	11 00	528 00											
7 50	1	10 50	504 00											
		11 50	552 00											
		15 00	720 00											
		9 00	432 00											
		12 00	576 00											
		18 00	869 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
31	Vineland	Shaving		1									
	Women's, misses' and children's shoes.	Heel scouring		1									
		Edge setting		1									
		Buffers		1			2	1				$8 00	1
		Stripping		1			1					17 00	1
		Finishing		1			1					9 00	1
		Stock fitting		4		2							
		Heel stocking		1									
		Packing		1									
		Heel burnishing		1									
		Others		10		5						7 50	1
32	Vineland	Total	52	40		12							
	Women's, misses' and children's shoes.	Cutters		11						11		$18 00	
		Lasters		12					12				
		McKay machine op'rs		2						2		13 00	
	Men's department.	Beaters out		1		2			1	2			
		Heelers		1		2			3				
		Breasting and nailing		1						1			
		Second lasters		1		1			1	1			
		Trimmer		1									
		Shavers		2					2				
		Heel scourers				1				1			
		Edge setters		2		1						16 50	
		Heel burnishers		1		1			1	1			
		Acid and cutting							1				
		Stripper							1				
		Finisher		1					3				
		Cleaning, lining, &c.		1		4				5			
		Packer		1						1			
		Tacker							1				
	Women's department.	Total	51		51				51				
		Closing			2								
		Staying			3								
		Pasting			10								
		Quarter stitching			3								
		Lining making			5								
		Closing-on			4								
		Vamping			3								
		Cording button-holes			2								
		Button sewing			8								
		End sewing			2								
		Working button-holes			2								
		Marking lining			3								
		Cutting button-holes			1								
		Marking and blocking			2								

RUBBER SHOE FACTORIES.

146	New Brunsw'k.		394					6					
	Rubber shoes	Shoe makers		10	90		200		300			$10 00	6
		Upper cutters		9					9			12 00	7
		Out-sole cutters		8					8			13 00	6
		In-sole cutters		2					2			12 00	2

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BOOT AND SHOE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
		$4 00	$192 00											
		12 00	576 00											
		18 00	384 00											
$4 00	1	5 00	240 00											
4 00	1	12 00	576 00											
4 00	1	8 00	384 00											
		9 00	432 00											
		9 00	432 00											
		6 00	288 00											
		10 80	518 40											
4 00	2	6 00	288 00											
										$2 00 3 50	10	No	No	25
$5 00		$11 50	$552 00											
		18 80	566 00											
5 00		9 00	432 00											
		9 80	470 00											
		15 84	760 32											
		9 60	432 00											
		8 04	385 92											
		15 00	720 00											
		14 40	691 20											
		4 00	192 00											
		14 00	672 00											
		10 50	504 00											
		16 25	300 00											
		6 00	288 00											
		13 50	648 00											
		6 00	288 00											
		6 00	288 00											
		19 00	576 00											
								$6 00	$288 00					
								5 60	268 00					
								4 00	192 00					
								4 80	230 00					
								2 80	134 00					
								4 80	230 00					
								8 00	384 00					
								9 60	460 80					
								5 00	187 20					
								2 50						
								2 50	120 00					
								2 50	120 00					
								2 50	120 00					

RUBBER SHOE FACTORIES.

											10	No	No	40
$6 00	4	$9 00	$400 00	$10 00	200	$4 00	90	$7 00	$300 00	$4 00				
6 00	2	10 00	450 00											
10 00	2	11 00	500 00											
			450 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

RUBBER SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
146	New Brunsw'k. Rubber shoes	Lining cutters		2					2			$12 00	2
		Filling cutters		2					2			12 00	2
		Stiffening cutters		2					2			12 00	2
		Counter cutters		2					2			12 00	2
		Binding cutters		2					2			12 00	2
		Varnishers		4					4			15 00	4
		Cementers		1			3						
		Strap makers		6			6						
		Packers		6						6		10 00	4
		Markers		2			2						
		Stringers					2						
		Inspectors		2			2						
		Box makers		3					3			12 00	3
		Mill hands		12		8				20		12 00	12
		Helpers		6						6		7 50	6
52	New Brunsw'k. Rubber boots and shoes.		519										
		Boot makers		47		25			72			$12 25	11
		Packers		11		4	5		8	12		12 00	8
		Cutters		66		9			47	28		12 00	26
		Varnishers		18				1	17	1		13 00	17
		Shoe makers			*236	58			294				
		Mill hands		38	1	1				40		12 00	10
†177	Jersey City Rubber car springs and belting.		60										
		Belti'g and hose m'krs			24	4				28		$15 00	
		Grinders and mo'lders			28	4				32		15 00	

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

75	Bridgeton Nail works, puddling mill	Total	93	93					84	9			
		Puddlers		32					32		2	$11 50	8
		Helpers		32					32		2	6 50	
		Rollers		4					4		2	8 00	1
		Catchers		4					4		2	8 00	
		Hookers-up		4					4		2	6 00	2
		Drag-outs		4					4		2	6 50	2
		Squeezers		2					2			6 50	
		Engineers		2						2		12 00	
		Water tenders		2						2		9 40	
		Stackers		2					2		2	6 50	
		Weighers		2						2		6 60	
		Muck shearers		2						2		6 25	
		Superintendent		1						1			

No. 75.—Some of the lost time was the result of a strike; but the mill did not run regularly any part of the year.

* Includes girls. † Car springs.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

RUBBER SHOE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
			$500 00											
			450 00											
			450 00											
			450 00											
			450 00											
			550 00											
				$7 00	2	$4 00	1	$5 00	$240 00					
				7 00	4	4 00	3	5 00	240 00					
$6 00	4	$9 00	450 00											
				7 00	2				300 00					
				7 00	2				300 00					
				7 00	2				300 00					
			500 00											
4 50	8	10 00	500 00											
6 00	6	7 00	400 00											
											10	No	No	30
$9 00	10	$10–$11	$480 00							$6 00, 7 00				
10 00	3		500 00							5 00				
9 00	15	$9–$12	500 00							3 00, 5 00				
8 00	1	$13 00	575 00											
				$9 00	20	$4 00	30	$6 50	$325 00	7 50				
6 00	8	$6–$12	450 00											
$9 00		$11 00	$550 00											
9 00		11 00	550 00											

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

												10 p.c.	No	144
$10 00	21	$10 75	$258 00								12			
6 50		6 50	156 00								12			
5 00	1	6 50	156 00								12			
5 00		6 50	156 00								12			
4 00	2	5 00	120 00								12			
4 00	1	5 00	120 00								12			
4 00		5 00	120 00								12			
		12 00	280 00								12			
		9 40	225 00								12			
		6 50	156 00								10			
		6 60	156 00								10			
		6 25	162 00								10			
		20 00	600 00								12			

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
75	Bridgeton..... Sheet mill.	Total.....	43	41	.....	2	.....	.....	41	2	.....	.....	.....
		Heaters.....	.....	6	.....	.....	.....	.....	6	.....	2	$12 60	3
		Helpers.....	.....	6	.....	.....	.....	.....	6	.....	.....	8 00	3
		Rollers.....	.....	2	.....	.....	.....	.....	2	.....	2	10 00	2
		Catchers.....	.....	4	.....	.....	.....	.....	4	.....	2	8 00	2
		Hookers.....	.....	2	.....	.....	.....	.....	2	.....	.....	6 00	1
		Sheet layers.....	.....	4	.....	.....	.....	.....	4	.....	2	6 00	1
		Rimmers-down.....	.....	2	.....	.....	.....	.....	.....	2	.....	7 20	1
		Scrapers.....	.....	.....	.....	2	.....	.....	2	.....	.....	2 25	1
		Stokers.....	.....	4	.....	.....	.....	.....	4	.....	2	5 50	1
		Plate shearers.....	.....	4	.....	.....	.....	.....	4	.....	2	7 50	1
		Skelp shearers.....	.....	3	.....	.....	.....	.....	3	.....	2	15 00	1
		Roughers.....	.....	4	.....	.....	.....	.....	4	.....	2	10 75	.....

No. 75.—Some of the lost time was the result of a strike; but the mill did not run regularly any part of the year.

75	Nail mill.....	Total.....	122	43	.....	79	.....	.....	.....	.....	.....	.....	.....
		Nailers.....	.....	24	.....	.....	.....	.....	24	.....	.....	$28 00	1
		Feeders.....	.....	5	.....	75	.....	.....	80	.....	.....	7 00	6
		Iron carriers.....	.....	6	.....	.....	.....	3	.....	6	.....	.....	.....
		Stokers.....	.....	4	.....	.....	.....	.....	.....	4	.....	.....	.....
		Shakers.....	.....	2	.....	.....	.....	.....	2	.....	.....	.....	.....
		Wheelers.....	.....	.....	.....	4	.....	.....	.....	4	.....	.....	.....
		Engineers.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
		Blacksmiths.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....

No. 75.—See above. Wages were reduced twice during the year.

76	Millville..... Pipe mill, dry and green sand.	Total.....	120	119	.....	1	.....	.....	.....	.....	4–8	.....	.....
		Moulders.....	.....	29	.....	.....	.....	.....	29	.....	.....	$18 50	.....
		Core makers.....	.....	14	.....	.....	.....	.....	14	.....	.....	18 50	.....
		Clay beaters.....	.....	9	.....	.....	.....	.....	.....	.....	.....	8 10	.....
		Ware cleaners.....	.....	7	.....	1	.....	.....	7	.....	.....	10 00	.....
		Carpenters.....	.....	6	.....	.....	.....	.....	.....	6	.....	16 00	.....
		Machinists.....	.....	2	.....	.....	.....	.....	.....	2	.....	16 00	.....
		Blacksmiths.....	.....	2	.....	.....	.....	.....	.....	2	.....	16 00	.....
		Helpers.....	.....	22	.....	.....	.....	.....	.....	.....	.....	8 70	.....
		Laborers.....	.....	15	.....	.....	.....	.....	.....	15	.....	8 10	.....
		Cupola men.....	.....	5	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Teamsters.....	.....	9	.....	.....	.....	.....	.....	9	.....	9 00	.....

No. 76.—A team in a green sand shop consists of four men: two moulders, one core maker and one clay beater. Owing to the substitution of machinery, the team in dry sand shops numbers eight, formerly nine.

77	File works.....	Total.....	14	8	.....	6	.....	.....	14	.....	.....	$16 50	1
89	Paterson..... Bridge building.	Total.....	570	550	.....	20	.....	.....	.....	.....	.....	.....	.....
		Rolling mill.....	.....	350	.....	.....	.....	.....	.....	.....	.....	$50 00	10
		Bridge shop.....	.....	200	.....	20	.....	.....	.....	.....	.....	24 00	3

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10 p.c.	No	144
$11 00	3	$11 80	$283 20	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....
6 50	3	7 25	174 00	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....
8 00	2	9 00	216 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
7 00	2	7 50	180 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
4 00	1	5 00	120 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
4 00	1	5 00	120 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
6 00	1	6 60	158 40	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
1 50	1	1 87	44 88	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
4 50	3	4 75	114 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
6 00	3	6 37	152 88	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
6 60	.....	9 40	225 60	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
9 00	.....	.....	245 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20 p.c.	No	120
$9 00	3	$20 00	$640 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
2 50	20	5 00	160 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	7 50	240 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	6 60	220 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	10 00	320 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	3 00	96 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	12 00	384 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	15 00	480 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00	.....	10 p.c	No	.....
$13 00	.....	$15 00	$750 00	.....	.....	.....	.....	.....	.....	.....	9½	.....	.....	3
13 00	.....	15 00	750 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	3
8 10	.....	8 10	425 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	3
5 00	.....	9 00	450 00	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	3
10 00	.....	12 50	650 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	16 00	700 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
10 00	.....	12 50	650 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	8 70	425 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
.....	.....	8 10	400 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	11 00	500 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	3
.....	.....	9 60	450 00	.....	.....	.....	.....	.....	.....	.....	9½	.....	.....	.....
$6 00	2	$10 50	$450 00	.....	.....	.....	.....	.....	.....	$3–$6	10	Yes	No	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$7 00	50	$14 00	$600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
9 00	75	12 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
64	Smithville	Total	350	344			6			350			
	Wood and iron machinery.	Machinists		150								$12 00	50
		Moulders		40								13 00	10
		Core makers		10								13 00	
		Helpers		50									
		Packers		8									
		Testers		8									
		Laborers		78									
		Painting					6						

No. 64.—The average daily wages were, for skilled men, $1.75; others, $1.25. Lost no time during the year, except legal holidays. Trade, during the last six months of 1884, was very poor, but since has been fair.

65	Salem	Total	41	41									
	Foundry and machine shop.	Moulders		10								$18 00	
		Helpers		10									
		Machinists		6									
		Laborers		15									
66	Millville	Total	20	18				2					
	Mould makers	Machinists		10				2				$18 00	1
		Helpers		5								10 00	
		Laborers		2									
		Engraver		1									
67	Burlington	Total	249	234									
	Pipe and job-work foundry	Moulders		50								$16 50	10
		Core makers		20								16 50	10
		Cupola men		10									
		Helpers		60									
		Machinists		20									
		Cleaners		6		15							
		Laborers		50									
		Carpenters		12									
		Blacksmiths		6								18 00	1

No. 67.—In this establishment there is very little piece-work. For moulding pipe, wet sand is used; for job-work, dry sand. Hands work mostly by the day. Ran on full time.

68	Camden	Total	570	550									
	Pipe and job-work.	Moulders		100								$16 00	16
		Core makers		40								16 00	20
		Cupola men		20									
		Helpers		150								9 00	20
		Machinists		40								15 00	5
		Cleaners		10		20							
		Laborers		100									
		Carpenters		24									
		Blacksmiths		15								18 00	3
		Boiler makers		30								18 00	6
		Others		20									

No. 68.—During the year as many as seven hundred hands were employed at times; but the figures given are the average number. Ran on full time.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
										$3 50	10	No	No	
$9 00	50	$10 00	$520 00											
8 00	8	11 00	572 00											
8 00		11 00	572 00											
		7 50	390 00											
		8 00	416 00											
		8 00	416 00											
		7 50	390 00											
								$3 50	$182 00					
														12
$12 00		$15 00	$750 00											
		9 00	450 00											
		12 00	600 00											
		7 50	350 00											
											10	No	No	12
$10 00	2	$12 00	$600 00											
6 00		8 00	400 00											
		7 50	375 00											
		12 00	600 00											
										$4 50		10 p.c.		
$13 00	20	$14 50	$754 00											
13 00	15	14 50	754 00											
		10 00	520 00											
		8 00	416 00											
		12 00	624 00											
		7 00	364 00											
		7 00	364 00											
		14 00	728 00											
		14 50	754 00											
										$4 50	10	6 p. c.		
$14 00	16	$15 00	$780 00											
14 00	20	15 00	780 00											
		10 00	520 00											
7 00	40	7 50	390 00											
10 00	10	12 00	624 00											
		7 50	390 00											
		7 50	390 00											
		14 00	728 00											
12 00	4	15 00	728 00											
14 00	10	16 00	832 00											
		10 00	520 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
69	Florence	Total	290	265									
	Pipe and job-work.	Moulders		50								$18 00	10
		Core makers		20								18 00	5
		Cupola men		10									
		Helpers		75								10 00	40
		Machinists		20								15 00	6
		Cleaners		5		10							
		Laborers		50									
		Carpenters		12									
		Blacksmiths		6								18 00	3
		Others		2		15							

No. 69.—There was a ten per cent. reduction the first of January; for the last six months the weekly wages were ten per cent. less than the figures given here. This reduction is taken into account in the annual earnings. Ran on full time.

70	Camden	Total	46	46									
	Foundry.	Moulders		16									
		Helpers		16								$10 00	2
		Laborers		10									
		Others		4								8 00	
71	Camden	Total	60	60									
	Machine works.	Machinists		24								$16 00	6
	Two firms.	Helpers		24								10 00	
		Laborers		10									
		Engineers		2									
72	Bridgeton	Total	170	170					10				
	Machine works.	Machinists		60					5			$15 00	
	Three firms.	Blacksmiths		10					5			20 00	
		Helpers		60									
		Laborers		20									
		Others		10									
73	Bridgeton	Total	20	20									
	Iron foundry.	Moulders		10								$16 00	1
		Pattern maker		1									
		Helpers		3									
		Laborers		3									
		Blacksmith		1									
		Engineer		1									
		Machinist		1									
74	Mount Holly	Total	19										
	Water-wheels	Millwrights		3								$18 00	1
		Moulders		6									
		Machinists		2								15 00	1
		Carpenter		1									
		Blacksmith		1									
		Helpers		2									
		Laborers		2									
		Others		2								8 00	1

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
										$4 00	10	10 p.c.		
$14 00	10	$16 00	$790 00											
14 00	5	16 00	790 00											
		10 00	494 00											
7 00	20	9 00	445 00											
10 00	4	12 00	593 00											
		9 00	445 00											
		8 00	395 20											
		15 00	741 00											
14 00	3	16 00	790 00											
		8 00	395 20											
											10	No	No	12
		$15 00	$750 00											
$7 00	3	8 00	400 00											
		7 50	375 00											
		6 00	300 00											
											10	No	No	12
$10 00	10	$12 00	$600 00											
7 00		8 00	400 00											
		7 50	375 00											
		12 00	600 00											
											10	No	No	12
$10 00		$12 00	$600 00											
15 00		18 00	900 00											
		8 00	400 00											
		7 50	375 00											
		8 00	400 00											
											10	No	No	24
$10 00	2	$12 00	$600 00											
		15 00	750 00											
		8 00	400 00											
		7 50	375 00											
		16 00	800 00											
		12 00	600 00											
		12 00	600 00											
										$4 00	10	12 p.c.	No	12
$12 00	1	$15 00	$750 00											
		17 00	850 00											
12 00	1	13 50	775 00											
		13 50	675 00											
		15 00	750 00											
		7 00	350 00											
		7 00	350 00											
4 00	1	6 00	300 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
59	Jersey City..... Boiler makers, blacksmiths and machinists.	Total.	163	138	.....	25	.....	25	.....	163	.....	.....	.....
		Machine shop:											
		Vise hands	.....	8	.....	.....	.....	.....	.....	.....	.....	$18 00	2
		Lathe hands	.....	6	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Planer hands	.....	2	.....	.....	.....	.....	.....	.....	.....	16 50	1
		Steam fitters	.....	2	.....	.....	.....	.....	.....	.....	.....	15 00	1
		Drillers	.....	2	.....	.....	.....	.....	.....	.....	.....	15 00	1
		Steam fitters' help'rs	.....	4	.....	.....	.....	.....	.....	.....	.....	10 50	4
		Slotting	.....	1	.....	.....	.....	.....	.....	.....	.....	16 50	.....
		Pattern makers	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Boiler shop:											
		Riveters	.....	10	.....	.....	.....	.....	.....	.....	.....	16 50	2
		Holders-on	.....	5	.....	.....	.....	.....	.....	.....	.....	10 00	.....
		Fitters-up	.....	6	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Calkers & chippers	.....	12	.....	.....	.....	.....	.....	.....	.....	15 60	5
		Laborers	.....	25	.....	.....	.....	.....	.....	.....	.....	9 00	.....
		Flange turners	.....	2	.....	.....	.....	.....	.....	.....	.....	25 00	1
		Blacksmiths	.....	2	.....	.....	.....	.....	.....	.....	.....	15 00	2
		" helpers	.....	2	.....	.....	.....	.....	.....	.....	.....	9 78	.....
		Layers-out	.....	2	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Blacksmith shop:											
		Blacksmiths	.....	12	.....	.....	.....	.....	.....	.....	.....	21 00	1
		Tool maker	.....	1	.....	.....	.....	.....	.....	.....	.....	15 60	.....
		Helpers	.....	20	.....	.....	.....	.....	.....	.....	.....	12 00	2
		Bolt makers	.....	3	.....	.....	.....	.....	.....	.....	.....	16 50	1
		Bolt cutters	.....	2	.....	.....	.....	.....	.....	.....	.....	13 50	1
		Drivers	.....	3	.....	.....	.....	.....	.....	.....	.....	12 00	1
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Foremen	.....	3	.....	.....	.....	.....	.....	.....	.....	77 00	1
60	Jersey City..... Car wheel works.	Total	25	25	.....	.....	.....	.....	4	21	.....	.....	.....
		Moulders	.....	5	.....	.....	.....	.....	4	1	.....	$26 00	4
		Machinists	.....	3	.....	.....	.....	.....	.....	3	.....	15 00	.....
		Laborers	.....	17	.....	.....	.....	.....	.....	17	.....	10 50	.....
61	Jersey City..... Cranes, cables and dredging chains.	Total	14	14	.....	.....	.....	.....	14	.....	4	$25 00	2
62	Jersey City..... Iron hollow-ware.	Total	54	40	.....	14	.....	6	31	23	.....	$15 00	20
63	Jersey City..... Horseshoeing	Total	8	7	.....	1	.....	.....	.....	8	.....	.....	.....
		Floormen	.....	3	.....	.....	.....	.....	.....	.....	.....	$18 00	2
		Forge hands	.....	3	.....	.....	.....	.....	.....	.....	.....	16 00	1
		Fitter	.....	1	.....	.....	.....	.....	.....	.....	.....	18 00	.....

No. 63.—All-day work. Men received from $2 to $3 per day. When union was in existence wages were as high as $4 and $4.50.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00 7 25	10	No	No	.....
$15 90	1	$16 98	$883 35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 50	5	16 75	871 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	1	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	1	13 50	702 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	1	11 25	585 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 50	546 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	16 50	858 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	1	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 60	8	15 78	820 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 00	520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13 50	5	13 41	697 67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	7	15 25	792 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 00	468 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
19 50	1	22 50	1170 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	780 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 78	508 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
17 10	1	16 50	858 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 60	811 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	1	8 50	442 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	2	13 50	702 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 60	1	11 55	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	2	10 00	520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	780 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
22 00	1	44 00	2280 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	15
$16 00	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 80	1	$12 60	$540 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	11	9 12	316 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$10 00	3	$18 00	$792 00	.....	.....	.....	.....	.....	.....	.....	9	5 p. c.	No	48
$8 00	20	$12 00	$500 00	.....	.....	.....	.....	.....	.....	$3–$8	10	No	No	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$7 50	10	No	No	12
$15 00	1	$17 00	$850 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	.....	19 50	725 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	18 00	900 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
55	Paterson ..... Stationary engines, flax and jute machinery.	Total	25	23	.....	.....	2	.....	.....	25	.....	$16 50	3
56	Paterson ..... Boiler making.	Total	29	27	.....	2	.....	.....	.....	27	4	$24 00	1
		Foreman	.....	1	.....	.....	.....	.....	.....	.....	.....	24 00	1
		Fitters	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Chippers	.....	3	.....	.....	.....	.....	.....	.....	.....	14 00	3
		Calkers	.....	3	.....	.....	.....	.....	.....	.....	.....	14 00	3
		Riveters	.....	2	.....	.....	.....	.....	.....	.....	.....	14 00	2
		Riveter boys	.....	.....	.....	2	.....	.....	.....	.....	.....	5 00	.....
		Holder on	.....	1	.....	.....	.....	.....	.....	.....	.....	9 00	1
		Helpers	.....	8	.....	.....	.....	.....	.....	.....	.....	9 00	8
		Flanger	.....	1	.....	.....	.....	.....	.....	.....	.....	21 00	1
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	15 00	1
		" helpers	.....	5	.....	.....	.....	.....	.....	.....	.....	9 00	5

No. 56.—The wages given here are for full time, estimated from weekly earnings, although the shop did not make full time. The actual earnings of the men for the year were about one-fifth less than here given.

57	Jersey City ..... Iron, brass and bronze casting.	Total	75	65	.....	.....	.....	10	12	63	.....	$18 00	8
		Iron moulders	.....	29	.....	.....	.....	.....	.....	.....	.....	18 00	5
		Brass moulders	.....	6	.....	.....	.....	.....	.....	.....	.....	18 00	3
		Core makers	.....	4	.....	.....	.....	.....	.....	.....	.....	13 50	1
		Piano-plate drillers	.....	8	.....	.....	.....	.....	.....	.....	.....	12 00	4
		Finishers	.....	7	.....	.....	.....	.....	.....	.....	.....	16 50	1
		Laborers	.....	5	.....	.....	.....	.....	.....	.....	.....	9 00	5
		Carpenter	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Iron melter	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Brass melter	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Teamsters	.....	2	.....	.....	.....	.....	.....	.....	.....	12 00	1
58	Jersey City ..... Machines and engines.	Total	15	14	.....	.....	.....	1	.....	15	.....	.....	.....
		Machinists	.....	13	.....	.....	.....	1	.....	.....	.....	$16 50	1
		Pattern maker	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 58.—Full time.

58½	Trenton ..... Saw-works.	Total	68	64	.....	4	.....	3	.....	.....	.....	.....	.....
		Saw makers	.....	6	.....	.....	.....	.....	.....	.....	.....	$21 00	1
		Temperers	.....	2	.....	.....	.....	.....	.....	.....	.....	18 00	2
		Grinders	.....	5	.....	.....	.....	.....	.....	.....	.....	16 50	1
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	18 00	1
		Blacksmiths	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Polishers	.....	3	.....	.....	.....	.....	.....	.....	.....	16 50	1
		Punch men	.....	3	.....	.....	.....	.....	.....	.....	.....	16 50	1
		Saw fitter	.....	1	.....	.....	.....	.....	.....	.....	.....	23 00	1
		Saw fitters	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$7 50	3	$10 80	$550 00								7½	Yes	No	13
$9 00	14	$12 00	$600 00							$5 00	10	No	No	
		24 00	1200 00											
		18 00	900 00											
		14 00	700 00											
		14 00	700 00											
		14 00	700 00											
			250 00											
		9 00	450 00											
		9 00	450 00											
		21 00	1050 00											
		15 00	750 00											
		9 00	450 00											
$7 00	10	$15 00	$750 00							$2–$6	10	7 p. c.	No	12
15 00	4	16 60	830 00											
15 00	3	16 50	825 00											
8 00	2	10 37	518 75											
7 00	5	8 43	421 88											
7 00		9 35	467 50											
		9 00	450 00											
		16 50	825 00											
		12 00	660 00											
		13 50	675 00											
		12 00	600 00											
9 00	1	10 50	525 00											
												No	No	
$10 50	7	$11 19	$572 40											
		16 50	858 00											
		15 00	780 00											
										$4 50	7	No	No	89
$15 00	2	$17 00	$611 52											
18 00	2	18 00	936 00											
9 00	1	12 00	507 52											
		18 00	936 00											
10 50	4	12 00	479 48											
10 50	2	12 50	486 80											
10 50	1	12 97	512 22											
		23 00	1195 00											
8 46	2	11 78	362 96											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
58½	Trenton Saw works.	Saw millers		4								$13 50	2
		Machinists		7								18 00	1
		Carpenter		1								12 00	1
		Engineer		1								15 00	1
		Packer		1								12 00	1
		Laborers		2								9 00	1
		Saw makers' helpers		4								9 00	4
		Apprentices				3						4 50	1
		Saw filers		3								12 15	1
		Temper helper		1								9 00	1
		Blacksmith helper		1								9 00	1
		Office boy				1						3 00	1
		Boys				3						6 00	1
		Teamster and team		1								18 00	1

No. 58½—The workmen in this establishment are paid by the hour, and the average for the year was forty-two hours per week. The greatest number of hours' working in any one week was fifty-five. Estimating ten hours as a full day, deducting the time lost from short hours, adding the days lost time from other causes, and the actual time made during the year, was but two hundred and twenty-three days

One blacksmith, one saw fitter, the packer and teamster were paid by the year, full time.

COTTON AND WOOLEN MILLS.

90	Gloucester City Cotton mill.	Total	832	367	440	75							
		Weavers		78	260							$7 50	
		Carders		76	60							7 00	
		Card strippers		4									
		Card grinders		4									
		Pickers		4									
		Spinners		30	90	75						7 00	
		Warpers		2									
		Frame tenders		24	30							7 00	
		Watchmen		2									
		Engineers		4									
		Firemen		4									
		Blacksmiths		2									
		Carpenters		2									
		Machinists		31								15 00	
		Laborers		75									
		Dyers		25									

No. 90.—Wages have been reduced from ten to fifteen per cent. The reduction was not uniform. Some of the hands were not cut down; others had their wages slightly reduced, and some were compelled to submit to a reduction of thirty-three and one-third per cent. The average reduction was about twelve and one-half per cent. The factory was stopped entirely for six weeks, was then started on half time for twelve weeks, making the loss time for the year twelve weeks.

In calculating the average annual earnings of the hands employed in the mill, forty weeks' work was the estimate for the year, no allowance being made for sickness or loss of work from any personal cause.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$6 00	1	$11 25	$393 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	1	11 70	524 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	1	12 00	428 90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	1	15 00	780 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	1	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	1	7 50	305 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	4	9 00	305 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3 60	2	3 96	209 80	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	1	10 80	393 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	1	9 00	300 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	1	9 00	300 56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3 00	1	3 00	156 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4 50	2	5 00	176 76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18 00	1	18 00	936 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

COTTON AND WOOLEN MILLS.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	{12½ p. c.}	.....	72
$4 00	.....	$5 50	$220 00	$7 00	.....	$3 50	.....	$4 50	$180 00	.....	.....	.....	.....	.....
4 00	.....	5 00	200 00	5 00	.....	2 75	.....	3 00	120 00	.....	.....	.....	.....	.....
.....	.....	6 00	240 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 00	280 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	5 00	200 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4 00	.....	5 00	200 00	5 00	.....	2 50	.....	3 00	120 00	.....	.....	.....	.....	.....
.....	.....	5 00	200 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	.....	7 00	280 00	3 00	.....	2 00	.....	2 25	100 00	.....	.....	.....	.....	.....
.....	.....	9 00	360 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 00	400 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	320 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	12 00	480 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	6 00	240 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 00	280 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

COTTON AND WOOLEN MILLS.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
91	Millville Cotton mill.		627	186	352	44	44	1					
		Weavers		42	185							$7 68	25
		Weaver boss		1									
		Loom fixers		4									
		Carders		21	42	10						6 00	6
		Card bosses			2							20 00	1
		Card grinders			2							8 50	1
		Card strippers			4							5 00	2
		Card tenders			22							7 00	11
		Pickers			3							7 00	1
		Speed tenders				25						5 00	
		Spinners		20	24	8	20	1					
		Spinner boss		1									
		Second boss		1									
		Doffers		1		1	24						
		Backers		1	18								
		Frame tender		1	40								
		Warpers		1	10								
		Watchmen		2									
		Machinists		40								15 00	20
		Laborers		50									

No. 91.—There was a strike this year against a reduction of wages; but the operatives, after staying out four weeks, were foreed to submit to the reduction. The individual loss time was very great, and frequent changes of hands have taken place. The wages have been reduced so low that the operatives are continually seeking other avenues of employment.

92	Mays Landing. Cotton mill.		352	106	169	77							
		Weavers		80	101	20						$7 68	
		Card tenders		6	26	4						7 00	
		Card grinder		1								8 25	
		Card stripper		1								5 00	
		Card pickers		2								7 25	
		Speed tenders			8	4							
		Spinners		5	9	40							
		Doffers and backers				9							
		Frame tenders			20								
		Warper		1	5								
		Watchmen		2									
		Laborers		8									

No. 92.—No allowance made for loss of time by individuals. The calculation is made for fifty-two weeks, and the time the factory stopped deducted.

142	Gloucester City Gingham mills. 12,800 spindles	Total	395	130	164	61	40						
		Weavers		78	100				178			$7 12	49
		Card tenders		8	15	13						5 00	
		Card strippers		2									
		Pickers		2									
		Spinning room			10	30	25		30				
		Frame tenders			20				20				
		Warpers			4	8	6						

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

COTTON AND WOOLEN MILLS.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
										$1 75 2 50	10			36
$3 00	40	$4 56	*$209 00											
			1000 00											
3 50	10	4 00	184 00	$4 00	10	$2 50			$115 00					
11 00	1	15 50	253 00											
5 75	1	7 13	329 00											
3 50	2	4 25	195 00											
5 50	11	6 25	288 00											
5 50	2	6 00	276 00											
5 00		5 00	230 00											
		5 00	230 00	5 00	20	3 50	30	$4 00	184 00					
		12 00	552 00											
		10 00	460 00											
		10 00	460 00					5 00	230 00					
		10 00	460 00	4 50	20	3 50	20	4 00	184 00					
		12 00	552 00	3 75	5	2 50	5	3 12	166 00					
12 00	20	13 50	621 00											
		7 50	345 00											
											10			18
$3 00		$4 56	$223 00	$6 00		$2 50		$3 75	$183 00					
5 50		6 25	306 00	7 00		5 50		6 25	306 00					
			343 00											
			196 00											
5 25		6 25	294 00											
				5 00		5 00		5 00	245 00					
		5 00	245 00					5 00	245 00					
								10 00	490 00					
		12 00	588 00					12 00	588 00					
		7 50	367 00											
										$2 00 2 50	10	15 p.c.		36
$3 56	49	$5 34	$241 30	$7 12	25	$3 06	75	$4 07	$183 15					
3 00		3 30	171 00											
		5 00	225 00											
		4 00	180 00											
				5 00		3 00		3 75	168 75					
				5 00		2 75		3 50	157 50					
				6 00	1	3 00		3 50	157 50					

*Including women weavers.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

COTTON AND WOOLEN MILLS.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
142	Gloucester City Gingham mills. 12,800 spindles	Watchmen	.....	2	.....	.....	.....	.....	.....	.....	.....	$8 50	1
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Fireman	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Carpenter	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Machinists	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Card grinder	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Loom fixers	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	8	15	10	9	.....	.....	.....	.....	8 00	.....

No. 142.—The lost time was from July 1st to November 1st, 1884, when the mill was run on short time, and for a part of the time closed altogether. Wages estimated at reduced figures.

93	Gloucester City Bleachery.		156	136	6	12	2	.....	.....	.....	.....	.....	.....
		Dryers	.....	43	.....	.....	.....	.....	.....	.....	.....	$12 00	14
		Finishers	.....	15	.....	.....	.....	.....	.....	.....	.....	10 00	3
		Bleachers	.....	6	.....	.....	.....	.....	.....	.....	.....	9 00	3
		Folders and packers	.....	30	.....	10	.....	.....	.....	.....	.....	12 00	15
		Sewers	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
		Dryers	.....	.....	2	2	2	.....	.....	.....	.....	.....	.....
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Fireman	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Machinists	.....	5	.....	.....	.....	.....	.....	.....	.....	15 00	1
		Carpenters	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
94	Millville Bleachery.		100	86	8	2	4	.....	.....	.....	.....	.....	.....
		Dryers	.....	20	.....	.....	.....	.....	.....	.....	.....	$15 00	2
		Finishers	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Bleachers	.....	8	.....	.....	.....	.....	.....	.....	.....	14 00	1
		Folders and packers	.....	30	.....	.....	.....	.....	.....	.....	.....	12 00	4
		Dryer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Printers	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	3	8	2	4	.....	.....	.....	.....	15 00	.....
98	Passaic Woolen mill.		90	55	15	10	10	.....	.....	.....	.....	.....	.....
		Weavers	.....	15	15	.....	.....	.....	30	.....	.....	$10 50	3
		Laborers	.....	40	.....	.....	.....	.....	.....	40	.....	7 00	4
		Spinners	.....	.....	.....	10	10	.....	.....	.....	.....	.....	.....
96	Passaic Knit goods.	Knitting	13	2	.....	1	10	.....	.....	.....	.....	$6 00	2
97	Paterson Turkish towels.		15	8	6	.....	1	.....	7	8	.....	$10 50	4

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

COTTON AND WOOLEN MILLS.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$7 00	1	$7 75	$348 75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	360 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 00	315 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	13 50	607 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	11 00	495 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	6 00	270 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	6 50	292 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 62	477 70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4 00	.....	6 00	270 00	$5 00	.....	$2 50	.....	$3 00	$135 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	18
$8 00	29	$9 00	$441 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	3	8 00	392 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	3	8 00	392 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	15	10 00	490 00	$5 00	2	$4 00	2	$3 50	$174 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	6 00	1	5 00	1	4 50	223 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	5 00	1	4 25	1	4 62	226 00	.....	.....	.....	.....	.....
.....	.....	11 00	490 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 00	441 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	1	12 00	588 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	775 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	362 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	24
$10 00	4	$12 00	$576 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	360 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	2	10 50	504 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	2	10 00	480 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 00	432 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	25 00	1200 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	.....	9 00	336 00	$7 00	2	$4 00	2	$5 00	$240 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
$6 50	3	$9 00	$450 00	$10 50	3	$6 50	3	$9 00	$400 00	.....	.....	.....	.....	.....
5 00	20	6 00	300 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$4 00	.....	.....	.....	.....
.....	.....	.....	$300 00	.....	.....	.....	.....	.....	.....	$2 00 7 50	10	.....	Yes	.....
$10 00	4	$9 00	$450 00	$6 00	1	$4 00	1	$6 00	$275 00	.....	10	.....	No	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

COTTON AND WOOLEN MILLS.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
100	Bridgeton		161	78	68	2	13		100	61			
	Woolen mill.	Weavers		40	60							$7 00	20
		Spinners		2									
		Self-acting mule					6						
		Card tenders		8								5 00	4
		Card feeders					4						
		Card strippers		2									
		Card grinders		2									
		Pickers		2									
		Dyers		9									
		Sorters		7									
		Repairers		1									
		Others		5	8	2	3					8 00	1
	No. 100.—This mill was in operation only for six months.												
99	Passaic Woolen mill.		350	200	100	26	24					$24 00	2
	No. 99.—Wages were reduced ten per cent., when a strike occurred continuing one week, when the wages were restored.												
101	Camden		59	14	20	10	15						
	Worsted mill.	Skilled workmen		6								$18 00	2
		Unskilled		8								8 00	
		Others			20	10	15						
	No. 101.—Reduction of wages in individual cases.												
102	Camden		240	115	90	20	15		140	100			
	Woolen goods	Weavers		30	70							$8 00	
		Spinners		8								12 00	
		Cloth finishers		20									
		Carders		11									
		Card strippers		2									
		Card grinders		2									
		Pickers		3									
		Dyers		12								16 00	
		Wool sorters		10								18 00	
		Repairers		3									
		Laborers		8									
		Others		6	20	20	15					10 00	

SILK MILLS.

110	Paterson	Silk throwsters	90	6	40	24	20			90		$8 00	7
111	Paterson		76	8	18	22	28			76			
	Silk throwing.	Hand silk winders			10		20					$5 00	25
		Hand silk doublers			8		8					5 00	16
		Hand silk twisters				10						3 50	10
		Hand silk tram mill		4								6 50	2
		Hand silk throwing		4								5 50	4
		Hand silk reelers				6						4 50	6
		Hand silk lacers, &c.				6						2 50	6

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

COTTON AND WOOLEN MILLS.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays,
										$2 50	10	No	No	
$5 00	3	$6 00	$156 00	$6 00	10	$3 00	12	$4 00	$104 00					
		6 00	156 00											
4 00	4	4 00	117 00											
		5 00	130 00											
		6 00	156 00											
		5 00	130 00											
		10 00	260 00											
		15 00	390 00											
		12 00	312 00											
4 00	1	6 00	156 00	5 00		3 00		4 00	104 00					
$5 00	2	$7 50		$5 50	3	$3 00	11	$4 00		$3 00 4 50	10	Yes		7
											10		No	12
$9 00	1	$12 00	$600 00											
6 00		7 00	350 00	$1 00										
				6 00		$3 00		$4 00	$150 00	$2 50 4 00				
											10	No	No	12
$6 00		$7 00	$350 00	$7 00		$3 00		$4 00	$200 00					
10 00		9 00	440 00											
		7 50	375 00											
		5 00	250 00											
		5 00	250 00											
		6 00	300 00											
		5 00	250 00											
10 00		12 00	600 00											
12 00		15 00	750 00											
		15 00	750 00											
		7 00	350 00											
6 00		8 00	400 00	10 00		7 00		8 00	400 00	$2 25 4 00				

SILK MILLS.

$7 00	1	$8 00	$400 00	$6 75	2	$5 00	38	$5 10	$260 00	$2 50 7 00	10	No	5 p. c.	
											10		10 p. c.	
$4 50	5	$4 90	$237 00											
		5 00	245 00											
										$3 50				
6 00	2													

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

SILK MILLS.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
112	Paterson..... Silk mill.	.....	110	16	.....	44	50	.....	14	96	.....	.....	.....
		Hand silk winding.....	.....	.....	.....	4	20	.....	.....	24	.....	.....	.....
		Hand silk doubling.....	.....	.....	.....	.....	20	.....	.....	20	.....	.....	.....
		Hand silk spinning.....	.....	.....	.....	40	.....	.....	.....	40	.....	.....	.....
		Soft silk winding.....	.....	.....	.....	.....	6	.....	.....	6	.....	.....	.....
		Warpers	.....	.....	.....	.....	4	.....	4	.....	.....	.....	.....
		Ribbon weaving.....	.....	10	.....	.....	.....	.....	10	.....	.....	.....	.....
		Machinists.	.....	2	.....	.....	.....	.....	.....	2	.....	$14 00	.....
		Boiler tender.....	.....	1	.....	.....	.....	.....	.....	1	.....	9 00	.....
		Carpenter.....	.....	1	.....	.....	.....	.....	.....	1	.....	15 00	.....
		Watchman	.....	1	.....	.....	.....	.....	.....	1	.....	11 00	.....
		Porter.....	.....	1	.....	.....	.....	.....	.....	1	.....	7 00	.....

No. 112.—The ribbon weaving department, at present, is not running full, only twenty per cent of hands being employed. The same with soft silk weaving and warping departments. The ages of boys range from fourteen to twenty years.

113	Paterson..... Silk throwing.	.....	344	76	448	8	12	.....	.....	.....	.....	.....	.....
		Winders	.....	.....	119	.....	.....	.....	.....	119	.....	.....	.....
		Doublers.	.....	.....	106	.....	.....	.....	.....	106	.....	.....	.....
		Mill hands.....	.....	55	.....	.....	.....	.....	.....	55	.....	$8 00	5
		Drawers.....	.....	.....	.....	.....	8	.....	.....	8	.....	.....	.....
		Reelers.....	.....	.....	.....	5	.....	.....	.....	5	.....	.....	.....
		Other hands.....	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Silk braiding.	Winders.....	.....	.....	23	.....	.....	.....	.....	23	.....	.....	.....
		Other hands.....	.....	1	.....	3	4	.....	.....	.....	.....	.....	.....

No. 113.—Wages were reduced ten per cent. and afterward restored.

115	Paterson..... Silk weaving and wind'g.	.....	50	40	4	1	5	.....	30	20	.....	$12 00	25

No. 115.—As the work is light, it can be done as well by women and girls as by men. Silk weavers did not average nine months' work in the year.

114	Paterson..... Silk mill.	.....	274	42	128	7	97	.....	168	106	.....	.....	.....
		Hand silk winding ...	.....	.....	.....	.....	20	.....	.....	20	.....	.....	.....
		Hand silk doubling ...	.....	.....	.....	.....	15	.....	.....	15	.....	.....	.....
		Hand silk reel'g mills	.....	.....	.....	5	.....	.....	.....	5	.....	.....	.....
		Soft silk winding... ...	.....	.....	.....	.....	35	.....	.....	35	.....	.....	.....
		Quill winding..... ...	.....	.....	.....	.....	21	.....	.....	21	.....	$12 00	2
		Twisters..... ...	.....	2	.....	2	6	.....	.....	10	.....	12 00	2
		Warpers	.....	.....	18	.....	.....	.....	18	.....	.....	.....	.....
		Weavers.....	.....	40	110	.....	.....	.....	150	.....	.....	.....	.....
116	Paterson..... Silk mill.	Silk throwing	50	3	4	20	23	.....	.....	.....	.....	$6 00	.....
117	Paterson..... Silk mill.	Weavers.....	100	30	5	15	50	1	53	47	.....	$15 00	3

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

SILK MILLS.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full weeks' work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
											10	No	No	
				$5 00				$5 00						
				5 00				5 00						
										$6 00				
				5 50										
		$14 00												
		9 00												
		15 00												
		11 00												
		7 00												
											10			
				$6 00	26	$5 00	19	$5 50						
				5 50	87	5 00	19	5 40						
$3 50	8	$7 00												
										$6 00				
										4 50				
				6 00	15	5 50	8	5 82						
$9 00	1	$10 00	$370 00	$8 50	3	$5 00	1	$6 00	$222 00	$3 00	*59½	No	No	
											10	No	No	
										$2 00				
										5 00				
										2 00				
										5 00				
										6 50				
										3 50				
										5 50				
										4 00				
										5 50				
										6 00				
										9 00				
								$9 00						
		$9 00						9 00						
				$5 00		$5 00				$2 50 6 00	10			
$5 00	1	$11 00		$12 00	2	$5 00	2	$9 00		$3 00 4 75	10½	No	No	

*Per week.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

SILK MILLS.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
118	Paterson..... Silk mill.	Silk throwing.....	95	7	45	32	11	.....	.....	95	.....	$9 00	.....
119	West Hoboken.. Silk mill.	.....	67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Weavers.....	.....	46	5	.....	.....	.....	51	.....	.....	.....	.....
		Winders.....	.....	.....	5	.....	.....	.....	5	.....	.....	.....	.....
		Doubling.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
		Spooling.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	.....
		Twisters.....	.....	1	2	.....	.....	.....	2	1	.....	.....	.....
		Foreman & employes.	.....	3	.....	.....	.....	.....	.....	3	.....	$15 00	1
		Warpers.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....

No. 119.—Wages have been reduced three cents per yard, on an average, upon the different qualities of goods.

120	West Hoboken.. Silk mill.	Dress goods.....	207	104	47	17	39	.....	157	.....	.....	$15 00	.....

PRINTING AND PUBLISHING.

121	Jersey City..... Newspaper and job printing.	.....	53	48	.....	5	.....	.....	16	37	.....	.....	.....
		Compositors.....	.....	16	.....	.....	.....	.....	.....	.....	.....	$22 00	4
		Pressmen.....	.....	15	.....	3	.....	.....	.....	.....	.....	18 00	3
		Job printers.....	.....	15	.....	2	.....	.....	.....	.....	.....	15 00	3
		Electrotypers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	13 00	1
123	Paterson..... Newspaper and job printing.	Compositors and pressmen.	35	18	11	6	.....	3	13	22	.....	$25 00	3
122	Jersey City..... Newspaper and job printing.	.....	44	39	.....	5	.....	.....	.....	.....	.....	.....	.....
		Compositors.....	.....	15	.....	.....	.....	.....	.....	.....	.....	$21 50	3
		Pressmen.....	.....	13	.....	.....	.....	.....	.....	.....	.....	15 00	2
		Electrotypers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	14 00	1
		Job workers.....	.....	9	.....	5	.....	.....	.....	.....	.....	16 00	2
124	Paterson..... Newspaper, book and job printing	.....	44	18	16	10	.....	.....	.....	.....	.....	.....	.....
		Editorial and counting room.....	...	4	.....	3	.....	.....	.....	.....	.....	.....	.....
		News room.....	.....	1	16	3	.....	.....	17	3	.....	.....	.....
		Job room.....	.....	8	.....	1	.....	.....	2	7	.....	.....	.....
		Press room.....	.....	5	.....	3	.....	.....	.....	8	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

SILK MILLS.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$7 00	.....	$8 00	$400 00	$6 00	.....	$5 00	.....	$5 40	.....	$4 50	10	No	No	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	Yes	.....	.....
.....	.....	$9 00	$425 00	.....	.....	.....	.....	$7 50	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	$6 00	.....	$5 00	.....	5 25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	6 00	.....	5 00	.....	.....	.....	$4 50	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5 00	.....	.....	.....	.....
.....	.....	.....	.....	10 00	1	7 00	2	.....	.....	.....	.....	.....	.....	.....
$12 00	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	10 00	.....	9 00	.....	9 50	.....	.....	.....	.....	.....	.....
$3 50	.....	$12 00	.....	$8 00	.....	$3 50	.....	$9 00	.....	$3 50	10	No	No	.....

PRINTING AND PUBLISHING.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
$15 00	3	$17 50	$910 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	2	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	2	10 00	520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	1	9 50	494 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$10 00	1	$17 54	.....	$11 35	1	$6 18	1	$8 36	.....	.....	9	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	No	No	.....
$10 00	1	$14 50	$754 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	2	11 00	572 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 50	1	10 25	523 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	1	11 50	598 00	.....	.....	.....	.....	.....	.....	$3 00 6 00	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	$8 00	$416 00	$5 75	.....	.....	.....	.....
.....	.....	$12 00	$624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 00	494 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

TOBACCO AND CIGAR FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
88	Burlington		28	27		1							
	Cigar factory.	Cigar makers		20								$18 00	
		Strippers		1		1						8 00	
		Wrapper makers		2								16 00	
		Packers		2								14 00	
		Salesmen		2								12 00	
87	Newark		21	16		5			16	5		$14 00	7
	Cigar factory.	Cigar making		15					15				
		Packing		1					1				
		Stripping				5				5			
86	Jersey City		23	19		4			18	5			
	Cigar factory.	Cigar makers		16								$24 00	2
		Packers		2								24 00	1
		Strippers				4							
		Foreman		1									
85	Jersey City		6	5		1			5	1			
	Cigar factory.	Cigar makers		5								$16 60	1
		Stripper				1							
84	Jersey City		14	11		3							
	Cigar factory.	Cigar makers		11					11			$14 00	3
		Strippers				3				3			
83	West Hoboken.		10	8		2			8	2			
	Cigar factory.	Cigar makers		7					7			$15 00	1
		Packer		1					1			18 00	
		Strippers				2				2			
82	Greenville		21	19		2			18	3			
	Cigar factory.	Hand work		6								$15 00	2
		Mould work		11								15 00	3
		Packer		1								19 00	
		Stripper				2							
		Foreman		1								14 00	
81	Millville		39	39									
	Cigar factory.	Cigar makers		30								$15 00	
		Strippers		2								4 00	
		Wrapper makers		2								15 00	
		Salesmen		5								15 00	

No. 88.—Employ only union men.

No. 81.—Employ only union hands. Works ran whole year, but in slack season only part of the hands employed.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

TOBACCO AND CIGAR FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
											10	No	No	
$10 00		$12 00	$600 00											
8 00		8 00	400 00											
12 00		13 00	675 00											
10 00		12 00	600 00											
10 00		11 00	550 00											
$8 00	1	$11 00								$2 25 4 50	9	No	No	12
											9½			6
$8 00	2	$14 90	$749 90											
12 00	1	18 00	918 00											
		3 12												
		13 00												
										$3 00		No	No	
$7 50	2	$10 35	$527 85											
										3 00				
										$3 50 6 00	9	No	No	30
$6 00	2	$9 50	$156 00											
$5 50	3	$12 00												
										$3 50				
											9½	Yes	No	18
$6 00	2	$10 00	$490 00											
6 00	3	9 00	441 00											
			931 00											
										$4 00				
			728 00											
											10	No	No	
$10 00		$12 00	$600 00											
2 00		2 50	125 00											
10 00		12 00	600 00											
10 00		12 00	600 00											

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

TOBACCO AND CIGAR FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
78	Camden		425	375	50								
	Cigar factory.	Cigar makers		250								$20 00	
		Strippers		25								20 00	
		Wrapper makers and packers		25								20 00	
		Salesmen		75								16 00	
		Saleswomen			50								

No. 78.—Employ union hands. See No. 81.

79	Salem		20	20									
	Cigar factory.	Cigar makers		16								$16 00	
		Strippers		1									
		Wrapper makers		1									
		Salesmen		2								16 00	
		Packers		1									

See No. 81.

PLUMBING AND GAS FITTING.

103	Jersey City		23	20				3		23			
	Plumbing, &c	Plumbers & gas fitters.		12								$18 00	6
		Laborers		8				3				12 00	2
104	Hoboken		14	11				3					
	Plumbing, &c	Plumbers & gas fitters.		6						14		$18 00	3
		Laborers		5				3				12 00	1
105	Jersey City		15	13				2		15		$18 00	3
	Plumbing, &c												
106	Paterson		29	25		4		4		29			
	Tinning and gas fitting.	Tinmen		12								$13 50	12
		Plumbers		3								15 00	
		Gas fitter		1								16 50	
		Brass worker		1								15 00	
		Laborers		8								9 00	1
107	Paterson		18	16		2		2		18			
	Plumbing and fitting.	Plumbers		2		1		1				$15 00	2
		Fitters		2		1		1				15 00	1
		Sheet-iron workers		3								18 00	1
		Tin workers		3								12 00	2
		Sewer workers		3								10 00	1
		Stone workers		3								9 00	3
108	Newark		65	55		10		6		65		$18 00	8
	Tin roofing & cornices.												
109	Jersey City		10	9		1						$15 00	2
	Coppersmiths												

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

TOBACCO AND CIGAR FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
												No	No	
$10 00		$13 00	$650 00											
10 00		13 00	650 00											
10 00		13 00	650 00											
10 00		12 00	600 00											
				$18 00		$6 00		$12 00	$600 00					
											10	No	No	
$12 00		$14 00	$700 00											
		12 00	600 00											
		12 00	600 00											
10 00		13 00	650 00											

PLUMBING AND GAS FITTING.

											9½	No	No	12
$13 00	1	$16 00	$833 00											
8 00	3	9 00	481 00											
											9	No	No	18
$15 00	2	$16 00	$816 00											
7 50	3	8 00												
$9 00	1	$14 00	$700 00								9	No	No	12
										$5 00	10	No	No	
$7 50	1	$13 00												
		15 00												
7 50	7	7 63												
										$3 00	10	No	No	
$6 00	1	$12 00												
7 50	1	11 25												
12 00	2	14 00												
4 00	1	9 33												
9 00	2	9 33												
		9 00												
$8 00	7	$10 50	$560 00							$3 00 7 00	10	No	No	
$8 00	1	$11 90	$611 00									7 p. c.		24

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

HOUSE AND SIGN PAINTING.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
127	Jersey City. House and sign painting.	.....	16	14	.....	2	.....	1	1	15	.....	$18 00	6
126	Jersey City. House and sign painting.	.....	15	13	.....	2	.....	2	1	14	.....	$24 00	1
125	Jersey City. Painting and paper hanging.	.....	19	16	.....	3	.....	3	6	10	.....	.....	.....
		House painters	.....	10	.....	.....	.....	.....	.....	.....	.....	$18 00	6
		Sign painters	.....	2	.....	.....	.....	.....	.....	.....	.....	28 00	1
		Paper hangers	.....	4	.....	.....	.....	.....	.....	.....	.....	28 00	1

SASH AND BLINDS.

131	Jersey City. Sash and blinds.	.....	12	9	.....	3	.....	1	.....	12	.....	$18 50	1
129	Jersey City. Sash and blinds.	.....	12	9	.....	3	.....	.....	.....	.....	.....	$16 50	9
128	Paterson. Sash and blinds and planing.	.....	35	29	.....	6	.....	3	.....	.....	.....	$18 00	2

HAT FACTORIES.

132	Orange Valley. Felt hat factory.	.....	101	72	12	17	.....	1	44	.....	.....	.....	.....
		Forming	.....	20	.....	15	.....	.....	..	35	.....	$15 00	6
		Making	.....	29	.....	1	.....	.....	20	10	.....	16 50	1
		Coloring	.....	4	.....	.....	.....	.....	.....	4	.....	11 00	1
		Finishing	.....	17	.....	1	.....	1	16	2	.....	15 00	2
		Trimming	.....	.....	12	.....	.....	.....	8	4	.....	.....	.....
		Packing and shipping	.....	2	.....	.....	.....	.....	.....	2	.....	15 00	1

No. 132.—The business is especially severe upon all people having a tendency to lung disease. Employes begin to work at the age of fourteen, when they are received as apprentices. The time when they begin to decline depends upon their constitution and habits. Have men of all ages and kinds, two over sixty years of age.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

HOUSE AND SIGN PAINTING.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$12 00	2	$15 78	$631 00	.....	.....	.....	.....	.....	.....	$6 00 8 50	10	No	No	72
$9 00	2	$16 15	$662 00	.....	.....	.....	.....	.....	.....	$4 00 6 00	9½	No	No	66
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$4 00 7 50	9	No	No	90
$12 00	2	$15 50	$584 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	1	19 00	703 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	2	14 00	518 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SASH AND BLINDS.

$6 00	1	$15 22	$791 00	.....	.....	.....	.....	.....	.....	$4 00 6 00	10	No	No	.....
.....	.....	.....	$780 00	.....	.....	.....	.....	.....	.....	$3 00	9½	No	No	12
$9 00	16	$10 00	$520 00	.....	.....	.....	.....	.....	.....	$5 00	10	10 p. c.	.....	35

HAT FACTORIES.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$9 00	9	$12 00	$600 00	.....	.....	.....	.....	.....	.....	$4 00	10	No	3 p. c.	10
10 00	1	14 00	700 00	.....	.....	.....	.....	.....	.....	4 00	10	No	No	2
9 00	2	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	10	No	No	15
10 00	2	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	9	No	No	30
.....	.....	.....	.....	$8 00	2	$7 00	1	$7 50	$350 00	.....	9	No	No	30
10 00	1	12 50	600 00	.....	.....	.....	.....	.....	.....	.....	10	No	5 p. c.	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

HAT FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
133	Orange Valley..	.....	109	87	.....	4	25	4	68	2	.....	.....	.....
	Fur hats.	Making.	.....	38	.....	1	.....	1	37	2	.....	$15 00	13
		Pouncing	.....	5	.....	.....	.....	.....	.....	.....	.....	24 00	1
		Finishing	.....	25	.....	3	.....	3	28	.....	.....	25 00	6
		Trimming	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	.....
		Blocking	.....	3	.....	.....	.....	.....	3	.....	.....	18 00	.....
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Colorer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Foremen	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Salesman	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Others	.....	1	.....	3	.....	.....	.....	.....	.....	.....	.....
135	Jersey City	.....	15	9	6	.....	.....	1	11	3	.....	.....	.....
	Silk and felt hats.	Body maker	.....	1	.....	.....	.....	.....	.....	.....	.....	$20 00	.....
		Silk hat finisher	.....	1	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Pouncer	.....	1	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Curlers	.....	2	.....	.....	.....	.....	.....	.....	.....	19 50	.....
		Stiff hat finisher	.....	1	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Tip maker	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
		Trimmers	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
		Cover sewer	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
		Salesmen	.....	3	.....	.....	.....	.....	.....	.....	.....	16 00	1

No. 135.—The men employed are all union men, and the scale of prices is regulated by the union. Job-work is paid for according to the character of the work required.

STONE AND MARBLE WORKS.

136	Paterson	Stone cutters	15	14	.....	1	.....	.....	8	12	.....	$18 00	10
	Marble and granite.												
137	Jersey City	.....	19	19	.....	.....	.....	.....	.....	19	.....	.....	.....
	Blue and brown-stone	Stone cutters	.....	14	.....	.....	.....	.....	.....	.....	.....	$18 00	5
		Yardmen	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Truck drivers	.....	3	.....	.....	.....	.....	.....	.....	.....	13 00	1

No. 137.—The business is a healthy one; no special disease peculiar to the trade.

138	Jersey City	Cutters	18	15	.....	3	.....	3	.....	18	.....	$30 00	2
	Monuments.												

No. 138.—On account of the advantage taken by the men, have done away with piece-work.

139	Jersey City	Stone cutters	20	14	.....	.....	.....	.....	.....	.....	.....	$19 50	4
	Blue-stone y'd												
140	Jersey City	Cutters	24	20	.....	4	.....	3	.....	22	.....	$32 00	2
	Monuments.												
141	Communipaw	Cutters	12	10	.....	2	.....	1	.....	12	.....	$26 00	2
	Monuments.												

No. 141.—A man who cuts letters well earns as high as $4.25 per day.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

HAT FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays,
												No		
$12 00	21	$13 00	$550 00								10		10 p c.	95
12 00	4	12 00	570 00								9		No	
16 00	22	18 00	750 00								10		15 p.c.	85
										$4 50	10		No	85
		18 00	600 00								10		No	85
		12 00	600 00											
		12 00	600 00											
		20 00	1000 00											
			1200 00											
		7 00	350 00							3 50 4 00				
											9	No	No	90
		$20 00	$750 00											
		18 00	700 00											
		18 00	700 00											
		19 50	750 00											
		18 00	700 00											
								$8 00						
				$9 50	1	$5 00	1	7 00						
								8 00						
$6 00	1	11 33	703 00											

STONE AND MARBLE WORKS.

$10 00	3	$16 00	$600 00								10			
$15 00	4	$17 00	$816 00											
		10 00	480 00											
10 00	2		528 00											
$10 00	3	$16 00	$800 00							$4 50 6 50 10 00	9	No	No	12
$15 00	5	$17 00	$843 00								9½	No	No	18
$9 00	2	$16 00	$800 00							$4 00 9 00	9	No	No	12
$9 00	2	$16 00	$784 00								9	No	No	18

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BAKERIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
161	Paterson... Bakery.		15	12		3		1		15			
		Bakers		6						9		$15 00	2
		Drivers		4						4		13 00	1
		Bookkeeper		1						1		14 00	
		Laborer		1						1		9 00	

No. 161.—Bakers begin to decline at forty-five, and are incapacitated for work at sixty. The eyes often suffer from working so long, because of the heat of the ovens. If Sunday night-work could be abolished, the men would get along more comfortable.

162	Jersey City. Bakery.		16	13	3					16			
		Bakers		8								$18 00	2
		Drivers		4								12 00	1
		Foreman		1								20 00	
		Clerks			3								

OIL CLOTH WORKS.

143	Salem. Oil cloth factory.		107	107									
		Sizing		12								$15 00	2
		Coating		15								9 00	3
		Printing		42								15 00	10
		Varnishing		20								9 00	7
		Trimming		10								8 00	
		Packing		8									

No. 143.—Last year one of the factory buildings burned down and was not rebuilt until October, which accounts for the average loss time being so great.

145	Camden		310	310									
		Skilled workmen		150								$25 00	
		Unskilled workmen		160									

No. 145.—This business is very healthy. Employes begin work at from fifteen to twenty years of age, begin to decline about fifty; but are not incapacitated for active work till sixty-five to seventy.

144	Camden		80	80									
		Skilled workmen		38								$18 00	
		Unskilled workmen		42									

WAGON AND CARRIAGE FACTORIES.

153	Jersey City. Express wagons.		20	19		1			3	17			
		Blacksmith		3								$18 00	
		Helpers		4								9 00	
		Body makers		2								14 00	
		Painters		6								16 50	
		Finishers		2								18 00	
		Letterers		2								20 00	
		Trimmer		1									

No. 153.—Employes begin to work at fifteen or sixteen. Blacksmiths begin to decline about fifty-five, painters about forty, and are incapacitated for work at the age of sixty-five and fifty. Wages were advanced from $2.50 per day to $3 per day.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

BAKERIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00 5 25	.....	No	No	12
$9 00	1	.....	$600 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
10 00	2	$11 50	598 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	700 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	450 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$11 00	2	$14 25	$741 00	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....
7 00	2	9 00	468 00	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
.....	.....	.....	1040 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	$8 00	1	$5 00	1	$6 50	$338 00	.....	10	.....	.....	.....

OIL CLOTH WORKS.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	72
$12 00	4	$13 00	$520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	3	8 00	320 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11 00	4	13 00	520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	7	8 00	320 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	320 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	300 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	24
$10 00	.....	$15 00	$720 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	384 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	18
$12 00	.....	$15 00	$685 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	392 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

WAGON AND CARRIAGE FACTORIES.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00	10	.....	Yes	.....
$15 00	.....	$16 50	$858 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	7 50	390 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	.....	13 00	676 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	9 75	507 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	.....	16 50	858 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	15 00	780 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	11 00	572 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WAGON AND CARRIAGE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
154	Jersey City..... Carriages and light wagons	.....	9	8	.....	1	.....	.....	.....	9	.....	.....	.....
		Blacksmiths.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Painters.....	.....	4	.....	.....	.....	.....	.....	.....	.....	$18 00	1
		Body maker.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Trimmer.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
156	Jersey City..... Wagons and Trucks.	.....	20	17	.....	3	.....	.....	.....	.....	.....	.....	.....
		Body makers.....	.....	4	.....	.....	.....	.....	.....	.....	.....	$12 00	1
		Blacksmiths.....	.....	2	.....	.....	.....	.....	.....	.....	.....	16 00	1
		Helpers.....	.....	3	.....	.....	.....	.....	.....	.....	.....	11 00	1
		Finishers.....	.....	3	.....	.....	.....	.....	.....	.....	.....	13 00	1
		Painters.....	.....	2	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Letterers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	22 00	.....
		Woodworker.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
155	Jersey City..... Light & heavy wagons.	Employes.....	16	14	.....	2	.....	2	1	15	.....	$16 00	2

MISCELLANEOUS INDUSTRIES.

168	Jersey City..... Railroad repair shop.	Total.....	239	237	.....	2	.....	2	.....	.....	.....	.....	.....
		Carpenters.....	.....	66	.....	.....	.....	.....	.....	.....	.....	$12 96	3
		Woodwork'g mach'es.	.....	6	.....	.....	.....	.....	.....	.....	.....	8 64	5
		Car-wheel shops.....	.....	18	.....	1	.....	1	.....	.....	.....	14 58	1
		Blacksmith shops.....	.....	12	.....	.....	.....	.....	.....	.....	.....	14 58	1
		Blacksmith's helpers..	.....	13	.....	.....	.....	.....	.....	.....	.....	8 64	2
		Tinshop, tinkers.....	.....	3	.....	.....	.....	.....	.....	.....	.....	11 88	2
		Tinshop, helpers.....	.....	7	.....	.....	.....	.....	.....	.....	.....	9 72	3
		Upholstery shop.....	.....	3	.....	1	.....	1	.....	.....	.....	13 50	1
		Paint shop.....	.....	15	.....	.....	.....	.....	.....	.....	.....	12 96	1
		Scrubbers.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers.....	.....	60	.....	.....	.....	.....	.....	.....	.....	8 10	1
		Outside labor gang.....	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Firemen.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineer.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 168.—There are no diseases peculiar to this business. Carpenters suffer mostly from lung complaints, and painters from painter's colic. A decline begins at from forty-five to fifty years of age, and men are incapacitated for work at about sixty-five.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

WAGON AND CARRIAGE FACTORIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00	10	No	No	.....
.....	.....	$15 00	$780 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$7 50	1	11 62	604 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$3 50 6 00	10	No	No	.....
$10 00	2	$10 75	$550 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	1	15 50	660 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	1	10 00	510 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	2	12 25	625 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	1	13 00	675 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	1	.....	728 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	$10 00	510 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$9 00	1	$12 00	$600 00	.....	.....	.....	.....	.....	.....	$4 00 6 00	10	10 p.c	.....	.....

MISCELLANEOUS INDUSTRIES.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	No	No	6
$9 72	8	$11 50	$588 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 10	1	8 37	425 00	.....	.....	.....	.....	.....	.....	$4 00	.....	.....	.....	.....
7 56	8	10 40	530 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 80	4	12 70	660 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 56	8	8 10	415 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 80	1	11 34	575 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 56	4	8 64	440 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 80	1	12 25	625 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....
8 54	2	10 80	550 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 56	385 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 48	2	7 75	385 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 56	385 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 60	500 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
.....	.....	12 00	624 00	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
169	W. J. R. R. Co.		317	317									
		Engineers		30								*$80 00	15
		Conductors		30								72 00	15
		Baggage-masters		12									
		Brakemen		60								40 00	20
		Platform hands		30								40 00	15
		Laborers		125								35 00	20
		Firemen		30								50 00	15

No. 169.—The wages here given are monthly. Hours of daily employment irregular. The number of hands employed is very irregular, as during the height of the watering season in the summer the number is largely increased. The company keeps quite a number during the slack season that they might dispense with in order to have them on hand when the busy season comes on. The number here given is a fair average.

No allowance made for sickness or other individual lost time. Many of the hands are not docked for lost time, and. consequently, the lost time on this railroad is not two and one-half per cent.

The train hands and some other of the employes have a society which, by the payment of a small sum monthly, insures them against pecuniary loss in case of accident.

170	Paterson. Silk weaving supplies.		80	41	31	3	5		48	35			
		Reed making		19		1				20		$18 00	1
		Harness making			25				25				
		Lingo making		4	6		5		15				
		Mail making		5						5			
		Shuttle and quill		13		2			8	7		12 00	10
158	Jersey City. Shirts and shirt fronts.		22	1	18		3		8	13			
159	West Hoboken. Shirts.		28	2	20		6		22	6		$15 00	1
176	Mount Holly. Locks.		24	24									
		Skilled hands		5									
		Partly skilled hands		6									
		Unskilled hands		12									
		Others		1									
178	Jersey City. Upholstery.		16	14		2		2	14			$22 00	2
179	Paterson. Flour and grist mill.		7	6		1				7		$12 00	5
180	Paterson. Grain elevator and steam feed mill.		7	6		2							
		Miller and engineer		1									
		Stone dresser		1									
		Teamster		1		1							
		Salesman		1									
		Bookkeeper		1									
		Mill boy				1							

No. 180.—This set of men handle two hundred cars of grain and hay during the year; average to the car, fifteen net tons.

* Wages given for the month.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$60 00	15	$70 00	$840 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
54 00	15	63 00	756 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	54 00	648 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30 00	20	36 00	432 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30 00	15	35 00	420 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30 00	20	32 50	390 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
40 00	15	45 00	540 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	30
$7 50	2	$12 00	$564 00	.....	.....	.....	.....	.....	.....	$4 00	.....	.....	.....	.....
.....	.....	.....	.....	$12 00	6	$4 50	1	$6 00	$282 00	.....	.....	.....	.....	.....
.....	.....	8 00	384 00	.....	.....	.....	.....	6 00	282 00	4 80	.....	.....	.....	.....
.....	.....	10 00	470 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	3	11 50	550 00	.....	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....
.....	.....	.....	$728 00	$8 00	3	$3 50	2	$5 00	$260 00	$1 50–$2	9	No	No	.....
$13 00	1	$14 00	$700 00	$9 25	5	$4 00	3	$5 80	$290 00	$2–$3	10	No	No	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	42
.....	.....	$12 00	$520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	360 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	337 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 00	450 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$8 00	2	$13 00	$546 00	.....	.....	.....	.....	.....	.....	.....	9	No	No	60
$8 00	1	$11 50	$550 00	.....	.....	.....	.....	.....	.....	$2 25	10	No	No	10
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$4 00	.....	No	No	.....
.....	.....	.....	$720 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	380 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	$480–360	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	900 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	900 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	192 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
181	Passaic Chemical works.		50	50						50		$18 00	1
182	Passaic Dye and print works.		729	550	59	105	15			729		$12 00	5
184	Camden Ship building.		56	56						56			
		Carpenters		50								$16 80	
		Blacksmiths		3									
		Laborers		3									

No. 184.—There are at least one hundred and fifty ship carpenters in Camden who have worked about three-quarters of the time, and have received, on an average, $2.80 per day.

185	Vineland Button factory.		23	3	12		8						
		Machine operators			10								
		Button workers			2		8						
		Engineer		1									
		Laborers		2									

No. 185.—There are two other factories here; in all about sixty hands are employed in the business.

186	Camden Steel pens.		335	35	250	20	30						
		Skilled hands		30								$14 00	
		Unskilled hands			250	20	30					8 00	
		Engineer		1									
		Laborers		4									
187	Jersey City Brushes.		31	5		2	24		24	7			
		Brush drawers					22		22				
		Brush borers		2								$16 50	1
		Brush finisher		1									
		General workers				2							
		Sand wheel worker		1									
		Engineer		1									
		Varnishers					2		2				
188	Jersey City Oakum.		43	33			10					$10 00	

No. 188—Total capacity per week, twenty tons. Business a healthy one. There are men in the factory sixty years of age, who have worked continuously for twenty-five years, and still are in full health.

189	Jersey City Dry dock and ship repairing.		147	141		6		6					
		Ship carpenters		100		1						$19 50	
		Ship calkers		36		5						19 50	
		Laborers		5								15 00	

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$8 25	12	$9 25	$468 92	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
$7 00	40	$8 50	$450 00	$5 00	46	$4 00	31	$4 80	$240 00	$3 50 6 00	10	No	No	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$4 00	10	No	No	72
$15 00	.....	$15 95	$636 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	300 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$2 50	.....	No	No	72
.....	.....	.....	.....	$7 00	5	$4 00	5	$5 50	$220 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	5 00	1	3 00	1	4 00	160 00	.....	.....	.....	.....	.....
.....	.....	.....	$400 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	$7 50	300 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$2 00 4 00	10	No	No	12
$9 00	.....	$12 00	$600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	7 00	350 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	375 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	48
.....	.....	.....	.....	$4 25	4	$1 50	4	$2 53	$111 32	.....	.....	.....	.....	.....
$13 00	1	$14 75	$649 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	13 50	544 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$3 50	.....	.....	.....	.....
.....	.....	13 50	544 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	528 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....
$4 00	.....	$7 60	$400 00	.....	.....	.....	.....	.....	.....	.....	11	No	No	35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$4 00	9	No	No	.....
$9 00	.....	$18 91	$900 00	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....
9 00	.....	18 91	900 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....
9 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
191	Jersey City..... Barbers, 17 establishments	.....	56	43	.....	13	.....	8	.....	56	.....	$14 00	3

No. 191.—Barbers work fifteen hours on Saturday, and eight hours on Sunday. They receive a half day off every two weeks, and work a half day on holidays. They complain about the long hours they are obliged to work.

192	Paterson..... Harness making.	.....	8	7	.....	1	.....	1	.....	8	.....	$15 00	1
193	Jersey City..... Carpet cleaning works.	.....	18	9	3	6	.....	.....	.....	.....	.....	.....	.....
		Carpet layers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Drivers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Carpet sewers.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
		Bookkeepers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	$9 00	.....
		Factory hands.....	.....	3	.....	6	.....	.....	.....	.....	.....	14 00	.....

No. 193.—Women lose about seventy-two days.

130	Jersey City..... Wood mouldings and hand-rails.	.....	38	30	.....	8	.....	.....	.....	38	.....	.....	.....
		Planers.....	.....	8	.....	.....	.....	.....	.....	.....	.....	$18 00	7
		Wood sawing.....	.....	5	.....	8	.....	.....	.....	.....	.....	15 00	3
		Laborers.....	.....	15	.....	.....	.....	.....	.....	.....	.....	12 00	4
		Foremen.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 130.—Lung complaints, from inhaling saw-dust, are prevalent.

195	Jersey City..... Brooms.	.....	12	10	1	1	.....	.....	.....	.....	.....	.....	.....
		Winders.....	.....	3	.....	.....	.....	.....	.....	.....	.....	$13 00	1
		Sewers.....	.....	3	.....	.....	.....	.....	.....	.....	.....	13 00	1
		Sizer.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Corn sorters.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....
		Buncher.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Steamer.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
		Driver.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 195.—The machinery is all worked by hand.

196	Jersey City..... Drug mill.	.....	30	26	.....	4	.....	.....	.....	.....	.....	.....	.....
		Millwright.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Engineers.....	.....	2	.....	.....	.....	.....	.....	.....	.....	$18 00	1
		Millers.....	.....	6	.....	.....	.....	.....	.....	.....	.....	15 00	1
		Truckmen.....	.....	2	.....	.....	.....	.....	.....	.....	.....	15 00	1
		Cooper.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Miscellaneous.....	.....	14	.....	4	.....	.....	.....	.....	.....	15 00	2

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
$9 00	8	$11 50	$596 00	.....	.....	.....	.....	.....	.....	$3 00 6 00	13	No	No	.....
$7 00	1	$11 00	$500 00	.....	.....	.....	.....	.....	.....	$2 00	10	No	No	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$2 25	10	No	No	.....
.....	.....	$15 00	$780 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	13 00	676 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	$9 00	1	$6 00	2	$7 00	$280 00	.....	.....	.....	.....	.....
$7 00	.....	8 00	416 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	.....	12 50	640 00	.....	.....	.....	.....	.....	.....	2 25	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00	10	No	No	.....
$12 00	1	$16 00	$832 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	2	13 80	718 00	.....	.....	.....	.....	.....	.....	5 00	.....	.....	.....	.....
7 00	7	9 14	475 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	30 00	1500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	48
$8 50	1	$10 80	$476 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	1	11 00	484 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	11 00	484 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 00	440 00	.....	.....	.....	.....	.....	.....	$4 00	.....	.....	.....	.....
.....	.....	8 00	350 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	$6 00	$264 00	.....	.....	.....	.....	.....
.....	.....	10 00	520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$4 00 6 00	10	No	No	30
.....	.....	$20 00	$875 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
$12 00	1	15 00	650 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11 00	2	12 00	520 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	1	13 50	580 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	650 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	1	11 00	475 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
174	New Brunswick	.....	183	98	.....	68	17	.....	.....	.....	.....	.....	.....
	Wall paper.	Block cutters	.....	26	.....	.....	.....	.....	.....	26	.....	$20 00	20
		Felters	.....	2	.....	.....	.....	.....	.....	2	.....	12 00	.....
		Machine printers	.....	12	.....	.....	.....	.....	.....	12	.....	19 00	8
		Color mixers	.....	4	.....	.....	.....	.....	.....	4	.....	.....	.....
		Machine hands	.....	6	.....	10	.....	.....	.....	16	.....	18 00	3
				8	.....	4	.....	.....	.....	12	.....	.....	.....
		Designers	.....	3	.....	.....	.....	.....	.....	3	.....	20 00	2
		Packers	.....	9	.....	.....	.....	.....	.....	9	.....	.....	.....
		Embossing	.....	1	.....	2	5	.....	.....	8	.....	.....	.....
		Reelers	.....	17	.....	.....	12	.....	.....	29	.....	.....	.....
		Polishing machines	.....	1	.....	2	.....	.....	.....	3	.....	.....	.....
		Helpers & color mixers	.....	9	.....	.....	.....	.....	.....	9	.....	.....	.....
		Miscellaneous	.....	.....	.....	50	.....	.....	.....	50	.....	.....	.....

No. 174.—No piece-work.

This factory runs for six months fourteen hours per day, allowing for the extra time over ten hours, at the same rate of wages.

172	New Brunswick	.....	335	253	30	52	.....	.....	.....	.....	.....	.....	.....
	Fruit-jar trimmings.	Press-room	.....	65	.....	3	.....	.....	.....	68	.....	$9 00	12
		Screw-room	.....	33	.....	2	.....	.....	.....	35	.....	9 00	5
		Examiners	.....	10	.....	.....	.....	.....	.....	10	.....	.....	.....
		Polishers	.....	14	.....	.....	.....	.....	14	.....	.....	.....	.....
		Glass tighteners	.....	1	.....	15	.....	.....	6	10	.....	.....	.....
		Tin shop	.....	35	.....	13	.....	.....	26	22	.....	14 50	5
		Packers	.....	10	30	2	.....	.....	.....	42	.....	10 00	2
		Spinners	.....	16	.....	.....	.....	.....	15	1	.....	17 00	1
		Blanking-room	.....	5	.....	9	.....	.....	.....	14	.....	10 00	1
		Box making	.....	2	.....	8	.....	.....	.....	10	.....	.....	.....
		Machine shop	.....	32	.....	.....	.....	.....	.....	32	.....	18 00	1
		Carpenters	.....	7	.....	.....	.....	.....	.....	7	.....	13 50	2
		Blacksmith	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
		Bricklayer	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
		Moulders in foundry	.....	6	.....	.....	.....	.....	.....	6	.....	.....	.....
		Others	.....	15	.....	.....	.....	.....	.....	15	.....	9 00	4
177	Jersey City	.....	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Rubber car springs and belting.	Hose & belting makers	28	24	.....	4	.....	.....	.....	28	.....	$15 00	.....
		Grinders & Moulders	32	28	.....	4	.....	.....	.....	32	.....	15 00	.....
82	Cumberland Co	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Glass sand.	Engineer	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
		Foreman	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
		Unskilled hands	.....	15	.....	.....	.....	.....	.....	15	.....	.....	.....

No. 82.—The washing of sand was introduced first by Anthony Sharp, in 1841. The present proprietor took the business in 1870, and has introduced improved machinery by which four men can work one hundred tons per day. This sand contains ninety-nine and one-half per cent. of silica.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including supt's and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$5 00 7 00	10	No	No	30
$17 00	6	$17 50	$800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	4	17 00	770 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	18 00	818 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 00	3	17 00	770 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	550 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16 00	1	18 00	818 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 00	440 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 00	480 00	.....	.....	.....	.....	$3 50	$162 00	.....	.....	.....	.....	.....
.....	.....	8 00	375 00	.....	.....	.....	.....	3 50	162 00	.....	.....	.....	.....	.....
.....	.....	7 50	327 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	327 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2 50	140 00	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
$6 00	8	$7 50	$335 00	.....	.....	.....	.....	.....	.....	$3 50	.....	.....	.....	30
6 00	4	7 75	350 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	30
.....	.....	6 50	260 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
.....	.....	10 00	440 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
.....	.....	8 50	350 00	.....	.....	.....	.....	.....	.....	2 00 6 00	...	.....	.....	60
7 50	4	11 00	480 00	.....	.....	.....	.....	.....	.....	2 00 5 00	...	.....	.....	30
7 50	3	8 00	375 00	$7 50	5	$3 00	4	$4 00	$210 00	.....	.....	.....	.....	60
10 00	4	14 25	670 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
6 00	4	.....	380 00	.....	.....	.....	.....	.....	.....	3 00 5 00	...	.....	.....	30
.....	.....	7 50	305 00	.....	.....	.....	.....	.....	.....	3 00 5 00	...	.....	.....	50
12 00	10	13 50	700 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	5	10 50	545 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	18 00	800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	19 50	800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	13 00	598 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
7 50	11	8 00	296 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	90
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
$9 00	.....	$11 00	$550 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
9 00	.....	11 00	550 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
.....	.....	$10 00	$500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	16 00	800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	9 00	450 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
83	Glass sand		44	44									
	Four firms on Maurice river	Foremen		4						4		$16 00	
		Unskilled hands		40						40		9 00	
	No. 83.—This sand averages ninety-eight per cent. of silica.												
84	Glass sand												
	South Vinel'd. Three firms.	Unskilled hands	25									$2 00	1
	No. 84.—Average ninety-eight per cent. of silica. Some job-work done under contract.												
84½	Trenton China decorators.	Total	30	8	7	3	12	15	9	21			
		Printers		2								$18 00	1
		Painters		2								17 00	1
		Fillers-in			5		6						
		Gilders		2		2	2					12 00	2
		Transferrers			2		4						
		Kilnmen		1		1						30 00	
		Ground layers		1								17 00	1

No. 84½.—Nearly all the foremen do well in wages, rating from $18 to $60 per week. Anything like definite statistics of the time worked it is difficult to obtain, because one week all may be idle and the next working overtime, when three hours and a half is reckoned for a half day. In the busy season it is not unusual for women and young girls to work until 10 P. M.

GENERAL INDUSTRIES NOT TABULATED ELSEWHERE.

163	Bridgeton Various firms.		300										
		Blacksmiths										$18 00	
		Bakers										12 00	
		Barbers										12 00	
		Carpenters											
		Printers, (see remarks)										18 00	
		Painters										18 00	
		Masons											
		Laborers											
		Dressmakers											
		Milliners											
		Waterman											
	No. 163.—Type-setting largely done by boys and girls, at $2 to $4 weekly.												
164	Camden Co. Various firms		2890	2210	680								
		Carpenters		130								$20 00	
		Bricklayers		150									
		Barbers		120								12 00	
		Blacksmiths		150								20 00	
		Masons		90								18 00	
		Hodcarriers		130								12 00	
		Harnessmakers		50								15 00	
		Dressmakers			140								
		Carriagemakers		160								18 00	

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	180
$12 00	2	$14 00	$700 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	8 00	200 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	60
$1 00	.....	$1 25	$312 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....
$10 00	1	$15 00	$588 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
15 00	1	16 00	445 00	.....	.....	.....	.....	.....	.....	$2 00	.....	15 p.c.	.....	133
.....	.....	.....	.....	$6 00	2	$3 80	4	$4 50	$178 00	2 00	.....	30 p.c.	.....	70
10 00	.....	11 00	462 00	10 00	1	3 00	1	6 50	273 00	.....	.....	10 p.c.	.....	49
.....	.....	.....	.....	7 00	2	2 00	8	4 50	189 00	2 00	.....	.....	.....	46
.....	.....	18 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	17 00	510 00	.....	.....	.....	.....	.....	.....	.....	.....	12 p.c.	.....	100

GENERAL INDUSTRIES NOT TABULATED ELSEWHERE.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$1 50 3 00	.....	.....	.....	.....
$10 00	.....	$15 00	$750 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	630 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
6 00	.....	8 00	400 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	.....	16 00	675 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	16 00	675 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	7 50	300 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25
.....	.....	.....	.....	$10 00	.....	$4 00	.....	$6 00	$240 00	.....	.....	.....	.....	48
.....	.....	.....	.....	10 00	.....	4 00	.....	6 00	240 00	.....	.....	.....	.....	48
.....	.....	*$25 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	No	.....
$12 00	.....	$15 00	$630 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
.....	.....	18 00	760 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
6 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	.....	18 00	900 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	.....	16 00	700 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
9 00	.....	10 00	425 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
9 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	$10 00	.....	$4 00	.....	$6 00	$230 00	.....	.....	.....	.....	75
10 00	.....	12 00	530 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36

* Wages per month and board.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GENERAL INDUSTRIES NOT TABULATED ELSEWHERE.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
164	Camden Co..... Various firms.	Milliners.....	.....	.....	110	.....	.....	.....	.....	.....	.....	.....	.....
		Music teachers.....	.....	20	30	.....	.....	.....	.....	.....	.....	$15 00	.....
		Paper mill workers.....	.....	25	.....	.....	.....	.....	.....	.....	.....	25 00	.....
		Paper hangings.....	.....	50	.....	.....	.....	.....	.....	.....	.....	20 00	.....
		Printers.....	.....	300	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Plasterers.....	.....	80	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shirtmakers.....	.....	25	200	.....	.....	.....	.....	.....	.....	.....	.....
		Shoemakers.....	.....	100	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Tailors.....	.....	90	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Wheelwrights.....	.....	90	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Tinmen.....	.....	100	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Laborers.....	.....	500	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Carpet weavers.....	.....	50	.....	.....	.....	.....	.....	.....	.....	15 00	.....

No. 164.—A large part of the work is done by the piece, but at very irregular prices, and some of it by contract.

165	Cumberland Co Various firms	.....	905	843	60	.....	.....	.....	.....	.....	.....	.....	.....
		Bakers.....	.....	30	.....	.....	.....	.....	.....	.....	.....	$15 00	.....
		Barbers.....	.....	40	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Blacksmiths.....	.....	40	.....	.....	.....	.....	.....	.....	.....	20 00	.....
		Carpenters.....	.....	100	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Dressmakers.....	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....
		Flour mills.....	.....	25	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Harnessmakers.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Hodcarriers.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Jewelers.....	.....	20	.....	.....	.....	.....	.....	.....	.....	20 00	.....
		Milliners.....	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....
		Masons.....	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Painters.....	.....	60	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Printers.....	.....	100	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Laborers.....	.....	200	.....	.....	.....	.....	.....	.....	.....	9 00	.....
		Wood sawyers.....	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Wood choppers.....	.....	100	.....	.....	.....	.....	.....	.....	.....	10 00	.....

No. 165.—A large amount of job-work is done, but the prices are very irregular.

166	Millville..... Various firms.	.....	335	270	55	.....	.....	.....	.....	.....	.....	.....	.....
		Blacksmiths.....	.....	20	.....	.....	.....	.....	.....	.....	.....	$20 00	.....
		Bakers.....	.....	10	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Barbers.....	.....	15	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Carpenters.....	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Carriagemakers.....	.....	10	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		*Printers.....	.....	15	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Laborers.....	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
		†Painters.....	.....	30	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		‡Tinmen.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Watermen.....	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Masons.....	.....	30	.....	.....	.....	.....	.....	.....	.....	18 00	.....
		Dressmakers.....	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....
		Milliners.....	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....

*Type-setting is mostly done by boys, at wages from $1.50 to $3 per week.
†Contract work, but irregular.
‡Irregular.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GENERAL INDUSTRIES NOT TABULATED ELSEWHERE.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	$10 00	.....	$5 00	.....	$7 00	$280 00	.....	.....	.....	.....	48
$10 00	.....	$12 00	.....	8 00	.....	3 00	.....	5 00	200 00	.....	.....	.....	.....	72
7 00	.....	9 00	$450 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	15 00	620 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	72
10 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	.....	12 00	600 00	8 00	.....	3 00	.....	4 00	200 00	.....	.....	.....	.....	.....
10 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	750 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	7 50	375 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	12 00	480 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$1 50 / 3 00	10	No	No	.....
$7 00	.....	$10 00	$500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	9 00	450 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 00	.....	15 00	700 00	$10 00	.....	$4 00	.....	$6 00	$240 00	.....	.....	.....	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
7 00	.....	8 00	400 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	10 00	470 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36
8 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	10 00	.....	4 00	.....	6 00	280 00	.....	.....	.....	.....	36
.....	.....	16 00	750 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36
12 00	.....	15 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	7 50	370 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36
.....	.....	7 50	375 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3 00	.....	6 00	150 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$1 50 / 3 00	10	No	No	.....
$12 00	.....	$16 00	$800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	700 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	8 00	350 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15 00	.....	16 00	640 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
.....	.....	12 00	600 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
.....	.....	*25 00	250 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50
16 00	.....	17 00	680 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	$10 00	.....	$4 00	.....	$5 00	$200 00	.....	.....	.....	.....	50
.....	.....	.....	.....	10 00	.....	5 00	.....	6 00	240 00	.....	.....	.....	.....	50
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50

*Per month with board.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GENERAL INDUSTRIES NOT TABULATED ELSEWHERE.

Office number.	Location.	Subdivision of Trade.	Total number of hands employed.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece-workers.	Number of time-workers.	When working in teams, the number in a team.	Highest wages paid to men per week, not including superintendents and clerks.	Number receiving the highest wages.
167	Vineland	.....	350	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Various firms.	Blacksmiths	.....	.....	.....	.....	.....	.....	.....	.....	.....	$22 00	.....
		Bakers	.....	.....	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Barbers	.....	.....	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Carpenters	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		*Printers	.....	.....	.....	.....	.....	.....	.....	.....	.....	12 00	.....
		Painters	.....	.....	.....	.....	.....	.....	.....	.....	.....	16 00	.....
		Masons	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Laborers	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 00	.....
		Dressmakers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shirtmakers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Shoemakers	.....	.....	.....	.....	.....	.....	.....	.....	.....	15 00	.....
		Milliners	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

No. 167.—Piece-work is irregular and done under special contract.

* Type-setting is done largely by boys and girls.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

GENERAL INDUSTRIES NOT TABULATED ELSEWHERE.

Lowest wages paid to men per week.	Number receiving the lowest wages.	Average wages of men for a full week's work.	Average annual earnings of men from July 1st, 1884, to July 1st, 1885, not including sup'ts and clerks.	Highest wages paid to women per week.	Number receiving the highest wages.	Lowest wages paid to women per week.	Number receiving the lowest wages.	Average wages of women for a full week's work.	Average annual earnings of women from July 1st, 1884, to July 1st, 1885.	Wages paid to boys and girls per week.	Number hours worked per day.	Have wages been reduced during the year? How much?	Have wages been increased during the year? How much?	Av. No. days lost during year, excluding legal holidays.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$2 00 3 00	10-15	No	No	.....
$12 00	.....	$16 00	$800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	.....	9 00	450 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	15 00	700 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
8 00	.....	10 00	500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
10 00	.....	12 00	480 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
.....	.....	15 00	480 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
5 00	.....	6 00	300 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	$10 00	.....	$4 00	.....	$5 00	$200 00	.....	.....	.....	.....	60
.....	.....	.....	.....	8 00	.....	3 00	.....	4 00	184 00	.....	.....	.....	.....	24
10 00	.....	12 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	10 00	.....	4 00	.....	5 00	200 00	.....	.....	.....	.....	60

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

AGRICULTURAL LABORERS.

COUNTIES.	Total number of hands employed.	Yearly hands with board, per month.	Monthly hands with board, per month.	Daily hands with board, ordinary work, per day.	Daily hands with board, special work, per day.	HARVESTING. Cradling, with board, per day.	HARVESTING. Mowing, with board, per day.
Atlantic and Cape May counties.	3,000	.....	.....	.....	.....	.....	.....
Highest wages	.....	$22 00	$25 00	$1 25	$1 50	$3 00	$2 50
Lowest wages	.....	12 00	18 00	75	90	2 00	2 25
Average wages	.....	15 00	16 00	90	1 00	2 50	2 00
*Hours worked daily	.....	14	14	10	10	10	10
Burlington county	3,800	.....	.....	.....	.....	.....	.....
Highest wages	.....	$15 00	$20 00	$1 50	.....	$2 50	$2 25
Lowest wages	.....	10 00	12 00	75	.....	1 75	1 50
Average wages	.....	12 00	15 00	1 00	.....	2 00	1 75
Camden county	2,800	.....	.....	.....	.....	.....	.....
Highest wages	.....	$20 00	$25 00	$1 25	$2 00	$3 00	$2 50
Lowest wages	.....	8 00	10 00	75	1 00	2 00	2 25
Average wages	.....	10 00	16 00	1 00	1 50	2 50	2 00
Cumberland county	1,600	.....	.....	.....	.....	.....	.....
Highest wages	.....	$20 00	$25 00	$1 25	$2 00	$3 00	$2 50
Lowest wages	.....	8 00	10 00	75	1 00	2 00	2 25
Average wages	.....	10 00	16 00	1 00	1 50	2 50	2 00
Gloucester county	1,700	.....	.....	.....	.....	.....	.....
Highest wages	.....	$20 00	$25 00	$1 25	$2 00	$3 00	$2 50
Lowest wages	.....	10 00	15 00	75	1 25	2 00	2 25
Average wages	.....	12 00	18 00	1 00	1 50	2 50	2 00
Salem county	2,000	.....	.....	.....	.....	.....	.....
Highest wages	.....	$20 00	$25 00	$1 25	$1 75	$3 00	$2 50
Lowest wages	.....	10 00	12 00	75	1 00	2 00	2 25
Average wages	.....	12 00	15 00	1 00	1 25	2 50	2 00

* Hours of daily work and harvesting-wages are uniform in the southern part of the State.

TABLE No. 2.—ESTABLISHMENTS—*Continued.*

AGRICULTURAL LABORERS.

HARVESTING.				Remarks.
Haying, with board, per day.	Binding, with board, per day.	Women, house-work, milker, &c., per week, with board.	Wages paid to boys and girls per week.	
.....	.....	.....	$1 00 3 00	A large number of the working people in Atlantic and Cape May counties are engaged in oystering and fishing, devoting only a part of their time to farming. Many of them follow the water, finding employment on board of coasting vessels, a large number of which are owned in the lower counties of the State, and are furnished with captains and hands from the neighborhood of ownership. Few work on the farm the whole year, and in being able to find other employment do not average a month's lost time.
$2 00	$2 00	$3 50	.....	
1 00	1 50	1 00	.....	
1 50	1 75	2 00	.....	
10	10	15	.....	
.....	.....	.....	$1 50 3 00	Included in the board for yearly and monthly hands are the washing, and the privilege of a horse and carriage occasionally. When daily hands are not boarded twenty-five per cent. extra per day is allowed. Harvesting is occasionally done by contract, by the acre. Likewise, ditching by the rod. Special terms are made by farmers who have tenant houses, with an acre or two of land attached, upon which the occupant can raise vegetables, &c., for his family.
$2 00	$2 00	.....	.....	
1 75	1 25	.....	.....	
1 50	1 50	$2 00	.....	
.....	.....	.....	$1 00 3 00	It is difficult to ascertain the average yearly wages of hands working by the day, as so much lost time occurs; but as nearly as can be estimated, it is $200 per year with and $300 without board.
$2 00	$2 00	.....	.....	
1 00	1 50	.....	.....	
1 50	1 75	$2 00	.....	
.....	.....	.....	$1 00 3 00	Large quantities of strawberries and blackberries are shipped from Vineland, in Cumberland county, and from Hammonton, in Atlantic county, every season. The picking of the berries gives employment to a large number of women and children. The price paid is two cents per quart, and from fifty to seventy-five quarts can be picked per day Cumberland, Cape May and Atlantic counties also raise a large quantity of cranberries.
$2 00	$2 00	.....	.....	
1 00	1 50	.....	.....	
1 50	1 75	$2 00	.....	
.....	.....	.....	$1 00 3 00	Whortleberries and wild blackberries grow in abundance in Gloucester, Camden, Cumberland and Cape May counties, and women, girls and boys make considerable money by picking them. These berries can be sold on the spot for four cents per quart, and many families make as much as $100 a year by this employment.
$2 00	$2 00	$3 00	.....	
1 00	1 50	1 00	.....	
1 50	1 75	1 75	.....	
.....	.....	.....	$1 00 3 00	
$2 00	$2 00	$3 00	.....	
1 00	1 50	1 00	.....	
1 50	1 75	1 75	.....	

TABLE No. 3.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL BLOWERS (Green Glass).

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
2	Millville	Blow in shop	11c. for 12 oz. weight, less 10 per cent.	1 dozen
3	"	Blow in shop	83c. for 4½ oz. weight, less 10 per cent.	1 gross
5	"	Gaffer	11c. for 12 oz. weight, less 10 per cent.	1 dozen
6	"	Blow in shop	60c. for 1 oz. size, less 10 per cent.	1 gross
7	Clayton	Blow in shop	$1 for 6 oz. panel, less 10 per cent.	1 "
8	"	Blow in shop	69c. for 1 oz. panel, less 10 per cent.	1 "
9	"	Gaffer	$1 for 6 oz. panel, less 10 per cent.	1 "
10	"	Blow in shop	$1 for 6 oz. panel, less 10 per cent.	1 "
11	"	Gaffer	85c. for 5 oz. panel, less 10 per cent.	1 "
12	Glassboro	Blow in shop	79c. for 4 oz. vials, less 10 per cent.	1 "
13	"	Gaffer	79c. for 4 oz. vials, less 10 per cent.	1 "
14	"	Blow in shop	69c. for 2 oz. vials, less 10 per cent.	1 "
15	"	Gaffer	60c. for ½ and 1 oz. vials, less 10 per cent.	1 "
16	"	Blow and finish	13c. for 16 oz. weight, less 10 per cent.	1 dozen
17	"	Blow and finish	13c. for 16 oz. beers, less 10 per cent.	1 "
18	Woodbury	Blow in shop	75c. for 4 oz., less 10 per cent.	1 gross
19	"	Gaffer	64c. for 6 drachm, less 10 per cent.	1 "
20	"	Gaffer	$1.12 for 8 oz. weight, less 10 per cent.	1 "
21	"	Blow in shop	60c. for ½ and 1 oz., less 10 per cent.	1 "
22	Bridgeton	Blow in shop	60c. for 1 oz., less 10 per cent.	1 "
23	"	Bottle blowing	14½c., less 10 per cent.	1 dozen
24	"	Blow in shop	80c., sponge varnish, less 10 per cent.	1 gross
25	"	Gaffer	64c. to $1 for 2 to 6 oz., less 10 per cent.	1 "
26	"	Blow in shop	8½c. for ½ pint flasks, less 10 per cent.	1 dozen
27	"	Bottle blower	14½c., less 10 per cent.	1 "
28	"	Gaffer	9¼c. for 8 oz., less 10 per cent.	1 "
29	Salem	Blow in shop	11½c. for 12 oz., less 10 per cent.	1 "
30	"	Gaffer	9½c. for 8 oz. weight, less 10 per cent	1 "
31	"	Bottle blower	13c. for 16 oz. weight, less 10 per cent.	1 "
32	"	Blow in shop	9½c. for 8 oz. weight, less 10 per cent.	1 "
33	"	Bottle blower	14c. for 16 oz. weight, less 10 per cent.	1 "
34	Williamstown		8c. to 9c.	1 "
36	Winslow	Bottle blower	14c., wines, 5 to gallon, less 10 per cent.	1 "
37	"	Bottle blower	15c. for 20 oz., less 10 per cent.	1 "
38	"	Bottle blower	17c. for 26 oz., less 10 per cent.	1 "
39	Wilton	Bottle blower	15c. for 20 oz. beers, less 10 per cent.	1 "
40	"	Blow in shop	9½c. for 8 oz., less 10 per cent.	1 "
41	"	Bottle blower	14c., wines, 5 to gallon, less 10 per cent.	1 "
42	"	Bottle blower	13c. for 16 oz., less 10 per cent.	1 "
43	"	Bottle blower	13c. for 16 oz., less 10 per cent.	1 "
44	"	Blow in shop	60c. for ½ and 1 oz., less 10 per cent.	1 gross
45	"	Blow in shop	9½c. for 8 oz., less 10 per cent	1 dozen
46	"	Blow in shop	75c. for 4 oz., less 10 per cent.	1 gross

FLINT-GLASS BLOWERS (Covered Pots).

47	Millville	Blow in shop	64c. for 2 oz., less 10 per cent.	1 gross
48	"	Blow in shop	75c. for 4 oz., less 10 per cent.	1 "
49	"	Blow in shop	64c. for 2 oz., less 10 per cent.	1 "
50	"	Blow in shop	$1.02 for 8 oz., less 10 per cent.	1 "
51	"	Blow in shop	96c. for 6 oz., less 10 per cent.	1 "
52	Glassboro	Blow in shop	64c. for 2 oz., less 10 per cent.	1 "
53	Millville	Bohemian blower	28c. for ⅛ and ¼ drachm	1 "
54	"	Bohemian blower	28c. for ⅛ and ¼ drachm	1 "

TABLE No. 3.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL BLOWERS (Green Glass).

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
3 men and 3 boys, 180 per day	18	40	60	80	Biliousness.
3 men and 3 boys, 20 per day	18	40	50	80	Dyspepsia.
3 men and 3 boys, 168 per day	16	40	65	90	Dyspepsia and liver complaint.
3 men and 3 boys, 28 per day	16	40	45	75	Cold and consumption.
3 men and 3 boys, 19 per day	16	36	56	75	Throat and dyspepsia.
3 men and 3 boys, 25 per day	17	38	42	62	Liver and dyspepsia.
3 men and 3 boys, 19 per day	18	40	55	70	Dyspepsia.
3 men and 3 boys, 19 per day	17	39	58	80	Dyspepsia.
3 men and 3 boys, 18 per day	16	40	60	70	Dyspepsia.
3 men and 3 boys, 20 per day	16	40	50	70	Dyspepsia.
3 men and 3 boys, 18 per day	16	40	60	75	Liver complaint.
3 men and 3 boys, 22 per day	17	35	50	70	
3 men and 3 boys, 30 per day	16	40	60	...	Liver complaint.
2 men and 2 boys, 80 per day	16	40	60	70	
2 men and 2 boys, 75 per day	16	48	60	74	General debility.
3 men and 3 boys, 22 per day	25	50	60	80	Dyspepsia.
3 men and 3 boys, 28 per day	10	40	60	75	Consumption.
3 men and 3 boys, 18 per day	16	40	65	...	Dyspepsia.
3 men and 3 boys, 30 per day	16	35	60	75	Piles and rheumatism.
3 men and 3 boys, 26½ per day	16	40	60	75	Throat disease.
2 men and 2 boys, 75 per day	.....	.....	50	75	
3 men and 3 boys, 15 per day	16	40	60	75	
3 men and 3 boys, 12 (6 oz.) per day	17	35	50	70	General debility.
3 men and 3 boys, 198 per day	16	40	.....	75	
2 men and 3 boys, 80 per day	.....	35	.....	75	
3 men and 3 boys, 180 per day	17	.....	.....	75	
3 men and 3 boys, 150 per day	22	35	.....	...	Dyspepsia.
3 men and 3 boys, 196 per day	16	30	40	50	Dyspepsia.
2 men and 2 boys, 85 per day	16	40	.....	...	Consumption and dyspepsia.
3 men and 3 boys, 190 per day	18	.....	.....	...	Lung and liver.
2 men and 2 boys, 80 per day	17	40	45	...	Dyspepsia.
3 men and 3 boys, 200 per day	17	40	50	55	Throat and lung.
2 men and 2 boys, 75 per day	18	40	60	75	Dyspepsia.
2 men and 2 boys, 65 per day	16	40	55	70	Dyspepsia and liver.
2 men and 2 boys, 60 per day	16	40	55	70	Biliousness.
2 men and 2 boys, 70 per day	16	40	56	72	Dyspepsia.
3 men and 3 boys, 180 per day	18	43	57	75	Liver.
2 men and 2 boys, 60 per day	18	40	55	70	Dyspepsia.
2 men and 2 boys, 70 per day	18	41	56	70	Throat.
2 men and 2 boys, 60 per day	16	45	58	66	Biliousness.
3 men and 3 boys, 20 per day	16	42	57	72	Dyspepsia and lung.
3 men and 3 boys, 144 per day	16	40	55	70	Dyspepsia.
3 men and 3 boys, 20 per day	18	40	56	70	Dyspepsia.

FLINT-GLASS BLOWERS (Covered Pots).

3 men and 3 boys, 26 per day	16	45	60	75	Liver.
3 men and 3 boys, 22 per day	16	45	60	70	Dyspepsia.
3 men and 3 boys, 28 per day	16	45	60	70	Biliousness.
3 men and 3 boys, 15 per day	16	50	65	75	Liver.
3 men and 3 boys, 16 per day	16	50	65	75	Liver.
3 men and 3 boys, 25 per day	16	45	60	70	Biliousness.
1 man, 12 per day	15	40	55	65	Liver.
1 man, 12 per day	16	48	60	70	Biliousness.

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

WINDOW-GLASS BLOWERS, GATHERERS, FLATTENERS AND CUTTERS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
56	Millville	Blower		100 ft., or 1 box
57	Glassboro	Blower	58c	100 ft., or 1 box
58	Winslow	Blower		100 ft., or 1 box
59	"	Blower	60c	100 ft., or 1 box
60	Malaga	Blower	58c. to $1.60	100 ft., or 1 box
60	"	Blower		100 ft., or 1 box
65	"	Blower	Av., 50c., according to quality	100 ft., or 1 box
67	Bridgeton	Gatherer	37½c	100 ft., or 1 box
68	Malaga	Gatherer	67 p. c. of the blower's price	100 ft., or 1 box
70	"	Flattener	¼ of the blower's price	
71	Glassboro	Flattener	25 p. c. of the blower's price	
73	Malaga	Cutter	26½c	1 box of 100 ft.
74	Glassboro	Cutter	26½c	1 box of 100 ft.

MISCELLANEOUS WORKMEN IN GLASS FACTORIES.

81	Millville	Stopper grinder (flint)	10c., average	1 dozen
83	"	" (green glass)	20c., less 15 p. c. (quart bottles)	1 dozen
84	"	" (green glass)	25c., less 15 p. c. (½ gal. bottles)	1 dozen
85	Williamstown	Pot maker	By month, $70	1 pot
86	Winslow	Box m'kr (wind.-glass)	3c. for single; 6c. for double	1 box

SILK WORKERS.

106	Paterson	Ribbon weaver	$3.00	1 cut, 10 yards
107	"	Ribbon weaver	3.00	1 cut, 10 yards
108	"	Ribbon weaver	3 05	1 cut, 10 yards
109	"	Ribbon weaver	2.03; ⅛ off for twisting	1 cut, 10 yards
110	"	Ribbon weaver	3.30 for 32 shuttles, No. 5; ⅛ off for twisting	1 cut, 10 yards
111	"	Ribbon weaver	2.95	1 cut, 10 yards
112	"	Ribbon weaver	3.00; ⅛ off for twisting	1 cut, 10 yards
113	"	Ribbon weaver	2.30; ⅛ off for twisting	10 yards; but as 28 ribbons run together a cut is equal to 280 yards of ribbon
114	"	Ribbon weaver	3.70 for 18 shuttles, No. 16 (10 in a tent); ⅛ off for twisting	1 cut
115	"	Ribbon weaver	3.10 for 18 shuttles, No. 16 (9 in a tent); ⅛ off for twisting	1 cut
116	"	Ribbon weaver	2.62½ for 46 shuttles, No. 2 (6 in a tent); ⅛ off for twisting	1 cut
117	"	Ribbon weaver	3.31 for No. 9 (9 in a tent); ⅛ off for twisting	1 cut
118	"	Ribbon weaver	3.65 for 20 shuttles, No. 10 (10 in a tent)	1 cut

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

WINDOW-GLASS BLOWERS, GATHERERS, FLATTENERS AND CUTTERS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
48 per week	21	40	50	...	
9 per day	16	40	50	75	
44 per week	20	45	60	70	
44 per week	20	45	60	70	
45 per week	21	38	45	65	Throat.
45 per week	21	38	45	65	Throat.
45 per week	21	38	45	65	Throat.
8 per day	16	40	50	65	Hard work.
45 per week	18	45	50	65	Throat.
Flattener for 4 blowers	21	38	50	60	Throat.
4 flatteners to 16 blowers	18	40	50	55	
18 per day	21	38	56	65	Throat.
18 per day	18	45	50	60	Consumption.

MISCELLANEOUS WORKMEN IN GLASS FACTORIES.

25 per day	20	45	60	70	Consumption.
17½ per day with help of boy	20	45	55	70	Consumption.
14 per day with help of boy	18	45	60	70	Consumption.
4 per week	25	40	50	60	Consumption; dust of clay settles on lungs.
100 single, 50 double, per day	18	50	65	80	

SILK WORKERS.

8 yards per day	14	50	50	60	Weak eyes.
8 yards per day	15	40	50	65	Weak eyes and nervousness.
9 yards per day (average)	14	50	60	...	
9 yards per day	15	.....	50	...	
8 yards per day	15	.....	.....	...	Lung trouble, caused by dyes.
6 yards per day	14	40	45	55	Weak eyes.
8 yards per day	15	37	45	55	Lung disease.
9 yards, or 252 running yards, per day	15	40	50	60	Consumption.
6 yards per day	15	45	50	55	Nervousness; lung disease.
7 yards per day	15	40	50	...	
9 yards per day	15	40	50	60	Lung disease.
7 yards per day	15	40	50	55	Weak eyes; lung disease.
8 yards per day	15	40	50	...	

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

SILK WORKERS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
119	Paterson	Ribbon weaver	$3.31 for No. 9 (9 in a tent); ⅛ off for twisting	1 cut
120	"	Ribbon weaver	2.75; ⅛ off for twisting	1 cut
121	"	Ribbon weaver	3.11; ⅛ off for twisting	1 cut
122	"	Ribbon weaver	3.00; ⅛ off for twisting	1 cut
123	"	Ribbon weaver	$3.60 for 18 shuttles, No. 16 (7 in a tent); ⅛ off for twisting	1 cut
124	"	Ribbon weaver	2.40; ⅛ off for twisting	1 cut
125	"	Ribbon weaver	2.40 to $8; ⅛ off for twisting	12 yards of the $8
126	"	Ribbon weaver	3.00; ⅛ off for twisting	1 cut
127	"	Ribbon weaver	3.25; ⅛ off for twisting	1 cut
128	"	Ribbon weaver	3.52; ⅛ off for twisting	1 cut
129	"	Ribbon weaver	3.29 for 18 shuttles, No. 16	1 cut
130	"	Ribbon weaver	3.31	1 cut
131	"	Ribbon weaver	4.15, 16 shuttles, 16 pieces	1 cut
132	"	Ribbon weaver	2.90, 20 shuttles	1 cut
133	"	Hand-loom weaver	14c	1 yard
134	"	Hand-loom weaver	25 to 50c	1 yard
135	"	Hand-loom weaver	25c	1 yard
136	"	Limp & broad silk w'ver	60c	1 dozen
137	"	Horizontal warper		
138	"	Warper	4½ to 5c	100 ends
150	"	Power-loom weaver	7c	1 yard
151	"	Broad silk	8c	1 yard
152	"	Broad silk & handk'fs	8c. per yd, $1.15 per doz. handk'fs	1 yard or dozen
153	"	Power and hand-loom	$12.00	1 piece, 65 yards
154	"	Power-loom	7.50	100 yards
155	"	Broad silk weaver	8c	1 yard
156	"	Power-loom	$9.00	75 yards
157	"	Power-loom	9.75	65 yards
158	"	Power-loom	7½c	1 yard

SHOEMAKERS.

159	Camden	Cutter	12½c	1 dozen
161	Newark	Stock-cutting, out-soles	17c	1 case, 60 pairs
162	"	Cutting	60c. for misses'; 70c. for women's	60 pairs
163	Vineland	Laster	Boys', 8c.; youths', 7c	1 pair
164	"	Laster	Boys', 8c.; youths', 7c	1 pair
165	"	Laster	Children's, 2¾c.; misses', 3¼c.; women's, 3¾c.; solar tips, ¾c. extra: kid, half box, 5¾c	Take uppers from fitters, and the soles, in-soles & stiffenings from stock fitters, & draw them over the last
166	Newark	Laster	Children's, 3¾c.; women's, Spanish, 7c	1 pair
167	"	Laster	Children's, 3¾c.; misses', 4 to 5½c.; women's, 5 to 7c.	1 pair
168	"	Laster	4 to 7c	1 pair
169	"	Laster	Children's, 3¾c.; misses', 4c.; youths', 5c.; women's, 5 to 6½c.; women's, Spanish, 7c.	1 pair

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

SILK WORKERS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
6 yards per day	15	45	50	56	Weak eyes; lung disease.
9 yards per day	14	40	50	60	Lung trouble, caused by dust.
8 yards per day	15	40	50	55	Weak eyes.
8 yards per day	16	40	45	55	Weak eyes.
8 yards per day	15	40	50	55	
10 yards per day	15	45	50	60	Weak eyes.
4 yards per day of the $8	15	45	50	...	Weak eyes.
10 yards per day	.....	.....	.....	...	
8 yards per day	15	35	45	55	Weak eyes, caused by dust.
9 yards per day	18	40	50	60	
9 yards per day	15	.....	.....	...	
8 yards per day	15	37	60	...	Lung disease.
6 yds., or 96 running yds. of ribbon per day	15	50	60	70	
10 yds., or 200 running yds. of ribbon per day	14	50	.....	...	
14 yards per day	14	45	50	60	
4 to 10 yards per day	16	.....	.....	...	
6 yards per day	16	45	55	60	
1¼ on 1 loom, 2½ on 2 looms per day	14	.....	.....	...	
350 yards per day	14	40	50	60	
.....	15	26	50	...	Catarrh.
22 yards on 2 looms	14	45	55	60	
14 yards per day	15	.....	.....	...	
1 yard silk, 1 dozen handk'fs	12	.....	.....	...	Nervousness.
5 yards per day	12	40	45	60	
15 yards per day	15	40	50	60	
19 yards per day	12	.....	50	...	Consumption.
9 yards per day	.....	.....	.....	...	
8 yards per day	.....	.....	.....	...	
22 yards per day	14	40	50	60	

SHOEMAKERS.

140 per week	16	50	60	75	Close confinement.
800 pairs per day	17	40	50	70	
3 cases per day	12	50	75	80	
35 to 40 per day	15	40	60	70	Dyspepsia.
30 to 36 per day	16	45	.....	...	
.....	14	.....	.....	75	Consumption and biliousness.
40 pairs per day, average	16	45	50	70	Consumption.
40 pairs per day, average	16	40	50	70	
36 pairs per day	17	60	75	90	
40 pairs per day	13	40	60	80	

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

SHOEMAKERS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
170	Newark	Laster	Children's, 3¾c.; misses', 4 to 5½c.; women's, 5 to 7c.; youths', 5c.; boys', 7c.	1 pair
172	New Brunsw'k.	Laster	2½ to 8½c. for children's and women's	1 pair
173	Camden	Heeler	35c. is the average price	1 dozen pairs
174	"	Heeler	40c. is the average price	1 dozen pairs
175	"	Finishing	60c. per case	72 pairs
176	Vineland	Bottom finisher	45, 75 and 90c. per case	60 pairs
177	Newark	Finishing	2½c	1 pair
178	"	Finishing	49c	
180	Vineland	Stock fitting	23c	1 case, 60 pairs
182	"	Nailing and breasting	21c	60 pairs
183	"	Edge setting	¾ to 1¾c	1 pair
184	Newark	Jobbing	$2 for bottoming boots; $1 to $2 for shoes	1 pair
186	Jersey City	Fitter	14c	1 pair
187	Camden	Burnisher	40c	1 dozen pairs
188	"	Trimmer	38c	1 dozen pairs
189	"	Operating	12½c	1 dozen pairs
191	Newark	Cleaner	$12 per week	1 dozen pairs
192	Orange	Sewing shoes (hand)	26 to 28c	1 pair
194	Jersey City	Custom work	Lace shoes, $1.25 to $2.25; boots, $2 to $3.50	1 pair
195	"	Custom work	Boots, $2.50; shoes, $1.50 per pr.	1 pair
388	Camden	Benchman	Ladies' shoes, $1.50	1 pair
386	"	Burnish'g & edge set'g	Burnish'g, 1¼c.; edge set'g, 1¼c.	1 pair
383	"	Heeler	Ladies', regular, 7c.; misses', 6c.; children's, 5c.; shave, ½c. extra	1 pair

FLAX WORKERS.

196	Paterson	Flax dresser	$2.73 for Irish; $2.28 for Canadian	100 pounds
197	"	Flax dresser	2.73	100 pounds
198	"	Flax dresser	2.73	100 lbs. constitutes a piece; from this is produced 60 lbs. dressed line, 37 lbs. tow and 3 lbs. waste.
199	"	Flax dresser	2.73 for French, Dutch, Flemish, Irish	100 pounds
200	"	Flax dresser	2.73 for French, Dutch, Flemish, Irish	100 "
201	"	Flax dresser	2.73 for French. Dutch, Flemish, Irish	100 "
203	"	Flax dresser	2.73 for French, Dutch, Flemish, Irish	100 "
205	"	Flax dresser	2.73 for French, Dutch, Flemish, Irish	100 "
207	"	Flax dresser	1.25 for Canadian	100 "

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

SHOEMAKERS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
60 pairs of children's; 36 to 40 pairs of women's, misses', boys' and youths' per day	16	45	60	75	Consumption.
70 pairs per day	14	.....	.....	...	
6 dozen	21	50	65	80	
8 dozen is a full day's work; 42 per week	20	45	60	70	Consumption.
31 cases per week	20	45	60	70	General debility.
600 pairs per day, on full time	18	50	70	...	Throat and lung.
80 pairs per day	16	50	70	...	
7 pairs per day	16	50	75	...	
8 cases, or 480 pairs per day	.....	.....	.....	...	
8 cases, or 480 pairs	16	40	50	75	Throat and lung.
300 per day, average	16	45	55	75	Consumption.
1 pair per day	12	45	65	80	Debility.
100 pairs per week	16	37	60	70	Throat, lung and dyspepsia.
40 per week	16	50	60	70	
38 per week	18	45	60	70	Lung and liver.
100 per week	18	45	50	65	Throat and liver.
35 dozen per day	14	45	62	65	
6 to 8 pairs per day	.....	.....	.....	...	
Boots, cheap kind, 1 pair per day; best, 2 pairs in 3 days	14	45	62	76	Weakness in back.
1 pair per day, by hand	18	50	55	70	Consumption.
2 pairs per day; 11 per week	14	45	.....	75	Consumption.
10 pairs per hour	18	35	45	50	Consumption; general debility.
.....	18	50	.....	80	Consumption.

FLAX WORKERS.

85 pounds of Canadian per day	16	35	50	60	Asthma.
375 pounds per week	16	40	45	55	Asthma.
60 pounds dressed line, including 37 pounds tow, in 1 day and 4 hours	15	45	55	70	Asthma.
60 pounds out of 100 in 1 day and 4 hours	15	45	58	65	Asthma.
75 pounds per day, or 375 per week	15	50	60	70	Asthma and consumption.
71 pounds per day	16	45	55	60	Lung diseases.
62½ pounds per day, fine grade	14	40	50	60	Lung trouble, caused by dust.
65 pounds in 1 day and 3 hours	15	40	56	70	Asthma.
60 pounds per day	15	50	55	65	Asthma, caused by dust.

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

HATTERS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
235	Orange	Finishing	$1.87	1 dozen hats
236	Newark	Finishing	1.37½ to $3	1 dozen hats
237	"	Finishing	2.25, average	1 dozen hats
239	"	Finishing	1.62½ to $2.62½	1 dozen hats
240	"	Finishing	12½c	1 hat
243	Orange	Maker	15c.	1 hat
244	"	Maker	14 to 17c	1 hat
245	"	Maker	12 to 27c	1 hat
246	Newark	Stiffening	6 to 18c	1 hat
248	Orange	Blocking, Ironing, Pouncing		1 dozen hats
249	Newark	Pouncing	10, 15, 20c	1 dozen
250	Orange	Pouncing	18c	1 dozen
251	Newark	Sizing	10 to 12c	1 hat
299	Orange	Sizing	11c., average price	1 hat
380	Paterson	General workmen	Finishing silk hats, 62½c.; curling, 20c.; body making, 33c.; jobbing and repairing, 10 to 50c.	1 hat

CIGAR MAKERS.

260	Newark	Hand work	$8.00 to $12	1,000 cigars
261	Paterson	Hand work	8.00 to $16	1,000 "
262	Jersey City	Hand work	7.00	1,000 "
263	"	Hand work	9.00	1,000 "
264	"	Hand work	11.00	1,000 "
265	"	Hand work	11.00	1,000 "

COTTON AND WOOLEN WORKERS.

386	Millville	Weaver (female)	19c., plain muslin	1 cut, 56 yards
387	"	Weaver (female)	19c., plain muslin	1 cut, 56 yards
388	"	Weaver	19c., print goods	1 cut, 56 yards
601	Paterson	Weaver	27c., mosquito netting	1 roll, 96 yards
391	Newark	Spinning	$1.21	100 pounds of yarn, No. 32
394	Passaic	Wool sorter	45c	100 pounds
396	"	Wool sorter	45c	100 pounds
398	Camden	Cloth weaver	8½ to 16c	1 yard, or 30 to a piece or cut

TABLE No 3.—INDIVIDUAL EMPLOYES—*Continued.*

HATTERS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
1 dozen per day	17	35	50	58	Consumption.
1 dozen to 2½ per day	17	60	.....	...	Consumption.
14 to 20 hats per day	17	40	.....	...	Consumption and nervousness.
1½ to 2 dozen per day	17	40	60	...	Consumption and nervousness.
24 per day	17	35	.....	56	Consumption.
9 to 12 in a day	17	21	25	30	Consumption.
12 per day, average	17	35	.....	...	Lung and throat.
9 to 12 per day	16	50	60	70	Rheumatism.
1 to 3 per day	16	55	65	80	Rheumatism.
1½ in a day	18	40	.....	50	Hatter shakes; consumption.
10 to 24 per day	17	40	50	60	Nervous prostration.
.....	16	40	54	60	
15 to 24 per day	17	50	45	...	
3 in two hours	14	25	50	60	
Finishing, 8; curling, 3 to 4 dozen; fur bodies, 1½ dozen; gossamer bodies, 1 dozen per day	18	50	60	80	Consumption.

CIGAR MAKERS.

200 to 260 per day	10	45	60	90	Old age.
200 to 350 per day	15	40	60	76	Lung and kidney.
200 per day	14	48	60	70	Dyspepsia.
2,000 per week	16	47	60	70	Dyspepsia.
300 per day	14	48	65	70	Dyspepsia.
150 is an average day's work	14	43	55	70	Dyspepsia.

COTTON AND WOOLEN WORKERS.

21 cuts per week	16	35	45	60	
20 cuts per week	16	35	45	60	
28 cuts per week	16	40	55	70	Consumption.
4 rolls per day	15	40	50	55	Lung disease.
1,100 pounds per week	12	45	56	64	
445 pounds per day	21	48	55	65	
445 pounds per day	14	47	55	65	
1 cut in 1½ to 2 days	18	.....	45	...	

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

SEWING MACHINE WORKS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
361	Elizabeth	Milling department	Nine-twentieths of a cent	One hemmer
360	"	Milling department	Nine-twentieths of a cent	One hemmer
362	"	Milling department		Machine arms
363	"	Milling department	45c. per 100	1 shuttle race
364	"	Moulding	3¼c	1 cross piece
365	"	Moulding	3¼c	1 brace
366	"	Assembly department	80c. per 100	Tables milling
367	"	Assembly department	43c. per 100	1 set arms
368	"	Cast-iron finishing	98c. per 100	1 piece
370	"	Polishing	$1.35 per 100	1 iron table
378	"	Screw department	60c. per 100	1 screw
379	"	Milling department	50c. per 100	1 table
380	"	Polishing and grinder	$3.08 per 100	Fit'g side-plate arm
381	"	Shuttle covers	6c. per 100	

TAILORS.

348	Paterson	General work	Pants, $1.40 per pair; coats, average, $5	1 pair pants or 1 coat
350	"	General work	Pants, 75c. to $1.75, average, $1.25; coats, average, $4.50	1 pair pants or 1 coat
351	"	Coatmaker	$4.50 to $7	1 coat
352	"	General work	Pants, $1 to $1.75; coats, $3 to $7.	1 pr. pants or 1 coat
357	"	General work	Pants, $1.25 to $1.50; coats, $4 to $6; vests, $1	1 garment
356	"	General work	Pants, $1.25; coats, $4.50	1 garment of any kind
354	"	Pantsmaker	Pants, $1.25	1 pair pants
353	"	Pantsmaker	Pants, $1.25 to $1.50	1 pair pants
355	"	Coatmaker	Coats, $3 to $7	1 coat
358	Jersey City	Custom coats	From $1.80 to $7.50 a coat	1 coat
359	New Brunsw'k.	Coats	Coats, $6 to $8.50; average, $6	1 coat

RUBBER WORKERS.

422	Butler	Comb cutting	$1.00 for 100 dozen	100 dozen
421	"	Comb cutting	1.00 for 100 dozen	100 dozen
429	New Brunsw'k.	Cutting	25c	100 pairs
425	"	Rubber shoes	6c. to 10c. per pair	1 pair
428	"	Women's shoes	2¼c. per pair	1 pair
427	"	Arctic shoes	5½c. per pair	1 pair
426	"	Women's arctics	4½c. per pair	1 pair
424	"	Bootmaker	13c	1 pair

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

SEWING MACHINE WORKS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
2,500 per week	15	40	45	50	Consumption.
2,500 per week	13	35	40	55	Rheumatism.
200 per day	12	40	45	...	Lung diseases.
400 to 500 per day	16	30	40	50	Chest, lungs and eyes.
69 per day	19	35	45	...	
58 per day	15	40	.....	50	Rheumatism ; colds.
1,000 per week	14	50	.....	...	
2,500 per week	14	50	.....	...	
168 per day	.....	.....	.....	...	
140 per day	20	.....	.....	...	
350 per day	.....	.....	.....	...	
400 per day	.....	.....	.....	...	
500 per week	.....	.....	.....	...	
5,000 per week	.....	.....	.....	...	

TAILORS.

1 pair pants, 9 hours ; coat, 27 hours	15	40	47	55	Consumption.
1 pair pants, 9 hours ; coat, 25 hours	13	55	60	75	Spinal disease and consumption.
3 coats per week	.....	.....	.....	...	Dyspepsia and spinal disease.
1 pair pants, 8½ hours ; coat, 25 to 27 hours	16	55	60	70	Spinal disease.
2 pair pants, 12 hours ; 2 vests, 12 hours	16	50	65	...	Dyspepsia.
1 pair pants, 8 hours ; coat, 20 hours ; vest, 8 hours	14	40	60	70	
1 pair pants, 9 hours	15	35	55	60	Dyspepsia.
1 pair pants, 9 hours	14	30	40	55	Consumption and dyspepsia.
1 coat, 25 hours ; average	14	45	60	...	Spinal disease.
2 to 3 coats per week, according to quality	16	50	65	70	Dyspepsia.
1 coat in 1½ days, with help of boy and girl	14	50	60	...	Dyspepsia and asthma.

RUBBER WORKERS.

200 dozen per day	13	45	50	65	
150 dozen per day	14	.....	.....	...	
800 pairs per day	.....	40	50	58	
16 to 24 pairs per day	14	.....	.....	60	Chest trouble.
48 pairs per day	14	.....	.....	...	Consumption.
24 pairs per day	16	24	33	50	Consumption.
24 pairs per day	14	25	33	50	Consumption.
12 pairs per day	14	35	50	...	Consumption.

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

IRON WORKERS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
516	Bridgeton	Heater	35c	1 ton, 2,240 pounds.
518	"	Muck-roller	7½c. per ton	1 ton, 2,240 pounds.
517	"	Plate-roller	10c. per ton	1 ton, 2,240 pounds.
521	"	Nail-iron shearer	9 to 18c. per ton	1 ton, 2,240 pounds.
520	"	Puddler	$2.81 per ton, less ⅓ to helper	1 ton puddled iron.
525	"	Nail maker	Fine 3's, $1.18 per keg; common 3's, 61c., &c.	100 pounds
526	"	Nail cutter	7c. per 100, for 10's	100 pounds
527	"	Nail cutter	According to size of nail	100 pounds
599	Trenton	Wire drawer	9c. per 100 pounds, 30 per cent. off	100 pounds

POTTERS.

596	Trenton	Hollow-ware presser	65c. per dozen cake plates, less 8 per cent	1 dozen
602	"	Handler	Tea cups, 3½ to 4c. per dozen	1 dozen
598	"	China decorator	$1 for lining dinner set; 15c. lining toilet set; from 50c. to $2.50 for painting toilet set	1 set, or 2 slop jars; 10 dozen for dinner set; 9 pieces or toilet set
597	"	Ground-layer and gilder	$1.25 per dozen for ground laying; $1.44 for gilding	1 dozen
601	"	Handler	4c. per dozen	1 dozen
595	"	Presser	$2 per dozen	1 dozen
600	"	Thrower	Vases, 9c.; mugs, 24's, 6c.; 30's, 5c., &c., egg cups, 5c.	1 dozen

TABLE No. 3.—INDIVIDUAL EMPLOYES—*Continued.*

IRON WORKERS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
6 tons per day	.....	.....	.....	...	
16 tons per day	20	35	45	60	Cramps.
16 tons per day	25	35	45	60	Cramps.
14 to 28 tons per day	21	40	50	...	
2,520 pounds	18	45	60	...	Cramps.
Fine 3's, 7 kegs weekly; other sizes in proportion	17	45	70	75	Lung disease.
1,300 pounds per day	14	45	60	75	Dyspepsia.
Fine, 1 keg of 100 to 40, according to size	15	40	55	...	Consumption.
4,000 pounds per day	17	50	65	75	None.

POTTERS.

28 dozen per week; help, $1 per week	12	32	50	65	Asthma.
70 dozen per day, with help of boy	.....	.....	.....	...	
5 dinner sets in two days, lined off	12	35	40	50	Lead colic and dyspepsia.
2 dozen per day	12	40	50	60	Lead colic.
66 dozen per day	.....	.....	50	...	Asthma and consumption.
8 dozen per week; pay helper, $1 per day	.....	.....	.....	...	
Mugs, 120; vases, 100; egg cups, 130 daily; pay helper, $2.50 per day	.....	.....	.....	...	Asthma.

TABLE No. 3.—ESTABLISHMENTS.

PAINTERS.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
156	Jersey City Heights... Wagons.	Lettering	10 to 30c. for plain work	1 foot
			15 to 60c. for fancy work	1 foot
155	Union Hill Wagons.	Lettering	12 to 24c. for plain work	1 foot
			18 to 50c. for fancy work	1 foot
126	Jersey City Sign Painters	Painting (Sign)	12 to 20c. for plain lettering	1 foot
			22 to 45c. for gold lettering	1 foot
		Painting (House)	30c. to $1	1 square foot

CIGAR MAKERS.

79	Salem Cigars.	Cigar making	$5.50 to $15; average, $8	1,000
78	Camden Cigars.	Cigar making	8.00 to $15; average, $10	1,000
81	Millville Cigars.	Cigar making	Average, $8	1,000
88	Burlington Cigars.	Cigar making	Average, $10	1,000
87	Newark Cigars.	Cigar making	$8 to $12	1,000
82	Jersey City Cigars.	Cigar mak'g, hand-w'k	$8 to $14	1,000
		Cigar mak'g, m'ld w'k.	$6 to $10	1,000
		Packing	75c. to $1.25	1,000
85	Jersey City Cigars.	Cigar making	$7 to $15	1,000

PRINTERS.

536		Book compositor	30 to 35c	1,000 ems
535	Paterson	Book and news comp'r	30 and 35c.; 38 and 40c	"
534	Jersey City	Compositor	38c	"
533	"	Compositor	35c.	"
532	"	Compositor	38c	"
531	Newark	Compositor	32c	"
530	"	Compositor	32c	"

MISCELLANEOUS WORKMEN.

543	Woodside	Rasp puncher and sider	61c. for 14-in. rasps	1 dozen (13)
541	"	Rasp puncher and sider	81c. for 16-in. rasps	1 "
539	"	Rasp puncher and sider	81c., without perc'tage, for 16-in.	1 "
540	"	Machine file cutter	12-in. flat, 26c.	1 "
			14-in. flat, 30c.	1 "
			15-in. flat, 32c.	1 "
			16-in. flat, 35c.	1 "
			20-in. flat, 45c.	1 "

TABLE No. 3.—ESTABLISHMENTS.

PAINTERS.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
12 to 20 daily 8 to 15 daily	14	55	65 70		Generally healthy.
10 to 25 daily 7 to 20 daily	.....	.....	.....	...	
15 to 25 daily 10 to 18 daily	14	37	54	...	Painters' colic.
.....	.....	.....	.....	...	

CIGAR MAKERS.

1,800 cigars weekly, average	15	48	60	...	Weak eyes.
1,300 cigars weekly, average	14	45	60	...	Lung.
1,500 cigars weekly, average	16	46	55	...	
1,200 cigars weekly, average	15	40 45	60	...	Consumption.
.....	12	45	65	...	Dyspepsia.
850 to 1,200 cigars weekly	14	50	60	...	Dyspepsia and lung.
1,000 to 1,500 cigars weekly	.....	.....	.....	...	
17,000 cigars weekly	.....	.....	.....	...	
200 cigars daily	17	45	65	...	Dyspepsia and consumption.

PRINTERS.

9,500 daily	14	36	50	60	Consumption; rum.
7,000 daily	14	37	50	...	Consumption.
7,000 to 9,000 daily	17	.....	.....	...	Dyspepsia generally.
50,000 to 52,000 weekly	16	40	55 60	65	Dyspepsia.
8,000 to 10,000 daily	.....	.....	.....	...	
Average, 8,000 daily	16	.....	.....	...	Consumption; liquor.
7,000 to 8,500 daily	.....	.....	.....	...	

MISCELLANEOUS WORKMEN.

2 dozen daily	15	40	45	56	Lameness.
1½ dozen daily	.....	40	50	55	Stiffness; heart trouble.
1½ to 2 dozen daily	14	.....	.....	...	
7 dozen daily 6 dozen daily 6 dozen daily 5½ dozen daily	14	40	50	56	Liver trouble.

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS WORKMEN.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
538	Woodside	Machine rasp cutter	16-in., 7½c.	1 dozen (13)
			15-in., 7c.	1 "
			14-in., 6½c.	1 "
574	Vineland	Dressmaker	$3 to $10	1 dress
575	Paterson	Dressmaker	Average, $4.50	1 dress
595	New Brunsw'k.	Solderer (fruit-jar)	5c	1 gross
159	Hoboken Shirtmaking.	Shirtmakers	Shirts, shop work, 60c. to $1.25; custom work, 90c. to $1.50.	1 dozen
			Buttonholes, by machine, 10c. for shop work; by h'nd, 20 to 25c. for custom work.	1 "
158	Jersey City Shirtmaking.	Shirtmakers	Fine shirts, from $1 to $1.60	1 "
			Store shirts, from 40c. to $1.25	1 "
			Machine-made buttonh'es, 12c	1 "
			Hand-made buttonholes, 24c.	1 "

GLASS FACTORIES.

1	Millville Green-glass (bottle and vial) factory.	Green druggist glass-ware blowing	1 oz., 60c., less 10 per cent	Per gross
			2 oz., 64c., less 10 per cent	Per gross
			5 oz. weight, 86c., less 10 per cent	Per gross
			10 oz. weight, 10c., less 10 per cent	Per dozen
			12 oz. weight, 11c., less 10 per cent	Per dozen
			14 oz. weight, 12c., less 10 per cent	Per dozen
			16 oz. weight, 13c., less 10 per cent	Per dozen
			18 oz. weight, 14c., less 10 per cent	Per dozen
			Panels and wide mouths, ½c. extra per dozen	
		Stopper grinding	12½c., less 15 per cent	Per dozen
17	Millville Flint-glass factory.	Flint-glass blowing	1 oz., 60c., less 10 per cent	Per gross
			4 oz. weight, 75c., less 10 per cent	Per gross
			8 oz. weight, $1.14, less 10 p. c.	Per gross
			10 oz. weight, $1.32, less 10 p. c.	Per gross
			12 oz. weight, $1.60, less 10 p. c.	Per gross
			20 oz. weight, $2, less 10 p. c.	Per gross
		Lamp-workers (Bohemian) blowers	⅛, ¼, ½ and 1 drachm, 25c	Per gross
20	Millville Window-glass factory.	Window-glass blowing	Size: 10x15 ft., No. 1, 50c.; No. 2, 45c.; No. 3, 40c.; No. 4, 35c.	Box of 100 sq. feet. There are many sizes between & ab'v those given in preceding column; but prices correspond proportionately
			Size: 30x46 ft., No 1, $1.30; No. 2, $1.10; No. 3, 70c.; No. 4, 60c.	

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS WORKMEN.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
30 dozen daily 34 dozen daily	14	50	55	55	Consumption; lead colic; rheumatism.
1 to 2 weekly	14	35	45	60	
1 dress in 5 days	14	35	50	60	Dyspepsia and consumption.
40	16	30	35	42	Lungs.
5 dozen fine shirts weekly; 6 to 9 dozen others 6 to 10 dozen buttonholes (machine) daily; 4 to 6 dozen (hand) daily	.....	.....	.....	...	All kinds.
8 to 12 shirts daily, without buttonholes 7 to 14 shirts daily 8 to 12 dozen daily 7 to 8 dozen daily	13	.....	.....	...	

GLASS FACTORIES.

27¾, per team of 3, daily	12	40	65	...	Lung trouble.
25–27, per team of 3, daily	.....	.....	.....	...	
20, per team of 3, daily	.....	.....	.....	...	
168, per team of 3, daily	.....	.....	.....	...	
153, per team of 3, daily	.....	.....	.....	...	
150, per team of 3, daily	.....	.....	.....	...	
148, per team of 3, daily	.....	.....	.....	...	
144, per team of 3, daily	.....	.....	.....	...	
.....	.....	.....	.....	...	
25, a full day's work	.....	.....	.....	...	
30 daily, per shop of 3	16 18	40	65	...	Dyspepsia and biliousness.
22 daily, per shop of 3	.....	.....	.....	...	
18 daily, per shop of 3	.....	.....	.....	...	
15 daily, per shop of 3	.....	.....	.....	...	
12 daily, per shop of 3	.....	.....	.....	...	
9 daily, per shop of 3	.....	.....	.....	...	
12 daily, (or $3)	.....	.....	.....	...	
Wages range more with quality than quantity. The League does not allow men to make more than forty-eight boxes per day. Forty-six boxes are about an average day's work See No. 20, remarks, Table No. 2 (Establishments), *supra.*	16	45	65	...	Sometimes dyspepsia, throat and lung trouble.

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
32	Vineland	Cutter		1 case of 60 pairs
	Shoe factory.	Laster	2¾c. to 7c	1 pair
	women's,	Beaters-out	35c	1 case of 60 pairs
	misses' and	McKay machine		1 case of 60 pairs
	children's	Heeler	40c.	1 case of 60 pairs
	Men's department.	Second laster	23c.	1 case of 60 pairs
		Breaster and nailer		1 case of 60 pairs
		Trimmer		1 case of 60 pairs
		Shaver	60c.	1 case of 60 pairs
		Heeler, scourer		1 case of 60 pairs
		Edgesetter	¾c., 1c., 1½c. and 1¾c	1 pair
		Heel burnisher	20c. to 25c	1 case of 60 pairs
		Acid and cutting	12c., 14c. and 15c	1 case of 60 pairs
		Stripper	12c. to 14c	1 case of 60 pairs
	Women's department.	Closing	Average, 25c	1 case of 60 pairs
		Staying	Average, 35c	1 case of 60 pairs
		Pasting	Average, 83c	1 case of 60 pairs
		Quarter stitching	Average, 30c	1 case of 60 pairs
		Lining making	Average, 30c	1 case of 60 pairs
		Closing-on	Average, 40c	1 case of 60 pairs
		Vamping	Average, 50c	1 case of 60 pairs
		Cording buttonholes	Average, 40c	1 case of 60 pairs
		Button sewing	Average, 65c	1 case of 60 pairs
		End sewing	Average, $1	1 case of 60 pairs
		Working buttonholes	Average, 11c	1 case of 60 pairs
		Marking linings	Average, 5c	1 case of 60 pairs
		Marking and blocking boys' shoes	Average, 6 to 7c	1 case of 60 pairs
40	Camden	Cutting	Average, 30c	1 dozen pairs
	Infants' shoes	Lasting	Average, 45c	1 dozen pairs
		Heeling	Average, 45c	1 dozen pairs
		Burnishing	40c	1 dozen pairs
		Fitting	40c. to $1.25	1 dozen pairs
		Stock fitting	Average, 15c	1 dozen pairs
		Edge setting	Average, 35c	1 dozen pairs
		Finishing	Average, 40c	1 dozen pairs
38	Camden	Lasting	Average, infants', 12c Average, women's, &c., 37½c	1 dozen pairs 1 dozen pairs
	Women's,	Heeling	25c to $1.25	1 case of 72 pairs
	misses' and	Trimming	Average, 40c	1 dozen pairs
	infants'	Burnishing	Average, 40c	1 dozen pairs
	shoes.	Operating	Average, 12c	1 dozen pairs
		Finishing	Average, 60c	1 case of 72 pairs
		Cutting	Average, 12c	1 dozen pairs
		Fitting	Average, 72c	1 case of 72 pairs
		Edge setting	Average, infants', 24c Average, women's, &c., 36c	1 dozen pairs 1 dozen pairs
47	Lumberton	Burnishing	Average, 16c	1 dozen pairs
	Infants' shoes	Heeling	Average, 22c	1 dozen pairs
		Lasting	Average, 22c	1 dozen pairs
		Cutting	Average, 20c	1 dozen pairs
		Operating	Average, 16c	1 dozen pairs
		Trimming	Average, 22c	1 dozen pairs
		Fitting	Average, 8½c	1 pair

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

SHOE FACTORIES.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
11 men, 8 cases per day	12–15	35–40	50–60	...	Throat and lung troubles.
12 men, 8 cases per day	...	...	...	...	
2 men, 8 cases per day	...	...	...	...	
1 man, 8 cases per day	...	...	...	...	
1 man, 8 cases per day	...	...	...	...	
4 men, 32 cases per day	...	...	...	...	
4 men, 32 cases per day	...	...	...	...	
4 men, 32 cases per day	...	...	...	...	
4 men, 32 cases per day	...	...	...	...	
2 men, 8 cases per day	...	...	...	...	
1 boy, 8 cases per day	...	...	...	...	
...	...	...	...	...	
...	...	...	...	...	
...	...	...	...	...	
2 hands, 8 per day	14	40	50	...	Throat and lung troubles.
8 hands, 8 per day	...	...	...	...	
10 hands, 8 per day	...	...	...	...	
3 hands, 8 per day	...	...	...	...	
5 hands, 8 per day	...	...	...	...	
4 hands, 8 per day	...	...	...	...	
3 hands, 8 per day	...	...	...	...	
2 hands, 8 per day	...	...	...	...	
8 hands, 8 der day	...	...	...	...	
2 hands, 8 per day	...	...	...	...	
2 hands, 8 per day	...	...	...	...	
1 hand, 8 per day	...	...	...	...	
2 hands, 8 per day	...	...	...	...	
33 to 35 weekly	12–16	35–50	60–65	...	Malaria.
22 to 24 weekly	...	...	...	...	
22 to 24 weekly	...	...	...	...	
24 to 30 weekly	...	...	...	...	
12 to 18 weekly	...	...	...	...	
60 weekly	...	...	...	..	
28 to 30 weekly	...	...	...	...	
25 to 30 weekly	...	...	...	...	
Average, 150 dozen pairs weekly Average, 48 dozen pairs weekly	12–16	35–40	50–60	...	Mostly lung troubles.
Average, 80 dozen pairs weekly	...	...	...	...	
Average, 40 dozen pairs weekly	...	...	...	...	
Average, 45 dozen pairs weekly	...	...	...	...	
Average, 135 dozen pairs weekly	...	...	...	...	
Average, 187 dozen pairs weekly	...	...	...	...	
Average, 150 dozen pairs weekly	...	...	...	...	
Average, 63 dozen pairs weekly	...	...	...	...	
Average, 75 dozen pairs weekly Average, 50 dozen pairs weekly	...	...	...	...	
600 weekly	12–16	35–45	60–70	...	Consumption.
650 weekly	...	...	...	...	
650 weekly	...	...	...	...	
675 weekly	...	...	...	...	
800 weekly	...	...	...	...	
650 weekly	...	...	...	...	
82 weekly	...	...	...	...	

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
42	Burlington			
	Women's, misses' and infants' shoes.	Heeling	1½ to 2c	1 pair
		Burnishing	1½ to 3½c	1 pair
		Operating	12 to 18c	1 dozen pairs
		Stock fitting	10 to 15c	1 dozen pairs
		Fitting	Average, 9c	1 pair
		Cutting	Average, 18c	1 dozen pairs
		Lasting, edge setting and finishing	Average, 15c	1 dozen pairs
44	Burlington	Heeling	1 to 1½c	1 pair
	Infants' shoes	Burnishing	1½ to 3c	1 pair
		Operating	Average, 15c	1 dozen pairs
		Stock fitting	Average, 12c	1 dozen pairs
		Cutting	Average, 11c	1 dozen pairs
		Fitting	Average, 8½c	1 pair
		Lasters, edge setters and finishers	Average, 10c. (about)	1 dozen pairs
50	Newark	Stock cutting	15, 16c	1 case (60 pairs)
	Shoes.	Stock channeling	14c	1 case (60 pairs)
		Lasting (hand)	3¾ to 7c	1 pair
		Sewing (machine)	1c	1 pair
		Leveling (machine)	½c	1 pair
		Edge trim'g (machine)	½c	1 pair
		Heel trim'g (machine)	½c	1 pair
		Edge burn'g (machine)	1c	1 pair
		Heel burn'g (machine)	½c	1 pair
		Bottom'g and slicking	1c	1 pair
		Finishing	2c	1 pair
		Upper cutting	60, 70c	1 case (60 pairs)
		Lining cutting	15c	1 case (60 pairs)
		Trimmings cutting		1 case (60 pairs)
		Heeling		1 pair
49	Newark	Stock channeling	Time work	1 dozen pairs
	Shoes (machine sewed).	Lasting	7, 8, 9c. for men's; 6c. for boys'.	1 pair
		McKay operator	Time work	1 dozen pairs
		Leveling	Time work	1 dozen pairs
		Heeling	Time work	1 dozen pairs
		Trimming	Time work	1 dozen pairs
		Second lasting	Time work	1 dozen pairs
		Edge burnishing	12c. for single; 15c. for double sole	1 dozen pairs
		Heel burnishing	7c	1 dozen pairs
		Finishing	25c. for boys'; 35 to 72c. for men's	1 dozen pairs
		Freeing		1 dozen pairs
52	New Brunswick	Boot makers	8 to 21c	1 pair
	Rubber boots and shoes.	Packers	5 to 20c	100 pairs
		Cutters	5c. to $1.11	100 pairs
		Shoemakers	2 to 10½c	1 pair
146	New Brunswick	Shoemakers	3 to 10c	1 pair
	Rubber boots and shoes.	Upper cutters	25c	100 pairs
		Out-sole cutters	20c	100 pairs
		In-sole cutters	10c	100 pairs
		Lining cutters	15c	100 pairs
		Filling cutters	10c	100 pairs

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

SHOE FACTORIES.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
Quantity varies with quality	18	48	60	...	Consumption.
100 to 150 daily	...	...	...	...	
100 to 150 daily	...	...	...	...	
100 to 160 weekly	...	...	...	...	
100 to 160 weekly	...	...	...	...	
75 to 100 weekly	...	...	...	...	
80 to 90 weekly	...	...	...	...	
400, per team of 4, weekly	...	...	...	...	
200 to 250 daily	18	40–50	60–65	...	Throat and lung troubles.
150 to 200 daily	...	...	...	...	
100 weekly	...	...	...	...	
100 weekly	...	...	...	...	
100 weekly	...	...	...	...	
75 to 100 weekly	...	...	...	...	
About 400 weekly for the team of 4 ("four corners")	...	...	...	...	
16 daily	14	60	75	...	None.
16 daily	...	...	...	...	
40 daily	...	...	...	...	
450 daily	...	...	...	...	
900 daily	...	...	...	...	
450 daily	...	...	...	...	
900 daily	...	...	...	...	
225 daily	...	...	...	...	
300 daily	...	...	...	...	
900 daily	...	...	...	...	
100 daily	...	...	...	...	
3½ to 4 daily	...	...	...	...	
16 daily	...	...	...	...	
16 daily	...	...	...	...	
900 daily	...	...	...	...	
30 daily	...	...	...	...	
24 daily	...	...	...	...	
30 daily	...	...	...	...	
30 daily	...	...	...	...	
40 daily	...	...	...	...	
22 daily	...	...	...	...	
15 daily	...	...	...	...	
13½ daily	...	...	...	...	
30 daily	...	...	...	...	
6 daily	...	...	...	...	
5 daily	...	...	...	...	
12 to 18 daily	...	...	...	...	
...	...	...	...	...	
...	...	...	...	...	
12 to 60 daily	...	...	...	...	
16 to 24 daily	12–20	40–50	60	...	Consumption and kidney complaint.
800 daily	...	...	...	...	
1,000 daily	...	...	...	...	
2,000 daily	...	...	...	...	
2,000 daily	...	...	...	...	
2,000 daily	...	...	...	...	

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

SHOE FACTORIES.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
146	New Brunswick Rubber boots and shoes.	Stiffening cutters	10c	100 pairs
		Counter cutters	10c	100 pairs
		Binding cutters	10c	100 pairs
		Varnishers	25c	100 pairs
		Cementers		1 piece
		Strapmakers		1 piece
		Packers		1 piece
		Markers		1 piece
		Stringers		1 piece
		Inspectors		1 piece
		Boxmakers	2c	1 box
		Mill hands		

COTTON, WOOLEN AND SILK MILLS.

91	Millville Cotton mill.	Weaving	Twilled, 39 tucks, 72x80, 30c Twilled, 40 tucks, 68x72, 28c Twilled, 39 tucks, 72x80, 30c ———, 43 tucks, 80x96, 50c Sheeting, 33½ tucks, 72x90, 40c Plain, 40 tucks, 56x48, 18c Sheeting, 36 tucks, 60x68, 27c Print, 28 tucks, 64x60, 19c	1 cut of 56 yards
90	Gloucester City. Cotton mill.	Weaving	Gingham, 40c Twilled muslin, 33c Plain muslin, 20c	1 cut of 50 yards
		Spooling	6c	1 box
142	Gloucester City. Gingham mills.	Weaving	Average 51c	1 cut of 45 yards
100	Bridgeton Woolen mills.	Weaving	Narrow looms, 2c Broad looms, 3c	1 yard 1 yard
102	Camden Woolen mills.	Weaving	Average about 10c	1 yard
99	Passaic Woolen mills.			
96	Paterson Knitting mills			
97	Paterson Turkish towel		Towels, 48. to 70c Cloth, 3. to 4½c	1 dozen 1 yard
117	Paterson Silk mills.	Weaving	8. to 25c	1 yard
		Warping	5c	100 ends 100 m. long.
119	Hoboken Silk mills.	Weaving	20 to 32c. per yard	60 to 70 yards; no gen'l rule in the different mills.
120	West Hoboken. Silk dress gds.	Weaving	22, 24, 28, 30, 32, 35, 50c. pr. yd.	Generally 100 yds.; but at present only making 54 yds.

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

SHOE FACTORIES.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
2,000 daily	...	...	...	...	
2,000 daily	...	...	...	...	
2,000 daily	...	...	...	...	
1,000 daily	...	...	...	...	
1,000 pairs daily	...	...	...	...	
500 pairs daily	...	...	...	...	
400 pairs daily	...	...	...	...	
2,000 pairs daily	...	...	...	...	
2,000 pairs daily	...	...	...	...	
2,000 pairs daily	...	...	...	...	
100 daily	...	...	...	...	
20 to 30 lb.-rolls of gum daily	...	...	...	...	

COTTON, WOOLEN AND SILK MILLS.

16 cuts. 18 cuts. 16 cuts. 10 cuts. 12 cuts. 24 cuts. 18 cuts. 24 cuts. Weekly with 6 looms (av.)	12 M 14 F	45 M. 35 F.	60 M. 50 F.		Consumption.
Average, 6 looms, 12 cuts weekly. Average, 8 looms, 15 cuts weekly. Average, 8 looms, 24 cuts weekly.	12 M 14 F	45 M. 35 F.	60 M. 50 F.		Consumption among the women.
10 to 12 daily	...	...	...	...	
3½ per loom for men and 3 for women, weekly; each tend from 2 to 4 looms; average 3	12 M 14 F	40 M. 35 F.	60 M. 50 F.		Throat and lung troubles.
50 yards, (1 cut) daily. 100 yards, (2 cuts) in 3 days.	12	48	75	...	Healthy.
15 yards daily	...	...	...	...	
10 pairs of blankets weekly, per hand	...	...	...	...	
15 to 35 yards daily, according to quality	...	...	...	...	
About 250 yards of cloth or 18 dozen towels per week	...	...	...	...	
9 to 12 yards daily, for 1 weaver. 25,000 ends, 200 metres, 2 w'ks, 1 warper.	14 ...	60–75 ...	60–75 ...	... ...	None.
Weavers, 6 to 10 yards daily. Winders, average 10 lbs. daily	...	...	...	...	
840 yards per day for 120 looms, or 6 to 7 per loom	...	...	...	...	

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Office number.	Location.	Subdivision of Trade.	Price Received for the Piece.	What constitutes a piece?
75	Bridgeton..... Iron works. Sheet mill.	Heaters.....	35c.....	1 ton.....
		Helpers.....	17c.....	1 ton.....
		Rollers.....	10c.....	1 ton.....
		Catchers.....	7½c.....	1 ton.....
		Hookers.....	6½c.....	1 ton.....
		Sheet layers.....	6½c.....	1 ton.....
		Scrapers.....	1¾c.....	1 ton.....
		Stackers.....	5½c.....	1 ton.....
		Plate shearers.....	7c.....	1 ton.....
		Roughers.....	11½c.....	1 ton.....
	Puddle mill.	Puddlers.....	$2.80.....	1 ton (2,240).....
		Helpers.....	25c.....	Heat.....
		Rollers.....	7½c.....	1 ton (2,240).....
		Catchers.....	7½c.....	1 ton (2,240).....
		Hookers-up.....	5c.....	1 ton (2,240).....
		Drag-outs.....	5½c.....	1 ton (2,240).....
		Squeezers.....	5½c.....	1 ton (2,240).....
132	Orange Valley.. Hats.	Sizing.....	14c., average.....	1 hat.....
		Finishing.....	$2.25, average.....	1 dozen hats.....
		Trimming.....	4c., average.....	1 hat.....
135	Jersey City..... Silk and felt hats.	Body making.....	$6 for plain.....	1 dozen.....
		Silk hat finishing.....	6 to $8.....	1 dozen.....
		Pouncing.....	1.50.....	1 dozen.....
		Silk hat curling.....	1.75 to $3.....	1 dozen.....
		Stiff hat curling.....	1.75.....	1 dozen.....
		Trimming.....	2.00 to $2.12.....	½ dozen.....
		Tip making.....	25c.....	1 dozen.....
		Cover sewing.....	$1.....	1 dozen.....
133	Orange Valley.. Fur hats.	Making.....	1.20 to $2.88.....	1 dozen.....
		Pouncing.....	10 to 20c.....	1 dozen.....
		Finishing.....	$1.50 to $3.00.....	1 dozen.....
		Trimming.....	40 to 65c.....	1 dozen.....
		Blocking.....	18 to 28c.....	1 dozen.....
121	Jersey City..... Printing.	Compositors.....	38c.....	1,000 ems.....
122	Jersey City..... Printing.	Compositors.....	35c.....	1,000 ems.....
123	Paterson..... Printing.	Compositors.....	25c.....	1,000 ems.....
124	Paterson..... Printing.	Compositors.....	25c. for women; 30c. for men....	1,000 ems.....

TABLE No. 3.—ESTABLISHMENTS—*Continued.*

MISCELLANEOUS INDUSTRIES.

Quantity Produced.	Age at which employes begin to work.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Greatest age to which they live.	Diseases Peculiar to the Trade.
6 tons daily per team	20	30–40	50–60	...	Cramps and rheumatism.
18 tons daily per team..	...	...	...	...	
18 tons daily	...	...	...	...	
18 tons daily	...	...	...	...	
18 tons daily	...	...	...	...	
18 tons daily	...	...	...	...	
18 tons daily	...	...	...	...	
18 tons daily	...	...	...	...	
4,975 lbs. per team, daily.	...	...	...	...	
40,800 lbs. per team, daily..	...	...	...	...	
40,800 lbs. per team, daily	...	...	...	...	
40,800 lbs. per team, daily	...	...	...	...	
40,800 lbs. per team, daily	...	...	...	...	
Average 14 daily	...	...	...	...	Lung troubles.
Average 15 hats daily	...	...	...	...	
Average 24 hats daily	...	...	...	...	
15 bodies daily	17	50	60	...	
1 dozen daily	...	...	...	...	
5 dozen daily	...	...	...	...	
2 to 3 dozen daily	...	...	...	...	
5 to 7 dozen daily	...	...	...	...	
1 dozen daily	...	...	...	...	
5 dozen daily	...	...	...	...	
2 to 3½ dozen daily	...	...	...	...	
15 to 24 hats daily	...	...	...	...	
20 to 30 dozen daily	...	...	...	...	
15 to 24 hats daily	...	...	...	...	
1½ to 3 dozen daily	...	...	...	...	
48 to 72 dozen daily, but generally 2 or 3 men work together on different parts	...	...	...	...	
52 weekly; 8 to 10 daily	17	54	65	...	Dyspepsia.
52 weekly	15	45	60	...	Consumption.
...	...	...	...	...	
...	...	...	...	...	

PART II.

THE CONDITION OF WAGE-EARNERS.

CHAPTER I.—THE COST OF LIVING.

CHAPTER II.—THE CHEMISTRY AND ECONOMY OF FOODS.

CHAPTER III.—WHAT THE WORKINGMEN THINK. REMARKS AND SUGGESTIONS BY INDIVIDUAL EMPLOYES AND OTHERS, IN REPLY TO QUESTIONS NOS. 27 AND 28, BLANK NO. 3.

CHAPTER I.

THE COST OF LIVING.

The decennial censuses, which are year by year becoming more reliable and valuable, show, approximately, the wealth of the nation. But these statistics do not pretend to, and, from the nature of the case, can give little insight into the social condition of our people, especially of that large class of bread-winners, the working people, whose families comprise more than ninety in every hundred of the population. Efforts in this direction have not been wanting, even before the day of labor bureaus; yet, until recently, they have resulted only in information, at best incomplete and unsatisfactory, concerning the nominal earnings of the wage-laborer, the extent of woman and child labor, in what kind of dwelling his family is housed, and the like. Such facts do not even exhibit the merest superficial view of the daily life of our workingmen's families. To get at their real condition we must go farther and find out in what manner their income is spent—what part is used up in providing for subsistence, for clothing and for shelter, and if anything is left for other purposes than mere physical sustenance—the keeping of the body and soul together. Do they save anything from their earnings? How many are in debt? What portion is propertyless, and have we an American proletariat? How little do we actually know about all this! He who said that one-half of the world had no knowledge of the way in which the other half lived stated but a part of the truth.

The need of the information referred to has come to be generally recognized by the social reformer as well as the economist and statesman; and it is gratifying to know that the exertions which are now being made in this country to obtain detailed and accurate budgets of the income and expenditures of our wage-earners and their families are meeting with considerable success.

In Europe, eminent economists for a long time past have devoted

themselves to this "labor of love," and among them the distinguished German statistician, Dr. Ernst Engel, formerly Director of the Prussian Statistical Bureau, who has spent over thirty years of his busy life in this work. He considers well-kept family account books to be the surest way of gauging the social climate, showing, as they must, the relative income and outlay. If compared year by year, they are a true index of the gradual social development or degeneration of a people,* for they photograph its style of living—what the masses eat, drink and wear, the way they are sheltered, and the amount they save, or spend in amusement; from them, too, we can learn whether the industrial progress has increased wages and decreased the cost of living—whether, as has been asserted, the working people are gaining a constantly increasing share of an increasing product, with less effort or labor in each decade, as the decade passes.† Further, these household budgets are a fair indication of the relative condition of the various industries, which, if flourishing, should show a like change in the earnings and general comfort of equally industrious and economical employes.* To the workingman himself, this subject is of the greatest moment, for the value of his wages lies in their purchasing power. The struggle for existence is daily becoming keener and the average wage-laborer must practice the strictest economy, or he will find himself behind at the end of the season. If he has kept an accurate account of his daily expenses and his periodical receipts, he can soon find out the reason why both ends did not meet, notwithstanding the fact that his neighbor's family which earns no more has had no difficulty. Now, we fully agree with a well-known American economist, who thinks that "it is not altogether desirable either to advise or to attempt to promote such changes in the diet as might, under the pressure of necessity, make a considerable saving"—to see how near one can safely approach the starvation point; but the laboring man, above all others, should remember that over one-half of the struggle of life is the struggle for food, and should learn the best way to economize it—"how he can feed himself well and

* Engel: "Rechnungsbuch der Hausfrau."

† Edward Atkinson: "The Application of Science to the Production and Consumption of Food."

cheaply," as a German writer puts it.* The first step towards the discovery of this secret is a little domestic bookkeeping. If the wage-earner himself has no inclination that way, let his wife or daughter write down the weekly items of income and expenditure—what has been paid to the butcher, the baker and the candlestick maker. Over one hundred years ago an author, writing of this matter, observed that he had never known a man keeping a correct account of his household debits and credits who did not save something. Benjamin Franklin, who truly was called one of the greatest of Americans, expressed the same idea with his epigramatic "A penny saved is a penny gained." All this is as true to-day as it was then. The careful workingman wants to realize at the end of each week just where he stands and how much there is left to begin another week with; while the practical housewife needs not so much information about the quantity of oxygen and nitrogen contained in the various kinds of foods as to know how many cents her husband, whose income foots up but a few hundred dollars, can afford to expend for bread and butter. Yet a knowledge of the relative quantity of nutriments in our food material is by no means a matter of small consequence. Such a knowledge would directly add to the purchasing power of wages, for it would prevent the great wastefulness practiced by the poor and rich alike, which, indeed, is a consummation devoutedly to be wished and amply justifies the reproduction in the next chapter, of some suggestions on the "Chemistry and Economy of Foods" from the interesting paper read by Prof. W. O. Atwater, before the late National Convention of the Chiefs of the U. S. Bureaus of Labor Statistics.

*Dr. Meinert: "*Wie naehrt man sich gut und billig.*" In this connection the following table, showing the average expenditures for meat in the places named, will be interesting. The data have been deduced from statistics referred to in this chapter:

	Expended for meat.	Per cent. of total expenses.	Per cent. of amount expended for food.
New Jersey	$86 00	14.15	26.48
Massachusetts	101 00	13.34	21.17
Illinois	68 00	12.24	29.57
Great Britain	70 00	13.77	26.88
Germany	28 61	9.26	15.18

Interest in the collection of workingmen's budgets was first awakened by Mr. Fletcher, of the English Statistical Society, who during the '30s drew attention to their value, which has since been fully appreciated by both scholars and statesmen. At the first International Statistical Congress, held in 1853, at Brussels, one of the "sections" was devoted to the subject of the "household budgets of the working classes," the material for which had been gathered by two eminent Belgian economists, one of whom, Ducpetiaux, published at about this time, his celebrated work on "*Budgets economiques des classes laborienses*," which was followed by one from the pen of the Frenchman, Prof. Leplay, on "*Les onvriers Europeens*." A study of the facts therein reported led to the discovery by Dr. Engel of his economic law, known by the name of Engel's Law of Subsistence. These statistics showed that the percentage spent for food increased in the inverse ratio of the income, that is, the smaller the income of the family the larger was the relative proportion spent for mere subsistence.* The Belgian families were divided by Ducpetiaux into three classes—with incomes of $62, $82 and $121, respectively. The first required an additional support from public or private charity; the second just came out even, spending everything for physical sustenance, while the third had more or less left for those items which are generally classed as sundries. One of the indirect results of the interest excited by this publication was the improvement of the Belgian laboring classes, both through legislative and individual effort.

By 1857, Dr. Engel had secured sufficient data from different families in Saxony to enunciate the following economic law referred to above, the gist of which is that the poorer the family the larger is the relative percentage of outlay for subsistence; that the percentages of outlay for clothing and shelter do not vary materially whatever the income; and lastly, with the increase of income the percentage of outlay for "sundries" also increases:

* For example, out of an income of 160 marks ($38), there was spent 72.96 per cent. for food, and so on; with an income of 2,400 marks ($564), this percentage had decreased to 56.90.

ENGEL'S LAW.

ITEMS OF EXPENDITURE.	PERCENTAGE OF THE EXPENDITURES OF THE FAMILY OF—		
	A laborer with an income of from $225 to $300 a year.	A man of the intermediate class (*des Mittelstandes*), income from $450 to $600.	One in easy circumstances, income from $750 to $1,100.
1. Subsistence	62.0	55.0	50.0
2. Clothing	16.0	18.0	18.0
3. Lodging	12.0 } 95.0	12.0 } 90.0	12.0 } 85.0
4. Light and fuel	5.0	5.0	5.0
5. Education, public worship, &c.	2.0	3.5	5.5
6. Legal protection, &c.	1.0	2.0	3.0
7. Care of health	1.0 } 5.0	2.0 } 10.0	3.0 } 15.0
8. Comfort, mental and bodily recreation	1.0	1.0	3.5
Total	100.0	100.0	100.0

The approximate correctness of this economic law has been demonstrated by other investigators. Ballin in his "Hanshalt der Arbeitenden Klassen"* shows that the wealthy Berlinese families expend 30 per cent., the middle classes up to 50 per cent., and the laborers from 50 to 70 per cent. of their total expenditures for food and drink. Col. C. D. Wright, averaging the results obtained by Dr. Engel with those in Massachusetts and Great Britain, concludes † that the law would stand for Massachusetts, on an annual expenditure of $750, as follows: Subsistence, 51.76 per cent.; clothing, 16.32 per cent.; rent, 16.25 per cent.; fuel, 5.10 per cent.; sundry expenses, 10.57 per cent.; total, 100 per cent.; and for Great Britain, on a total expenditure of $500 annually, as follows: Subsistence, 56.45 per cent.; clothing, 15.54 per cent.; rent, 13.66 per cent.; fuel, 4.83 per cent.; sundries, 9.52 per cent.; total, 100 per cent. The observations recently made in our own State, Massachusetts, England and Illinois are given below. Few cases, probably, will be found to which the law exactly applies; and it will vary in different countries. But it is a fair average rule, and as such is especially of practical value, because it enables the wage-earner to calculate just what part of his income may be expended for the different items of physical sustenance without embarrassment. The comforts, however meagre, are to be remembered as well as the necessaries—the provision for health, education, for old age, and for wives and children, as well as the provision for to-day's meal.

The Massachusetts Bureau of Labor Statistics corroborated Engel's propositions by an investigation conducted in 1874, when there were

* Page 47.

† Mass. Report (1884), p. 467.

397 budgets collected. In 1884, nineteen fresh budgets were obtained and a comparison made with sixteen gathered in Great Britain in 1883. Last year the Illinois Bureau made a similar investigation in that State; while this Bureau now publishes the annual (1884–5) accounts of receipts and expenditures from 319 families in New Jersey. The difficulty in obtaining accurate consumption-statistics is well known to those who have attempted this work. It is rare to find a workingman who notes down the little daily items of outlay. Many have their "pass books," but even these do not show all the food expenditures, which, to a great extent, must be estimated. For these and other reasons, it has been found impracticable, in our present effort, to obtain the *quantity* of food consumed—something which should always accompany the price, and without which the budget is to that extent incomplete.* The amount paid out for rent, clothing, fuel and light, on the other hand, generally can be stated pretty fairly. Our own tables in detail are published at the close of this chapter, in connection with the Massachusetts and English budgets lately collected, as well as some German accounts obtained from a valuable work recently issued.† These tables are summarized in the following pages.

* What kind of blank should be prepared and how far it should go into detailed inquiries has not yet been settled. In 1853 the Brussels International Congress, mentioned above, recommended a scheme, which is given in Engel's Rechnungsbuch der Hausfrau, referred to above. The following schedule for a blank to obtain "the daily ration of food of working people in different sections of the country" was prepared by Mr. Edward Atkinson for the consideration of the Chiefs of the United States Bureau of Labor Statistics:

	Quantity.	Price.	Cost (cents).
A. Meat and fish			
B. Milk			
Butter			
Cheese			
Eggs			
Total annual food			

	Quantity.	Price.	Cost (cents).
C. Bread—Wheat, corn or rye			
D. Vegetables			
E. Sugar			
Molasses or syrup			
F. Tea			
Coffee			
G. Fruit—Green			
Dry			
H. Salt, spice, ice, pickles and sundries			
Totals			

† Ballin: "*Haushalt der Arbeitenden Klassen,*" *Luckhardt, Berlin.*

NEW JERSEY.—AVERAGE INCOME AND EXPENDITURE.

OCCUPATIONS.	Number of families.	Total individuals in same.	Average number in family.	Average number at work.	Earnings of head of family.	Income of family.	Expenditures of family.	Surplus.	Deficiency.
Glass blowers	48	238	4.9	1.3	$941 00	$1,070 00	$737 00	$333 00	.....
Glass workers, miscellaneous	34	163	4.8	1.6	712 00	813 00	654 00	159 00	.....
Blacksmiths	11	64	5.9	1.6	693 00	747 00	674 00	73 00	.....
Carpenters	12	66	5.5	1.5	545 00	678 00	661 00	17 00	.....
Machinists	24	117	4.9	1.5	558 00	629 00	619 00	10 00	.....
Shoemakers	32	164	5.1	1.4	542 00	583 00	565 00	18 00	.....
Iron workers	15	72	4.8	1.5	493 00	573 00	538 00	35 00	.....
Flax mill workers	28	137	4.9	1.7	374 00	482 00	501 00	.....	$19 00
Silk mill workers	34	141	4.2	1.5	322 00	368 00	459 00	.....	81 00
Laborers	24	119	4.9	1.4	405 00	517 00	511 00	6 00	.....
Miscellaneous workmen not classified	57	258	4.5	1.4	644 00	710 00	659 00	51 00	.....
Total	319	1,539	4.8	1.45	$594 00	$680 00	$608 00	$72 00	.....
Single men	43	.....	.....	.....	$343 00	.....	$323 00	$20 00	.....

NEW JERSEY.—AVERAGE EXPENDITURE FOR RENT.*

OCCUPATIONS.	Number of families.	Number rooms.	Average number rooms per family.	Total rent.	AVERAGE RENT.		AVERAGE RENT PER ROOM.	
					Year.	Month.	Year.	Month.
Glass blowers	41	284	6.93	$4,433 00	$108 00	$9 00	$15 61	$1 30
Miscellaneous workmen in glass factories	28	174	6.21	2,700 00	96 00	8 00	15 50	1 29
Iron workers	20	104	5.20	1,854 00	93 00	7 75	17 82	1 48
Machinists	25	134	5.36	2,980 00	120 00	10 00	22 24	1 85
Carpenters	15	93	6.20	1,733 00	116 00	9 66	18 63	1 55
Potters	3	12	4.00	376 00	125 00	10 41	31 33	2 61
Printers	6	26	4.33	741 00	124 00	10 33	28 50	2 37
Blacksmiths	12	78	6.50	1,442 00	122 00	10 17	18 46	1 54
Painters	7	25	3.57	671 00	96 00	8 00	26 84	2 24
Cigarmakers	5	21	4.20	598 00	120 00	10 00	28 48	2 37
Shoemakers	32	161	5.03	3,262 00	102 00	8 50	20 26	1 67
Tailors	6	25	4.16	604 00	101 00	8 42	24 16	2 01
Hatters	12	50	4.17	1,290 00	108 00	9 00	25 80	2 15
Sewing-machine works hands	8	32	4.00	624 00	78 00	6 50	19 50	1 62
Silk mills hands	36	149	4.14	3,216 00	89 00	7 42	21 58	1 80
Cotton and wool mills hands	5	22	4.40	462 00	92 00	7 67	21 00	1 75
Flax works hands	28	99	3.54	2,100 00	75 00	6 23	21 21	1 77
Miscellaneous workmen not classified	66	306	4.63	6,680 00	101 00	8 42	21 83	1 82
Laborers	35	157	4.50	2,701 00	78 00	6 50	17 20	1 43
Total	390	1,952	5.00	$38,467 00	$98 00	$8 15	$19 79	$1 65

*These averages are somewhat different from those in succeeding tables, which include the "lodging" expenditures of many who own their houses, as interest, &c. For details, see below.

NEW JERSEY.—AVERAGE EXPENDITURES—EXPENSE DETAILS.

OCCUPATIONS.	Number of families reporting.	Average number of individuals per family.	Average number adults.	Average number children.	Average number at work.	Total expenses per family.	Subsistence.	Lodging.	Clothing.	Light and fuel.	Sundries.	EXPENDITURE FOR MEAT. Number families reporting.	EXPENDITURE FOR MEAT. Average amount expended.
Glass blowers	48	4.9	2.3	2.5	1.3	$736 55	$361 81	$102 66	$154 54	$43 00	$74 54	57	$89 00
Glass workers, miscellaneous	34	4.8	2.3	2.5	1.6	653 65	331 56	98 35	122 73	41 03	59 98	33	81 00
Blacksmiths	11	5.9	2.4	3.5	1.6	673 72	333 45	120 19	126 81	39 00	54 27	11	86 00
Carpenters	12	5.5	2.3	3.2	1.5	661 41	326 50	135 25	112 25	37 50	49 91	11	82 00
Machinists	24	4.9	2.3	2.7	1.5	618 91	327 22	120 92	88 79	36 33	45 65	21	85 00
Shoemakers	32	5.1	2.3	2.8	1.4	564 50	312 67	103 25	81 78	36 40	30 41	26	78 00
Iron workers	15	4.8	2.0	2.8	1.5	538 20	290 87	93 60	78 00	36 80	38 93	12	83 00
Flax mill workers	28	4.9	2.1	2.8	1.7	508 87	310 25	75 72	71 79	32 79	10 14	27	95 00
Silk mill workers	34	4.2	2.0	2.2	1.5	459 44	265 70	81 70	71 62	37 33	3 09	32	103 00
Misc. workmen, not classified	57	4.5	2.1	2.4	1.4	658 57	362 15	121 50	91 24	37 53	56 15	42	84 00
Laborers	24	4.9	2.3	2.6	1.4	510 96	282 38	82 12	83 04	30 88	32 54	22	65 00
Total	319	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	294	.....
Grand average	.....	4.8	2.2	2.6	1.45	$607 34	$324 74	$99 99	$101 63	$37 60	$43 38	.....	$86 00
Av., excluding miscellaneous workmen	262	.....	.....	.....	.....	594 75	316 59	101 88	98 08	37 61	40 59	.....	.....
Selected Budgets— Glass workers, Blacksmiths, Carpenters, Machinists, Shoemakers, Iron workers	176	5.02	2.2	2.8	1.45	647 26	332 09	106 96	115 06	39 36	53 78	.....	.....
Silk workers, Flax workers, Laborers	86	4.61	2.14	2.47	1.52	487 30	284 86	79 87	74 92	34 04	13 61	.....	.....

NEW JERSEY.—RELATIVE PERCENTAGES OF EXPENDITURES.

OCCUPATIONS.	Average income.	Subsistence.	Lodging.	Clothing.	Light and fuel.	Sundries.	Total per cent.
Glass blowers	$1,070 00	49.13	13.94	20.98	5.83	10.12	100
Glass workers, miscellaneous	813 00	50.72	15.05	18.78	6.28	9.17	100
Blacksmiths	747 00	49.50	17.83	18.82	5.79	8.06	100
Carpenters	678 00	49.37	20.45	16.97	5.67	7.54	100
Machinists	629 00	52.87	19.54	14.35	5.87	7.37	100
Shoemakers	583 00	55.38	18.29	14.49	6.45	5.39	100
Iron workers	573 00	54.06	17.37	14.49	6.84	7.24	100
Laborers	517 00	55.27	16.07	16.25	6.04	6.37	100
Flax workers	482 00	61.94	15.12	14.37	6.54	2.03	100
Silk workers	368 00	57.83	17.78	15.60	8.12	.67	100
Average	673 00	53.23	17.13	16.49	6.33	6.82	100
Misc. workmen not classified above.	710 00	54.17	18.17	13.65	5.62	8.39	100
Grand average	680 00	53.47	16.73	16.46	6.19	7.15	100
Selected Budgets—							
Glass workers, Blacksmiths, Carpenters, Machinists, Shoemakers, Iron workers	782 00	51.30	16.53	17.78	6.08	8.31	100
Silk workers, Flax workers, Laborers	447 00	58.45	16.39	15.38	6.99	2.79	100

COMPARATIVE INCOME AND EXPENDITURES.—AVERAGES IN NEW JERSEY, ILLINOIS, MASSACHUSETTS, GREAT BRITAIN AND GERMANY.

	NEW JERSEY (319 families).		ILLINOIS (1373 families).		MASSACHUSETTS (19 families).		GREAT BRITAIN (16 families).		GERMANY (336 families).	
	Average.	Percentage.	Average.	Percentage.	Average.	Percentage.	Average.	Percentage.	Average.	Percentage.
Persons in family	4.8	.....	4.49	.....	5.21	.....	6.06	.....	5.02	.....
Adults	2.2	45.83	.....	.....	2.16	41.46	2.00	33.00	.....	.....
Children	2.6	54.17	.....	.....	3.05	58.54	4.06	67.00	.....	.....
Number at work	1.45	.....	.....	.....	2.16	.....	2.56	.....	1.94	.....
Total income	$679 73	.....	$612 76	.....	$803 47	.....	$517 47	.....	$195 37	.....
Head of family	594 15	87.41	566 15	92.39	558 68	69.53	309 84	59.88	159 90	81.84
Members of family	85 58	12.59	46 61	7.61	244 79	30.47	207 63	40.12	35 47	18.16
Total expenses	607 34	89.36	535 55	87.40	754 42	93.89	508 35	98.24	187 11	95.78
Surplus	72 39	10.64	77 21	12.60	49 05	6.11	9 12	1.76	8 26	4.22

COMPARATIVE PERCENTAGES OF EXPENDITURE.*

	NEW JERSEY.		MASSACHUSETTS.		ILLINOIS.		GREAT BRITAIN.		GERMANY.†	
	Average expenditure.	Percentage.	Average expenditure.	Percentage.	Average expenditure.	Percentage.	Average expenditure.	Percentage.	Average expenditure.	Percentage.
Subsistence	$324 74	53.47	$371 73	49.28	$229 27	41.38	$261 11	51.36	$153 96	53.90
Clothing	101 63	16.46	120 37	15.95	116 42	21.00	92 07	18.12	34 07	11.92
Lodging	99 99	16.73	148 95	19.74	96 83	17.42	68 55	13.48	50 29	17.58
Light and fuel	37 60	6.19	32 42	4.30	31 22	5.63	17 81	3.50	19 03	6.65
Sundries	43 38	7.15	80 95	10.73	‡80 84	14.57	68 81	13.54	28 43	9.95
Total	$607 34	100	$754 42	100	$535 55	100	$508 35	100	$285 80	100

* These are based on the latest returns, and are general averages of all classes of workmen, see preceding table.

† Nineteen selected families from Ballin's "Haushalt der Arbeitenden Klassen."

‡ Includes milk.

NEW JERSEY.—RENT AND ROOMS—DETAILS.

Glass Workers.

	Occupation.	Residence.	Yearly rent.	Number of families in house.	Average number of rooms per family.
2	Glass blower	Millville	$105 00	1	6
3	Glass blower	Millville	72 00	1	9
4	Glass blower	Millville	75 00	1	8
5	Glass blower	Millville	60 00	1	.....
7	Glass blower	Clayton	120 00	2	6
8	Glass blower	Clayton	48 00	1	7
9	Glass blower	Clayton	108 00	1	11
10	Glass blower	Clayton	120 00	1	8
15	Glass blower	Glassboro	60 00	1	7
17	Glass blower	Glassboro	120 00	1	5
18	Glass blower	Woodbury	156 00	1	9
19	Glass blower	Woodbury	168 00	1	8
20	Glass blower	Woodbury	120 00	2	8
21	Glass blower	Woodbury	150 00	1	6
24	Glass blower	Bridgeton	120 00	1	5
25	Glass blower	Bridgeton	125 00	2	9
26	Glass blower	Bridgeton	120 00	2	5
27	Glass blower	Bridgeton	144 00	1	6
28	Glass blower	Bridgeton	150 00	2	7
30	Glass blower	Salem	120 00	1	7
31	Glass blower	Salem	108 00	2	8
35	Glass blower	Williamstown	100 00	1	7
36	Glass blower	Winslow	50 00	2	4
37	Glass blower	Winslow	120 00	1	9
38	Glass blower	Winslow	60 00	2	6
39	Glass blower	Wilton	84 00	2	6
40	Glass blower	Wilton	84 00	2	6
41	Glass blower	Wilton	84 00	2	6
42	Glass blower	Wilton	84 00	2	6
44	Glass blower	Wilton	60 00	2	6
45	Glass blower	Wilton	72 00	2	5
46	Glass blower	Wllton	84 00	2	6
48	Glass blower	Millville	150 00	2	7
49	Glass blower	Millville	150 00	1	9
50	Glass blower	Glassboro	120 00	2	6
51	Glass blower	Millville	120 00	1	8
52	Glass blower	Glassboro	150 00	1	9
53	Glass blower	Millville	120 00	2	7
54	Glass blower	Millville	120 00	2	7
55	Glass blower	Millville	168 00	2	7
58	Glass blower	Winslow	60 00	2	6
59	Glass blower	Bridgeton	84 00	2	6
60	Glass blower	Malaga	90 00	1	.....
62	Glass blower	Malaga	96 00	1	.....
63	Glass blower	Malaga	96 00	1	.....
64	Glass blower	Malaga	96 00	1	.....
65	Glass blower	Malaga	60 00	1	.....
66	Glass blower	Malaga	96 00	1	.....
67	Gatherer, window-glass	Bridgeton	144 00	1	.....
68	Gatherer, window-glass	Malaga	80 00	1	.....
69	Gatherer, window-glass	Millville	120 00	2	7
70	Flattener, window-glass	Malaga	60 00	1	.....
71	Flattener, window-glass	Glassboro	84 00	1	5
74	Cutter, window-glass	Glassboro	120 00	1	.....
75	Cutter, window-glass	Millville	150 00	1	9
76	Mouldmaker	Clayton	120 00	1	.....
78	Mouldmaker	Millville	80 00	1	.....
79	Mouldmaker	Millville	120 00	1	.....
80	Mouldmaker	Millville	108 00	2	6
81	Stopper grinder	Millville	120 00	2	7
82	Stopper grinder	Glassboro	100 00	2	5
83	Stopper grinder	Millville	100 00	2	5

NEW JERSEY.—RENT AND ROOMS--DETAILS—Continued.

Glass Workers.

Office number.	OCCUPATION.	RESIDENCE.	Yearly rent.	Number of families in house.	Average number of rooms per family.
84	Stopper grinder	Millville	$120 00	1	8
85	Pot maker	Williamstown	108 00	1	7
86	Pot maker	Clayton	96 00	1	6
87	Box maker	Winslow	50 00	2	5
88	Box maker	Millville	120 00	1	8
89	Packer	Williamstown	96 00	2	6
90	Packer	Clayton	72 00	2	3
91	Packer	Millville	84 00	1	8
93	Master shearer	Williamstown	120 00	1	8
95	Master shearer	Winslow	84 00	2	6
96	Master shearer	Millville	120 00	2	6
97	Master shearer	Salem	96 00	2	8
98	Shearer	Millville	96 00	2	6
99	Shearer	Winslow	60 00	2	5
100	Shearer	Clayton	42 00	2	4
101	Shearer	Millville	100 00	2	6
102	Engraver	Millville	120 00	1	8
487	Engraver	Millville	100 00	1	7
103	Gatherer, bottle	Winslow	50 00	2	4
105	Batch maker	Clayton	84 00	2	6
104	Watchman, glass factory	Millville	100 00	2	5

Machinists.

276	Machinist	Millville	$125 00	1	7
267	Machinist	Paterson	120 00	2	6
268	Machinist	Paterson	24 00	2	3
269	Machinist	Elizabethport	120 00	2	3
271	Machinist	Newark	113 00	4	3
272	Machinist	Rahway	84 00	2	4
273	Machinist	Jersey City	180 00	2	6
274	Machinist	Camden	156 00	2	7
275	Machinist	Camden	156 00	1	8
278	Machinist	Camden	144 00	1	7
279	Machinist	Camden	156 00	1	8
280	Machinist	Camden	168 00	1	9
281	Machinist	Millville	120 00	2	6
282	Machinist	Gloucester City	150 00	4	7
283	Machinist	Camden	120 00	2	6
289	Machinist	Paterson	120 00	2	3
290	Machinist	Paterson	144 00	2	5
277	Machinist	Florence	72 00	1	6
300	Machinist	Elizabethport	120 00	2	5
291	Machinist	Paterson	78 00	2	4
292	Machinist	Paterson	96 00	2	4
293	Machinist	Paterson	72 00	5	2
294	Machinist	Paterson	120 00	4	4
298	Machinist	Paterson	78 00	1	5
427	Machinist	New Brunswick	144 00	2	6

Carpenters.

318	Carpenter	Millville	$72 00	2	9
320	Carpenter	Newark	144 00	1	.....
321	Carpenter	South Orange	150 00	1	.....
323	Carpenter	Orange	104 00	2	3
325	Carpenter	Orange	108 00	2	4
328	Carpenter	New Brunswick	80 00	2	3
330	Carpenter	Jersey City Heights	192 00	2	7

NEW JERSEY.—RENT AND ROOMS—DETAILS—Continued.

Carpenters.

Office number.	Occupation.	Residence.	Yearly rent.	Number of families in house.	Average number of rooms per family.
331	Carpenter	Elizabeth	$84 00	2	4
332	Carpenter	Elizabeth	96 00	1	6
333	Carpenter	Metuchen	75 00	2	4
334	Carpenter	Bloomingdale	120 00	1	7
335	Carpenter	Butler	84 00	1	5
338	Carpenter	Vineland	72 00	1	8
342	Ship Carpenter	Camden	180 00	1	9
344	Ship Carpenter	Camden	150 00	1	8
345	Ship Carpenter	Camden	172 00	2	8
346	Ship Carpenter	Camden	144 00	2	8

Blacksmiths.

304	Blacksmith	Rahway	$120 00	1	4
305	Blacksmith	Burlington	100 00	2	6
306	Blacksmith	Burlington	120 00	1	8
307	Blacksmith	Bridgeton	120 00	1	9
308	Blacksmith	Camden	156 00	1	8
309	Blacksmith	Camden	144 00	2	8
310	Blacksmith	Clayton	144 00	2	8
311	Blacksmith	Millville	120 00	2	6
312	Blacksmith	Camden	180 00	1	9
316	Blacksmith	Jersey City	96 00	4	4
315	Blacksmith	Paterson	94 00	3	5
317	Blacksmith	New Brunswick	48 00	2	3

Shoemakers.

159	Shoemaker	Camden	$168 00	1	8
160	Shoemaker	Vineland	60 00	2	4
161	Shoemaker	Newark	96 00	4	3
162	Shoemaker	Newark	120 00	3	4
163	Shoemaker	Vineland	96 00	1	.....
164	Shoemaker	Vineland	90 00	1	6
166	Shoemaker	Newark	84 00	4	3
167	Shoemaker	Newark	96 00	3	4
168	Shoemaker	Newark	72 00	1	6
169	Shoemaker	Newark	60 00	3	3
172	Shoemaker	New Brunswick	60 00	2	3
173	Shoemaker	Camden	100 00	2	5
174	Shoemaker	Camden	120 00	2	6
175	Shoemaker	Camden	144 00	1	7
176	Shoemaker	Vineland	90 00	1	8
177	Shoemaker	Newark	96 00	2	4
178	Shoemaker	Newark	105 00	4	3
179	Shoemaker	Camden	150 00	2	7
180	Shoemaker	Vineland	84 00	2	4
182	Shoemaker	Vineland	66 00	2	6
183	Shoemaker	Vineland	84 00	1	6
185	Shoemaker	Butler	72 00	2	4
186	Shoemaker	Jersey City	144 00	4	4
187	Shoemaker	Camden	168 00	1	8
188	Shoemaker	Camden	144 00	1	7
189	Shoemaker	Camden	96 00	3	6
190	Shoemaker	Camden	120 00	2	7
191	Shoemaker	Newark	84 00	3	4
192	Shoemaker	Orange	144 00	1	.....
193	Shoemaker	Newark	84 00	3	4

NEW JERSEY.—RENT AND ROOMS—DETAILS—Continued.

Shoemakers.

Office number.	OCCUPATION.	RESIDENCE.	Yearly rent.	Number of families in house.	Average number of rooms per family.
194	Shoemakers	Jersey City	$84 00	6	3
195	Shoemakers	Paterson	60 00	2	4
382	Shoemakers	Camden	120 00	1	.....
386	Shoemakers	Camden	96 00	1	5
383	Shoemakers	Camden	102 00	1	5

Iron Workers.

599	Wire drawer	Trenton	$96 00	1	5
504	Iron moulder	Harrison	84 00	2	5
505	Iron moulder	New Brunswick	120 00	2	4
506	Iron moulder	Millville	120 00	2	7
507	Iron moulder	Florence	96 00	1	7
508	Iron moulder	Camden	168 00	1	8
509	Iron moulder	Camden	156 00	1	7
510	Iron moulder	Millville	60 00	1	5
511	Iron moulder	Paterson	84 00	2	4
512	Iron moulder	Burlington	120 00	2	7
513	Coremaker	Florence	96 00	2	5
515	Driller	Paterson	48 00	3	3
517	Plate roller	Bridgeton	84 00	1	.....
518	Muck roller	Bridgeton	72 00	1	4
520	Puddler	Bridgeton	96 00	1	6
521	Nail shearer	Bridgeton	42 00	1	5
522	Foundryman	Florence	60 00	2	5
523	Foundryman	New Brunswick	96 00	2	3
524	Iron worker	Burlington	60 00	2	5
526	Nail cutter	Bridgeton	36 00	2	2
528	Nailer	Butler	144 00	2	7

Silk Workers.

107	Silk weaver	Preakness	$60 00	2	3
108	Silk weaver	Paterson	108 00	2	4
114	Silk weaver	Paterson	84 00	2	4
115	Silk weaver	Paterson	144 00	1	5
116	Silk weaver	Paterson	120 00	3	3
118	Silk weaver	Paterson	108 00	2	4
119	Silk weaver	Paterson	48 00	1	4
120	Silk weaver	Paterson	108 00	4	3
121	Silk weaver	Paterson	108 00	4	5
123	Silk weaver	Paterson	84 00	2	3
124	Silk weaver	Paterson	108 00	2	5
125	Silk weaver	Paterson	84 00	1	5
127	Silk weaver	Paterson	84 00	3	4
128	Silk weaver	Paterson	96 00	2	4
129	Silk weaver	Paterson	120 00	4	4
130	Silk weaver	Paterson	108 00	2	4
131	Silk weaver	Paterson	92 00	8	3
132	Silk weaver	Paterson	120 00	2	4
133	Silk weaver	Paterson	90 00	2	4
134	Silk weaver	Paterson	96 00	1	8
135	Silk weaver	Paterson	48 00	2	3
136	Silk weaver	Paterson	60 00	4	3
137	Silk warper	Paterson	60 00	1	3
138	Silk warper	Paterson	84 00	1	6

NEW JERSEY.—RENT AND ROOMS—DETAILS—Continued.

Silk Workers.

Office number.	Occupation.	Residence.	Yearly rent.	Number of families in house.	Average number of rooms per family.
139	Silk doubler	Paterson	$84 00	2	4
142	Silk finisher	Paterson	48 00	2	6
143	Silk finisher	Paterson	84 00	3	4
144	Silk winder	Paterson	72 00	3	4
146	Silk reeler	Paterson	108 00	4	4
148	Silk finisher	Paterson	108 00	2	5
149	Silk dyer	Paterson	96 00	2	3
150	Silk weaver	Paterson	72 00	2	3
152	Silk weaver	Paterson	120 00	2	5
155	Silk weaver	Paterson	60 00	2	4
156	Silk weaver	Paterson	60 00	2	4
157	Silk weaver	Paterson	84 00	4	5

Flax Workers.

196	Flax worker	Paterson	$48 00	2	3
197	Flax worker	Paterson	48 00	2	3
198	Flax worker	Paterson	74 00	2	4
199	Flax worker	Paterson	72 00	1	3
200	Flax worker	Paterson	72 00	3	3
202	Flax worker	Paterson	84 00	1	4
203	Flax worker	Paterson	48 00	3	2
204	Flax worker	Paterson	60 00	3	4
205	Flax worker	Paterson	74 00	3	3
206	Flax worker	Paterson	78 00	5	4
207	Flax worker	Paterson	108 00	3	5
208	Flax worker	Paterson	75 00	2	4
210	Flax worker	Paterson	72 00	3	3
211	Flax worker	Paterson	72 00	5	4
212	Flax worker	Paterson	60 00	3	4
213	Flax worker	Paterson	72 00	2	3
215	Flax worker	Paterson	72 00	2	3
216	Flax worker	Paterson	72 00	2	3
217	Flax worker	Paterson	96 00	2	4
218	Flax worker	Paterson	98 00	3	4
219	Flax worker	Paterson	90 00	3	4
220	Flax worker	Paterson	60 00	2	3
221	Flax worker	Paterson	60 00	2	3
222	Flax worker	Paterson	60 00	2	3
223	Flax worker	Paterson	72 00	2	4
226	Flax worker	Paterson	55 00	4	3
227	Flax worker	Paterson	128 00	2	5
228	Flax worker	Paterson	120 00	1	4

Miscellaneous.

388	Cotton weaver	Millville	$72 00	2	5
601	Cotton weaver	Paterson	90 00	3	3
390	Cotton mill hand	Millville	120 00	2	6
391	Cotton spinner	Newark	120 00	2	5
393	Cloth finisher	Rahway	60 00	2	3
397	Cloth weaver	Camden	120 00	1	.....
338	Tailor	Union Hill	150 00	1	8
357	Tailor	Paterson	136 00	2	4
352	Tailor	Paterson	54 00	4	2
350	Tailor	Paterson	108 00	2	4
349	Tailor	Paterson	72 00	6	4
348	Tailor	Paterson	84 00	3	3

NEW JERSEY.—RENT AND ROOMS—DETAILS—*Continued.*

Miscellaneous.

Office number.	Occupation.	Residence.	Yearly rent.	Number of families in house.	Average number of rooms per family.
237	Hatter	Newark	$84 00	2	3
239	Hatter	Newark	108 00	2	5
240	Hatter	Newark	96 00	2	4
241	Hatter	Newark	120 00	2	4
242	Hatter	Newark	120 00	4	4
243	Hatter	Orange Valley	96 00	3	4
244	Hatter	Orange	60 00	2	3
246	Hatter	Newark	126 00	2	5
247	Hatter	Orange	96 00	3	4
248	Hatter	Orange	120 00	2	5
251	Hatter	Newark	84 00	2	3
299	Hatter	Orange	180 00	1	6
361	Sewing machine works	Elizabeth	72 00	2	4
360	Sewing machine works	Elizabeth	72 00	2	3
363	Sewing machine works	Elizabeth	72 00	2	5
367	Sewing machine works	Elizabeth	84 00	2	3
370	Sewing machine works	Elizabethport	96 00	2	4
371	Sewing machine works	Elizabethport	72 00	3	3
372	Sewing machine works	Elizabeth	60 00	2	3
373	Sewing machine works	Elizabeth	96 00	1	7
376	Sewing machine works	Elizabeth	120 00	1	.....
380	Sewing machine works	Elizabeth	108 00	1	.....
411	Painter	Paterson	72 00	2	4
110	Painter	Paterson	84 00	4	3
412	Painter	Orange	192 00	.....	6
413	Painter	Orange	89 00	2	3
415	Painter	Orange	84 00	6	3
416	Painter	Orange	60 00	2	3
414	Painter	New Brunswick	90 00	2	3
260	Cigarmaker	Newark	90 00	3	3
261	Cigarmaker	Paterson	112 00	2	4
263	Cigarmaker	Jersey City	96 00	5	4
264	Cigarmaker	Jersey City	180 00	8	5
265	Cigarmaker	Jersey City	120 00	2	5
257	Pearl buttonmaker	Newark	84 00	2	3
256	Pearl buttonmaker	Newark	84 00	2	4
255	Pearl buttonmaker	Newark	72 00	2	4
409	Railroad janitor	Rahway	96 00	2	4
406	Railroad fireman	Perth Amboy	65 00	2	3
405	Railroad fireman	Cape May	120 00	2	6
404	Railroad conductor	Jersey City	168 00	3	4
403	Railroad clerk	Jersey City	188 00	2	7
402	Railroad, platform	Millville	120 00	2	6
401	Railroad brakeman	Millville	120 00	2	7
399	Railroad engineer	Jersey City	216 00	2	6
475	Harnessmaker	Newark	85 00	5	4
446	Harnessmaker	Newark	72 00	4	3
448	Japanner	Newark	120 00	1	4
449	Japanner	Newark	84 00	3	3
450	Japanner	Newark	72 00	4	6
542	File grinder	Paterson	84 00	1	5
541	Rasp puncher	Belleville	60 00	1	.....
540	File cutter	Newark	90 00	4	4
538	Rasp cutter	Woodside	96 00	4	4
537	Printer	Jersey City	96 00	3	4
536	Printer	Paterson	84 00	2	4
535	Printer	Paterson	84 00	2	4
534	Printer	Jersey City	144 00	2	5
533	Printer	Jersey City	144 00	4	5
532	Printer	Jersey City	158 00	3	4
417	Boilermaker	Elizabeth	90 00	2	3
418	Boilermaker	Elizabethport	96 00	1	7

NEW JERSEY.—RENT AND ROOMS—DETAILS—Continued.

Miscellaneous.

Office number.	OCCUPATION.	RESIDENCE.	Yearly rent.	Number of families in house.	Average number of rooms per family.
430	Bricklayer	Jersey City Heights	$120 00	2	5
431	Bricklayer	Paterson	84 00	2	6
434	Mason	Woodbury	144 00	1	8
435	Hod carrier	New Brunswick	72 00	2	4
436	Hod carrier	Newark	96 00	2	4
438	Hod carrier	Newark	96 00	3	3
437	Hod carrier	Camden	150 00	1	8
559	Clerk	Bloomingdale	120 00	3	4
561	Bookkeeper	Paterson	144 00	2	6
562	Insurance agent	Camden	156 00	1	8
564	Driver	Jersey City	108 00	6	4
565	Manager	Millville	48 00	1	6
569	Felter	Cranford	60 00	1	4
571	Driver	Jersey City Heights	120 00	4	4
573	Steam fitter	Jersey City	180 00	1	9
576	Pen finisher	Camden	144 00	1	6
577	Brewer	Elizabethport	84 00	2	4
578	Lineman	Newark	108 00	5	4
579	Paperhanger	Jersey City Heights	120 00	5	4
581	Polisher	New Brunswick	84 00	2	4
594	Watchman	Paterson	108 00	4	6
595	Solderer	New Brunswick	78 00	2	4
596	Driver	Rahway	72 00	1	4
598	Foreman	Paterson	168 00	2	5
603	Bartender	Pompton	84 00	1	4
604	Engineer	Butler	84 00	2	4
605	Stone cutter	Newark	96 00	1	6
544	Brass finisher	Newark	96 00	2	4
546	Brass finisher	Paterson	108 00	2	4
548	Plasterer	Paterson	96 00	2	4
606	Plasterer	Paterson	60 00	3	3
549	Baker	Jersey City	84 00	6	4
551	Wheelwright	Mt. Holly	144 00	1	9
553	Barber	Jersey City	144 00	5	6
554	Barber	Jersey City	84 00	2	3
555	Barber	Bloomingdale	96 00	4	3
557	Satchel maker	Newark	60 00	3	3
441	Plumber	Rahway	120 00	1	.....
442	Plumber	Jersey City	96 00	8	3
424	Rubber worker	New Brunswick	84 00	1	.....
429	Rubber worker	New Brunswick	120 00	1	6
425	Rubber worker	Butler	60 00	1	4
423	Rubber worker	Butler	72 00	2	3
422	Rubber worker	Butler	120 00	2	7
593	Building mover	Rahway	120 00	1	5
597	Potter	Trenton	100 00	1	4
598	Potter	Trenton	132 00	2	3
595	Potter	Trenton	96 00	1	.....
610	Potter	Trenton	120 00	1	.....
596	Potter	Trenton	144 00	1	5

Laborers.

408	Laborer	Perth Amboy	$48 00	2	3
451	Laborer	Paterson	60 00	2	3
453	Laborer	Jersey City	120 00	6	4
454	Laborer	Jersey City	93 00	4	4
455	Laborer	Jersey City	84 00	4	4
456	Laborer	Millville	120 00	2	6
457	Laborer	Butler	84 00	2	5

NEW JERSEY.--RENT AND ROOMS—DETAILS—Continued.

Laborers.

Office number.	OCCUPATION.	RESIDENCE.	Yearly rent.	Number of families in house.	Average number of rooms per family.
458	Laborer	Butler	$72 00	2	4
459	Laborer	Butler	84 00	2	5
460	Laborer	Butler	60 00	1	4
461	Laborer	Butler	60 00	2	3
462	Laborer	Paterson	96 00	2	3
463	Laborer	Millville	50 00	1	5
464	Laborer	Millville	50 00	1	5
465	Laborer	Millville	50 00	1	5
466	Laborer	Millville	50 00	1	5
471	Laborer	Burlington	60 00	2	5
472	Laborer	Florence	80 00	2	5
473	Laborer	Millville	100 00	2	6
474	Laborer	Camden	120 00	1	6
475	Laborer	Camden	120 00	2	7
476	Laborer	Camden	120 00	2	8
477	Laborer	Camden	96 00	2	6
478	Laborer	Millville	72 00	2	5
479	Laborer	Millville	50 00	2	3
480	Laborer	Winslow	72 00	2	5
481	Laborer	Clayton	24 00	2	3
482	Laborer	Woodbury	120 00	2	7
483	Laborer	Williamstown	90 00	2	3
485	Laborer	Paterson	60 00	6	4
489	Laborer	Paterson	36 00	3	2
492	Laborer	Paterson	72 00	2	4
497	Laborer	Paterson	60 00	2	3
501	Laborer	Woodside	96 00	4	4
503	Laborer	Newark	72 00	6	3

NEW JERSEY.—WORKINGMEN'S BUDGETS.

Glass Workers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in Family.			Cost of Living for Self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
32	Salem.....	New Jersey	Glass blower (green glass).....	1	1	.....	* *	.....	$100
43	Wilton	"	Glass blower (green glass).....	1	1	.....	*	.....	75
7	Clayton.....	"	Glass blower (green glass).....	2	2	.....	$120	$175	60
22	Bridgeton...	"	Glass blower (green glass).....	2	2	.....	*	.....	125
23	"	"	Glass blower (green glass).....	2	2	.....	†	285	50
27	"	Penna.....	Glass blower (green glass).....	2	2	.....	144	286	30
65	Malaga	New Jersey	Glass blower (window-glass)..	2	2	.....	60	200	75
2	Millville.....	"	Glass blower (green glass).....	3	2	1	‡105	252	40
12	Glassboro ..	"	Glass blower (green glass).....	3	2	1	†	400	150
13	"	Penna.....	Glass blower (green glass).....	3	3	.....	†	400	250
15	"	New Jersey	Glass blower (green glass).....	3	2	1	†	430	150
16	"	"	Glass blower (green glass).....	3	2	1	†	§275	150
26	Bridgeton...	Germany....	Glass blower (green glass).....	3	2	1	120	320	100
30	Salem.....	New Jersey	Glass blower (green glass).....	3	2	1	120	400	157
36	Winslow	"	Glass blower (green glass).....	3	3	.....	50	400	250
37	"	"	Glass blower (green glass).....	3	3	.....	120	365	150
44	Tansboro ...	"	Glass blower (green glass).....	3	.....	.....	60	290	150
45	Wilton	"	Glass blower (green glass).....	3	2	1	72	218	60
59	Bridgeton...	"	Glass blower (window-glass)..	3	2	1	84	251	150
66	Malaga	"	Glass blower (window-glass)..	3	2	1	96	251	125
28	Bridgeton...	"	Glass blower (green glass).....	3	2	1	150	200	75
1	Millville.....	"	Glass blower (green glass).....	4	2	2	†	500	150
6	"	"	Glass blower (green glass).....	4	2	2	†	300	200
8	Clayton.....	"	Glass blower (green glass).....	4	2	2	48	542	250
9	"	"	Glass blower (green glass).....	4	3	1	‡108	263	60
10	"	"	Glass blower (green glass).....	4	2	2	120	265	100
11	"	"	Glass blower (green glass).....	4	3	1	†	390	155
14	Glassboro ...	"	Glass blower (green glass).....	4	2	2	24	400	100
20	Woodbury..	"	Glass blower (green glass).....	4	2	2	120	310	100
21	"	"	Glass blower (green glass).....	4	2	2	150	410	200
24	Bridgeton...	"	Glass blower (green glass).....	4	2	2	120	270	50
33	Salem.....	Maryland...	Glass blower (green glass).....	4	2	2	†	400	200
41	Wilton	New Jersey	Glass blower (green glass).....	4	2	2	84	350	100
53	Millville.....	Penna.....	Glass blower (flint-glass).....	4	2	2	120	255	100
58	Winslow.....	"	Glass blower (window-glass)..	4	2	2	60	444	150
60	Malaga	New Jersey	Glass blower (window-glass)..	4	2	2	90	300	100
55	Millville.....	Germany....	Glass blower (flint-glass).....	4	2	2	168	512	200
4	"	New Jersey	Glass blower (green glass).....	5	2	3	‡75	400	200
29	Salem.....	"	Glass blower (green glass).....	5	.....	.....	‡18	500	300
31	"	"	Glass blower (green glass).....	5	2	3	108	360	181
39	Wilton	"	Glass blower (green glass).....	5	2	3	84	350	100
46	"	"	Glass blower (green glass).....	5	.....	.....	84	350	100

*Board. †Own house. ‡Interest; own house. §Raise large part of vegetables and truck for groceries.

NEW JERSEY.—WORKINGMEN'S BUDGETS.

Glass Workers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
.....	$100	†$400	$774	.....	1	.....	.....	.....	.....	.....	No	Yes	No	32
.....	.....	†475	700	.....	1	.....	.....	.....	.....	.....	No	‖Yes	No	43
$35	60	450	1,300	$1,300	1	$50	$20	$50	$25	$30	Yes	Yes	No	7
40	150	†675	800	800	1	.....	.....	.....	.....	.....	Yes	Yes	No	22
25	100	460	950	950	1	50	25	100	25	85	.....	Yes	No	23
40	.....	500	900	900	1	80	40	80	35	51	Yes	Yes	No	27
40	50	425	1,080	1,080	1	33	48	63	23	33	Yes	Yes	No	65
33	50	480	1,296	1,296	1	75	35	62	30	50	Yes	Yes	No	2
50	100	700	970	970	1	120	60	95	50	75	Yes	Yes	No	12
50	100	800	950	950	1	125	60	90	50	75	Yes	Yes	No	13
50	70	700	1,100	1,100	1	125	60	100	50	95	Yes	Yes	No	15
40	35	‡500	1,000	1,000	1	100	40	‡65	30	‡50	Yes	Yes	No	16
40	10	590	790	790	1	80	40	90	40	70	Yes	Yes	No	26
48	25	750	1,125	1,125	1	80	60	110	50	100	No	Yes	No	30
50	126	876	1,176	1,176	1	80	60	120	50	80	.....	Yes	No	36
40	25	700	950	950	1	80	60	100	40	85	Yes	Yes	No	37
40	60	600	750	750	1	75	50	70	40	55	Yes	‖Yes	No	44
40	10	400	300	300	1	40	40	58	30	50	No	No	Yes	45
40	75	600	1,092	1,092	1	60	50	60	40	41	Yes	Yes	No	59
40	100	611	1,080	1,080	1	60	48	80	24	39	Yes	Yes	No	66
35	40	500	675	675	1	50	25	50	25	50	Yes	Yes	No	28
100	50	800	1,400	1,400	1	.....	.....	.....	.....	.....	Yes	Yes	No	1
50	*	950	1,200	1,200	1	72	36	84	60	48	Yes	Yes	No	6
40	150	1,032	1,250	1,250	1	150	80	147	75	100	Yes	Yes	No	8
35	60	526	1,300	1,300	1	50	25	90	25	73	Yes	Yes	No	9
40	75	600	1,300	1,300	1	65	30	90	30	50	Yes	Yes	No	10
45	100	690	870	870	1	90	60	110	40	90	Yes	Yes	No	11
40	136	700	908	908	1	.....	.....	.....	.....	.....	No	Yes	No	14
40	30	600	1,175	1,175	1	75	50	75	40	70	Yes	Yes	No	20
40	100	900	1,130	1,130	1	90	60	110	50	100	Yes	Yes	No	21
35	10	485	600	600	1	65	36	75	35	59	Yes	Yes	No	24
40	60	700	1,200	1,200	1	90	60	100	50	100	Yes	Yes	No	33
50	50	634	800	800	1	75	50	100	40	85	Yes	‖Yes	No	41
25	200	700	920	920	1	50	45	73	24	63	Yes	Yes	No	53
72	100	826	1,139	1,139	1	100	60	120	50	114	Yes	Yes	No	58
40	50	580	1,080	1,080	1	72	53	85	35	55	Yes	Yes	No	60
40	150	1,070	1,370	1,370	1	125	65	150	60	112	Yes	Yes	No	55
30	70	775	1,000	1,000	1	100	50	100	50	100	No	Yes	No	4
45	137	1,000	1,125	1,125	1	100	80	150	60	110	Yes	Yes	No	29
38	25	712	1,100	1,100	1	80	60	100	50	70	Yes	Yes	No	31
50	16	600	800	800	1	80	60	100	40	70	.....	‖Yes	No	39
50	16	600	750	750	1	80	50	100	40	80	Yes	Yes	No	46

*$100, including principal and interest. †Board. ‡Raise large part of vegetables and truck for groceries. ‖Owing by firm which failed.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Glass Workers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
18	Woodbury..	New Jersey	Glass blower (green glass).....	5	.....	.....	$156	$250	$125
48	Millville.....	"	Glass blower (flint glass).....	5	2	3	150	400	200
49	"	"	Glass blower (flint glass).....	5	2	3	150	400	200
50	Glassboro ...	Penna.....	Glass blower (flint glass).....	5	2	3	150	350	180
57	"	New Jersey	Glass blower (window-glass)..	5	2	3	*	440	300
3	Millville.....	"	Glass blower (green glass).....	6	2	4	72	386	250
5	"	"	Glass blower (green glass).....	6	2	4	† 60	500	300
40	Wilton	"	Glass blower (green glass).....	6	.....	.....	84	350	125
54	Millville.....	"	Glass blower (flint glass).....	6	2	4	120	350	150
47	"	"	Glass blower (flint glass).....	6	2	4	*	400	200
34	Wm'stown .	"	Glass blower (green glass).....	7	2	5	† 100	500	150
52	Glassboro ...	Penna.....	Glass blower (flint glass).....	7	2	5	150	400	150
64	Malaga	New Jersey	Glass blower (window-glass)..	7	3	4	96	400	275
42	Wilton	"	Glass blower (green glass).....	8	.....	.....	84	400	150
38	Winslow.....	"	Glass blower (green glass)	8	.....	.....	60	400	140
19	Woodbury..	"	Glass blower (green glass).....	8	3	5	168	432	300
62	Malaga	"	Glass blower (window-glass)..	8	2	6	96	350	250
35	Wm'stown .	Maryland...	Glass blower (green glass)	9	4	5	100	700	100
25	Bridgeton...	New Jersey	Glass blower (green glass).....	10	2	8	125	440	300
51	Millville.....	"	Glass blower (flint glass).....	10	2	8	120	470	260
63	Malaga.....	"	Glass blower (window-glass)..	10	2	8	96	433	270
72	Bridgeton...	Ireland.....	Flattener (window-glass).....	1	1	.....	‡	.....	.....
73	Malaga.....	New Jersey	Cutter (window-glass).	1	1	.....	‡	.....	75
488	Millville	"	Engraver (glass).....	1	1	.....	‡	.....	60
70	Malaga.....	"	Flattener (window-glass).....	2	2	.....	60	200	60
79	Millville	"	Mouldmaker (glass).....	2	2	.....	120	226	60
77	"	Penna	Mouldmaker (glass).....	2	2	.....	‡	.....	70
86	Clayton.....	Switz'rland	Potmaker (glass).....	2	2	.....	96	250	80
68	Millville	New Jersey	Gatherer (window-glass).....	3	2	1	80	241	75
95	Winslow.....	"	Master shearer (wi'dow-glass)	3	2	1	84	300	100
100	Clayton	"	Shearer (window-glass).....	3	2	1	42	228	50
103	Winslow.....	"	Gatherer (green glass).....	3	2	1	50	210	50
89	Wm'stown .	"	Glass packer.....	3	2	1	96	250	50
90	Clayton.....	"	Glass packer.....	3	2	1	72	198	50
71	Glassboro ...	"	Flattener (window-glass).....	4	2	2	84	350	100
97	Salem	"	Master shearer (wi'dow-glass)	4	2	2	96	374	150
93	Wm'stown .	"	Master shearer (wi'dow-glass)	4	3	1	† 120	500	250
98	Millville	"	Shearer (window-glass).....	4	2	2	96	239	40
76	Clayton.....	Maryland...	Mouldmaker (glass).....	4	2	2	120	400	250
82	Glassboro ...	New Jersey	Stopper grinder (glass).....	4	2	2	100	260	100
84	Millville.....	Penna..	Stopper grinder (glass).....	4	2	2	120	340	123
91	"	England.....	Glass packer.....	4	2	2	84	244	60
92	"	New Jersey	Glass packer.....	4	2	2	*	400	150
487	"	"	Glass engraver.....	4	2	2	100	350	125
75	"	"	Cutter (flint glass).....	5	2	3	150	350	150
80	"	"	Mouldmaker (glass).....	5	2	3	108	425	150

* Own house. † Interest; own house. ‡ Board.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Glass Workers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
$45	$24	$600	$1,100	$1,600	2	$60	$50	$60	$40	$40	Yes	Yes	No	18
45	105	900	1,225	1,225	1	100	65	100	50	85	No	Yes	No	48
45	105	900	1,300	1,300	1	100	70	100	50	80	Yes	Yes	No	49
50	150	880	900	900	1	90	55	95	40	70	No	Yes	No	50
60	* 300	1,100	800	1,300	2	100	60	130	50	100	Yes	Yes	No	57
47	45	800	1,240	1,240	1	125	73	86	52	50	Yes	Yes	No	3
50	100	1,010	1,400	1,400	1	150	75	100	75	100	Yes	Yes	No	5
40	50	649	700	900	2	80	60	100	40	70	Yes	Yes	No	40
40	90	750	900	900	1	80	62	98	42	68	Yes	Yes	No	54
50	150	800	1,250	1,400	2	100	60	105	45	90	Yes	Yes	No	47
50	† 300	1,100	1,525	1,862	3	100	60	90	75	§ 135	Yes	Yes	No	34
40	60	800	950	950	1	105	60	100	50	85	No	Yes	No	52
46	83	900	640	1,280	3	90	75	105	50	80	Yes	Yes	No	64
50	50	734	700	850	2	90	60	110	40	100	Yes	‖	No	42
40	100	740	950	1,070	2	100	60	100	40	100	Yes	Yes	No	38
50	50	1,000	1,075	1,475	2	100	60	122	50	100	Yes	Yes	No	19
50	50	796	1,080	1,080	1	85	60	100	40	65	Yes	Yes	No	62
50	50	1,000	1,200	1,320	2	175	150	150	125	100	Yes	Yes	No	35
45	50	980	270	750	3	130	70	100	60	80	Yes	No	Yes	25
50	100	1,000	900	1,000	3	120	75	120	60	95	No	.....	No	51
41	50	900	1,080	.....	2	100	80	115	55	83	Yes	Yes	No	63
.....	.....	‡ 500	430	.....	1	.....	.....	.....	.....	.....	No	No	Yes	72
.....	50	‡ 375	630	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	73
.....	40	‡ 300	600	.....	1	.....	.....	.....	.....	.....	Yes	No	No	488
35	50	405	1,080	1,080	1	40	40	60	25	35	Yes	Yes	No	70
35	20	461	634	634	1	52	44	72	19	39	No	Yes	No	79
.....	50	‡ 360	516	516	1	.....	.....	.....	.....	.....	Yes	Yes	No	77
45	39	510	1,020	1,020	1	50	50	60	40	50	Yes	Yes	No	86
40	50	486	720	720	1	50	45	77	30	39	Yes	Yes	No	68
45	50	579	950	950	1	75	50	75	40	60	Yes	Yes	No	95
20	10	350	420	420	1	40	50	68	20	50	Yes	Yes	No	100
30	10	350	350	350	1	30	40	65	25	50	No	No	No	103
35	19	450	450	450	1	65	50	60	35	40	No	No	No	89
30	10	360	365	365	1	30	40	58	20	50	.....	Yes	No	90
41	25	600	918	945	2	90	45	100	40	75	.....	.....	No	71
40	40	700	700	700	1	75	60	109	40	90	No	No	No	97
75	* 300	1,245	1,460	2,000	3	125	75	140	60	100	Yes	Yes	No	93
30	5	410	500	500	1	60	40	59	30	50	Yes	Yes	No	98
45	45	850	1,070	1,070	1	90	60	110	50	90	Yes	Yes	No	76
40	50	550	600	600	1	60	50	60	40	50	No	Yes	No	82
45	* 200	828	630	630	1	90	60	80	40	70	Yes	No	Yes	84
45	100	533	500	800	3	50	25	72	25	72	Yes	Yes	No	91
40	10	600	622	622	1	80	60	110	50	100	Yes	Yes	No	92
50	75	700	950	950	1	70	50	100	40	90	No	Yes	No	487
45	105	800	1,125	1,125	1	90	55	90	40	75	Yes	Yes	No	75
35	57	775	775	775	1	.....	.....	.....	.....	.....	Yes	No	No	80

* Including sickness, &c. † Including furniture and society dues, &c. ‡ Board. § Cannot account for balance. ‖ Owing by firm which failed.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Glass Workers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
96	Millville.....	New Jersey	Master shearer (wi'dow-glass)	5	3	2	$120	$340	$100
69	"	"	Gatherer (window-glass).....	6	2	4	120	340	150
102	"	"	Engraver (flint-glass).....	6	2	4	120	350	150
94	Bridgeton...	"	Master shearer (wi'dow-glass)	6	2	4	*	300	200
99	Winslow.....	"	Shearer (window-glass).....	6	2	4	60	350	175
101	Bridgeton...	Virginia.....	Shearer (window-glass).....	6	2	4	100	300	150
78	Millville.....	New Jersey	Mould maker (glass).....	6	2	4	80	350	150
83	"	"	Stopper grinder (glass).....	6	2	4	100	375	100
88	"	"	Box maker (glass factory).....	6	3	3	120	428	200
105	Clayton.....	"	Batch maker (glass).....	7	2	5	84	351	125
81	Millville.....	New York...	Stopper grinder (glass).....	7	.....	.....	120	300	100
85	Wm'stown.	Germany....	Pot maker (glass).....	7	2	5	108	500	100
87	Winslow.....	New Jersey	Box maker (glass factory).....	7	2	5	50	400	100
104	Millville.....	Penna.....	Watchman (glass factory).....	7	5	2	100	474	200
74	Glassboro...	New York...	Cutter (window-glass).....	8	2	6	120	430	250
67	Bridgeton...	New Jersey	Gatherer (window-glass).....	9	4	5	144	400	200

Blacksmiths.

207	Bridgeton...	New Jersey	Blacksmith.....	7	2	5	$120	$300	$160
208	Camden.....	Penna.....	Blacksmith.....	7	2	5	156	300	95
212	Camden.....	"	Blacksmith.....	6	2	4	180	350	160
211	Millville.....	New Jersey	Blacksmith	6	.....	.....	120	370	100
210	Clayton.....	"	Blacksmith.....	5	2	3	144	466	250
209	Camden.....	Penna.....	Blacksmith.....	5	2	3	144	300	150
206	Burlington.	New Jersey	Blacksmith.....	5	2	3	120	325	115
280½	Jersey City.	New York..	Blacksmith.....	5	2	3	96	366	85
428	N. Bruns'k.	New Jersey	Blacksmith.....	5	2	3	48	281	50
205	Burlington.	Delaware...	Blacksmith.....	4	2	2	100	250	80
379	Paterson.....	Ireland.....	Blacksmith.....	9	5	4	94	360	150
214	Rahway.....	New Jersey	Blacksmith.....	1	1	.....	.....	.....	70

Carpenters.

226	P. Amboy...	New Jersey	Carpenter.....	1	1	.....	.....	.....	$75
221	Orange.	Saxony.....	Carpenter.....	1	1	.....	.....	.....	39
216	Paterson.....	New York...	Carpenter.....	1	1	.....	.....	.....	50
234	Vineland....	"	Carpenter.....	2	2	.....	*	$250	60
230	Metuchen...	New Jersey	Carpenter.....	4	2	2	$75	289	50
227	J.C.Heights	New York...	Carpenter.....	4	2	2	192	480	167
239	Camden.....	New Jersey	Ship carpenter.....	4	2	2	*	300	160
218	S. Orange...	"	Carpenter.....	5	2	3	150	350	250
232	Passaic Co..	"	Carpenter.....	5	2	3	84	291	75
229	Elizabeth...	Penna.....	Carpenter.....	5	2	3	96	325	25
225	N. Bruns'k.	New Jersey	Carpenter.....	5	2	3	80	300	90

*Own house.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Glass Workers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
$40	$10	$610	$560	$610	2	$90	$50	$90	$40	$70	No	No	No	96
40	50	700	600	800	2	75	60	90	50	65	Yes	No	No	69
40	40	700	950	950	1	90	55	85	45	75	No	Yes	No	102
50	50	600	1,100	1,100	1	60	40	90	40	70	Yes	Yes	No	94
40	25	650	400	650	2	75	60	100	40	75	No	No	No	99
25	20	595	600	800	3	75	40	80	35	80	No	Yes	No	101
40	95	715	715	.....	3	.....	.....	.....	.....	.....	Yes	No	No	78
45	*207	827	630	630	1	90	65	100	45	75	Yes	No	Yes	83
42	10	800	840	1,190	2	100	60	118	50	100	Yes	Yes	No	88
40	60	660	450	690	3	70	51	110	30	90	No	No	No	105
40	40	600	660	770	2	70	60	80	30	60	Yes	No	No	81
32	.....	740	840	840	1	125	80	133	62	100	No	Yes	No	85
50	40	640	500	700	3	90	60	110	50	100	Yes	Yes	No	87
40	186	1,000	540	1,340	4	100	50	140	40	144	Yes	Yes	No	104
45	75	920	800	800	1	125	60	100	60	85	Yes	No	†No	74
40	16	800	650	800	2	85	45	120	50	100	.....	No	No	67

Blacksmiths.

$40	$60	$680	$768	$768	1	$70	$55	$85	$35	$55	Yes	Yes	No	207
44	‡110	705	705	705	1	72	53	85	35	55	No	No	No	208
40	64	794	1,000	1,000	1	81	64	96	39	70	Yes	Yes	No	212
40	20	650	450	650	3	80	50	110	30	100	No	No	No	211
40	100	1,000	1,000	1,000	1	150	75	100	70	71	No	No	No	210
40	41	675	750	750	1	75	50	90	35	50	Yes	Yes	No	209
40	50	650	750	750	1	75	60	90	40	60	Yes	Yes	No	206
36	95	678	700	700	1	67	49	183	32	35	Yes	No	No	280½
29	§12	§420	425	425	1	75	55	98	35	18	Yes	No	Yes	428
35	40	505	750	750	1	62	45	75	28	39	Yes	Yes	No	205
45	5	654	324	724	5	140	41	54	85	40	Yes	Yes	No	379
.....	112	‖414	414	.....	1	.....	.....	.....	.....	.....	No	No	No	214

Carpenters.

.....	$25	‖$350	$518	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	226
.....	105	‖500	700	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	221
.....	25	‖310	335	.....	1	.....	.....	.....	.....	.....	Yes	No	No	216
$30	60	400	550	$650	2	30	50	75	40	55	Yes	Yes	No	234
30	26	475	475	475	1	75	24	120	40	30	$50	No	No	230
38	¶100	977	558	1,130	3	.....	.....	.....	.....	.....	No	Yes	No	227
40	150	650	650	650	1	72	53	85	35	55	Yes	No	No	239
35	130	915	725	845	2	100	60	125	35	30	Yes	No	Yes	218
30	.....	480	480	480	1	.....	.....	.....	.....	.....	Yes	No	No	232
42	12	500	425	425	1	.....	.....	.....	.....	.....	Yes	No	Yes	229
45	¶90	600	600	600	1	104	.....	.....	20	.....	No	No	No	225

*Including sickness, &c. †But used savings. ‡Sickness. §Not including doctor's fees, &c.; 90 days illness. ‖Board. ¶Furniture bill included.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Carpenters.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
240	Camden	Virginia	Ship carpenter	5	[illegible]	3	$150	$300	$100
236	"	New York	Carpenter	6	3	3	180	250	100
241	"	New Jersey	Ship carpenter	6	3	3	172	325	100
242	"	Penna	Ship carpenter	6	2	4	144	300	125
238	"	New Hamp	Ship carpenter	7	2	5	180	275	125
237	"	New Jersey	Ship carpenter	7	2	5	*	400	200
231	Bloom'gdale	"	Carpenter	8	4	4	120	433	140

Machinists.

266	Paterson	New Jersey	Machinist	1	.....	.....	†	.....	$80
276	Millville	Maryland	Machinist	2	2	.....	$125	$150	50
289	Paterson	New Jersey	Machinist	2	2	.....	120	329	55
296	"	Germany	Machinist	2	2	.....	*	.....	25
388	Elizabeth	"	Machinist	3	2	1	96	340	79
268	Paterson	England	Machinist	3	2	1	24	226	8
295	"	Ireland	Machinist	3	2	1	‡	219	25
427	New Bruns'k	New York	Machinist	4	2	2	144	280	36
272	Rahway	"	Machinist	4	2	2	84	340	75
277	Florence	New Jersey	Machinist	4	2	2	72	160	60
283	Camden	Ireland	Machinist	4	2	2	120	275	130
200	Elizabethp't	Germany	Machinist	4	2	2	120	380	75
291	Paterson	New Jersey	Machinist	4	.....	.....	78	352	80
292	"	Germany	Machinist	4	2	2	96	198	20
294	"	England	Machinist	5	2	3	120	404	20
267	"	New Jersey	Machinist	5	2	3	120	283	80
273	Jersey City	France	Machinist	5	3	2	180	493	200
274	Camden	Maryland	Machinist	5	2	3	156	300	150
279	"	England	Machinist	5	3	2	156	295	105
270	Newark	New Jersey	Machinist	5	2	3	§ 225	525	75
391	Elizabeth	Ireland	Machinist	6	2	4	120	500	80
280	Camden	Kentucky	Machinist	6	2	4	168	290	100
281	Millville	New Jersey	Machinist	6	3	3	120	350	100
290	Paterson	Ireland	Machinist	6	2	4	144	460	168
271	Newark	New Jersey	Machinist	7	2	5	113	462	100
282	Glo'ster City	Virginia	Machinist	7	2	5	150	326	150
269	Elizabethp't	Penna	Machinist	8	2	6	120	310	80
275	Camden	England	Machinist	8	2	6	156	350	130

*Own house. †Board, $5 per week. ‡Rent free for taking care of place. §Interest and taxes.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Carpenters.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
$40	$10	$600	$600	$700	2	$71	$54	$84	$36	$55	No	No	No	240
30	40	600	600	800	2	58	47	78	25	38	No	.....	.....	236
35	18	650	504	604	2	60	60	90	40	75	Yes	No	Yes	241
35	68	672	672	672	1	60	60	85	40	55	Yes	No	No	242
40	80	700	700	700	1	64	54	84	29	44	Yes	No	No	238
50	*200	850	850	850	1	90	70	100	50	90	Yes	No	No	237
52	25	770	200	700	1	150	75	60	96	52	Yes	No	Yes	231

Machinists.

.....	$10	†$350	$350	.....	1	.....	.....	.....	.....	.....	Yes	No	No	266
$35	15	375	650	$650	1	$30	$24	$10	$20	$36	Yes	Yes	No	276
20	‡100	624	560	560	1	91	68	50	90	30	No	No	Yes	289
20	.....	320	250	250	1	.....	.....	.....	.....	.....	Yes	No	Yes	296
50	50	615	615	615	1	.....	.....	.....	.....	.....	No	No	No	388
17	.....	275	165	165	1	.....	.....	.....	.....	.....	Yes	No	Yes	268
45	2	291	210	210	1	73	47	50	36	13	Yes	No	Yes	295
20	20	500	700	700	1	140	20	80	20	20	Yes	Yes	No	427
32	75	606	700	700	1	110	54	160	16	.....	Yes	Yes	No	272
30	30	352	660	660	1	25	40	55	15	25	Yes	Yes	No	277
35	40	600	600	600	1	45	45	80	35	70	Yes	No	No	283
52	.....	627	524	524	1	117	52	130	29	52	No	No	Yes	200
44	6	560	270	530	4	130	60	71	63	28	No	No	Yes	291
36	.....	350	300	300	1	60	35	39	50	14	No	No	Yes	292
30	12	586	90	490	3	.....	.....	.....	.....	.....	Yes	No	Yes	294
37	10	530	500	500	1	90	56	45	62	30	Yes	No	Yes	267
43	130	1,046	900	900	1	98	72	190	64	69	Yes	No	Yes	273
40	54	700	700	700	1	72	53	85	35	55	No	No	No	274
44	75	675	600	675	2	70	50	85	35	55	No	No	No	279
65	35	925	925	975	3	.....	.....	.....	.....	.....	.....	.....	.....	270
40	60	800	800	800	1	.....	.....	.....	.....	.....	No	No	No	391
40	§112	700	520	620	2	77	50	80	30	53	Yes	No	Yes	280
40	40	650	650	950	2	80	65	95	40	70	Yes	No	No	281
50	§130	952	600	650	2	130	74	95	115	46	No	No	Yes	290
23	22	720	580	720	2	110	70	.....	.....	.....	No	No	No	271
40	60	726	576	726	2	76	60	90	40	60	No	No	No	282
30	‖35	575	575	575	1	72	48	120	50	20	No	No	No	269
44	20	700	540	790	3	80	65	95	40	70	Yes	Yes	No	275

*Sickness. †Board, $5 per week. ‡Car fare. §Including sickness, &c. ‖Doctor's bill, church, &c.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Shoemakers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
170	Newark.....	New Jersey	Shoemaker.....	1	1	.....	†	.....	$72
171	"	"	Shoemaker.....	1	1	.....	†	.....	40
303	N. Bruns'k.	"	Shoemaker (rubber).....	1	1	.....	†	.....	120
302	"	"	Shoemaker (rubber).....	1	1	.....	†	.....	45
*301	"	"	Shoemaker (rubber).....	2	2	.....	‡	$230	40
160	Vineland....	"	Shoemaker.....	2	2	.....	$60	222	35
191	Newark.....	New York...	Shoemaker.....	2	2	.....	84	397	50
382	Camden.....	New Jersey	Shoemaker.....	3	2	1	120	364	60
163	Vineland....	New Hamp	Shoemaker.....	3	3	.....	96	282	45
162	Newark.....	Mass.....	Shoemaker.....	3	2	1	120	260	25
186	Jersey City.	New York...	Shoemaker.....	4	2	2	144	417	130
173	Camden.....	Penna.....	Shoemaker.....	4	2	2	100	245	75
189	"	New Jersey	Shoemaker.....	4	2	2	96	250	75
185	Butler.....	Ireland.....	Shoemaker.....	4	2	2	72	248	45
177	Newark.....	"	Shoemaker.....	4	4	.....	96	380	38
178	"	New Jersey	Shoemaker.....	4	2	2	108	297	60
299	N. Bruns'k.	"	Shoemaker (rubber).....	4	2	2	84	296	60
190	Camden.....	"	Shoemaker.....	5	2	3	120	315	175
188	"	Virginia.....	Shoemaker.....	5	2	3	144	300	100
182	Vineland....	New York...	Shoemaker.....	5	2	3	66	239	100
161	Newark.....	New Jersey	Shoemaker.....	5	2	3	96	334	40
195	Paterson.....	"	Shoemaker.....	5	2	3	60	260	50
194	Jersey City.	Germany....	Shoemaker.....	5	2	3	84	386	90
166	Newark.....	New Jersey	Shoemaker.....	6	2	4	84	320	21
167	"	"	Shoemaker.....	6	2	4	96	345	24
164	Vineland....	Conn.....	Shoemaker.....	6	2	4	90	275	50
176	"	New Jersey	Shoemaker.....	6	.....	.....	90	350	180
183	"	England.....	Shoemaker.....	6	3	.....	84	250	100
175	Camden.....	Kentucky...	Shoemaker.....	6	.....	.....	144	350	200
174	"	Mass.....	Shoemaker.....	6	2	4	120	290	150
179	"	New Jersey	Shoemaker.....	6	3	3	150	300	100
169	Newark.....	Ireland.....	Shoemaker.....	7	2	5	60	380	70
192	Orange.....	"	Shoemaker.....	7	3	4	144	425	53
187	Camden.....	Maryland...	Shoemaker.....	7	3	4	168	350	126
168	Newark.....	New Jersey	Shoemaker.....	8	2	6	72	338	50
193	"	"	Shoemaker.....	8	2	6	84	300	40
159	Camden.....	Conn.....	Shoemaker.....	8	3	5	168	240	200

Silk Workers.

158	Paterson.....	New Jersey	Silk weaver (power loom).....	1	1	.....	†	.....	$40
154	"	England.....	Silk weaver (power loom).....	1	1	.....	†	.....	50
153	"	Ireland.....	Silk weaver (power loom).....	1	1	.....	†	.....	30
112	"	Switz'rland	Silk weaver (ribbon).....	1	1	.....	†	.....	80
111	"	"	Silk weaver (ribbon).....	1	1	.....	†	.....	50
109	"	"	Silk weaver (ribbon).....	1	1	.....	†	.....	80
108	"	Germany....	Silk weaver (ribbon).....	1	1	.....	†	.....	70

* Female. † Board. ‡ Own house.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Shoemakers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
.....	$108	‡$470	$500	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	170
.....	75	‡ 375	550	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	171
.....	32	‡ 296	296	.....	1	.....	.....	.....	.....	.....	No	No	No	303
.....	91	‡ 356	356	.....	1	.....	.....	.....	.....	.....	No	No	No	302
$18	4	292	292	$292	1	$72	$30	$116	$12	.....	No	No	No	§301
30	* 69	406	598	598	1	31	15	135	31	$10	Yes	Yes	No	160
35	10	576	576	576	1	120	30	150	67	30	Yes	No	No	191
45	.....	589	600	600	1	.....	.....	.....	.....	.....	No	No	No	382
51	57	531	500	500	1	39	39	156	24	25	No	No	Yes	163
35	10	450	450	450	1	75	44	90	30	21	Yes	No	No	162
40	95	826	900	900	1	87	47	170	62	51	Yes	No	No	186
30	50	500	500	500	1	50	45	60	40	50	Yes	No	No	173
35	44	500	562	562	1	60	45	75	30	40	Yes	Yes	No	189
35	.....	400	200	200	1	.....	.....	.....	.....	.....	Yes	No	Yes	185
36	.....	550	410	550	3	.....	.....	.....	.....	.....	Yes	No	No	177
35	.....	500	500	500	1	.....	.....	.....	.....	.....	Yes	No	No	178
25	20	485	418	418	1	100	28	100	36	32	No	No	Yes	299
40	50	700	600	700	2	70	60	75	40	55	Yes	No	No	190
35	21	600	600	600	1	75	55	85	35	50	No	No	No	188
35	10	450	450	450	1	35	50	75	25	54	No	No	No	182
36	* 110	616	616	616	1	75	65	105	40	49	Yes	No	No	161
35	.....	405	365	365	1	85	37	56	65	17	Yes	No	Yes	195
27	40	627	611	611	1	74	46	140	83	42	Yes	No	Yes	194
30	5	460	450	450	1	45	60	110	44	61	Yes	No	Yes	166
35	.....	500	500	500	1	.....	.....	.....	.....	.....	No	No	No	167
36	27	478	538	538	1	35	60	90	35	55	.....	Yes	No	164
40	30	690	550	650	2	40	50	110	50	100	Yes	No	Yes	176
28	22	484	640	640	1	35	50	70	35	60	No	Yes	No	183
40	66	810	832	832	1	90	55	95	40	60	Yes	Yes	No	175
30	50	640	640	640	1	65	50	75	35	65	No	No	No	174
35	15	600	400	600	2	80	50	80	40	50	Yes	Yes	No	179
40	.....	550	400	530	3	60	42	100	74	104	Yes	No	Yes	169
55	90	767	425	767	4	.....	.....	.....	.....	.....	No	No	No	192
36	20	700	778	878	2	80	60	100	40	70	Yes	Yes	No	187
40	.....	500	500	500	1	62	48	130	38	60	No	No	No	168
40	† 20	500	550	550	1	.....	.....	.....	.....	.....	No	No	No	193
40	42	790	700	880	2	85	60	90	45	60	Yes	Yes	No	159

Silk Workers.

.....	$25	‡$325	$325	.....	1	.....	.....	.....	.....	.....	No	No	No	158
.....	.....	‡ 258	125	.....	1	.....	.....	.....	.....	.....	No	No	Yes	154
.....	.....	‡ 264	175	.....	1	.....	.....	.....	.....	.....	Yes	No	Yes	153
.....	20	‡ 360	330	.....	1	.....	.....	.....	.....	.....	Yes	No	Yes	112
.....	.....	‡ 284	240	.....	1	.....	.....	.....	.....	.....	No	No	Yes	111
.....	20	‡ 334	210	.....	1	.....	.....	.....	.....	.....	Yes	No	Yes	109
.....	28	‡ 384	384	.....	1	.....	.....	.....	.....	.....	No	No	No	108

* Including medicine, &c. † Balance spent in fixtures for shop. ‡ Board. § Female.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Silk Workers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
106	Paterson.....	England.....	Silk weaver (ribbon).....	1	1	.....	*	.....	$6
147	"	Mass.....	Silk throwster.....	1	1	.....	*	.....	50
145	"	New York..	Silk throwster.....	1	1	.....	*	.....	60
141	"	New Jersey	Silk finisher.....	1	1	.....	*	.....	70
110	"	Switz'rland	Silk weaver (ribbon).....	2	2	.....	*	.....	80
157	"	England.....	Silk weaver (power loom).....	2	2	.....	$84	$180	85
117	"	Germany....	Silk weaver (ribbon).....	2	1	1	*	.....	90
142	"	New Jersey	Silk finisher.....	2	2	.....	48	227	20
107	Preakness..	New York..	Silk weaver (ribbon).....	2	2	.....	60	200	50
120	Paterson.....	Switz'rland	Silk weaver (ribbon).....	2	2	.....	108	266	90
122	"	"	Silk weaver (ribbon).....	2	2	.....	72	238	50
156	"	Ireland.....	Silk weaver (power loom)	3	2	1	60	185	60
151	"	Scotland.....	Silk weaver (broad silk).....	3	2	1	†	230	75
128	"	New York..	Silk weaver (ribbon).....	3	2	1	96	319	150
127	"	Germany....	Silk weaver (ribbon).....	3	2	1	84	301	50
126	"	Ireland	Silk weaver (ribbon).....	3	2	1	†	400	100
124	"	England.. ..	Silk weaver (ribbon).....	3	2	1	108	225	75
121	"	Switz'rland	Silk weaver (ribbon).....	3	2	1	108	213	50
139	"	England.....	Silk doubler.....	3	1	2	84	239	65
140	"	New Jersey	Silk finisher.....	3	2	1	†	300	100
144	"	England.....	Silk winder.....	3	2	1	72	230	30
148	"	Switz'rland	Silk finisher	3	2	1	108	278	100
155	"	Austria	Silk weaver (broad silk).....	4	2	2	60	260	50
137	"	New Jersey	Silk warper	4	2	2	60	205	75
114	"	Switz'rland	Silk weaver (ribbon).....	4	2	2	84	321	100
113	"	"	Silk weaver (ribbon).....	4	2	2	108	342	65
118	"	Germany....	Silk weaver (ribbon).....	4	2	2	108	460	80
123	"	Switz'rland	Silk weaver (ribbon).....	4	2	2	84	286	90
125	"	England.. ..	Silk weaver (ribbon).....	4	2	2	84	266	100
148	"	New York..	Silk finisher.....	5	2	3	84	178	40
134	"	Scotland... .	Silk weaver (hand loom).....	5	2	3	96	314	.....
115	"	Germany....	Silk weaver (ribbon).....	5	2	3	120	284	130
146	"	New Jersey	Silk reeler.....	6	2	4	108	342	75
132	"	France.....	Silk weaver (ribbon).....	6	2	4	120	395	125
130	"	Germany....	Silk weaver (ribbon).....	6	3	3	108	317	80
119	"	"	Silk weaver (ribbon).....	6	2	4	48	354	90
152	"	England	Silk weaver (broad silk).....	7	2	5	120	435	90
129	"	Switz'rland	Silk weaver (ribbon).....	7	2	5	120	335	150
133	"	England.....	Silk weaver (hand loom).....	8	2	6	90	439	120
138	"	N. S.....	Silk warper	9	2	7	84	370	100

Flax Workers.

232	Paterson.....	Germany....	Flax worker (helper).....	1	1	.....	*	.....	$30
230	"	Ireland.....	Flax worker (bundler).....	1	1	.....	*	.....	40
229	"	"	Flax worker (spreader).....	1	1	.....	*	.....	30
201	"	"	Flax worker (dresser).....	1	1	.....	*	.....	55
210	"	Scotland.....	Flax worker (dresser).....	2	2	.....	$72	$218	35

*Board. †Own house.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Silk Workers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditure.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
.....	.....	* $266	$160	.....	1	.....	.....	.....	.....	.....	No	No	Yes	106
.....	$10	* 320	320	.....	1	.....	.....	.....	.....	.....	No	No	No	147
.....	.....	* 294	200	.....	1	.....	.....	.....	.....	.....	No	No	Yes	145
.....	25	* 407	400	.....	1	.....	.....	.....	.....	.....	No	No	Yes	141
.....	† 100	434	275	$275	1	.....	.....	.....	.....	.....	No	No	Yes	110
$40	.....	389	190	240	2	$75	$20	$36	$39	$10	No	No	Yes	157
.....	30	472	472	472	1	.....	.....	.....	.....	.....	Yes	No	Yes	117
25	.....	320	320	320	1	.....	.....	.....	.....	.....	No	No	No	142
30	.....	340	185	185	1	76	24	40	45	15	No	No	Yes	107
36	.....	500	500	500	1	104	35	42	60	25	Yes	No	No	120
30	10	400	400	400	1	105	25	40	52	16	No	No	No	122
45	.....	350	230	230	1	62	30	38	41	12	No	No	Yes	156
27	.....	332	120	120	1	78	34	45	55	18	No	No	Yes	151
47	18	660	660	660	1	109	45	80	85	30	Yes	No	No	128
45	.....	480	330	330	1	100	36	60	70	35	Yes	No	Yes	127
40	.....	540	736	736	1	142	65	70	89	34	Yes	Yes	No	126
75	.....	483	300	300	1	80	30	40	62	13	Yes	No	Yes	124
40	.....	411	411	411	1	83	30	35	50	15	Yes	No	No	121
30	12	430	200	430	2	78	40	45	56	20	No	No	No	139
40	.....	440	440	440	1	106	45	54	70	25	Yes	No	No	140
35	2	369	195	345	2	70	33	39	66	22	Yes	No	Yes	144
34	5	525	365	525	2	90	36	64	69	19	Yes	No	No	148
30	.....	400	400	400	1	.....	.....	.....	.....	.....	No	No	No	155
35	.....	375	300	300	1	70	24	39	55	17	No	No	Yes	137
50	.....	555	360	360	1	100	41	66	78	36	No	No	Yes	114
35	† 35	585	336	336	1	150	35	79	48	30	Yes	No	Yes	113
50	.....	698	480	480	1	157	76	79	92	36	Yes	No	Yes	118
45	.....	505	420	420	1	78	45	60	75	28	No	No	Yes	123
75	.....	525	335	335	1	104	36	45	61	20	Yes	No	Yes	125
36	2	340	290	290	1	75	18	35	33	17	No	No	Yes	148
40	.....	450	176	300	2	100	50	100	39	25	Yes	No	Yes	134
55	.....	589	200	200	1	104	36	78	40	26	No	No	Yes	115
35	.....	560	162	512	2	120	65	53	70	34	No	No	Yes	146
45	15	700	600	600	1	130	73	72	85	35	No	No	Yes	132
45	.....	550	450	450	1	130	50	50	57	30	No	No	Yes	130
‡	.....	492	340	340	1	115	46	68	85	40	No	No	Yes	119
45	.....	690	300	600	3	125	90	80	96	44	Yes	No	Yes	152
45	.....	650	500	500	1	115	46	55	85	34	§ No	No	Yes	129
45	6	700	490	700	2	126	90	82	96	45	No	No	No	133
46	.....	600	500	500	1	135	75	55	66	39	No	No	Yes	138

Flax Workers.

.....	$5	$243	$144	.....	1	.....	.....	.....	.....	.....	No	No	Yes	232
.....	60	360	360	.....	1	.....	.....	.....	.....	.....	No	No	No	230
.....	.....	186	162	.....	1	.....	.....	.....	.....	.....	No	No	Yes	229
.....	13	328	328	.....	1	.....	.....	.....	.....	.....	No	No	No	201
$21	18	364	400	$650	2	$75	$29	$54	$45	$15	Yes	Yes	No	210

* Board. † Including doctor and undertaker's bills. ‡ Given. § But could live without getting into debt.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Flax Workers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
206	Paterson	Ireland	Flax worker (dresser)	2	1	1	$78	$250	$90
204	"	"	Flax worker (dresser)	2	.....	.....	60	240	100
198	"	"	Flax worker (dresser)	2	2	.....	74	220	96
196	"	"	Flax worker (dresser)	2	2	.....	48	250	50
212	"	"	Flax worker (dresser)	3	2	1	60	325	40
205	"	Scotland	Flax worker (dresser)	3	1	2	74	262	50
221	"	"	Flax worker (dresser)	3	2	1	60	210	40
197	"	Ireland	Flax worker (dresser)	3	2	1	48	371	100
220	"	"	Flax worker (dyer)	3	2	1	60	218	65
231	"	New Jersey	Flax worker (dyer)	3	2	1	60	165	60
219	"	Ireland	Flax worker (dyer)	4	2	2	90	310	60
211	"	"	Flax worker (dresser)	4	2	2	72	241	25
218	"	France	Flax worker (dresser)	5	3	2	98	288	40
213	"	Scotland	Flax worker (dresser)	6	2	4	72	294	60
217	"	"	Flax worker (dresser)	6	2	4	96	370	130
223	"	Ireland	Flax worker (dyer)	6	2	4	72	323	150
216	"	Scotland	Flax worker (dresser)	6	2	4	72	322	40
199	"	"	Flax worker (dresser)	6	2	4	72	285	40
200	"	Ireland	Flax worker (dresser)	6	2	4	72	346	40
202	"	"	Flax worker (dresser)	6	2	4	84	364	60
203	"	"	Flax worker (dresser)	6	2	4	48	297	25
207	"	"	Flax dresser	7	2	5	108	339	55
214	"	Scotland	Flax dresser	7	2	5	75	315	80
227	"	Ireland	Flax bleacher	7	2	5	128	397	100
228	"	"	Flax dyer	8	4	4	120	425	100
215	"	Scotland	Flax dresser	9	2	7	72	412	191
208	"	Ireland	Flax dresser	10	2	8	75	630	93

Iron Workers.

415	Newark	Penna.	Iron roller	1	1	.....	*	.....	$30
410	Millville	New Jersey	Coremaker	1	1	.....	*	.....	60
419	Florence	Penna.	Foundryman	2	2	.....	$60	$120	50
401	New Bruns'k	Maine	Iron moulder	2	2	.....	120	350	80
423	Bridgeton	New Jersey	Nail cutter	3	1	2	36	205	20
420	New Bruns'k	New York	Foundry stoker	3	2	1	96	280	95
414	Bridgeton	New Jersey	Muck roller	3	2	1	72	280	10
409	Florence	"	Coremaker	3	2	1	96	175	60
424	Bridgeton	New York	Nailer	5	2	3	78	350	70
416	"	New Jersey	Puddler	5	2	3	96	208	.....
408	Burlington	"	Coremaker	5	.....	.....	120	275	125
407	Paterson	Ireland	Iron moulder	6	2	4	84	310	80
406	Millville	New Jersey	Iron moulder	6	2	4	60	500	65
405	Camden	Maine	Iron moulder	6	2	4	156	345	150
402	Burlington	New Jersey	Iron moulder	7	2	5	120	300	125
417	Bridgeton	"	Nail shearer	8	2	6	42	290	50
404	Camden	New York	Iron moulder	8	3	5	168	375	190

* Board.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Flax Workers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1884.	Total income of family	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year.	Office number.
$22	.....	$440	$430	$430	1	$70	$30	$100	$25	$25	No	No	Yes	206
25	$5	430	430	430	1	52	30	120	13	25	No	No	No	204
30	.....	420	390	390	1	62	30	60	45	23	No	No	Yes	198
35	.....	383	287	287	1	77	35	53	55	20	No	No	Yes	196
27	8	460	470	470	1	200	25	35	35	30	No	Yes	No	212
25	*28	430	430	430	1	62	52	111	17	20	No	No	.....	205
30	.....	340	330	330	1	75	26	40	53	16	No	No	Yes	221
25	6	550	330	530	2	130	45	67	89	40	No	No	Yes	197
35	.....	378	330	330	1	80	28	45	48	17	No	No	Yes	220
30	.....	315	224	224	1	52	25	37	31	20	No	No	Yes	231
40	.....	500	330	420	1	110	36	54	84	26	No	No	Yes	219
22	*90	450	430	430	1	83	35	45	57	21	No	No	Yes	211
20	.....	446	430	430	1	85	39	70	78	16	No	No	Yes	218
24	.....	450	420	420	1	70	74	110	20	20	No	No	Yes	213
34	.....	630	430	600	2	110	70	80	85	25	No	No	Yes	217
45	.....	590	330	440	2	131	60	40	55	37	No	No	Yes	223
30	.....	464	440	440	1	70	50	140	30	32	No	No	Yes	216
35	8	440	432	432	1	75	60	60	70	20	No	No	Yes	199
45	*25	528	370	470	2	85	83	61	91	26	No	No	Yes	200
45	2	555	370	555	2	.....	.....	.....	.....	.....	No	No	No	202
28	*22	420	240	420	2	83	70	74	45	25	No	No	No	203
60	10	572	360	520	2	115	46	78	72	28	No	No	Yes	207
25	*20	510	424	485	2	70	65	140	20	20	No	No	Yes	214
50	.....	675	350	675	3	126	80	71	87	31	No	No	No	227
50	.....	695	345	695	5	133	84	78	78	52	No	No	No	228
25	.....	700	430	690	2	115	46	167	30	54	No	No	Yes	215
35	*42	880	280	880	3	156	96	135	140	100	No	No	No	208

Iron Workers.

.....	$60	$350	$98	.....	1	.....	.....	.....	.....	.....	Yes	No	Yes	415
.....	60	286	675	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	410
$30	25	285	386	$386	1	$17	$32	$47	$10	$14	No	Yes	No	419
45	25	620	620	620	1	130	.....	.....	.....	.....	Yes	No	No	401
40	*95	396	272	272	1	.....	.....	.....	.....	.....	No	No	Yes	423
40	70	581	420	575	2	100	.....	.....	.....	.....	Yes	No	Yes	420
20	10	392	175	175	1	.....	.....	.....	.....	.....	Yes	No	Yes	414
35	40	406	830	830	1	30	43	58	20	34	Yes	Yes	No	409
40	*72	610	528	610	1	90	40	100	30	90	Yes	No	No	424
19	.....	323	265	300	3	90	24	70	12	12	No	No	Yes	416
40	40	600	828	828	1	72	48	78	30	47	Yes	Yes	No	408
40	6	520	75	475	3	104	50	60	70	26	No	No	Yes	407
35	10	660	660	660	1	125	75	140	60	100	No	No	No	406
44	*100	775	700	700	1	75	55	95	40	80	Yes	No	Yes	405
42	38	625	775	775	1	.....	.....	.....	.....	.....	Yes	Yes	No	402
40	28	450	125	450	3	80	40	75	30	65	No	No	No	417
42	25	800	735	935	2	80	60	110	40	85	Yes	Yes	No	404

*Including sickness.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Laborers.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
375	Cranford....	Ireland.....	Mill laborer.....	1	1	.....	†	.....	$40
374	Rahway.....	"	Dye-house laborer.....	1	1	.....	†	.....	16
369	Paterson.....	"	Laborer.....	1	1	.....	†	.....	60
364	"	"	Laborer.....	1	1	.....	†	.....	¶
359	Vineland....	New York..	Laborer.....	1	1	.....	†	.....	60
377	E. Orange...	Ireland.....	Laborer.....	2	2	.....	‡	$310	43
326	Paterson.....	"	Laborer (flax works).....	2	2	.....	$55	250	30
333	Butler.....	New Jersey	Laborer.....	2	2	.....	72	236	55
278	P. Amboy...	Ireland	Laborer.....	2	2	.....	48	200	50
376	Woodside...	Germany...	Laborer.....	3	2	1	96	286	3
356	Clayton.....	New Jersey	Laborer.....	3	2	1	24	200	75
309	N. Bruns'k..	Maine.....	Laborer (hod carrier).....	3	2	1	72	260	70
354	Millville.....	Penna.....	Laborer (glass works).....	4	2	2	50	290	60
340	"	New Jersey	Laborer.....	4	2	2	50	‖ 200	125
346	Bridgeton...	New Hamp	Laborer.....	4	2	2	60	190	60
352	Camden.....	New York..	Laborer (foundry helper).....	5	2	3	96	304	90
349	"	England.....	Laborer.....	5	2	3	120	300	75
347	Florence....	Canada.....	Laborer.....	5	2	3	80	225	80
339	Millville.....	New York..	Laborer.....	5	.....	.....	50	225	125
311	Camden.....	Canada.....	Laborer (hod carrier).....	5	2	3	150	250	75
379	Newark.....	Ireland.....	Laborer (hod carrier).....	5	2	3	96	323	40
341	Millville.....	France.....	Laborer.....	6	.....	.....	50	215	100
328	Jersey City.	Penna.....	Laborer.....	6	2	4	120	393	100
329	"	R. Island....	Laborer.....	6	3	3	96	470	100
353	Millville.....	New Jersey	Laborer.....	7	2	5	72	370	150
348	"	Maine	Laborer.....	7	2	5	100	300	160
331	"	Ireland	Laborer.....	7	3	4	120	250	90
330	Jersey City.	New York..	Laborer.....	7	2	5	84	440	60
310	Newark.....	Ireland.	Laborer.....	8	2	6	90	380	20
350	Camden.....	R. Island....	Laborer.....	8	5	3	120	320	200

Miscellaneous Workmen.

*489	Paterson.....	England.....	Dress and shirt maker.....	1	1	.....	†	.....	$25
*481	Vineland....	Mass.....	Dress and shirt maker.....	1	1	.....	†	.....	50
479	Paterson	Germany....	Butcher.....	1	1	.....	†	.....	100
282	Rahway.....	"	Cloth presser.....	1	1	.....	†	.....	40
262	Jersey City.	England.....	Cigarmaker.....	1	1	.....	§ $72	§ $156	40
254	Newark.....	Ireland.....	Pearl buttonmaker.....	2	2	.....	.....	390	50
314	Rahway.....	New Jersey	Plumber.....	2	2	.....	120	250	50
287	Paterson.....	New York...	Painter.....	2	2	.....	84	250	100
290	Orange.....	Germany....	Painter.....	2	2	.....	88	230	40
243	Paterson.....	Ireland.....	Tailor.....	2	2	.....	84	183	70

* Female. † Board. ‡ Own house. § Furnished room; get meals at restaurant. ‖ Raise my own vegetables. ¶ Given to me.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Laborers.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
.....	$20	$240	$240	.....	1	.....	.....	.....	.....	.....	.....	No	No	375
$5	97	216	308	.....	1	.....	.....	.....	.....	.....	.....	No	No	374
.....	.....	320	215	.....	1	.....	.....	.....	.....	.....	No	No	Yes	369
.....	.....	175	125	.....	1	.....	.....	.....	.....	.....	No	No	Yes	364
.....	40	250	320	.....	1	.....	.....	.....	.....	.....	No	Yes	No	359
37	10	400	390	$390	1	$90	$80	$115	$25	§	Yes	No	Yes	377
25	10	370	370	370	1	.....	.....	.....	.....	.....	No	No	No	326
25	12	400	450	450	1	.....	.....	.....	.....	.....	Yes	Yes	No	333
35	67	400	430	430	1	.....	.....	.....	.....	.....	Yes	.....	No	278
17	.....	402	365	365	1	52	17	177	28	$12	Yes	No	Yes	376
30	6	335	358	358	1	40	40	50	20	50	Yes	Yes	No	356
28	40	470	540	540	1	73	24	152	§ 11	.....	Yes	Yes	No	309
20	20	440	375	375	1	50	30	100	30	80	Yes	No	Yes	354
30	55	450	450	450	1	34	49	94	23	§	Yes	No	No	340
30	10	350	350	350	1	40	40	60	20	30	No	No	No	346
35	25	550	350	550	3	70	50	75	40	69	No	No	No	352
35	20	550	375	550	3	50	50	85	40	75	Yes	No	No	349
35	30	450	350	450	2	54	44	74	20	33	No	No	No	347
25	25	450	400	400	1	40	55	100	30	§	Yes	No	Yes	339
40	15	530	480	530	2	58	50	78	25	39	No	No	No	311
36	.....	495	375	495	2	82	76	100	35	30	Yes	No	No	379
25	10	400	425	425	1	40	55	90	20	¶ 10	.....	.....	No	341
32	80	726	540	740	2	71	48	210	30	34	Yes	No	No	328
38	* 90	794	450	800	3	94	70	205	48	53	Yes	No	No	329
45	40	677	375	675	3	80	60	100	40	90	No	No	Yes	353
40	75	675	375	675	3	70	60	90	30	50	No	No	No	348
35	55	550	345	590	3	60	48	78	24	39	No	Yes	No	331
22	14	620	400	620	2	95	42	205	55	43	Yes	No	No	330
18	† 32	540	475	500	2	100	70	90	50	70	Yes	No	Yes	310
40	50	730	330	730	3	75	60	75	40	70	No	No	No	350

Miscellaneous Workmen.

.....	$9	‡$190	$190	.....	1	.....	.....	.....	.....	.....	No	No	No	‖489
.....	.....	‡ 200	280	.....	1	.....	.....	.....	.....	.....	No	Yes	No	‖481
.....	20	‡ 380	360	.....	1	.....	.....	.....	.....	.....	No	No	Yes	479
.....	10	‡ 300	300	.....	1	.....	.....	.....	.....	.....	Yes	No	No	282
.....	50	318	412	.....	1	.....	.....	.....	.....	.....	Yes	Yes	No	262
$50	10	500	475	$475	1	.....	.....	.....	.....	.....	No	No	Yes	254
25	10	455	900	900	1	.....	.....	.....	.....	.....	Yes	Yes	No	314
30	.....	464	110	110	1	$87	$26	$57	$64	$16	Yes	No	Yes	287
25	40	423	485	485	1	85	15	75	30	25	Yes	Yes	No	290
33	15	385	385	385	1	58	27	34	52	12	No	No	No	243

* Including sickness. † Including funeral, &c. ‡ Board. § Raise my own vegetables.
‖ Female. ¶ Milk; get vegetables, &c., from grocer.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Miscellaneous.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in family.			Cost of living for self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
250	Paterson	Ireland	Tailor	2	2	.....	*	.....	$31
239	Newark	Switz'rland	Hatter	2	2	.....	$108	$345	45
474	Millville	New Jersey	Sand works	2	2	.....	48	250	100
485	Jersey City	Delaware	Paperhanger	2	2	.....	120	392	110
466	"	New Jersey	Clerk	2	2	.....	*	.....	30
261	Paterson	"	Cigarmaker	3	2	1	112	278	25
244	Orange	Ireland	Hatter	3	2	1	60	234	30
243	"	New Jersey	Hatter	3	2	1	96	225	10
237	"	"	Hatter	3	2	1	84	468	50
233	E. Orange	"	Hatter	3	2	1	.....	.....	40
247	Paterson	Ireland	Tailor	3	2	1	54	246	30
439	"	England	Printer	3	2	1	84	262	56
456	Millville	New Jersey	Wheelwright	3	2	1	†60	250	75
215	Jersey City	New York	Plumber	3	2	1	96	415	100
269	"	"	Engineer (railroad)	3	2	1	216	320	74
277	Millville	New Jersey	Baggagemaster (railroad)	3	.....	.....	‡	250	60
274	Jersey City	"	Conductor (railroad)	3	2	1	168	322	150
272	Millville	"	Platform hand (railroad)	3	2	1	120	175	60
245	Paterson	England	Tailor	4	2	2	108	182	30
260	Newark	"	Cigarmaker	4	2	2	90	420	40
265	Jersey City	New Jersey	Cigarmaker	4	3	1	120	445	140
283	Rahway	"	Cloth finisher	4	1	3	60	250	50
477	N. Bruns'k.	Ireland	Paper stainer	4	2	2	‡	350	100
476	Cranford	"	Felter	4	2	2	60	220	40
438	Paterson	Wales	Compositor	4	1	3	84	245	125
435	Jersey City	New York	Compositor	4	2	2	158	458	180
499	N. Bruns'k.	"	Solderer	4	2	2	78	215	60
460	Jersey City	England	Barber	4	2	2	84	376	50
472	"	New Jersey	Driver	4	2	2	108	358	75
266	Millville	"	Cotton mill weaver	4	2	2	72	244	30
255	Elizabeth	Scotland	Sewing-machine (milling)	4	2	2	72	416	63
321	Newark	New Jersey	Japanner	4	2	2	120	400	46
276	P. Amboy	Penna.	Fireman (railroad)	4	2	2	85	270	80
273	Jersey City	New Jersey	Clerk (railroad)	4	2	2	188	300	125
426	N. Bruns'k.	Ireland	Fruit jar polisher	4	2	2	84	286	40
482	Camden	Penna.	Pen finisher	5	2	3	144	230	100
478	J.C.Heights	New Jersey	Butcher	5	2	3	120	‖373	90
440	Jersey City	New York	Printer	5	2	3	96	334	85
500	Rahway	England	Teamster	5	2	3	72	271	70
465	Blo'm'gd'le	Penna.	Clerk	5	3	2	120	410	150
270	Millville	New Jersey	Conductor (railroad)	5	3	2	§80	300	130
304	Jersey City	"	Bricklayer and mason	5	2	3	120	465	130
292	Orange	Germany	Painter	5	2	3	84	290	30
291	N. Bruns'k.	New York	Painter	5	2	3	90	300	50
253	Elizabeth	Germany	Sewing-machine (milling)	5	2	3	72	370	50
257	Newark	Ireland	Pearl button cutter	5	2	3	84	291	50

*Board. †Own house; interest. ‡Own house. §Own house; building association dues. ‖Carry home all meat needed.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Miscellaneous.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditure.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
.....	$5	‡$335	$430	$430	1	.....	.....	.....	.....	.....	Yes	No	No	250
$19	*83	600	600	600	1	.....	.....	.....	.....	.....	Yes	No	No	239
30	72	500	800	800	1	$60	$40	$80	$30	$40	No	Yes	No	474
35	125	782	675	675	1	75	62	170	41	44	Yes	No	Yes	485
10	.....	315	550	550	1	.....	.....	.....	.....	.....	No	Yes	No	466
25	10	450	¶600	¶600	1	.....	.....	.....	.....	.....	Yes	Yes	No	261
25	†20	369	336	336	1	91	52	45	20	26	Yes	No	Yes	244
20	.....	351	300	300	1	.....	.....	.....	.....	.....	Yes	No	Yes	243
40	30	672	672	672	1	.....	.....	.....	.....	.....	Yes	No	No	237
.....	†30	§230	**257	**257	1	.....	.....	.....	.....	.....	.....	.....	.....	233
30	5	365	350	350	1	85	43	55	41	22	.....	No	Yes	247
43	5	450	450	450	1	104	26	39	75	18	No	No	No	439
40	†121	546	546	546	1	50	50	80	30	40	Yes	No	No	456
35	80	726	850	850	1	88	43	61	43	180	Yes	Yes	No	215
40	80	730	624	884	2	80	38	113	59	30	No	Yes	No	269
35	30	375	480	480	1	60	48	78	25	39	Yes	Yes	No	277
32	156	828	828	828	1	.....	.....	.....	.....	.....	No	No	No	274
25	20	400	400	400	1	40	40	45	20	30	No	No	No	272
40	.....	360	360	360	1	60	31	42	36	13	Yes	No	No	245
30	20	600	600	600	1	200	18	144	18	40	No	No	No	260
38	70	812	475	890	2	76	50	190	80	48	Yes	Yes	No	265
40	20	420	370	370	1	.....	.....	.....	.....	.....	.....	No	Yes	283
40	75	565	900	900	1	.....	.....	.....	.....	.....	Yes	Yes	No	477
25	15	360	360	360	1	.....	.....	.....	.....	.....	Yes	No	No	476
46	.....	500	250	450	2	90	30	43	62	20	No	No	Yes	438
42	162	1,000	1,000	1,000	1	110	54	190	60	44	Yes	No	No	435
26	45	424	468	468	1	.....	.....	.....	.....	.....	Yes	Yes	No	499
30	55	595	572	572	1	109	37	160	30	40	Yes	No	Yes	460
38	60	639	572	572	1	72	64	143	36	42	No	No	Yes	472
25	5	376	276	376	2	.....	.....	.....	.....	.....	No	No	No	266
18	31	600	576	576	1	.....	.....	.....	.....	.....	Yes	No	Yes	255
34	.....	600	600	600	1	72	40	110	90	88	Yes	No	No	321
40	75	550	745	745	1	.....	.....	.....	.....	.....	Yes	Yes	No	276
46	95	754	660	960	2	58	42	140	28	32	Yes	Yes	No	273
35	15	460	425	425	1	98	.....	.....	.....	.....	No	No	Yes	426
35	11	520	520	520	1	50	48	65	27	40	No	No	No	482
37	65	‖685	610	610	1	‖	78	197	43	55	Yes	No	Yes	478
34	54	604	550	550	1	63	42	170	28	30	Yes	No	Yes	440
30	25	468	468	468	1	.....	.....	.....	.....	.....	No	No	No	500
50	20	750	750	750	1	.....	.....	.....	.....	.....	Yes	.....	No	465
40	50	600	864	864	1	62	53	85	35	55	Yes	Yes	No	270
35	†60	810	975	975	1	95	50	200	70	50	Yes	Yes	No	304
36	10	450	400	400	1	.....	.....	.....	.....	.....	Yes	No	Yes	292
40	10	490	490	490	1	.....	.....	.....	.....	.....	No	No	No	291
40	40	572	550	550	1	100	40	150	50	30	.....	No	Yes	253
25	16	466	420	420	1	104	62	42	52	31	No	No	Yes	257

*Including life insurance dues and literature. †Including sickness. ‡Also for rent of workshop, $90. §Board for six months. ‖Carry home all meat needed. ¶$150 due yet.
**For six months.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Miscellaneous.

Office number.	Residence.	Place of Birth.	Subdivision of Trade.	Number in Family.			Cost of Living for Self		
				Total.	Adults.	Children.	Lodging.	Food.	Clothing.
268	Millville.....	England.....	Cotton mill (loom fixer).....	5	2	3	$120	$275	$100
429	N. Bruns'k.	Ireland.....	Fruit-jar trimmer.....	6	2	4	*	350	75
279	Rahway.....	"	Janitor (railroad).....	6	2	4	96	300	75
275	Cape May...	"	Fireman (railroad).....	6	.....	.....	120	315	125
308	Woodbury..	New Jersey	Mason.....	6	2	4	144	350	156
306	N. Bruns'k.	Ireland.....	Bricklayer.....	6	2	4	*	360	100
324	Paterson.....	England.....	Tailor.....	6	2	4	136	234	26
263	Jersey City.	New York..	Cigarmaker.....	6	2	4	96	628	100
249	Orange.....	New Jersey	Hatter	6	2	4	*	300	100
436	Jersey City	Penna.....	Compositor.....	6	2	4	144	446	150
437	"	New York..	Compositor.....	6	2	4	144	466	120
467	Paterson.....	"	Bookkeeper.....	6	2	4	144	400	25
468	Camden.....	Ohio.....	Insurance agent.....	6	2	4	156	350	150
457	Mt. Holly...	New Jersey	Wheelwright.....	7	2	5	144	325	90
459	Jersey City.	New York..	Barber.....	7	4	3	144	470	165
325	Union Hill.	Germany....	.....	7	3	4	150	460	110
480	Jersey City.	New Jersey	Steamfitter.....	8	3	5	180	514	160
289	Orange.....	Virginia	Painter	8	4	4	192	360	40
264	Jersey City.	New York..	Cigarmaker.....	8	2	6	180	538	225
299	Orange.....	Virginia.....	Hatter.....	9	2	7	180	400	100
380	"	Ireland	Hatter.	9	3	6	† 216	387	100

* Own house. † For house and workshop.

NEW JERSEY.—WORKINGMEN'S BUDGETS—Continued.

Miscellaneous.

AND FAMILY FOR YEAR.						ITEMIZED EXPENDITURES FOR FOOD.					ACCUMULATIONS OF SAVINGS.			
Light and fuel.	Sundries, including amusements.	Total expenditures.	Total earnings for self from July 1st, 1884, to July 1st, 1885.	Total income of family.	Number working for wages.	Meat.	Breadstuffs.	Groceries.	Dairy products.	Vegetables.	In former years?	During the past year?	Have you run into debt during the past year?	Office number.
$40	$15	$550	$450	$550	2	$75	$50	$75	$25	50	No	No	No	268
35	40	500	730	730	1	104	.....	.....	.....	.....	Yes	Yes	No	429
30	9	510	510	510	1	.....	.....	.....	.....	.....	No	No	No	279
30	10	600	600	600	1	70	60	90	35	60	No	No	No	275
42	62	754	754	754	1	.....	.....	.....	.....	.....	Yes	No	No	308
40	70	570	675	675	1	.....	.....	.....	.....	.....	Yes	Yes	No	306
29	.....	425	425	425*	1	90	31	38	45	29	No	No	No	324
26	50	900	900	900	1	156	60	300	62	50	Yes	No	No	263
50	† 70	520	320	320	1	100	50	125	.....	25	Yes	No	Yes	249
38	104	882	882	882	1	120	60	155	72	39	Yes	No	No	436
42	128	900	900	900	1	80	68	212	53	55	Yes	No	No	437
35	116	720	720	720	1	.....	.....	.....	.....	.....	No	No	No	467
44	100	800	800	800	1	80	65	95	40	70	Yes	No	No	468
35	56	650	800	800	1	78	60	90	37	60	No	Yes	No	457
41	140	960	624	1,160	3	85	64	240	39	42	Yes	No	No	459
40	90	850	696	1,096	2	85	62	210	54	49	Yes	Yes	No	325
52	140	1,046	846	1,300	2	106	80	230	47	51	Yes	Yes	No	480
43	25	660	660	1,060	3	.....	.....	.....	.....	.....	.....	.....	No	289
36	‡ 260	1,239	970	1,380	3	109	72	200	104	53	Yes	Yes	No	264
30	47	775	355	755	3	.....	.....	.....	.....	.....	No	No	.....	299
* 71	5	779	550	695	3	.....	.....	.....	.....	.....	Yes	No	Yes	380

* For house and workshop. † Including taxes. ‡ Including sickness.

MASSACHUSETTS.—WORKINGMEN'S BUDGETS.

Earnings and Expenses.

No.	Persons in family.			At work.			Earnings of head of family.	Earnings of members of family.	Total earnings.	Total expenses.	Surplus.
	Adults.	Children.	Total.	Adults.	Children.	Total.					
1	2	4	6	1	1	2	$616 00	$224 00	$840 00	$661 00	Yes.
2	2	4	6	1	2	3	572 00	364 00	936 00	936 00	No.
3	2	2	4	1	.....	1	616 00	.....	616 00	649 00	No.
4	3	3	6	1	2	3	624 00	390 00	1,014 00	1,014 00	No.
5	2	4	6	2	.....	2	450 00	156 00	606 00	432 00	Yes.
6	2	5	7	1	2	3	390 00	456 00	846 00	846 00	No.
7	2	4	6	1	2	3	385 00	358 00	743 00	743 00	No.
8	3	3	6	1	2	3	416 00	195 00	611 00	611 00	No.
9	2	4	6	1	1	2	520 00	184 00	704 00	653 00	Yes.
10	2	4	6	1	2	3	608 00	282 00	890 00	890 00	No.
11	2	4	6	1	1	2	624 00	300 00	924 00	924 00	No.
12	3	.....	3	2	.....	2	520 00	780 00	1,300 00	1,185 00	Yes.
13	2	3	5	1	1	2	614 00	260 00	874 00	874 00	No.
14	2	1	3	1	.....	1	1,040 00	.....	1,040 00	834 00	Yes.
15	2	.....	2	2	.....	2	520 00	260 00	780 00	540 00	Yes.
16	2	4	6	1	1	2	494 00	156 00	650 00	650 00	No.
17	2	2	4	1	1	2	470 00	156 00	626 00	626 00	No.
18	2	3	5	1	1	2	520 00	130 00	650 00	650 00	No.
19	2	4	6	1	.....	1	616 00	.....	616 00	616 00	No.

GREAT BRITAIN.—WORKINGMEN'S BUDGETS.

Earnings and Expenses.

1	2	4	6	1	.....	1	$282 24	.....	$282 24	$282 24	No.
2	2	3	5	1	2	3	126 52	$666 64	793 16	647 18	Yes.
3	2	3	5	1	2	3	243 30	209 24	452 54	452 54	No.
4	2	2	4	1	1	2	277 36	101 21	378 57	378 57	No.
5	2	5	7	1	2	3	326 02	192 21	518 23	518 23	No.
6	1	6	7	1	1	2	227 73	88 56	316 29	316 29	No.
7	2	4	6	1	2	3	253 03	253 04	506 07	506 07	No.
8	3	5	8	1	3	4	291 96	340 62	632 58	632 58	No.
9	2	5	7	1	2	3	248 17	327 49	575 66	575 66	No.
10	2	4	6	1	1	2	417 50	151 82	569 32	569 32	No.
11	2	6	8	1	2	3	399 01	272 50	671 51	671 51	No,
12	2	3	5	1	2	3	462 27	321 16	783 43	783 43	No.
13	2	4	6	1	2	3	301 69	128 95	430 64	430 64	No.
14	2	4	6	1	.....	1	379 55	.....	379 55	379 55	No.
15	2	2	4	1	1	2	341 59	88 56	430 15	430 15	No.
16	2	5	7	1	2	3	379 55	180 04	559 59	555 59	No.

MASSACHUSETTS.—WORKINGMEN'S BUDGETS.

Expense Details.

No.	Total expenses.	Rent.	Groceries.	Meat.	Fish.	Milk.	Fuel.	Clothing.	Boots and shoes.	Dry goods.	Sundry expenses.
1	$661 00	$144 00	$150 00	$85 00	$30 00	.....	$40 00	$60 00	$30 00	$12 00	$110 00
2	936 00	192 00	300 00	100 00	30 00	$30 00	40 00	150 00	50 00	15 00	29 00
3	640 00	Owned.	250 00	104 00	30 00	25 00	40 00	60 00	25 00	15 00	100 00
4	1,014 00	240 00	300 00	150 00	40 00	30 00	40 00	100 00	40 00	15 00	50 00
5	432 00	72 00	200 00	50 00	20 00	30 00	.....	20 00	15 00	5 00	20 00
6	846 00	150 00	260 00	125 00	20 00	25 00	30 00	90 00	40 00	12 00	94 00
7	743 00	96 00	200 00	100 00	30 00	30 00	30 00	100 00	30 00	10 00	117 00
8	611 00	144 00	200 00	75 00	25 00	25 00	30 00	50 00	20 00	10 00	32 00
9	653 00	66 00	200 00	75 00	30 00	20 00	.....	100 00	50 00	.....	112 00
10	890 00	168 00	280 00	156 00	10 00	25 00	40 00	100 00	24 00	30 00	57 00
11	924 00	180 00	300 00	156 00	25 00	30 00	40 00	75 00	26 00	15 00	77 00
12	1,185 00	400 00	200 00	75 00	30 00	20 00	80 00	150 00	.....	40 00	190 00
13	874 00	150 00	240 00	100 00	20 00	25 00	40 00	50 00	25 00	20 00	204 00
14	834 00	168 00	250 00	100 00	30 00	25 00	40 00	100 00	30 00	20 00	71 00
15	540 00	156 00	150 00	75 00	15 00	12 00	15 00	40 00	20 00	8 00	49 00
16	650 00	120 00	156 00	156 00	20 00	13 00	20 00	75 00	20 00	10 00	60 00
17	626 00	96 00	200 00	75 00	20 00	25 00	25 00	40 00	25 00	20 00	100 00
18	650 00	144 00	220 00	80 00	20 00	30 00	26 00	60 00	25 00	15 00	30 00
19	616 00	144 00	175 00	75 00	30 00	25 00	40 00	60 00	25 00	15 00	27 00

GREAT BRITAIN.—WORKINGMEN'S BUDGETS.

Expense Details.

1	$282 24	$48 66	$99 75	$24 33	$14 60	$17 03	$8 76	$29 20	$12 17	$9 73	$18 01
2	647 18	Owned.	145 98	*121 65	.....	24 33	24 33	58 39	34 06	38 93	199 51
3	452 54	50 60	194 64	.....	14 60	12 17	17 03	77 85	12 17	.....	73 48
4	378 57	94 89	126 51	60 82	24 33	9 73	12 17	35 52	.....	14 60	.....
5	518 23	63 26	145 98	72 99	9 73	19 46	14 60	48 66	29 20	19 46	94 89
6	316 29	43 79	87 59	48 66	4 87	19 46	9 73	38 93	14 60	14 60	34 06
7	506 07	63 26	194 64	121 65	29 20	19 46	19 46	43 80	14 60	.....	.....
8	632 58	75 91	145 98	*75 42	.....	9 73	21 90	87 59	24 33	68 12	123 60
9	575 66	56 93	234 06	58 88	16 79	19 46	29 20	48 66	11 92	24 33	75 43
10	569 32	77 86	194 64	97 32	14 60	14 60	24 33	68 12	19 46	19 46	38 93
11	671 51	107 05	243 30	145 98	19 46	19 47	19 47	58 39	24 33	.....	34 06
12	783 43	99 27	170 31	*97 32	.....	7 30	19 46	97 32	24 33	48 66	219 46
13	430 64	63 26	145 98	48 66	12 17	9 73	19 46	34 06	9 73	9 73	77 86
14	379 55	75 42	145 98	48 66	.....	17 03	14 60	48 66	17 03	.....	12 17
15	430 15	69 58	145 98	33 92	9 73	18 98	12 17	58 39	12 17	9 73	54 50
16	559 15	107 05	194 64	58 39	9 73	24 33	18 25	82 72	19 47	.....	45 01

*Includes fish.

GERMAN WORKINGMEN'S INCOMES AND EXPENDITURES.*

LOCATION AND OCCUPATION.	Number of families.	Total number of individuals.	Number in family.	Number at work.	Earnings of head of family from trade only.	Income of family.	Expenditures of family.	Surplus.	Deficit.
SILESIA (1875)—									
Miners—62 families of 62 men, 61 women, 217 children and four others	62	344	‡5.55	.....	‡$180 95	‡$216 67	‡$215 48	‡$1 19	.....
Miscellaneous industrial wage-earners—235 families of 235 men, 230 women, 607 children and 27 others	235	1199	‡5.10	‡1.97	‡152 98	‡189 17	‡188 76	‡41	.....
†Laborer—Man, wife and four small children	1	6	6	2	105 75	126 90	132 11	.....	§
BERLIN (1881)—									
Book store employe—Man and wife	1	2	2	1	183 30	‖199 52	204 92	.....	$5 40
BERLIN (1882)—									
Pharmacy employe—Man, wife and two children	1	4	4	2	244 20	320 77	283 49	37 26	.....
MUNICH (1880)—									
Mason—Man, wife and two young children	1	4	4	2	207 74	305 50	314 24	.....	8 74
Cabinetmaker—Man, wife and two young children	1	4	4	2	253 80	355 32	353 21	2 11	.....
BADEN (1880)—									
Watch-case enameler (independent)—Man, wife and two young children	1	4	4	3	293 55	315 51	273 92	31 59	.....
TAUNUS (1883)—									
Road laborer—Man, wife and five children	1	7	7	4	.....	310 68	302 44	8 22	.....
DESSAU (1882)—									
Factory operative—Man, wife and four small children	1	6	6	2	146 64	156 55	156 55	.....	.....
BERLIN (1880)—									
Lamp worker—Man and wife	.....	2	2	2	183 30	294 69	258 18	36 51	.....
Cigarmakers—Man, wife and three small children	.....	5	5	2	.....	317 72	329 64	.....	11 92
Tailor—Man, wife and two small children	.....	4	4	2	.....	366 60	346 18	20 42	.....
Shoemaker (independent)—Man, wife and two small children	.....	4	4	2	270 25	306 91	307 94	.....	1 04
Shoemaker (independent,—Man and wife	.....	2	2	2	246 75	294 92	292 20	2 72	.....
Mason—Man, wife and two young children	.....	4	4	2	211 50	289 52	300 33	.....	10 81
Wine saloon employe—Man, wife and two small children	.....	4	4	2	235 00	296 10	312 67	.....	16 67
Copyist—Man, wife and three small children	.....	5	5	1	282 00	¶352 50	360 45	.....	8 95
FRANKFORT (1880)—									
Messenger—Man, wife and two small children	.....	4	4	2	195 52	291 40	276 85	4 55	.....
Bookbinder—Man, wife and two small children	.....	4	4	2	220 90	343 10	285 18	57 92	.....
Tailor (independent)—Man, wife and two small children	.....	4	4	2	235 00	423 00	413 50	9 50	.....
Cabinetmaker—Man, wife and two small children	.....	4	4	2	.....	223 25	230 58	.....	7 33
Railroad employe—Man, wife and one small child	.....	3	3	1	214 32	287 87	223 96	63 81	.....

* From Ballin's "Haushalt der Arbeitenden Klassen." † Lower Silesia. ‡ Average. These workmen are really better off than the mere wage-rate would indicate, for they frequently have free shelter, fuel, &c. § Covered by extra work on Sundays. ‖ Includes gifts, &c. ¶ Including fees as teacher.

GERMAN WORKINGMEN'S INCOMES AND EXPENDITURES—Continued.

Single Workmen.

LOCATION AND OCCUPATION.	Earnings.	Expenditures.	Surplus.	Deficit.
BERLIN (1880)—				
Bookkeeper	$293 02	$270 49	$18 53	.....
Cabinetmaker	173 42	174 08	.....	$0 66
Textile industry (female)	131 56	120 74	10 82	.....
FRANKFORT (1880)—				
Shoemaker	*161 00	156 68	4 32	.....
Cabinetmaker	184 05	182 82	1 23	.....
Tailor (independent)	†276 00	266 80	9 20	.....
MUNICH (1880)—				
Dressmaker	95 68	100 05	.....	4 37
Compositor	251 97	259 21	.....	7 24

* Lodging free. † Including $23 for music lessons.

CHAPTER II.

THE CHEMISTRY AND ECONOMY OF FOODS.*

It is an interesting fact that, although the cost of food makes up the larger part of the living expenses of ordinary people, even the most intelligent know less of the actual value of their food for fulfilling its purposes than of that of almost any other of the staple necessities of life. The man who buys a coat has generally a pretty fair idea as to the relation between its value and its cost, and if he is getting material to have it made, he knows about how much of each kind is wanted, and does not fall into the error of buying a great deal more cloth than he needs for the outside and using part of the excess for lining when cheaper material would do as well or better, nor does he try to economize by buying poor buttons and too little thread. But for his food he is very apt to select materials which furnish some of the nutritive ingredients at needlessly high cost, and in excessive amount, while they supply others in insufficient quantity and in very uneconomical ways.

If I succeed in making clear to you the points which I am here to urge, I believe you will be persuaded that not only our so-called laboring classes, but all who desire or are compelled to economize, would be greatly benefited by a better understanding of the principles on which the economy of food is based, and by the application of those principles in the purchase and use of their aliment.

I think a careful study of the subject will show that among the many ways in which our American habits of wastefulness manifest themselves, one of the worst is in the waste of food, and that this wastefulness is practiced by the poor as well as by the rich. It manifests itself in purchasing more than is needed, in using part of the excess to overload the alimentary organs and throwing the rest away, in using costly materials where less expensive ones would serve as well, in purchasing materials that are really dear but seem to be cheap, and in the false economy of using too little of one material and too much of another, and thus losing where there is an earnest attempt to save. And it is not only the loss to the purse from wrong selection of food in the market, but the loss to both purse and health by wrong keeping and cooking and using at home that is to be deplored, and ought to be avoided.

Then, too, we have to remember that it is the ignorant, and that means the poor, that suffer most from this improvidence, and when we consider still further the suffering that is endured from wrong use of food—and some of our wisest students of physiology and hygiene are persuaded that improper eating, and especially overeating, is a source of more disease than any other one thing; that what we may call the eating habit does, on the whole, more harm to health than the drinking habit—I think we

*Paper read by Prof. W. O. Atwater, at the third annual session of the National Convention of Chiefs of the Bureaus of Labor Statistics, held at Boston, Mass., June 29th to July 1st, 1885.

shall be persuaded that the subject of the nature and uses of food is one worthy of our most careful consideration.

A pound of lean beef, round steak freed from fat, for instance, and a quart of milk, both contain about the same quantity, say a quarter of a pound, of actually nutritive material. But the pound of beef costs more than the quart of milk and it is worth more as a part of a day's supply of food. The nutritive materials or nutrients, as we call them, in the lean meat, though the same quantity as in the milk, are different in quality, and of greater nutritive value.

We have here an illustration of a fundamental fact in the economy of foods, namely, that the differences in the values of different foods depend upon both the kinds and the amounts of the nutritive material which they contain. If, then, we would understand the nutritive value of foods, we must know, first of all, what they are composed of. Knowing this, we must next consider what the several food ingredients do in the body; what is the special work which each one of the different nutrients has to perform in building up our bodies and in supplying their wants. When, in addition to all this, we know how much of each class of nutrients our bodies require and our food-materials contain we shall be in condition to economize our foods as we do the other necessaries of life.

Twenty-five years ago, indeed I might say fifteen years ago, but comparatively little was known about these things, and for that matter our knowledge of them is still very far from complete. But, nevertheless, we do know to-day about how much of the different nutritive ingredients, or nutrients as they are called, our ordinary food-materials contain, and we have a tolerably clear conception of the functions of these different ingredients in the nutrition of our bodies; and finally, a large amount of observation and experiment has told us about what proportions of the several classes of nutrients are required to meet the needs of people in different conditions of life.

LATER RESEARCH IN THE SCIENCE OF FOOD AND NUTRITION.

Among the numerous branches of biological research by no means the least interesting and important is the study of foods and nutrition. Within the past fifteen years especially, a very large amount of scientific labor has been devoted to the investigation of the composition of foods and the functions of their ingredients in the animal economy. Indeed, very few persons this side of the Atlantic have any just conception of the magnitude of this work and its result. And, though the most important problems are still unsolved, and must, because of their complexity, long remain so, yet enough has been done to give us a tolerably clear insight into the processes by which the food we eat supplies our bodily wants.

The bulk of our best definite knowledge of these matters comes from direct experiments, in which animals are supplied with food of various kinds, and the effects noted. The food, the excrement, solid and liquid, and in some cases the inhaled and exhaled air, are measured, weighed and analyzed. Many trials have been made with domestic animals—horses, oxen, cows, sheep, goats and swine—with dogs, rabbits, birds, and the like; and a large number also with human beings of both sexes and different ages. In the philosophical planning of the researches; in the ingenuity manifested in devising apparatus; in accuracy, thoroughness, patience and persistence in the work, as well as in the distinguished genius of many of the workers, chemico-physiological science has assumed the highest rank among the sciences of our time; with the rest it has brought us where we can estimate the nutritive values of foods

from their chemical composition, with so near an approach to accuracy that in Germany, where the best research is done, tables, giving in figures the composition and nutritive valuations of foods, have been prepared by eminent chemists and physiologists and are coming into general use.

HOW OUR FOOD SUPPLIES THE WANTS OF OUR BODIES.

Our food supplies the wants of our bodies in four ways:

Food Furnishes,

1. The material of which the body is made.
2. The material to repair the wastes of the body.

Food is Consumed in the Body to

3. Produce heat to keep it warm.
4. Produce muscular and intellectual strength for work.

To understand how food does its work in the nourishment of our bodies we must recall the fact that our bodies and the materials that nourish them are both composed of a certain list of chemical elements which are combined in a great variety of compounds. These compounds we may divide into three groups:

A. *Water.*
B. *Organic Compounds.*
C. *Mineral Compounds.*

About water we need here say very little. Of the mineral compounds, one of the most important is the phosphate of lime which makes the basis of bone. Phosphates, sulphates, and chlorides of potassium and sodium, and other mineral salts likewise, occur in our bodies and are essential not only to health, but even to life itself. But in studying food from the standpoint of its nutritive value, that is, value for supplying bodily wants, we have to do, chiefly, with the organic compounds. These we may roughly divide into three principal classes, and this classification will do for the organic compounds of both our food and our bodies.

I. *Protein Compounds,* otherwise known as albuminoids, flesh formers, or "flesh substance."
II. *Fats.*
III. *Carbohydrates.*

This division answers very well so long as we are only making approximate estimates of the nutritive values of our foods, but when we study foods very accurately, and more especially when we come to the chemistry of the body, we find compounds which cannot very well be placed in either of these classes. Fortunately for our purpose, however, the proportion of these latter compounds in our foods and in our bodies is very small.*

We have not as yet sufficiently accurate analyses to tell in just what proportions these compounds occur in the body. Very probably the body of an average healthy

*This classification leaves out of account numerous compounds of minor importance, including the so-called "nitrogenous extractives," which are the essential constituents of "extract of meat." See beyond.

man, weighing 148 pounds, or with clothing 156 pounds, would contain something like the following quantities:—

WEIGHTS OF COMPOUNDS IN BODY.

Water	89.5	pounds.
Protein, etc.	26.8	"
Fats	23.3	"
Carbohydrates, etc.	0.1	"
Mineral matters	8.3	"
	148.0	

Of course I do not mean to say that this is an exact statement of the amounts of these compounds in the body of any given man or of an ideal man. These figures are simply an attempt to show, in a general way, in about what proportions the compounds probably occur.

Such then is the composition of the body. These elements and compounds must come from the food. It is the food that furnishes the material of which the growing body of the child is built up, and as our tissues are being continually consumed by work, and thought, and worry, it is by food that they are restored; and finally it is our food that supplies the fuel by whose consumption the heat and strength of the body are maintained. Viewed from the standpoint of their uses in the nutrition of man, the constituents of ordinary foods may be succintly classified as follows:—

1. *Edible Substance*, e. g., the flesh of meats and fish, the shell contents of oysters, wheat flour.
2. *Refuse*, e. g., bones of meat and fish, the shells of oysters, bran of wheat.

The edible substance consists of

1. *Water.*
2. *Nutritive Substance or Nutrients.*

Of the meat my butcher sends me, the fish I find in the market, and the other food upon my table, only a part serves to fulfill these purposes. The bone of my roast beef I do not use for food at all, and that of shad is worse than useless, because of the bother it makes me to get rid of it; it is only the edible portion that is of actual value to me as food, the rest being merely refuse. And when we come to consider the edible portion, the meat freed from bone and gristle, the flesh of the fish, or the flour as it is baked in bread, we find that these consist largely of water. And although water is indispensable, that in the meat or the potatoes on my table is of no more value for the support of my body than the same amount in milk, or in the glass of water by my plate.

Leaving out of account, then, the refuse and the water, we have the nutritive materials, or, as we may call them, the nutrients of our foods. Speaking as chemists and physiologists, we may say that our food supplies, besides mineral substances and water, three principal classes of nutritive ingredients or nutrients, viz., albuminoids, carbohydrates, and fats; and that these are transformed into the tissues and fluids of the body, muscle and fat, blood and bone, and are consumed to produce heat and force.

Let me speak in a little more detail of the compounds of which our foods are composed:

Protein, so called, "flesh formers," or "flesh substance."—The terms protein, proteids, and albuminoids, are applied somewhat indiscriminately, in ordinary usage, to several or all of certain classes of compounds characterized by containing carbon, oxygen,

hydrogen, and with them, nitrogen. The most important are the proteids, or albuminoids, of which albumen, the white of egg, fibrin of blood, casein of milk, myosin, the basis of muscle, and gluten of wheat, are examples. Allied to these, but occurring in smaller proportions in animal tissues and foods, are the gelatinoids, the nitrogenous compounds that make the basis of connective and other tissues. Gelatin, whence the name gelatinoid (gelatin-like), is derived from some of these tissues, and may be taken as a type of the compound of this class. As these constituents are of similar constitution, and have similar, or nearly similar, uses in nutrition, it is customary to group them together as protein. What we should especially bear in mind, then, is that protein is a term applied to the nitrogenous constituents of our foods, and we shall see these are, in general, the most important, as they are most costly, of the nutrients.

The muscular tissues of animals, and hence, the lean portions of meat, fish, etc., contain small quantities of so-called nitrogenous extractives—creatin, carnin, etc.—which are the chief constituents of meat extract. These contribute materially to the flavor, and somewhat to the nutritive effect, of the foods containing them. They are not usually deemed of sufficient importance, however, to be grouped as a distinct class in tabular statements of the composition of foods.

Fats.—We have familiar examples of these in the fat of meat (tallow, lard), in the fat of milk, which makes butter, and in olive, cotton seed, and other animal and vegetable oils. The fats consist of carbon, oxygen, and hydrogen, and contain no nitrogen. In nutritive value, as in cost, they rank next to the protein compounds. For some of the nutritive functions, indeed, the fats equal or exceed protein in importance.

Carbohydrates.—Starch, cellulose (woody fiber), sugar, and inosite ("muscle sugar"), and other similar substances, are called carbohydrates. Like the fats, they consist of carbon, oxygen and hydrogen; but they have less carbon and hydrogen, and more oxygen than the fats.

Mineral Matters, or Ash.—When vegetable or animal matters are burned, more or less incombustible material remains as ash. The ingredients which make the ash are called mineral matters, or sometimes, salts. They are, for the most part, compounds of the elements, potassium, sodium, calcium and iron, with chlorine, sulphuric acid and phosphoric acid. Sodium, combined with chlorine, forms sodium chloride, or common salt. Calcium, with phosphoric acid, forms calcium phosphate, or phosphate of lime, the mineral basis of bones.

Our bodies, as I have already said, contain scores of compounds, many of which cannot be included in either of the above four classes. But the bulk of the compounds, exclusive of water, in the bodies of animals, as well as those in the food by which they are nourished, may be classed with either protein, fats, carbohydrates, or mineral matters.

Animal foods, as meats, fish, etc., contain but little of carbohydrates, their chief nutrients being protein and fats. Milk, however, and some shell-fish, as oysters, scallops, etc., contain more or less of carbohydrates. Vegetable foods, as wheat, potatoes, etc., contain less protein, and consist largely of starch, sugar, cellulose and other carbohydrates, though nearly all contain more or less of fats.

HOW THE NUTRITIVE INGREDIENTS OF THE FOOD NOURISH THE BODY.

These different nutrients, as we have seen, have different offices in nourishing the body, in building up its tissues, repairing its wastes, and serving as fuel to produce

animal heat, and muscular and intellectual energy. Just what is done by each class, exactly how they are transformed and used in the body, is not yet fully known. Still, we have to-day a tolerably fair idea of the principal parts played by each class of nutrients.

Suppose that I have for breakfast beefsteak, bread and butter and potatoes. The beef supplies me with considerable protein (in the lean meat) and fat. The butter is nearly all fat. The bread contains a little protein and fat, and the potatoes the same ingredients, but in still smaller proportions, the principal nutrients of both being starch or carbohydrate.

A small part of the food passes through the body undigested and constitutes the excretion of the intestines. The larger portion is digested, taken into the blood and distributed through the body, where it does its work, is consumed, and finally given off as water and carbonic acid, by the lungs and skin, and as water, urea, &c., by the kidneys. So then the bulk of the protein, fats and carbohydrates of my breakfast is digested, and, in the course of the day, the larger part of this digested material finds its ways into my blood and is distributed through my body.

Part of the protein of the food serves to repair my muscles, tendons, skin and other organs that are being worn out by constant use. The rest is consumed sooner or later, no one knows exactly when, where or how. Part is probably transformed into fat and stored as fat in my body, and thus replaces fat that is consumed to keep me warm and to give my muscles strength for the work they have to do. And probably a part of the protein is changed into glycogen, a carbohydrate which occurs in the liver.

Part of the fat of the meat and bread is stored as fat in my body and part is burned, yielding heat to keep me warm and muscular energy as well. The chief use of the carbohydrates, the starch and sugar, of the bread and potatoes seems to be to serve for fuel though they are transformed into fats also. It is a matter of common experience that many people are made corpulent by eating sugar and starchy foods, and grow lean when they avoid then.

By comparing the amounts of carbon, oxygen, hydrogen and nitrogen, actually found by experiments to be consumed by different individuals, and also noting the amount and composition of the food of different people, estimates have been made of the quantities of the several nutrients required by individuals of different classes under various conditions. Professor von Voit, of the University of Munich, for instance, who has made more extensive researches upon this subject, perhaps, than any one else, computes that a fair daily ration for a laboring man of average weight, at moderate work, would need to supply 4.2 ounces (0.26 ℔.) of protein, 2 ounces (0.12 ℔.) of fats, and 17.6 ounces (1.12 ℔.) of carbohydrates. Of course he may get on with less of either one, provided he has more of the others. But there is a minimum below which he cannot go without injury, and especially he must not have too little protein. He may have more protein and less carbohydrates or fats with no great harm, but with too little protein he will suffer, no matter how much carbohydrates his food may furnish.

CHEMICAL ANALYSIS OF FOODS.

Let us, then, notice what chemical analysis has to say of the amounts of the different nutrients in some of our ordinary foods. The tables beyond give results of analyses, the most of which are selected from a much larger number, performed in the

chemical laboratory of Wesleyan University, at the instance of the Smithsonian Institution, for the Food Collection of the United States National Museum.

The details will perhaps be best explained by an example. The flesh, or edible portion of a specimen of beef sirloin, of medium fatness, was analyzed and found to contain, approximately: water, 60 per cent; protein, 20 per cent; fats, 19 per cent; mineral matters, I per cent. But when we buy our sirloin steak or roast, by the pound, as we ordinarily do, we get not only the flesh, the edible substance, but with it more or less bone, sinew, and other refuse matter. This specimen contained about one-fourth, or 25 per cent. of bone, and only three-fourths, or 75 per cent, of flesh. If, then, we are to consider the composition of the meat as we buy it, we must take the refuse matter into account. The proportions of the several ingredients, in both the edible portion and the whole piece above referred to, are shown in the following table: —

	In flesh, edible portion.	In meat as bought, including refuse.
	Per cent.	Per cent.
Refuse, bones, etc.	None.	25
Water	60	45
Protein	20	15
Fat	19	14¼
Mineral matters	1	0¾
Totals	100	100

This very imperfect analysis may be stated in the following form, as is done in the tables beyond: *

CONSTITUENTS OF SAMPLE OF BEEF, SIRLOIN.

FOOD-MATERIAL.	IN EDIBLE PORTION— *i. e.*, flesh freed from bone and other refuse.					IN MEAT AS PURCHASED— including both edible portion and refuse.					
			NUTRIENTS.				EDIBLE PORTION.				
									NUTRIENTS.		
	Water.	Nutrients.	Protein.	Fats.	Mineral matters.	Refuse: bones, etc.	Water.	Nutrients.	Protein.	Fats.	Mineral matters.
	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.	Pr. ct.
Beef, sirloin, med. fatness	60	40	20	19	1	25	45	30	15	14.3	0.7

Tables I. and II., herewith, give the composition of a number of animal foods, mostly from late American analyses. It is only a short time since analyses of American meats, fish, etc., have been undertaken in any considerable number, and those as yet accomplished are far from sufficient for a complete survey of the subject. Indeed, the work already done can be regarded only as a beginning. Still, the figures will give a tolerably fair idea of the composition of the articles named. Table III. gives analyses of vegetable foods and beverages.

* The tables contain also columns for carbohydrates. etc., which occur in milk and in some shellfish, but are not found in ordinary meats in sufficient amount to warrant their insertion in such statements as this.

TABLE I.

COMPOSITION OF ANIMAL FOODS.

Edible Portion—Flesh, etc., Freed from Bone, Shells and Other Refuse.

KINDS OF FOOD-MATERIALS. (*Italics* indicate European analyses, the rest are American.)	Water.	Nutrients.	NUTRIENTS. Protein (albuminoids).	Fats.	Carbohydrates.	Ash.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
MEATS—Fresh.						
Beef, side, well fattened	54.6	45.4	17.2	27.2	.....	1.0
Beef, lean, nearly free from fat	76.0	24.0	21.8	0.9	.....	1.3
Beef, round,* rather lean	66.7	33.3	23.0	9.0	.....	1.3
Beef, sirloin,* rather fat	60.0	40.0	20.0	19.0	.....	1.0
Beef, neck,* "second cut."	64.5	35.5	19.9	14.5	.....	1.1
Beef, liver	69.5	30.5	20.1	5.4	3.5	1.5
Beef, tongue	63.5	36.5	17.4	18.0	.....	1.1
Beef, heart	56.5	43.5	16.3	26.2	.....	1.0
Veal, lean.	78.8	21.2	19.9	0.8	.....	(0.5)
Veal, rather fat	72.3	27.7	18.9	7.5	.....	1.3
Mutton, side, well fattened	45.9	54.1	14.7	38.7	.....	0.7
Mutton, leg*	61.8	38.2	18.3	19.0	.....	0.9
Mutton, shoulder*	58.6	41.4	18.1	22.4	.....	0.9
Mutton, loin (chops)	49.3	50.7	15.0	35.0	.....	0.7
MEATS—Prepared.						
Dried beef	58.6	41.4	30.3	4.4	.....	6.7
Corned beef, rather lean	58.1	41.9	13.3	26.6	.....	2.0
Smoked ham	41.5	58.5	16.7	39.1	.....	2.7
Pork, bacon, salted	10.0	90.0	3.0	80.5	.....	6.5
FOWL.						
Chicken, rather lean	72.2	27.8	24.4	2.0	.....	1.4
Turkey, medium fatness	66.2	33.8	23.8	8.7	.....	1.3
Goose, fat	38.0	62.0	15.9	45.6	.....	0.5
DAIRY PRODUCTS, EGGS, ETC.						
Cow's milk	87.4	12.6	3.4	3.8	4.8	0.7
Cow's milk, skimmed	90.7	9.3	3.1	0.7	4.8	0.7
Cow's milk, buttermilk	90.3	9.7	4.1	0.9	4.0	0.7
Cow's milk, whey	93.2	6.8	0.9	0.2	5.0	0.7
Cheese, whole milk	31.2	68.8	27.1	35.4	2.4	3.9
Cheese, skimmed milk	41.3	58.7	38.3	6.8	9.0	4.6
Butter	9.0	91.0	1.0	87.5	0.5	2.0
Hen's eggs	73.1	26.9	13.4	11.8	0.7	1.0
FISH, ETC.						
Flounder, whole	84.2	15.8	13.8	0.7	.....	1.3
Haddock, dressed	81.4	18.6	17.1	0.3	.....	1.2
Bluefish, dressed	78.5	21.5	19.0	1.2	.....	1.3
Cod, dressed	82.6	17.4	15.8	0.4	.....	1.2
Whitefish, whole	69.8	30.2	22.1	6.5	.....	1.6
Shad, whole	70.6	29.4	18.5	9.5	.....	1.4
Mackerel, average, whole	71.6	28.4	18.8	8.2	.....	1.4
Salmon, whole	63.6	36.4	21.6	13.4	.....	1.4
						SALT.
Salt cod	53.8	26.1	21.7	0.3	.....	20.1 | 4.1
Smoked herring	34.5	53.8	36.4	15.8	.....	11.7 | 1.6
Salt mackerel	42.2	47.2	22.1	22.6	.....	10.6 | 2.5
Oysters	87.2	12.8	6.0	1.2	3.6	2.0
Scallops	80.3	19.7	14.7	0.2	3.4	1.4

* Portions of the side of which analysis is given above.

TABLE II.

COMPOSITION OF ANIMAL FOODS.

SPECIMENS AS PURCHASED IN THE MARKETS.

(Including both Edible Portion and Refuse.)

KINDS OF FOOD-MATERIALS. (*Italics* indicate European analyses, the rest are American.)	Refuse—bones, skins, shells, etc.	EDIBLE PORTION.					
		Water.	Nutrients.	NUTRIENTS.			
				Protein (albuminoids).	Fats.	Carbohydrates, etc.	Mineral matters.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
MEATS—Fresh.							
Beef, side, well fattened	19.7	43.8	36.5	14.4	21.3	.....	0.8
Beef, round, rather lean	10.0	60.0	30.0	20.7	8.1	.....	1.2
Beef, sirloin, rather fat	25.0	45.0	30.0	15.0	14.3	.....	0.7
Beef, neck, "second cut"	19.0	52.2	28.8	16.2	11.7	.....	0.9
Beef, tongue	15.3	54.0	30.7	14.5	15.4	.....	0.8
Beef, heart	6.0	53.4	40.6	14.8	24.8	.....	1.0
Mutton, side, well fattened	20.0	42.9	37.1	13.2	23.2	.....	0.7
Mutton, leg	18.4	50.4	31.2	15.0	15.5	.....	0.7
Mutton, shoulder	16.8	48.7	34.5	15.0	18.7	.....	0.8
Mutton, loin (chops)	16.3	41.3	42.4	12.5	29.3	.....	0.6
MEATS—Prepared.							
Dried beef	6.5	55.5	38.0	27.4	4.2	.....	6.4
Corned beef, rather lean	6.2	54.5	39.3	12.5	24.9	.....	1.9
Smoked ham	12.5	36.3	51.2	14.6	34.2	.....	2.4
Pork, bacon, salt	5.0	9.5	85.5	2.8	76.5	.....	6.2
FOWL.							
Chicken, rather lean	41.6	42.2	16.2	14.2	1.2	.....	0.8
Turkey, medium fatness	35.4	42.8	21.8	15.4	5.6	.....	0.8
DAIRY PRODUCTS, EGGS, ETC.							
Cow's milk	.....	87.4	12.6	3.4	3.7	4.8	0.7
Cow's milk, skimmed	.....	90.7	9.3	3.1	0.7	4.8	0.7
Cow's milk, buttermilk	.....	90.3	9.7	4.1	0.9	4.0	0.7
Cow's milk, whey	.....	93.2	6.8	0.9	0.2	5.0	0.7
Cheese, whole milk	.....	31.2	68.8	27.1	35.4	2.4	3.9
Cheese, skimmed milk	.....	41.3	58.7	38.3	6.8	9.0	4.6
Butter	.....	9.0	9.1	1.0	87.5	0.5	2.0
Hen's eggs	13.7	63.1	23.2	11.6	10.2	0.6	0.8
FISH, ETC.							
Flounder, whole	66.8	27.2	6.0	5.2	0.3	.....	0.5
Haddock, dressed	51.0	40.0	9.0	8.2	0.2	.....	0.6
Bluefish, dressed	48.6	40.3	11.1	9.8	0.6	.....	0.7
Cod, dressed	30.0	58.4	11.6	10.6	0.2	.....	0.8
Whitefish, whole	53.5	32.5	14.0	10.3	3.0	.....	0.7
Shad, whole	50.1	35.2	14.7	9.2	4.8	.....	0.7
Mackerel, average, whole	44.6	40.4	15.0	10.0	4.3	.....	0.7
Salmon, whole	35.3	40.6	24.1	14.6	8.8	.....	1.0
							SALT
Salt cod	24.9	40.3	19.4	16.0	0.4	.....	15.4 | 3.0
Smoked herring	44.4	19.2	29.9	20.2	8.8	.....	6.5 | 0.9
Salt mackerel	33.3	28.1	32.5	14.7	15.1	.....	7.1 | 1.7
Oysters, in shell	82.3	15.4	2.3	1.1	0.2	0.6	0.4
Oysters, solids	.....	87.2	12.8	6.3	1.6	4.0	0.9
Scallops, edible portion	.....	80.3	19.7	14.7	0.2	3.4	1.4

TABLE III.

CONSTITUENTS OF VEGETABLE FOODS AND BEVERAGES.

KINDS OF FOODS AND BEVERAGES.	Water.	NUTRIENTS. Protein (albuminoids).	Fats.	Carbohydrates, etc.	Woody fiber.	Mineral matters.
FOODS.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
*Wheat flour, average	11.6	11.1	1.1	75.4	0.2	0.6
*Wheat flour, maximum	13.5	13.5	2.0	78.5	1.2	1.5
*Wheat flour, minimum	8.3	8.6	0.6	68.3	0.1	0.3
Graham flour (wheat)	13.0	11.7	1.7	69.9	1.9	1.8
Cracked wheat	10.4	11.9	1.7	74.6		1.4
Rye flour	13.1	6.7	0.8	78.3	0.4	0.7
Pearled barley	11.8	8.4	0.7	77.8	0.3	1.0
Buckwheat flour	13.5	6.5	1.3	77.3	0.3	1.1
Buckwheat "farina"	11.2	3.3	0.3	84.7	0.1	0.4
Buckwheat "groats"	10.6	4.8	0.6	83.1	0.3	0.6
Oatmeal	7.7	15.1	7.1	67.2	0.9	2.0
Maize meal	14.5	9.1	3.8	69.2	1.8	1.6
Hominy	13.5	8.3	0.4	77.1	0.3	0.4
Rice	12.4	7.4	0.4	79.2	0.2	0.4
Beans	13.7	23.2	2.1	53.7	3.7	3.6
Pease	15.0	22.9	1.8	52.4	5.4	2.5
Potatoes	75.5	2.0	0.2	20.7	0.8	1.0
Sweet potatoes	75.8	1.5	0.4	20.0	1.1	1.2
Turnips	91.2	1.0	0.2	6.0	0.9	0.7
Carrots	87.9	1.0	0.2	8.9	1.2	0.8
Cabbage	90.0	1.9	0.2	4.9	1.8	1.2
Cauliflower	90.4	2.5	0.4	5.0	0.9	0.8
Melons	95.2	1.1	0.6	1.4	1.1	0.6
Pumpkins	90.0	0.7	0.1	7.3	1.3	0.6
Apples	84.8	0.4	0.0	12.8	1.5	0.5
Pears	83.0	0.4	0.0	12.0	4.3	0.3
Starch	15.1	1.2	0.0	83.3	0.0	0.4
Cane-sugar	2.2	0.3	0.0	96.7	0.0	0.8
†Wheat bread	32.7	8.9	1.9	55.5		1.0
Graham bread	34.2	9.5	1.4	53.3		1.6
Rye bread	30.0	8.4	0.5	59.7		1.4
Soda crackers	8.0	10.3	9.4	70.5		1.8
"Boston" crackers	8.3	10.7	9.9	68.7		2.4
"Oyster" crackers	3.9	12.3	4.8	76.5		2.5
Oatmeal crackers	4.9	10.4	13.7	69.6		1.4
Pilot (bread) crackers	7.9	12.4	4.4	74.2		1.1
Maccaroni	13.1	9.0	0.3	76.8		0.8
BEVERAGES.			Alcohol.		Free acid.	
Lager beer	90.3	0.5	4.0	6.6	.....	0.2
Porter and ale	88.5	0.7	5.2	7.2	.....	0.3
Rhenish wine, white	86.3	.....	10.5	2.6	0.4	0.2
Rhenish wine, red	86.9	.....	8.9	3.4	0.5	0.3
French wine, claret	88.4	.....	8.1	2.7	0.6	0.2

NOTE.—The analyses of foods in Roman letters are American, those of foods and beverages in *Italics* are European.

The figures of Tables I. and II., with the exception of a few from European sources and indicated by *Italics*, are selected from the results of the investigation referred to above, as conducted under the auspices of the Smithsonian Institution and the United States Fish Commission. The specimens of meats were purchased from a dealer in Middletown, Conn., and said by him to be "fair average samples of the

*Of analyses of American flours. †From flour of about average composition.

better kinds of meats." A side of beef, freshly brought in winter from Chicago, and said to be a fair specimen of the best quality of "Chicago beef," was cut into about twenty-five pieces in the ordinary way. From each a sample fairly representing the whole cut was taken and analyzed. Thus the composition of each piece and of the whole side was learned. The compositions of one of the leanest portions, the round, a moderately fat piece, sirloin, a very fat portion, flank, and of the whole side, together with a tongue, liver and heart from another animal, are given in the table. The samples of a side of mutton and of parts of the same side were obtained and analyzed in like manner, as were those of the other meats and fowls. The specimens of cheese were from Washington Market, New York, the analyses in the table representing averages of several samples. The butter was from a Vermont dairy. Some of the specimens of fish were purchased in Middletown, the most, however, were furnished gratuitously from Fulton Market, New York, by Mr. E. G. Blackford, Fish Commissioner of the State of New York, who also contributed to the pecuniary expense of the investigation, as did likewise Mr. A. R. Crittenden, of Middletown. A considerable number of the specimens whose analyses are given in this table, and in the tables beyond, were furnished by Mr. F. B. Thurber, of New York, who also contributed a considerable sum toward defraying the cost of the research, as did also Hon. J. W. Alsop, M.D., of Middletown, Conn. It may be added that the figures in Tables I., II. and III. (aside from those from European sources) are selected from the results of nearly three hundred analyses of American food-materials, of which some two hundred are of fish and invertebrates.

Table III. gives analyses of vegetable food-materials and beverages. The figures for wheat flour represent the results of forty-nine analyses of American flours, of which the majority were analyzed under the direction of Prof. Brewer, and the rest collated by him from other sources for the "Report of the United States Census, 1880." The largest and the smallest percentages of each ingredient found in the analyses are given opposite "maximum" and "minimum." The specimens of bread, crackers, etc., were purchased and analyzed at Middletown, Conn., and have probably about the usual composition of such materials.

I have said so much by way of introduction to the tables, that it may be hardly advisable to discuss their contents at much length. Nor will this be necessary, for the figures themselves tell their own stories, and very plainly. Only a glance is needed to show, for instance, that fish as found in the markets generally contain more refuse, bone, skin, etc., than meats, as is illustrated in Tables I. and II. With the larger proportions of both refuse and water, the proportions of nutrients, though variable, are usually much less than in meats. Thus a sample of flounder contained sixty-seven per cent. of refuse, twenty-eight of water, and only five per cent. of nutritive substance, while the salmon averaged twenty-three, the salt cod twenty-two, and the salt mackerel thirty-six per cent. of nutrients. The nutrients in meats ranged from thirty per cent. in beef to forty-six in mutton, and eighty-seven and a half in very fat pork (bacon). The canned fish compare very favorably with the meats. It is worth noting that the nutrients in fresh codfish, dressed, in oysters, edible portion, and in milk, all were nearly the same in amount—about twelve and a half per cent. though differing in kind and proportions.

Vegetable foods have generally less water and more nutrients than animal foods. Ordinary flour, meal, etc., contain from eighty-five to ninety per cent. or more of nutritive material. But the nutritive values are not exactly proportional to the quantity of nutrients, because the vegetable foods contain but little protein and con-

sist mostly of carbohydrates, starch, sugar, cellulose, etc., which are of inferior nutritive value, and because the protein they do contain is less digestible than that of animal foods. Potatoes contain a large amount of water, and extremely little protein or fats.

I wish to call attention to two more things concerning the composition of fish:

1st. The chief difference between the flesh of fish and ordinary meats is, that the fish generally contains less fat and more water. The fat contained in the meats is, in the fish, replaced to a considerable extent by water. On this account, the flesh of fish has, generally, a lower nutritive value, pound for pound, than ordinary meats. Fish, as we buy them, have the further disadvantage in comparison with meats, that they contain larger percentages of refuse bone, skin, entrails, etc., than meats.

2d. On the other hand, in the flesh of most fish, the nutritive material is nearly all protein. That is to say, fish supply the ingredient of food which is the most important, and, as we shall see, the most expensive of all.

There is one difficulty with the tables, namely, that the figures for the analyses apply to either single specimens, or to averages of a number of specimens, and do not show the variations in the composition of the same food-material, which are often quite considerable. Two illustrations of this are given, the mackerel in Table IV., and the wheat flour in Table V. The figures for "maximum and minimum" in the latter show, as above indicated, the largest and smallest percentages of each ingredient found in the forty-nine specimens of American wheat flour analyzed. Thus the percentages of water vary from eight and three-tenths to thirteen and five-tenths, the average being eleven and six-tenths per cent., while the protein varies from eight and six-tenths to thirteen and six-tenths, averaging eleven and one-tenth per cent.*

I hope to give elsewhere, at a proper time, more detailed tables of analyses illustrating these differences in detail. It must be confessed, however, that the number of analyses thus far made are very far from sufficient to show at all completely the variations in the composition of our food-materials. Nevertheless, the figures in the tables give a tolerably accurate idea of the composition of the food-materials named.

DIGESTIBILITY OF FOODS.

The question of the digestibility of foods is a very complex and difficult one, and I have noticed that the men who know most about it are generally the least ready to make definite and sweeping statements as to the digestibility of this or that kind of food-material. One great difficulty is the fact that what we ordinarily call the digestibility of a food includes several different things, the ease with which it is digested, the time required for digesting it, and the proportions of its several constituents that are digested.

The ease of digestion and the suitableness of a food to the digestive organs of a given person are physiological rather than chemical questions, and, fortunately for myself, do not come within the scope of this lecture. The actual amounts digested are capable of more nearly accurate determination. Indeed, the percentage of the more important constituents of various foods actually digested by domesticated animals of different species, breeds, sexes, and ages, and under varying circumstances,

* Since the above tables were prepared, the results of a large series of analyses of American grain and milling products have been reported by Mr. Clifford Richardson, of the United States Agricultural Department. While these are a most important contribution to our knowledge, of the subject, the main results do not differ widely from those here given.

has been a matter of active experimental investigation in the German agricultural experiment stations during the past twenty years. Briefly expressed, the method consists in weighing and analyzing both the food consumed and the solid excrement, which latter represents the amount of food undigested, the difference being the amount digested.

Such experiments upon human subjects, however, are rendered much more difficult by the necessity of avoiding complex mixtures of foods, in order that the digestibility of each particular food or food-ingredient may be determined with certainty, and the fact that it is not easy to continue to eat the kind of food long enough for a satisfactory experiment. No matter how palatable a simple food may be to a man at first, it has been found that it will almost certainly become repugnant to him after two or three days. In consequence, the digestive functions are disturbed, and the accuracy of the trial is impaired. In the experiments in question, it was quite exceptional to find persons, in any walk of life, who could continue to eat large quantities of simple, plain food for tolerably long periods—a fact, by the way, which strikingly illustrates and emphasizes the importance of a varied diet in ordinary life.

Notwithstanding the difficulties referred to, a considerable number of experiments have been carried out, the majority in the physiological laboratory of the University of Munich, Germany. The results of a number of these experiments are concisely set forth in the following table:

PERCENTAGES OF UNDIGESTED MATTERS IN FOOD-MATERIALS.

KIND OF FOOD EATEN.	Percentage of the dry food lost as excrement.	PERCENTAGES OF THE—	
		*Nitrogen of the foods which go to waste in the excrement.	Carbohydrates of the foods which go to waste in excrement.
Lean beef	5 or 6	2 or 3	.....
Fish (haddock)	5 or 6	2 or 3	.....
Eggs	5¼	2½	.....
Milk	8 to 10	7 to 12	.....
Milk, with cheese	6 to 11	3 to 5	.....
Rice	4	25	1
Potatoes	9⅛	32	7½
Fat bacon, with some bread and beef	8½ to 9¼	12 to 14	2 to 6
White bread (wheat)	3¾ to 5½	19 to 26	1 to 1½
Coarse rye-bread (black bread)	15	32	11
Cabbage	15	18½	15½
Yellow beets	21	39	18

Thus the men upon whom the experiments were made digested all but 5 or 6 per cent. of the whole dry matter (water-free substance) of the lean beef and the fish, and all but 2 per cent. of their protein (nitrogen). Of the water-free substance of milk, a somewhat larger proportion passed through the body undigested. The vegetable foods were much less completely digested, the coarse rye bread and the beets were in this sense the least digestible of all.

A. COSTS OF PROTEIN.

A subject that has received but little attention in this country, though it has become a vital one in Europe, and is becoming so with us, is the cost of the nutritive material

*Protein.

of our foods. The relative cheapness or dearness of different foods must be judged by comparing, not the prices per pound, but the costs of the actual nutrients. In making such comparisons, the cost may be assumed to fall, not upon the inedible portions and the water, but solely upon the three classes of nutrients, the protein, fats and carbohydrates. The relative physiological values of the nutrients in different foods depend upon (1) their digestibility and (2) their functions and the proportions in which they can replace each other in nutrition. An accurate physiological valuation is, in the present state of our knowledge, at least impracticable. The pecuniary costs of the nutrients are, however, more nearly capable of approximation.

Various methods have been proposed for computing the relative pecuniary costs of the nutrients of foods, none of which, however, are entirely beyond criticism. The following, based upon German estimates of the relative costs of protein, fats and carbohydrates, is perhaps as satisfactory as any. They are those of Prof. König.

From extended comparisons of the composition and market prices of the more important animal and vegetable food-materials, such as meats, fish, flour, etc., those which serve for nourishment and not as luxuries, and form the bulk of the food of the people, it has been estimated that a pound of protein costs, on the average, five times as much, and a pound of fats three times as much, as a pound of carbohydrates; that, in other words, these three classes of nutrients stand related to each other, in respect to cost, in the following proportions:

Assumed ratios of costs in staple foods.	Protein	5
	Fats	3
	Carbohydrates	1

Perhaps a study of foods and prices in our market might lead to a different scale of valuations, but this will serve our present purpose.

Suppose a pound of beef to cost 25 cents, and to contain 25 per cent. of inedible matters, bone, etc., 45 per cent. of water, and 30 per cent. of nutritive substance, upon which latter—the bone and water being assumed to be without nutritive value—the whole cost comes. The 30 per cent. or $\frac{30}{100}$ pounds of nutritive substance thus costs 25 cents, or at the rate of $83\frac{1}{3}$ cents per pound. If now we leave out of account the minute quantities of carbohydrates and the mineral matters, the whole cost will fall upon the protein and fats. Assuming these to cost in the ratio of 5 : 3 and the amounts in the meat to be: protein 15 per cent., and fats $14\frac{1}{4}$ per cent, an easy computation will show the protein to cost 106 cents and a pound of fats 64 cents.*

*The methods of computing the cost of protein and the amounts obtained for 25 cents in different foods are as follows:

1. *Cost of Protein.*—Suppose we wish to learn the cost of the nutrients in wheat flour, containing 11.1 per cent. of protein, 1.1 per cent. of fat, and 75.4 per cent. of carbohydrates, and costing 4 cents a pound.

Let x represent the cost of a pound of carbohydrates in cents. Then, by the ratio of costs assumed above, a pound of fats would cost $3\,x$ cents and a pound of protein $5\,x$ cents. 100 pounds of the flour will cost 400 cents, and will contain 11.1 pounds of protein, 1.1 pounds of fats, and 75.4 pounds of carbohydrates. We shall have—

	$75.4\,x$ cents =	cost of	75.4	pounds of	carbohydrates.
	$3.3\,x$ cents =	"	1.1	"	fats.
	$55.5\,x$ cents =	"	11.1	"	protein.
Total,	$134.2\,x$ cents =	"	100	"	flour = 400 cents.

Whence $x = 3$ cents, cost of carbohydrates per pound.
$3\,x = 9$ cents, " fats.
$5\,x = 15$ cents, " protein.

2. *Amounts of Nutrients obtained for 25 cents.*—At 4 cents per pound for the flour, 25 cents will pay for 6.25 pounds. By the percentage composition above given 6.25 pounds of flour will contain 0.69 pound of protein, 0.07 pound of fats, and 4.71 pounds of carbohydrates, which are the amounts of nutrients obtained for 25 cents.

Of the different nutrients, protein is physiologically the most important, as it is pecuniarily the most expensive. For these reasons the cost of protein in different food-materials may be used as a means of comparing their relative cheapness or dearness, as is done in the following table. The figures represent the ordinary prices per pound and the corresponding costs of protein, in specimens of food-materials obtained in New York and Middletown, Conn., markets. Though the number of specimens is too small for reliable averages, the figures, taken together, doubtless give a tolerably fair idea of the relative costliness of the nutrients in the different classes of foods. It will of course be understood that the computations make allowance for the costs of the other nutrients, the fats and the carbohydrates, though for the sake of brevity the latter are omitted from the table.

COMPARATIVE COST OF PROTEIN IN FOOD-MATERIALS.

FOOD-MATERIALS.	At prices per pound.	Cost of protein per pound.	FOOD-MATERIALS.	At prices per pound.	Cost of protein per pound.
MEATS.	Cents.	Cents.		Cents.	Cents.
Beef, sirloin	25	106	Cod	6	56
Mutton, leg	22	91	Salt mackerel	12.5	53
Beef, sirloin	20	86	Salt cod	7	43
Mutton, leg	20	82	Mackerel	5	40
Mutton, side	20	73	Salt cod	6	37
Beef, round	18	70	Salt cod	5	31
Mutton, leg	16	66	Alewives	3	27
Corned beef, lean	18	66	Smoked herring	6	24
Beef, round	15	59			
Corned beef, lean	15	55	DAIRY PRODUCTS AND EGGS.		
Smoked ham	18	51	Eggs, 40 cts. per dozen	28	157
Smoked ham	15	43	Eggs, 25 cts. per dozen	18	101
Corned beef, lean	10	36	Eggs, 15 cts. per dozen	11	62
Beef, flank*	15	36	Milk, 8 cts. per quart	4	61
Beef, neck	8	33	Milk, 7 cts. per quart	3.5	53
Pork,* very fat, salted	16	83	Cheese, whole milk	18	37
Pork,* very fat, salted	12	25	Cheese, whole milk	13	27
			Cheese, skimmed milk	8	18
FISH.					
Salmon	100	511	VEGETABLE FOODS.		
Oysters, 50 cts. per quart	25	336			
Oysters, 40 cts. per quart	20	269	Wheat bread	8	38
Oysters, 30 cts. per quart	15	202	Rice	9	38
Lobsters	12	202	Potatoes,* $1.00 per bushel	1.7	30
Salmon	30	153	Wheat bread	6	29
Flounder	8	149	Potatoes,* 75 cts. per bushel	1.38	22
Shad	12	99	Wheat bread	4	19
Bluefish	10	98	Beans, 13 cts. per quart	6.5	18
Lake trout	15	92	Wheat flour	4.5	17
Halibut	15	85	Wheat flour	4	15
Haddock	7	84	Oatmeal	5	15
Mackerel	10	79	Beans, 10 cts. per quart	5	14
Cod	8	75	Potatoes,* 50 cts. per bushel	0.85	14
Canned salmon	20	70	Wheat flour	3.5	13
Shad	8	66	Corn meal	3	12

Thus the nutrients of vegetable foods are, in general, much less costly than in animal foods. The animal foods have, however, the advantage of containing a large proportion of protein and fats, and the protein, at least, in more digestible forms.

Among the animal foods, those which rank as delicacies are the costliest. By the above calculations, the protein in the oysters costs from two to three dollars, and, in

* Containing little protein, the chief value being in other ingredients.

salmon, rises to over five dollars per pound. In beef, mutton and ham, its varies from 106 to 43 cents; in shad, bluefish, haddock and halibut, the range is about the same; while in cod and mackerel, fresh and salted, it varies from 75 to as low as 31 cents per pound. Salt cod and salt mackerel are nearly always, fresh cod and mackerel often, and even the choicer fish, as bluefish and shad, when abundant, cheaper sources of protein than any but the inferior kinds of meat. Among meats, pork is the cheapest; but salt pork or bacon has the disadvantage of containing very little protein.

It is well worth the noting that oatmeal is one of the cheapest foods that we have; that is, it furnishes more nutritive material, in proportion to the cost, than almost any other. Corn meal is indeed cheaper, but the oatmeal has this great advantage over corn meal and wheat flour, that it has more protein. Of course, if we are to eat large quantities of lean meat—and most of us, I think, eat more than is best for our health, saying nothing of our purses—the extra protein in the oatmeal is of little consequence to us. But if one wishes to economize in his food, oatmeal, rightly cooked, affords an excellent material therefor.

One of the most interesting things brought out in the table is the cheapness of the staple vegetable food-materials, such as potatoes, wheat flour, corn meal, oatmeal and beans.

B. AMOUNTS OF NUTRIENTS OBTAINED FOR 25 CENTS IN DIFFERENT FOOD-MATERIALS.

The above method of computing the relative expensiveness of different kinds of food-materials is, as I have said, open to the objection that it is based upon a certain assumed ratio of relative costs of protein, fats and carbohydrates, which may or may not be right in any given case. A method free from these objections consists in computing how much of the several nutrients may be obtained for a given sum, for instance, 25 cents, in different food-materials. This is done in the following table:

AMOUNT OF NUTRIENTS FURNISHED FOR TWENTY-FIVE CENTS IN FOOD-MATERIALS AT ORDINARY PRICES.

FOOD-MATERIALS.	At prices per pound.	TWENTY-FIVE CENTS WILL PAY FOR—				
		Total food-material.	NUTRIENTS—POUNDS.			
			Total.	Protein.	Fats.	Carbohydrates.
MEATS.	Cents.	Pounds				
Beef, sirloin	25	1.00	.29	.15	.14	.....
Mutton, leg	22	1.14	.34	.17	.17	.....
Beef, sirloin	20	1.25	.37	.19	.18	.....
Mutton, leg	20	1.25	.38	.19	.19	.....
Beef, round	18	1.39	.40	.29	.11	.....
Mutton, side	20	1.25	.46	.17	.29	.....
Beef, round	15	1.67	.49	.35	.14	.....
Beef, neck, whole	8	3.13	.92	.48	.44	.....
Pork, salted, fat	16	1.56	1.23	.04	1.19	.....
Pork, salted, fat	12	2.08	1.65	.06	1.59	.....
FISH.						
Salmon	100	.25	.06	.04	.02	.....
Oysters, 50 cents per quart	25	1.00	.12	.06	.02	.04
Oysters, 35 cents per quart	17.5	1.42	.17	.09	.02	.06
Salmon	30	.83	.19	.12	.07	.....
Bluefish	10	2.50	.27	.25	.02	.....
Shad	12	2.08	.29	.19	.10	.....
Cod	8	3.13	.34	.33	.01	.....
Mackerel	10	2.50	.35	.25	.10	.....
Canned salmon	20	1.25	.44	.25	.19	.....
Shad	8	3.13	.44	.29	.15	.....
Cod	6	4.17	.45	.44	.01	.....
Salt cod	7	3.57	.58	.57	.01	.....
Salt mackerel	12.5	2.00	.60	.30	.30	.....
Mackerel	5	5.00	.71	.51	.20	.....
Salt cod	5	5.00	.82	.80	.02	.....
Smoked herring	6	4.17	1.21	.84	.37	.....
DAIRY PRODUCTS AND EGGS.						
Butter	30	.83	.73	.....	.73	.....
Milk, 8 cents per quart	4	6.25	.74	.21	.23	.30
Milk, 7 cents per quart	3.5	7.14	.84	.24	.26	.34
Cheese, whole milk	18	1.39	.90	.38	.49	.03
Cheese, whole milk	15	1.67	1.08	.45	.59	.04
Cheese, skim milk	8	3.13	1.69	1.20	.21	.28
VEGETABLE FOODS.						
Wheat bread	8	3.13	2.08	28	.06	1.74
Wheat bread	6	4.17	2.75	.37	.07	2.31
Potatoes, $1 per bushel	1.7	3.24	3.04	.27	.03	2.74
Beans, 10 cents per quart	5	5.00	3.96	1.16	.11	2.69
Potatoes, 75 cents per bushel	1.25	18.00	4.13	.36	.04	3.73
Wheat bread	4	6.25	4.15	.56	.12	3.47
Oatmeal	5	5.00	4.48	.76	.36	3.36
Wheat flour	4.5	5.55	4.83	.62	.06	4.15
Wheat flour	4	6.25	5.44	.69	.04	4.71
Potatoes, 50 cents per bushel	0.85	26.47	6.06	.53	.05	5.48
Indian meal	3	8.33	6.90	.70	.29	5.91

Prof. Atwater, since the delivery of the above address, has submitted the following appendix for publication:

In the above address, as given, were included some statements regarding daily rations, which constituted a practical application of the principles above set forth. At the request of Mr. Edward Atkinson, who desired the material to incorporate in an address to be given by himself as Chairman of the Section of Economic Science and Statistics of the American Association for the Advancement of Science, I dictated the substance of the statements to a stenographer, being too much pressed for time to give

to the preparation the care properly belonging to an article intended for publication, and appended a translation of German dietary and some estimates for daily rations of food-materials of the composition of those given in the tables, the latter prepared by my assistant, Mr. Rockwood. The matter in this form is reproduced here.

STANDARD FOR DAILY RATIONS.

In answer to the question, "What should be the standard for a daily ration?" it may be said that the ordinarily accepted standards are estimated in terms of the three most important classes of the nutritive ingredients, or nutrients of food: (1) protein, or albuminoids; (2) fats; (3) carbohydrates.

Our best information upon this subject comes from Germany, accurate observations and experiments have been there made by Liebig, Moleschott, Pettenkofer, Voit and others. Payen, in France, and Frankland, Playfair, Lawes and Gilbert, in England, have also made most valuable contributions to the knowledge upon this subject.

I cannot forbear noting the fact, however, that very little attention appears to have been paid to the results of these experiments on this side of the Atlantic, or, for that matter, in England; even in some of the best text-books in chemistry and physiology, those which are looked upon as most authoritative are too apt to pass the subject over most superficially, or almost to ignore it.

The standard rations assumed by Prof. Voit, of Munich, are more commonly accepted than any others, and are most frequently quoted and followed in estimating dietaries. The following are standards adopted by the Munich school of physiological chemists who follow Voit: —

STANDARDS FOR DAILY RATIONS.

	PROTEIN.	FATS.	CARBOHYDRATES.
	Grammes.	Grammes.	Grammes.
Children to 1½ years	20–36	30–45	60–90
Children from 6 to 15 years	70–80	37–50	250–400
Laboring man at moderate work	118	56	500
Laboring man at severe work	145	100	450
Laboring woman	92	44	400
Aged man	100	68	350
Aged woman	80	50	260

We are, of course, to understand that these figures represent only general averages. It is assumed that for an ordinary laboring man, doing an ordinary amount of work, the amounts of nutrients above given will suffice, and that with them he will hold his own; and that any considerable excess above these quantities will be superfluous. But, of course, no one expects any given man to adjust his diet exactly to this standard; he may need more, and may perhaps get on with less. He may eat more fats and less carbohydrates, or he may consume more protein, if he is willing to pay for it. If, however, he eats much less protein, and keeps up his muscular exertion, he will, in Prof. Voit's opinion, be apt, sooner or later, to suffer.

Protein is the costliest of the food ingredients, and hence the one which, from the pecuniary standpoint, most needs to be economized; and since, furthermore, its work of building up muscles, tendons, and the like, cannot be done by either of the other classes of nutrients; since, in other words, it is very expensive, one of the first ques-

tions in constructing an economical ration is, "What is the least amount of protein that will suffice?" This question cannot be answered exactly until we know more than we now do about the demands of different organisms under different conditions. The subject needs more thorough and experimental study. But we may find an approximate answer in results of observation and experiments already on record.

To resume briefly, in computing standard rations to supply sufficient food at the minimum cost, we have to learn—

1st. What is the minimum quantity of the most costly ingredient, viz., protein?

2d. What proportion of nutrients is contained in the food-materials we are to use?

But lack of complete data, as well as time for discussion, precludes further reference to the matter.

EXAMPLES OF GERMAN RATIONS.

Of late, a great deal of attention has been paid in Germany to this particular subject of the food of the people and the best ways to economize it. I noticed a statement in a scientific journal a few days ago that Bismarck had engaged Prof. König to prepare a series of schedules of rations for ordinary German laboring people, which I suppose actually means that one of the departments of the Prussian government has engaged Prof. König, who is one of the principal authorities in this line, to carry out this enterprise. Numerous attempts have already been made in this same direction. I have before me, for instance, a little brochure of about one hundred pages by Dr. Meinert, entitled "*Wie nährt man sich gut und billig?*" or "How can one feed himself well and economically?" That this is regarded as trustworthy is evinced by the fact that it was honored with a prize, offered by an association and awarded by a committee, consisting of Profs. Voit, Forster and Beneke, three of the best known German authorities in this specialty. It tells in plain language about foods, their constituents, the proportions of the several nutrients in various foods, the relative cheapness and dearness of different food-materials as shown by the comparison of their composition with their price, and with the rest gives schedules of daily rations for families. There are three of these schedules, the first intended for a family with an annual income of 800 marks, or $200, of which it is assumed that 60 per cent. will be expended for food. The second is for a family with an income of 1,100 marks, or $275, and the third for one of 1,500 marks, or $375 per annum. The outlay for the food of each of the last two is to be about 53 per cent. of the income. As the largest of the three incomes would be counted very small with us I have selected the schedule corresponding to it rather than either of the others for the translation which I have caused to be made and include herewith.

DIETARY FOR A FAMILY FOR TWO WEEKS.

The following dietary is calculated for a family consisting of father, mother, and two children of ten and twelve years of age. The annual income for the support of the family is taken at 1,500 marks, or $375, of which 53 per cent., 800 marks, or $200 per year, which would make 220 pfennigs, or 55 cents per day, is to be spent for food. It is assumed that the mother and two children will require as much nutritive material in their food as two laboring men, so that the family of four persons will be equal in their demand to three laboring men. Dr. Meinert further assumes that to earn so large a sum as 1,500 marks per year, more than ordinarily hard work will be required, and hence, following Prof. Voit's figures for rations, he provides for a ration

with nutrients a little in excess of the standard for a laboring man at moderate work. Prof. Voit's standards for an ordinary laboring man doing moderately hard work, and for the same man at severe work, are stated below, and with them Dr. Meinert's standard for the family in question.

NUTRIENTS IN DAILY RATION.

NUTRIENTS.	PROF. VOIT'S STANDARDS.		Dr. Meinert's Standard for family with 1,500 marks per year.
	For laboring man at moderate work.	For laboring man at severe work.	
Protein	118 grams (0.26 lb.)	145 grams.	120 grams.
Fats	56 " (0.12 lb.)	100 "	70 "
Carbohydrates	500 " (1.10 lb.)	450 "	500 "

As the family are counted equivalent to three "laboring men," the 220 pfennigs allowed for food per day must pay for three rations, which gives 73.3 pfennigs per ration. The problem, then, is to draw up a bill of fare for each day, which shall furnish a minimum of 120 grams or 0.27 lb. of protein, 70 grams or 0.15 lb. of fats; and 500 grams or 1.10 lbs. of carbohydrates, for 73.3 pfennigs or 18¾ cents per day, in food-materials such as a German laborer may properly use, and at such prices as he must pay for them.

In accordance with German usage provision is to be made for breakfast, dinner at midday, lunch (*Vesperbrot*) in the afternoon, and supper (*Abendessen*). The following is Dr. Meinert's outline of the bill of fare for two weeks:—

BILL OF FARE FOR FOURTEEN DAYS.

DAY.	BREAKFAST.	DINNER.	LUNCH.	SUPPER.
1st	Coffee, milk, rolls, black bread, butter	Fresh haddock, with mustard sauce and potatoes	Coffee and milk, bread and butter	Meat and vegetable soup.
2d	" "	Beef stew, with kohlrabi and potatoes	" "	Cheese and beer.
3d	" "	Sausage, with millet, milk and beer	" "	Onion soup.
4th	" "	Mutton and beans	" "	Potato soup.
5th	" "	"*Fleischgraupen*," with bacon and beer	" "	Pea soup.
6th	" "	"*Kloese*" (dumplings), with fruit	" "	Herring and beer.
7th	" "	Dried codfish, with sauerkraut, peas and beer	" "	Buttermilk soup.
8th	" "	Hashed meats, with potato soup	" "	Meat and vegetable soup.
9th	" "	Sausage (*Blutwurst*), with lentils and beer	" "	Potatoes and curd.
10th	" "	Liver, with potato salad	" "	Cheese and beer.
11th	" "	Beefsteak, with cabbage and potatoes	" "	Bread and milk soup.
12th	" "	Herring, potatoes and beer	" "	Meat and vegetable soup.
13th	" "	Pork, with cabbage and potatoes	" "	Cheese and beer.
14th	" "	Liver, with spinach, potatoes and beer	" "	Oatmeal in buttermilk.

The details of the daily bills of fare are given by Dr. Meinert in the forms translated beyond. The quantities are given in the metric weights and measures current in Germany. It will be remembered that the kilogram consists of 1,000 grams and equals about 2.2 lbs.; that the gram is nearly 15.5 grains, and, roughly speaking, 450 grams make a pound and 28 grams an ounce. The liter is 1,000 cubic centimeters, a little over a quart; a liter of water weighs 1 kilogram. The mark consists of 100 pfennigs, and is worth nearly twenty-five cents, so that the pfennig is one-quarter of a cent. Translating these into our own weights and measures would, I think, rather detract from than add to their clearness and value. In their present form they are simple, but would by recalculation become more complex. In the summary at the end, the quantities and prices are given in American weights and money.

In translating I will, for convenience, speak of the first and second breakfast together as breakfast. The midday and evening meals we will call dinner and supper, and will follow Dr. Meinert's example in including the afternoon lunch with breakfast.

In this dietary Dr. Meinert gives first a general schedule for breakfast and lunch, which (or its equivalent) is to serve for each of the fourteen days. The schedule for dinner and supper for each several day is given by itself. It is assumed that the material left over at one time will serve for another, and that thus the evening meals may be filled out from what is left at breakfast or dinner.

BREAKFAST AND LUNCH.

AMOUNT OF FOOD AND PRICE.	Amount in grams.	Price per kilo or liter in pfennigs.	Price of the amount indicated in pfennigs.	AMOUNT OF—		
				Protein—grams.	Fats—grams.	Carbohydrates—grams.
Four wheat rolls	290	.....	12	15	2	148
Rye bread	1,500	24	36	90	9	750
Coffee and coffee substitutes	60	.....	9	5	1	28
1¼ liters skimmed milk	1,250	8	10	38	6	50
Butter	100	240	24	.....	98	.....
Salt	75	20	1.5	.....	.....	.....
Two liters beer	2,000	12	24	10	.....	160
	.....	.....	116.5	158	116	1,136
Per head and day	.....	.....	38.8	53	39	379
There remains for dinner and supper	.....	.....	34.5	67	31	121
Total per head per day	.....	.....	73.3	120	70	500

It will be observed that the cost of each material is stated, with the amounts of nutrients it contains. By "per head" is understood for one laboring man. It will be remembered that the mother and two children were assumed to require as much as two laboring men.

Here follow details of dinner and supper, and summary for each of the fourteen days.

BILL OF FARE FOR DINNER AND SUPPER FOR FOURTEEN DAYS.

First Day.

AMOUNT OF FOOD.	Amount in grams.	Price per kilo or liter in pfennigs.	Price of the amount indicated in pfennigs.	AMOUNT OF— Protein—grams.	Fats—grams.	Carbohydrates—grams.	
Fresh haddock	500	80	40	60	5	8	*Dinner.*—Fresh haddock with mustard sauce and potatoes.
Mustard	125	80	10	33	42	31	
Flour	50	40	2	6	.....	35	
Fat (lard, butter)	60	130	8	.....	57	.....	
Potatoes	2,500	7	17.5	50	3	500	
*"Fleischgemuese"	125	200	25	40	22	44	*Supper.*—Meat and vegetable soup.
	.....	.....	102.5	189	129	618	
Per head	.....	.....	34.2	63	43	206	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	73.0	116	82	585	

Second Day.

Beef	500	120	60	80	40	.....	*Dinner*—Beef stew with kohlrabi and potatoes.
Fat (lard, butter, etc.)	100	130	13	.....	95	.....	
Kohlrabi	1,000	15	15	27	2	86	
Potatoes	1,500	7	10.5	30	3	300	
Skim-milk cheese	300	50	15	120	21	.....	*Supper*—Cheese and beer.
	.....	.....	113.5	257	161	386	
Per head	.....	.....	37.8	86	54	129	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	76.6	139	93	508	

Third Day.

Millet	500	40	20	56	17	290	*Dinner.*—Sausage with millet, milk and beer.
Skimmed milk	1,500	8	12	45	7	60	
Sausage	300	180	54	69	33	21	
Onions	150	10	1.5	4	.....	12	
Fat	50	130	6.5	.....	47	.....	*Supper.*—Onion soup.
Flour	150	40	6.0	17	2	105	
	.....	.....	100.0	191	106	488	
Per head	.....	.....	33.3	64	35	163	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	72.1	117	74	542	

Fourth Day.

Mutton	500	120	60	75	50	.....	*Dinner*—Mutton & beans.
Beans	500	40	20	130	10	250	
Fat	100	130	13	.....	95	.....	
Potatoes	2,000	7	14	40	2	400	*Supper.*—Potato soup.
	.....	.....	107	245	157	650	
Per head	.....	.....	35.6	82	52	216	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	74.4	135	91	595	

*"Fleischgemuese," soup made from a mixture of preserved South American meat and vegetables especially recommended by Dr. Meinert.

BILL OF FARE—Continued.

Fifth Day.

AMOUNT OF FOOD.	Amount in grams.	Price per kilo or liter in pfennigs.	Price of the amount indicated in pfennigs.	AMOUNT OF— Protein—grams.	Fats—grams.	Carbohydrates—grams.	
"Fleischgraupen"	450	150	68	100	10	300	*Dinner.*—"Fleischgraupen" with bacon and beer.
Bacon	125	160	20	3	98	.....	
Peas	300	50	15	67	6	150	*Supper.*—Pea soup.
Lard	40	170	7	.....	37	.....	
Spices	.....	.....	2	.....	.....	.....	
	.....	.....	112	170	151	450	
Per head	.....	.....	37.3	57	50	150	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	76.1	110	89	529	

Sixth Day.

Wheat flour	600	45	27	66	6	438	*Dinner*—Dumplings with fruit.
Potatoes	1,500	7	10.5	30	1.5	300	
Wheat rolls	72	.....	3	4	.....	35	
Fat	100	130	13	.....	95	.....	
Fruit	250	80	20	8	2.5	113	
Sugar	30	100	3	.....	.....	27	
Herrings	260	7	21	52	32	5	*Supper.*—Herring & beer.
	.....	.....	97.5	160	137.0	918	
Per head	.....	.....	32.5	53	46	306	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	71.3	106	85	685	

Seventh Day.

Dried codfish	250	140	35	198	3	.....	*Dinner.*—Dried codfish, with sauerkraut, peas and beer.
Sauerkraut	1,000	18	18	10	2	46	
Peas	300	50	15	67	3	150	
Fat	100	130	13	.....	95	.....	
Buttermilk, 2 liters	2,000	6	12	51	15	15	*Supper*—Buttermilk soup.
	.....	.....	93	326	118	211	
Per head	.....	.....	31	109	39	70	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	69.8	162	78	449	

Eighth Day.

Beef	200	120	24	32	16	.....	*Dinner.*—Hashed meats with potato soup.
Pork	100	130	13	14	10	.....	
Mutton	125	120	15	20	8	.....	
Fat	60	130	8	.....	56	.....	
Spices and vegetables	40	3	.....	.....	.....	.....	
Potatoes	3,000	7	21	60	3	600	
"Fleischgemuese"	125	200	25	40	22	46	*Supper.*—Meat and vegetable soup.
	.....	.....	106	166	115	646	
Per head	.....	.....	35.3	55	38	215	
For breakfast, lunch, etc.	.....	.....	38.5	53	39	379	
Total per head and day	.....	.....	74.1	108	77	594	

BILL OF FARE—Continued.

Ninth Day.

AMOUNT OF FOOD.	Amount in grams.	Price per kilo or liter or pfennigs.	Price of the amount indicated in pfennigs.	AMOUNT OF— Protein—grams.	Fats—grams.	Carbohydrates—grams.	
Sausage	300	160	48	35	34	78	*Dinner.*—Sausage and lentils.
Lentils	500	50	25	125	10	250	
Vinegar	.....	.....	3	.....	.....	.....	
Curd	250	40	10	43	8	7	*Supper.*—Potatoes & curd.
Potatoes	2,500	7	17.5	50	3	500	
	.....	.....	103.5	253	55	835	
Per head	.....	.....	34.5	84	18	278	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	73.3	137	57	657	

Tenth Day.

Liver and lungs	500	80	40	97	27	10	*Dinner.*—Liver with potato salad.
Lard	40	1.70	6.8	.....	36	.....	
Wheat rolls	156	.....	6	6	1.5	78	
Flour	40	40	1.6	4	0.5	28	
Onions	50	10	0.5	1	.....	4	
Pepper and vegetables	60	.....	1.6	.....	.....	.....	
Potatoes	2,500	7	17.5	50	2.5	500	
Vinegar and oil	.....	.....	5	.....	.....	.....	
Cheese	300	50	15	120	21	.....	*Supper.*—Cheese & beer.
	.....	.....	94.0	278	88.5	620	
Per head	.....	.....	31.3	93	29	207	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	70.1	146	68	586	

Eleventh Day.

Beefsteak	400	160	64	88	20	.....	*Dinner.*—Beefsteak with cabbage and potatoes.
Lard	60	170	10	.....	57	.....	
Red cabbage	1,000	15	15	18	2	70	
Potatoes	1,500	7	10.5	30	1	300	
Bread	300	24	7	18	3	150	*Supper.*—Bread and milk soup.
Skimmed milk	1,500	8	12	45	7	60	
	.....	.....	118.5	199	90	580	
Per head	.....	.....	39.5	63	30	193	
For breakfast, lunch, etc.	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	78.3	116	69	572	

BILL OF FARE—Continued.

Twelfth Day.

AMOUNT OF FOOD.	Amount in grams.	Price per kilo or liter in pfennigs.	Price of the amount indicated in pfennigs.	AMOUNT OF— Protein—grams.	Fats—grams.	Carbohydrates—grams.	
Three herrings	260	* 7	21	52	32	5	*Dinner.*—Herring, potatoes and beer.
Potatoes	3,000	7	21	60	3	600	
Skimmed milk	1,000	8	8	30	4	40	
Flour	50	40	2	5	0.5	35	
Onions	50	10	0.5	1	0.5	3	
Lard	50	170	8.5	.....	47	.....	
Spices	.....	.....	1.5	.....	.....	.....	
"Fleischgemuese"	125	200	25	40	22	46	*Supper*—Meat and vegetable soup.
	.....	.....	87.5	188	109.0	729	
Per head	.....	.....	29.2	63	36	243	
For breakfast, lunch, etc	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	68.0	116	75	622	

Thirteenth Day.

Pork	500	130	65	67	60	.....	*Dinner.*—Pork with white cabbage and potatoes.
Cabbage	1,000	10	10	20	1	66	
Potatoes	2,000	7	14	40	2	400	
Lard	50	170	8.5	.....	47	.....	
Cheese	300	50	15	120	21	.....	*Supper.*—Cheese & beer.
	.....	.....	112.5	247	131	466	
Per head	.....	.....	37.5	82	44	155	
For breakfast, lunch, etc	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	76.3	135	83	534	

Fourteenth Day.

Liver	500	100	50	175	15	.....	*Dinner.*—Liver with vegetables, potatoes and beer.
Spinach	1,000	15	15	20	2	60	
Potatoes	2,000	7	14	40	2	400	
Fat	80	130	10	.....	75	.... .	
Oatmeal	150	60	9	23	9	96	*Supper.*—Oatmeal in buttermilk.
Buttermilk	1,000	6	6	34	10	10	
	.....	.....	104	292	113	566	
Per head	.....	.....	35	97	38	189	
For breakfast, lunch, etc	.....	.....	38.8	53	39	379	
Total per head and day	.....	.....	73.8	150	77	568	

RATIONS OF COMMON FOOD-MATERIALS ESTIMATED TO CONTAIN THE AMOUNTS OF NUTRITIVE INGREDIENTS IN THE STANDARD RATION, WITH COST OF EACH.

The following rations have been calculated by my assistant, Mr. Rockwood, mostly from results of analyses made in our laboratory in behalf of the Smithsonian Institution (U. S. National Museum) as a basis for explanations of its food collection. No other considerable series of analyses of American food-materials has, so far as I am aware, been executed; hence, though the data are meagre they are the best avail-

* At seven pfennigs each.

able. They are probably not far out of the way. Mr. Rockwood has endeavored to construct one series of rations at a very low cost, eleven or twelve cents a day or thereabouts, and another series at higher rates, up to forty-five cents a day. Of course, it is not proposed that any person or family should attempt to follow these exactly. For that matter the chemist will evidently have to consult the cook if he proposes to construct dietaries to accord with ordinary tastes. The rations will, nevertheless, help to show how foods may be economized, and what proportions would suffice for the nourishment of ordinary people, and what are the constituents and costs of the different materials. They are estimated to supply very nearly the amounts of nutrients in Voit's standard ration for a laboring man at moderate work.

DAILY RATIONS COMPUTED TO FURNISH NUTRIENTS EQUIVALENT TO THOSE OF STANDARD FOR LABORING MAN AT MODERATE WORK.

Standard ration—Protein (118 grams), 0.26 lb.; fats (56 grams), 0.12 lb.; carbohydrates (500 grams), 1.10 lbs.

A.—DAILY RATIONS COSTING TWELVE CENTS OR LESS.

FOOD-MATERIALS.			FOOD-MATERIALS.		
KINDS.	Amounts	Costs.	KINDS.	Amounts	Costs.
No. 1.			*No. 6.*		
Beef, neck	½ lb.	4 cts.	Smoked herring	½ lb.	3 cts.
Beans	¼ "	¾ "	Potatoes	1 "	1 "
Potatoes	2 "	2 "	Beans	¼ "	1½ "
Oatmeal	¼ "	1¼ "	Wheat flour	1 "	4 "
Butter	¾ oz.	1½ "	Butter	1-16 "	2 "
Rye flour	½ lb.	1¼ "			
Total	.....	10¾ cts.	Total	.....	11½ cts.
No. 2.			*No. 7, for 3 men.*		
Beef, shin	½ lb.	3 cts.	Beef, neck	½ lb.	4 cts.
Oatmeal	½ "	2½ "	Beef, shin	½ "	3 "
Corn meal	½ "	1 "	Alewives	1 "	3 "
Milk, ½ pint	½ "	2 "	Beans	¼ "	¾ "
Potatoes	1 "	1 "	Milk, ½ pint	½ "	2 "
Butter	1 oz.	2 "	Rye flour	½ "	1¼ "
			Wheat flour	½ "	2 "
Total	.....	11½ cts.	Oatmeal	¾ "	3¾ "
No. 3.			Corn meal	1 "	3 "
Herring	½ lb.	3 cts.	Potatoes	5 "	5 "
Oatmeal	¼ "	1¼ "	Butter	2¾ oz.	5½ "
Potatoes	1 "	1 "			
Wheat flour	1 "	4 "	Total for 3 men	.....	33¼ cts.
Butter	1-16 "	2 "	" " 1 man	.....	11 "
Total	.....	11¼ cts.	*No. 8, for 4 men.*		
No. 4.			Beef, neck	½ lb.	4 cts.
Beef, shin	½ lb.	3 cts.	Beef, shin	½ "	3 "
Potatoes	3 "	3 "	Rye flour	½ "	1¼ "
Wheat flour	½ "	2 "	Sugar	1½ oz.	1 "
Beans	⅛ "	¾ "	Oatmeal	½ lb.	2½ "
Butter	1-16 "	2 "	Herring	1 "	6 "
Sugar	1 oz.	1 "	Beans	10 oz.	2⅝ "
			Wheat flour	2½ lb.	1[illegible] "
Total	.....	11¾ cts.	Potatoes	7 "	7 "
No. 5.			Butter	3¾ oz.	7¼ "
Alewives	1 lb.	3 cts.	Total for 4 men	.....	44⅝ cts.
Potatoes	2 "	2 "	" " 1 man	.....	11⅞ "
Corn meal	½ "	1½ "			
Wheat flour	½ "	2 "			
Butter	1-16 "	2 "			
Total	.....	1 ½ cts.			

B.—DAILY RATIONS COSTING FROM 12 TO 15 CENTS.

FOOD-MATERIALS.		
KINDS.	Amounts	Costs.
No. 9.		
Liver	½ lb.	5 cts.
Potatoes	1 "	1 "
Butter	1-16 "	2 "
Corn meal	1 "	3 "
Bread	½ "	3 "
Total	.....	14 cts.
No. 10.		
Beef, shin	½ lb.	3 cts.
Bread	½ "	2½ "
Potatoes	1 "	1 "
Oatmeal	¼ "	1¼ "
Corn meal	½ "	1½ "
Butter	1-16 "	2 "
Sugar	1-32 "	¼ "
Milk	¼ "	2 "
Total	.....	13½ cts.
No. 11.		
Salt cod	½ lb.	3½ cts.
Oatmeal	½ "	2½ "
Corn meal	½ "	1 "
Milk	½ "	2 "
Butter	1 oz.	2 "
Potatoes	2 lbs.	2 "
Total	.....	13 cts.
No. 12.		
Pork	⅛ lb.	2 cts.
Beans	¼ "	1¼ "
Salt cod	¼ "	2 "
Potatoes	1½ lbs.	1½ "
Bread	1¼ "	6 "
Total	.....	12¾ cts.
No. 13.		
Salt codfish	½ lb.	3½ cts.
Salt pork	⅛ "	2 "
Crackers (pilot)	1 "	5½ "
Peas	½ "	3 "
Total	.....	14 cts.

FOOD-MATERIALS.		
KINDS.	Amounts	Costs.
No, 14.		
Fresh mackerel	¾ lb.	4½ cts.
Potatoes	1 "	1 "
Cracked wheat	½ "	3 "
Corn meal	½ "	1½ "
Beans	½ "	3¾ "
Butter	1 oz.	2 "
Total	.....	12¾ cts.
No. 15.		
Beef, neck	½ lb.	4 cts.
Potatoes	1 "	1 "
Corn meal	½ "	1½ "
Rye bread	1 "	4 "
Butter	1 oz.	2 "
Total	.....	12½ cts.
No. 16, for 3 men.		
Liver	½ lb.	5 cts.
Beef, shin (soup)	½ "	3 "
Salt codfish	½ "	3½ "
Salt pork	2 oz.	2 "
Crackers (pilot)	1 lb.	5½ "
Peas	½ "	3 "
Sugar	½ oz.	¼ "
Milk	½ lb.	2 "
Oatmeal	½ "	1¼ "
Potatoes	2 lbs.	2 "
Bread	1 "	6 "
Butter	2 oz.	4 "
Corn meal	1½ lb.	4½ "
Total for 3 men	.....	42 cts.
" " 1 man	.....	14 "
No. 17, for 4 men.		
Beef, shin	½ lb.	3 cts.
Fresh mackerel	¾ "	4½ "
Salt cod	¾ "	5½ "
Pork	2 oz.	2 "
Beans	½ lb.	1½ "
Wheat bread	1⅜ "	8½ "
Cracked wheat	½ "	3 "
Corn meal	1½ "	4½ "
Oatmeal	¾ "	4 "
Butter	3 oz.	6 "
Milk	¾ lb.	4 "
Potatoes	5½ "	5½ "
Sugar	½ oz.	¼ "
Total for 4 men	.....	52¼ cts.
" " 1 man	.....	13 "

C.—DAILY RATIONS COSTING FROM FIFTEEN TO TWENTY CENTS.

FOOD-MATERIALS.		
KINDS.	Amounts.	Costs.
No. 18.		
Beef, neck	¼ lb.	2 cts.
Salt cod	¼ "	1½ "
Potatoes	1 "	1 "
Bread	½ "	3 "
Cabbage	2 oz.	¼ "
Turnips	2 "	⅛ "
Carrots	2 "	⅛ "
Oatmeal	2 "	⅝ "
Milk, 1 pint	1 lb.	3½ "
Rice	2 oz.	1⅛ "
Sugar	2 "	1¼ "
Corn meal	¼ lb.	¾ "
Soda crackers	1 oz.	¾ "
Butter	1 "	2 "
Total	.....	18 cts.
No. 19.		
Round steak	½ lb.	8 cts.
Milk	½ "	2 "
Butter	1 oz.	2 "
Cheese	1 "	1 "
Bread	½ lb.	2½ "
Potatoes	1½ lbs.	1½ "
Sugar	1½ oz.	1 "
Turnips	½ lb.	½ "
Corn meal	⅛ "	1 "
Total	.....	19½ cts.
No. 20.		
Beef, shin	¼ lb.	1½ cts.
Fresh cod	½ "	4 "
Oatmeal	⅛ "	½ "
Bread	½ "	3 "
Butter	1 oz.	2 "
Potatoes	1 lb.	1 "
Boston crackers	2 oz.	1¼ "
Milk, ½ pint	½ lb.	1½ "
Corn meal	½ "	1½ "
Total	.....	16¼ cts.
No. 21.		
Beef, neck	½ lb.	4½ cts.
Milk	½ "	2 "
Cheese	1 oz.	1 "
Bread	1 lb.	5 "
Potatoes	2 "	2 "
Sugar	1½ oz.	1 "
Total	.....	15½ cts.
No. 22.		
Pork	½ oz.	½ cts.
Beans	3 "	2 "
Fresh cod	½ lb.	3½ "
Potatoes	1½ lbs.	1½ "
Rye bread	1 "	4 "
Butter	1 oz.	2 "
Sugar	2 "	1½ "
Milk	1 lb.	3½ "
Total	.....	18½ cts.

FOOD-MATERIALS.		
KINDS.	Amounts.	Costs.
No. 23, for 3 men.		
Round steak	½ lb.	9 cts.
Beef, neck	½ "	2 "
Fresh haddock	½ "	3½ "
Salt cod	½ "	1½ "
Fat pork	¼ oz.	½ "
Beans	3 "	2 "
Milk	2½ lbs.	9 "
Cheese	1 oz.	1 "
Butter	3 "	6 "
Wheat bread	1 lb.	5 "
Rye bread	1 "	4 "
Soda crackers	1 oz.	¾ "
Oatmeal	2 "	⅝ "
Corn meal	7-12 lb.	1¾ "
Rice	2 oz.	1⅛ "
Carrots	2 "	⅛ "
Turnips	10 "	⅝ "
Potatoes	4 lbs.	4 "
Cabbage	2 oz.	¼ "
Sugar	5½ "	3½ "
Total for 3 men	.....	46¼ cts.
" " 1 man	.....	15 "
No. 24, for 3 men.		
Round steak	½ lb.	9 cts.
Beef, shin (soup)	¼ "	1½ "
Fat pork	1 oz.	1 "
Fresh cod	½ lb.	4 "
Cheese	1 oz.	1 "
Milk	1 lb.	3½ "
Beans	½ "	5 "
Peas	½ "	2½ "
Wheat bread	1½ "	7½ "
Rye bread	½ "	2 "
Boston crackers	2 oz.	1¼ "
Oatmeal	2 "	½ "
Corn meal	5-6 lb.	2½ "
Potatoes	2½ "	2½ "
Turnips	½ "	½ "
Butter	3 oz.	6 "
Sugar	3½ "	2¼ "
Total for 3 men	.....	53½ cts.
" " 1 man	.....	18 "
No 25, for 4 men.		
Round steak	½ lb.	9 cts.
Beef, shin (soup)	½ "	1½ "
Beef, neck	¼ "	2 "
Fresh cod	1 "	8 "
Salt cod	½ "	1½ "
Pork	½ oz.	½ "
Beans	½ lb.	5 "
Wheat bread	1½ "	8 "
Rye bread	1 "	4 "
Boston crackers	2 oz.	1¼ "
Soda crackers	1 "	¾ "
Oatmeal	1 lb.	5 "
Corn meal	¾ "	2¾ "
Rice	2 oz.	1½ "
Potatoes	5½ lbs.	5½ "
Cabbage	2 oz.	½ "
Turnips	2 "	¼ "
Carrots	2 "	⅛ "
Butter	3 "	6 "
Milk	2½ lbs.	7½ "
Sugar	3½ oz.	2¼ "
Total for 4 men	.....	71⅝ cts.
" " 1 man	.....	18 "

D.—DAILY RATIONS COSTING FROM TWENTY TO FORTY-FIVE CENTS.

FOOD-MATERIALS.			FOOD-MATERIALS.		
KINDS.	Amounts	Costs.	KINDS.	Amounts.	Costs.
No. 26.			*No. 29.*		
Beef (soup)	¾ lb.	6 cts.	Mutton, leg	¼ lb.	4 cts.
Potatoes	1 "	1 "	Oysters	½ "	10 "
Bread	½ "	3 "	Peas	⅛ "	1¼ "
Cabbage	2 oz.	¼ "	Potatoes	1 "	1 "
Turnips	2 "	⅛ "	Oatmeal	¼ "	1 "
Carrots	2 "	⅛ "	Rice	½ "	2½ "
Oatmeal	2 "	⅝ "	Bread	¼ "	3 "
Milk	1 lb.	3½ "	Oyster crackers	½ "	3 "
Rice	2 oz.	1⅛ "	Butter	1¼ oz.	3 "
Sugar	2 "	1¼ "	Total	.....	28¾ cts.
Corn meal	¼ lb.	¾ "	*No. 30.*		
Soda crackers	2 oz.	¾ "	Turkey	½ lb.	18 cts.
Butter	1 "	2 "	Fresh pork	2 oz.	1⅝ "
Total	.....	20½ cts.	Hominy	½ lb.	2 "
No. 27.			Potatoes	1 "	1 "
Shad	¼ lb.	4 cts.	Beans	¼ "	1½ "
Eggs	¼ "	4 "	Rye bread	½ "	3 "
Oatmeal	2 oz.	⅝ "	Milk	1 "	3½ "
Rice	2 "	1⅛ "	Total	.....	30⅝ cts.
Beans	¼ lb.	1½ "	*No. 31.*		
Bread	½ "	3 "	Beef, sirloin	¼ lb.	5 cts.
Potatoes	1 "	1 "	Potatoes	½ "	3 "
Soda crackers	¼ "	2½ "	Bread	1 "	6 "
Sugar	2 oz.	1¼ "	Butter	1 oz.	2 "
Butter	1 "	2 "	Sugar	¼ lb.	2½ "
Total	.....	21⅜ cts.	Beans	¼ "	2½ "
No. 28.			Skimmed milk	1 "	2 "
Beef, round	¼ lb.	4¼ cts.	Oysters	½ "	20 "
Shad	¼ "	4 "	Total	.....	43 cts.
Peas	½ "	2½ "	*No. 32.*		
Potatoes	¼ "	½ "	Salmon	¼ lb.	10 cts.
Cauliflower	½ "	6 "	Beef, sirloin	¼ "	5 "
Rice	½ "	3 "	Oysters	½ "	10 "
Oyster crackers	¼ "	5 "	Dried beef	1 oz.	1 "
Sugar	½ "	2½ "	Wheat bread	½ lb.	3 "
Butter	¼ "	2 "	Oatmeal	2 oz.	⅝ "
Total	.....	29¾ cts.	Rice	2 "	1½ "
			Potatoes	½ lb.	½ "
			Sweet potatoes	1 "	6 "
			Cabbage	2 oz.	¼ "
			Turnips	2 "	⅛ "
			Butter	2 "	2 "
			Milk	1 lb.	3½ "
			Sugar	2 oz.	1½ "
			Total	.....	45 cts.

[Since the delivery of the above address, Hon. Carroll D. Wright, the President of the Convention, has asked me in what form the statistics of dietaries of the people would be most valuable as data for determining the actual amounts of nutritive material consumed. The following brief statement suggests some points in answer to this question.

If the pecuniary cost of the dietary is the only or the principal matter to be considered, the statement of the total amounts of meats, vegetables, and other food-materials purchased may suffice. If, however, it be desired to determine the actual nutritive value of the dietary, and with this to answer the question whether the amounts of the several classes of nutrients, protein, fats and carbohydrates, are insufficient, excessive

or properly adapted to the needs of the consumer, the statements should be of such sort as to permit a reasonably accurate estimate of the actual amounts of nutrients in the food. It is likewise important to know whether all the food is actually eaten, or whether a part of it is wasted.

It is accordingly essential that the amounts of each of the food-materials should be stated in pounds. The legal bushel for certain articles may have one weight in one State, and a different weight in another State. When a chemist is told that the dietary includes so many bunches of onions or cans of corn, though he may know the average composition of corn and onions as they ordinarily grow, he is at a loss to tell how much of the nutritive materials the dietary contained, because of this lack of definiteness in the statement of the amounts of materials. If the statement is made that a family consumed so many pounds of beef in a year, he is again unable to estimate the amounts of nutrients it contained, because there are such wide differences in the composition of beef of various kinds, and espectally in the portions or "cuts," as the butchers call them, from the different parts of the same animal. A glance at the tables of composition of food-materials given in the address above will illustrate this point. I have been much perplexed in some attempts toward calculating the nutritive materials in dietaries from the fact that the amounts and kinds of materials are not stated with such definiteness as to permit an at all satisfactory estimate of their composition. In brief, if it is desired to ascertain the actual dietetic value of the food, or its fitness for the needs of the consumer, or if we seek an answer to the question as to whether it contains nutrients in proper amounts and proportions, and how it might be altered so as to make it better for his nourishment or for his purse, the weight of each food material, and as complete a description as possible of each article, should be given. That an accurate estimate of any given dietary is possible even with data in the form suggested is, of course, not to be assumed. The only way to determine the exact amount of nutrients is to analyze the food actually cousumed. But if the statistician's figures and descriptions are reasonably accurate and detailed, an at least approximate calculation of the composition is possible.]

CHAPTER III.

WHAT THE WORKINGMEN THINK.

REMARKS AND SUGGESTIONS BY INDIVIDUAL EMPLOYES AND OTHERS, IN REPLY TO QUESTIONS NUMBERS 27 AND 28, BLANK NUMBER 3.

BOTTLE AND VIAL GLASS BLOWERS: MILLVILLE.—"The causes that lead to financial embarrassment in my trade are the result of immoral habits among the workmen themselves, such as drink, and the desire to live beyond the sphere their wages will allow. In this way they exhaust their earnings and neglect their duties to their families. The great need is education and a higher and better knowledge of our rights and privileges." "Prohibition of the liquor traffic would greatly improve the condition of glass blowers as a body. Great advance has been made in this respect within a few years, but there is room for greater improvement still." "Selfishness is the great hindrance to the progress of the working people; too many look out, as they call it, for No. 1. To accomplish anything of consequence for the improvement and elevation of the working people there must be a sacrifice of self." "Glass blowers' opportunities, in early life, for education have been very limited, but night schools accomplished much for them nevertheless. The League has done a great deal in the way of practical education by bringing the intellectual powers into active exercise, and has given to the members opportunities to familiarize themselves with matters that pertain to their occupation. This has been of great advantage in securing a better rate of wages, so that it is the boast of our members that we have for the past four or five years been paid the highest rate possible under the wage system and the existing conditions of trade. The profits of employers have been reduced to the minimum, and the only hope for an increase must come by co-operation, under which the whole of the profits will be secured to the workers." "Rum is a great curse to glass blowers. I hope to see the day when it will be placed where it properly belongs, that is, on the top shelf in the drug store, labeled *poison*."

CLAYTON.—"Among the other institutions of reform, we are largely indebted to Sunday schools for improvements in the morals of the working classes."

GLASSBORO.—"We have in our trade men who are intellectually equal to any in the professions; but as a rule we are deficient in education. What we want is better opportunities for education." "The moral condition of glass blowers, generally, is above the average so far as this State is concerned." "If glass blowers would practice temperance to a greater extent it would vastly improve them. Entire prohibition of the liquor traffic would be a good thing, more so than anything else at present." "The financial state of glass blowers is improving; many of them own their own homes, and many more have savings invested."

WOODBURY.—"A strict enforcement of the Child Labor law, with compulsory attendance at school at least three months in the year of all under sixteen years of age." "The glass blowers, as a rule, are sober, industrious men, but some of them are addicted to drink; for the sake of their families the liquor traffic should be abolished by prohibition." "An eight-hour law would benefit us."

SALEM.—"The glass blowers are intelligent, but few have had the advantage of even a common school education, being deprived of the opportunity by early apprenticeship." "Shorter hours of labor and more time for recreation." "Trades unions to be prosperous should see that the members strictly obey the laws." "I hope to see the wage system superseded by co-operation." "Stopping the sale of rum would vastly improve the trade."

WILLIAMSTOWN.—"My opinion, after carefully studying the condition of our trade and the amount of money we spend in strikes to maintain wages, is that it would be better, when the employers are not willing to allow us a fair share of the profits, to use our money by starting business on our own account under the direction of the Glass Blowers' League. Twenty thousand dollars used in this way would be more effectual in a strike than to eat it up through idleness. I am opposed to strikes for the reason that they cost too much, but I do not see how they are to be avoided at times, so I believe the best there is to adopt the plan here suggested; and even though the strike fails, our money will not be wasted." "Industrial schools for our children would be a great benefit."

WINSLOW.—"The proper training of our children will greatly improve their future condition. I believe with our present free schools, they have a far better future before them than ours has been." "The temperance reform is doing a great work for the wage-workers."

WILTON.—"Wages were withheld during the blast by the employer, who failed, as I believe, through his own neglect of business, and the workmen will lose heavily by his failure. The law should compel employers to pay wages in full once every week." "The law should make it criminal for employers not to pay the workmen their wages." "There should be a law to compel the payment of wages in full, in cases of failure. We have worked for a year and now have to lose all we have saved." "The firm has failed, and they owe me $400, which I have worked hard for; there should be some way to compel the payment of wages." "Weekly or, at least, monthly payment of wages in full, would greatly benefit the working people here." "The workmen should take into consideration the subject of co-operation, not stock concerns; the two are very different; the former has the educational feature, which workmen need for success."

FLINT GLASS BLOWERS: MILLVILLE.—"We are fully up to the best of wage workers." "We have made our condition by organized effort." "The education of our children is the foundation for the future prosperity of the workingmen, and in this way we are making rapid progress." "Have not given much attention to these things, but think our elevation lies in education." "Workingmen's institutes, libraries and technical schools are among the means to elevate the laboring classes."

LAMP WORKERS: MILLVILLE.—"In Bohemia they make large quantities of the goods, and produce in private families, in addition to their regular work. This Bohemian glassware is brought to this country and sold at very low rates, which is a great injury to our trade of lamp work, by which many fancy articles of great beauty are made." "The condition of the workers in flint-glass has been much improved

financially, intellectually and morally by organization, and the process is still going on. What we need now is a more extended sphere of organized work, so that all of the operatives in the flint and all other glass industries shall be in a condition to receive the benefits of organized labor. The education of the young is now occupying a great deal of attention, and the next few years will show marked advantages among us in this respect." "The intelligence and morals of the hands at these works are of a very high order. There is little drinking, and many own their own houses. Although the blowers are governed by their organization, they seldom come into conflict with their employers. It is probable that the wages are the best the business affords. The organization extends throughout the country and takes in all kinds of blowers, as well as the pressers and mould makers. Not only are the wages regulated, but also the quantity produced, and no blower is allowed to make more than six dollars per day."

WINDOW GLASS WORKERS: MILLVILLE.—"We are improving rapidly." "What we need is a thorough organization with all the wage-workers of the world, or so confederated that we can control the wages in all countries." "Having fixed and maintained our wages through organized effort is a proof of ability to intelligently control our own affairs."

BRIDGETON.—"The morals of the working classes are better than the so-called higher classes."

MALAGA.—"The proper enforcement of our present labor laws would do much to improve our condition and that of our families." "Public libraries should be established in every town; we need one here." "Arbitration, as taught by our organization, is one of the best means to settle difference between capital and labor." "The young in our families are being better educated, and our trade is benefited thereby." "We are now amongst the foremost trades in the labor movement, and most of our difficulties with employers are settled by friendly conferences through committees." "There are some among us who are not as moral as they should be, but the majority of window-glass workers are good men, moral and religious." "The window-glass workers, as a class, are moral and intelligent; are also gaining financially." "The window-glass workers generally are sober, industrious and intelligent men; rum is the curse of the few; we hope to see it entirely prohibited at no distant day."

GATHERER.—"The condition of working people has been vastly improved within a few years; our trade, in particular, is upon a higher standard than ever before."

FLATTENER.—"There are men in our ranks who are as competent to determine what is to our interest, and who are actuated by as high and noble purposes as any other class in society." "A reduction of the hours of labor to eight or nine per day, the abolition of all child labor, and that of young persons, both male and female, under a given age, in factories, will make room for many of our unemployed men, young and old. So will a law to compel all employers to see that young persons in their employ attend school a certain number of hours each day, or week, as well as to forbid the employment of such young person without a certificate of age and of attendance at school the required period. A more stringent law for the protection of workmen against accident, when caused by the negligence of employers, managers or their servants, would, I am sure, prevent much of the loss of life and limb caused by the insecure guarding of machinery and like causes."

GLASS CUTTER: MALAGA.—"We owe much of our intellectual, moral and finan-

cial prosperity to organization." "Prohibition and compulsory education." "Our financial condition, if measured by our bank account, is low; still we are comfortable in our circumstances."

MOULD MAKERS: CLAYTON.—"The various secret and beneficial societies have exerted a good influence among workmen and their families, and have been of great advantage in an educational sense."

MILLVILLE.—Stop foreign immigration by placing a tariff of $1,000 upon any person coming here to engage in any pursuit tending to cheapen our wages; establish the eight-hour system; give us eight hours for work, eight hours for sleep, and eight hours for recreation and study; enforce the child labor laws." "Eight hours for a day's work; restrict immigration by a tariff of $1,000; enforce the child labor laws." "Laws that will give to the children a better education, and the encouragement of trade and labor unions."

STOPPER GRINDERS: MILLVILLE.—"The physical condition of the working people here is not attended to. Gymnasium exercises would greatly improve them in this respect." "The improvement of our financial condition has had its effect, and raised the working people in the intellectual scale." "Good wages are the foundation of all prosperity to the working people; as wages increase, their condition intellectually and morally is improved." "The condition of the laboring classes must be improved by legislation; this must be effected within party lines."

POT MAKERS: WILLIAMSTOWN.—"The prohibition of the sale of liquor, and compulsory education."

CLAYTON.—"At no former time have the working classes stood so high as at present."

BOX MAKERS.—"Co-operative factories would improve our condition." "Night schools have been of great benefit to the working classes in this city, but something more is needed to educate our children, too. Many of our working people cannot live without the help of their children, so they cannot send them to school in the day time. Wages should be high enough to enable the head of the family to provide a living without putting the children to work under fifteen years of age." "Fewer hours of work would give employment to more workmen and have a tendency to raise wages."

PACKERS.—"The dissipation and extravagance of the people keep the working people down." "Glass packers' condition could be improved financially by an advance of wages; physically, by cleaner and better hay used in packing; intellectually, by shorter hours of labor, and thus giving more time for self-improvement; and morally, mainly through their own exertions."

MASTER SHEARERS.—"Eight hours for a day's work would give more time for improvement, and a large number would employ it in that way. Because some would abuse the time gained in dissipation, is no argument against the law. Those who wish to improve themselves and families should have the chance to do so." "There is not enough attention given by the leading labor men to coöperation. We must come to this or go down in our wages." "Laboring people do not hold together as they should. They have not enough confidence in each other. Our condition will not improve much until this takes place." "There are many demagogues among us; we should get rid of them."

SHEARERS.—"We cannot all be tradesmen, but the laborer's lot is a hard one, on account of low wages." "Among the evils is that of Sabbath-breaking, which has become very common, and should not be tolerated." "There can be little done to

benefit unskilled laborers, unless means are devised to increase their wages; as it is now, it is a constant struggle to keep the wolf from the door."

ENGRAVERS ON GLASS.—"The social condition is generally what the family make it themselves; society usually takes the correct measure of individuals." "We have a trade organization, and are making progress intellectually."

GATHERERS.—"Compulsory education is the great need at present." "Increased facilities for popular education would benefit the condition of the working classes."

WATCHMEN.—"Much has been done in the few past years to improve the condition of wage-workers, and I think all that is necessary is to continue the progressive work a few years longer."

CIGAR MAKERS: JERSEY CITY.—"My complaint is an old one; abolish the tenement house system of cigar making and there will be plenty of work." Abolish cheap labor in the State of Pennsylvania so as to give us plenty of work." Abolishment of the tenement-house system would be beneficial to cigar makers; it would help to increase their wages." "Abolish child labor, which, I regret to say, exists to a great extent in many States."

PATERSON.—"I would favor a law compelling all business transactions to be done for cash, and abolish the credit system. I would have the child labor laws enforced; children are occupying the places of adult labor here. All cigar makers are trades union men and wages are good, all receiving the same rates. As a rule, the men have had some advantages of education, and are generally good men. A few are addicted to drink, which is degrading them. Could we overcome this evil we would be better off. Generally, wage workers in Paterson are poorly paid and are poorly educated. The only way that I can see to improve their condition is to organize them. What little education I have got has come mostly from that source."

IRON WORKERS: PATERSON.—"The locomotive works in Paterson, at one time employing 3,500 men, has not given work to 500 during the last year and a half. The men seem to be ashamed to tell how much they actually make and how they manage to exist. Many of the iron workers, machinists, blacksmiths, &c., could be seen around the city hose house during the summer trying to get a few weeks' work on the streets at $1.25 per day. But there were always four times more than was necessary. It was a common thing to have the policemen keep the crowds back." "Co-operation will be our only relief."

MILLVILLE.—"Prohibition of the liquor traffic." "Soft money."

NEW BRUNSWICK.—"If we had had unity and organization we would not have had a 'cut' of ten per cent. in this shop."

FLORENCE.—"Prohibition and a high tariff." "Our financial condition is better than formerly; still not what it should be."

JERSEY CITY.—"Stop immigration for ten years."

BURLINGTON.—"I have no complaint to make. We are doing fairly and our condition is improving." "Public libraries and reading rooms."

CAMDEN.—"We are doing very well."

WIRE DRAWER: TRENTON.—"Shorten the hours. In our establishment we are put at night work during the busy period."

NAILERS: BRIDGETON.—"We are now organized and the future will be better for us than the past has been." "We are much improved intellectually, but our financial condition is at a low ebb."

Notwithstanding the long and bitter strike of the Bridgeton nail workers, at pres-

ent the best of feeling exists between them and the superintendent of the "works," as the following extract from a local newspaper (November) will show:

"To-day the workmen of the nail works, Bridgeton, get an advance of 5 per cent. on their wages. This advance of wages is entirely voluntary on the part of the company and shows that there is a far better feeling existing between employer and employe than formerly. It also proves that workmen, even when organized, are not disposed to push for advanced wages when an opportunity occurs until it is very certain that they are being unfairly dealt with. The course that this company seems to have adopted in dealing with their hands is very creditable to them, and, as a business matter, we think, will prove a wise one. It is a very unusual proceeding for manufacturers and other employers to voluntarily advance wages, and we can recall but very few instances of this kind. We believe it would be to their interest to do so whenever the state of the market will warrant their making such advance. By so doing the hands would be inspired with confidence in the business transactions of the firm with the former, and they (the hands) would feel that employer and employe had a unity of interest. Employers who follow the course now pursued by this Bridgeton company need never fear any trouble with their workmen. We hope that the example set by this large company will be followed by many others."

In reply to this, the following communication from "an old workman" appeared in the same newspaper of a later date:

"I notice in the letter of your Millville correspondent an allusion to the recent advance of five per cent. to the employes of the iron works, in which he says that this advance is entirely voluntary on the part of the company, and shows that there is a better feeling existing between employer and employe *than formerly*. As an old employe of this firm, allow me to say in reply that I believe it has always been the policy of the proprietors to advance wages without waiting for the men to ask for it, and when the prices of nails and pipe went up the wages followed.

"I give you below the advances that were made since 1879, every one of which came before we asked for them, and some before they were expected. In the words of your Millville scribe, the advances were entirely voluntary on the part of the Cumberland Nail and Iron Company:

	Advance
September 1st, 1879	5 per cent.
October 3d, 1879	10 " "
February 2d, 1880	10 " "
March, 1880	10 " "
April 5th, 1880	10 " "
December, 1881	10 " "
November 16th, 1885	5 " "

"There were reductions during this time, of course, but these advances show the policy is to advance wages promptly, when the market will stand it."

A gentleman, not himself one of the strikers, sent the Bureau the following information on the subject:

"At the time of the strike the wages of heaters were $2; of puddlers, $1.90, and of laborers, $1 per day. There had been four reductions of ten per cent. each during the previous two years. Individual efforts had been made for an increase, but always refused. The helpers attempted a strike two years ago, but it broke down. Nailers run three or four machines at an average of about $10 gross for each machine per week. A feeder tends to each machine and gets half of what the nailer makes—$5. If the nailer has three machines he thus nets $15 weekly. When the present management took possession of the works nineteen tons were considered a good day's work, but now twenty to twenty-four tons are turned out for each of the ten furnaces. Then the pay per ton was $4.50; now, $2 80. Nineteen tons at $4.50 would be $85.50, or $8.55 per furnace; two helpers being paid $1.75, and two forehands $2.50 each. Twenty-four tons at $2.80 would be $67.20, or $6.72 per furnace; pay of each of the two helpers, $1.25; each of the two forehands, $2.11. A reduction of ten per cent on the latter figures caused the strike, the success of which restored the $2.80 rate. The men are now in a good labor organization."

PHILLIPSBURG.—The following is a copy of an order posted in several conspicuous places in an establishment in Phillipsburg, N. J.:

"*To the employes of the Warren Foundry:*

"Whereas, Certain strangers have come to this neighborhood under the name of Knights of Labor, for the avowed purpose of organizing workingmen to act jointly, so as to control employers in their own business, and on their own premises, and whereas, some of the men employed by the Warren Foundry Company, either from want of right knowledge or right feeling, have allowed themselves to become members of the above organization: the undersigned, on behalf of the company, asks of you individually if one of you would employ a man to work for you, who not only required the market rate of pay for his work, but also required the right to control you in your own business and on your own premises. We do not believe there is one of you who would agree to, or permit such a thing to be practiced on you; but this is just the state of affairs that the so called Knights of Labor wish to have established here, and, as a means to that end, they propose, by the aid of secret combined action, to assume power to war on and injure the company, till the company will submit to their dictation.

"Now be it understood, this company will not submit to such unbusiness-like condition, but will reduce their business and the number of men under their employment to any extent that may be found necessary to enable them to control their business, on their own premises, as they may think proper, as long as they pay for the labor they buy.

"We therefore request every man who has joined the above organization, and wishes to continue in the employ of the Warren Foundry, to immediately free himself from a combination in hostility to the company and its business welfare.

"If there are any that are not willing to do so, we request them to leave our premises, as we prefer to have our enemies outside our works. Any one not willing to conform to the above requests, and persists in a hostile combination to the business interests of this company, and still seeking the benefits of its employment, will be summarily discharged, as it suits the interests of the company to do so.

"——— ———, *President*,
"——— ———, *Superintendent*.

"PHILLIPSBURG, N. J., April 7th, 1885."

FILE CUTTERS: WOODSIDE.—"Thirteen rasps to the dozen are required of me, while the firm sells but twelve." "Immigration has had no effect." "Not much." "Last year we lost eleven full weeks; then went on three-quarters time; then nine hours daily and at last on full time again. We lose too much time to make any headway." "We are compelled to loaf too much, and do not get enough pay. Our great grievance is that while our employers sell twelve files to the dozen, we are compelled to put in thirteen." "We are paid every two weeks; would prefer our wages every Saturday." "The following is the price list for finishing 'horse' rasps per dozen: 12 inch, 78 cents; 13 inch, 92 cents; 14 inch, $1.08; 15 inch, $1.22; 16 inch, $1.44; 18 inch, $1.98. One-quarter is taken off for over-cutting, and one-quarter is deducted for the edges, all of which is done by machinery. After this we get the following: 12 inch, 44 cents; 13 inch, 51 cents; 14 inch, 61 cents; 15 inch, 67 cents; 16 inch, 81 cents; 18 inch, 91½ cents. On this there is a percentage of 5, 10, 15, 20, 25, 30 and 32½ cents on the dollar, at present."

LOCKSMITH: NEWARK.—"I have, in former years, accumulated considerable, but now, with an experience of sixty years, cannot make a cent above expenses. If ministers are allowed to ride on half-fare rates and our higher functionaries, even those of the bench, furnished with free passes everywhere, how can we expect any improvement or justice? We, at least, should draw double pay for our service. The government has usurped its powers in delegating to banking corporations the privilege of issuing currency, and in granting to railroads and cattle barons the public lands."

TEAMSTER: RAHWAY.—"I have never studied the labor questions."

STONE CUTTER: NEWARK.—"Foreign contract labor has injured us. We want cheaper fare between Newark and New York, and transfer tickets on the Orange street line. The condition of our drinking-water is very bad."

HATTERS: PATERSON.—"Co-operation and education and, I think, government aid to enable people to reach the Western lands and thus relieve our cities from their surplus labor, would help to improve our condition. We are allowing ourselves to be robbed by the middlemen. In Paterson there are ten thousand families of working people, who earn in good times an average of $500 a year. That would make about $5,000,000 for all; and of this not less than nine per cent. is taken out of their pockets and put into those of the men who step in between producer and consumer. By co-operation we could save all that—enough to give four hundred and fifty a house at $1,000. In twenty-two years every family could be supplied with one. Owning their own houses, they could afford to save six dollars per month, and thus greatly increase the accumulated wealth of the nation as well as their own."

NEWARK.—"Abolish all State Prison work and have our shops in better and cleaner condition." "We have incompetent and tyrannical foremen who make unnecessary trouble."

ORANGE.—"I believe in less legislation for corporations and more for the people, and in the best educational facilities for our children. Totally opposed to convict contract labor, but want a protective tariff on all manufactured goods which can be produced in this country. Arbitration when practicable. Let there be organization of labor, but no strikes when they can be avoided. The child labor law should be enforced to the fullest extent." "If men could have steady employment and work by the day instead of on piece-work, and for only eight hours, they would be healthier and live longer, which is everybody's aim." "Reduce the number of years for which patent rights can be granted."

ORANGE VALLEY.—"If the duty were taken off on raw material, we would be better off, because we could then compete with foreign countries." "Imported labor injures us because the foreigners work for reduced wages." "It keeps us idle." "It makes too many hands for the work that is to be done." "It has ruined some of our shops by cutting the prices." "It has apparently had no effect." "It has helped to pull down wages and made employment uncertain."

COTTON AND WOOLEN MILLS EMPLOYES: CAMDEN.—"The mills should not work overtime." "Give us free reading rooms and shorter hours."

MILLVILLE.—"We will not be better off until our wages are largely increased. More time for ourselves." "Our wages are too low, and something should be done for the women, who have hard work to get a living." "A great deal must yet be done before women are protected in their rights."

PATERSON.—"Let the government aid the people in settling the public lands." "Eight hours." "An apprentice law."

RAHWAY.—"We are very poor." "Intellectually and morally, fair."

GLOUCESTER CITY.—"Two years ago the weavers in the gingham mills received 63 cents a cut of forty-five yards each, 20 cents being a beam. This was changed to 19 cents per beam, or forty seven yards to a cut, for which they received 60 cents. A year ago a further reduction of 10 per cent. was made; this was followed by another of 15 per cent. on November 1st. The loomfixers, who formerly received $13.50, were reduced in the same ratio, and began a strike which has become general. The strikers demand that the prices before the last reduction of 15 per cent. be restored."

NEWARK.—"Co-operation, fewer hours of labor and universal organization."

SEWING MACHINE EMPLOYES: ELIZABETH.—"Foreign labor cannot injure us, because even the Chinese would not work any cheaper." "Competition has reduced wages." "There is great need of some kind of evening classes in connection with large factories. The best ship building yards in Scotland have them. Prizes are given for improvement. Industrial exhibitions might also be held every year." "Nationalization of railways, telegraphs, &c.; abolition of the banking system." "More organization." "Some of the contractors in our works hire foreign labor and run out skilled labor." "Nearly all the work is done by machinery, and after a month's work a man will be as useful as he could with twenty years' experience." "The sanitary arrangements are bad, especially as to the position of the water-closets, which cause malaria and other ills. The Polish immigrants injure some of the departments." "Our drinking water is unfit to be drunk. The dust from the emery-grinding department pollutes our air and we have to breathe it sometimes for days together. Ventilators should be put up. The greatest of evils is the steam-heating." "Let us have co-operation, organization and shorter time for work." "Our drinking water is unfit for animals."

PAINTERS: PATERSON.—"Many of the foreigners work for $1 a day."

ORANGE.—"We are overrun with green hands from Castle Garden."

NEW BRUNSWICK.—"It is almost impossible to give an account of how much time we lose, as we have rain, cold weather, dust and everything to contend against."

PRINTERS: JERSEY CITY.—"The State printing should be done by the State and not given to employers of 'scabs.' Boys should not be allowed in a printing office, for they are injuring our trade, as they work for little or nothing." "Job printing is injured by amateurs, or boys, who buy a cheap hand-press and do cheap work." "More school room for our children." "Cheap labor from the West is the only kind that affects us." "Foreign labor does not materially injure us."

NEWARK.—"Do away with the 'subbing' business and piece-work." "Rum should be kept out of printers' reach."

PATERSON.—"Limit the amount of land which a single person can hold, and no one to be allowed to purchase unless he has declared his intention of citizenship; government ownership of telegraphs, railroads and telephones; interest to be gradually abolished. Let the people go into co-operative enterprises and government assist deserving persons to settle on public lands; eight hours for a legal day's work; enforcement of labor laws and abolishment of the national banking system."

POTTERS: TRENTON.—"Teach the workingmen to pull together; stop overtime and bring up the young better." "I would like to do away with the piece-price system; I believe it is an injury to my fellow-laborers." "Immigration of foreign labor has hurt us." "The promotion of good morals among the working classes is an important work. Employers are often thoughtless in that respect, but need only a healthy public sentiment to be brought to bear upon them. During an experience of twenty years, I never knew a single instance where the outhouses used by the employes, male and female, were located with any regard to privacy. They are only separate in name. These buildings should be placed on different parts of the premises, and as widely apart as possible. It would help morality a good deal."

CHINA DECORATOR: TRENTON.—"Nearly all foremen do well in wages, which rate from $18 to $60 per week. One foreman, being asked what he did for his wages: 'Don't I grind it out of the hands; that is what I am paid for.' The kilnman can

never know in the morning at what hour his day's work will be finished; it may be at 6 P. M., and it may not be until long after midnight. In the busy season, which is in the fall and early winter, to work until ten o'clock at night, four nights per week, is nothing unusual for women and girls."

BRICKLAYER: NEW BRUNSWICK.—"The men are poor, and only about twenty per cent. own their own houses." "Some of us cannot write our own names."

JERSEY CITY.—"Trade schools."

HOD CARRIER: NEWARK.—"It is a very dangerous occupation. We should have a law to protect us."

BOILER MAKER: ELIZABETH.—"The compulsory education act is a dead letter. Weekly payments; store books are a sort of robbery." "Land ownership should be limited to actual cultivation of the soil."

RUBBER WORKERS: NEW BRUNSWICK.—"Weekly payments and restriction of immigration." "Our condition is pretty fair." "Some are as poor as church mice." "The working class should organize for their protection, and by a unity of action seek to redress their grievances. Arbitration and legislation in their interest, so far as justice demands, will accomplish much." "Weekly payment of wages would be a God-send and worth ten per cent. increase."

ENGINEER: JERSEY CITY.—"All stationary engineers should be required to pass an examination."

CONDUCTOR.—"Railroad employes, as a class, are moral."

BRAKEMAN.—"It is very inconvenient to wait a month for wages, and sometimes longer."

FIREMEN.—"We are as bright as other laborers."

PEARL BUTTON MAKERS: NEWARK.—"Stop importation by a high tariff." "At present we must compete with Austrian convicts, and also with Vienna families, who work from 15 to 17 hours daily. If I had bought my own clothes I could not have lived at all." "The trade is in a demoralized condition. Many are out of work and spend half their time on the streets."

SHOEMAKER: CAMDEN.—"We should teach our children the respectability of labor, and not to seek clerkship and the like. Many a good mechanic has been spoiled by putting him in a place for which he is not fitted." "Too little attention is paid to our physical condition." "I am not a grumbler, but take a very hopeful view of the future." "A home of my own and an eight-hour day."

PATERSON.—"Abolish prison labor, which takes a good deal of work from the shoemakers."

VINELAND.—"Our organization, though not as perfect as it should be, is of great benefit." "We need a workingman's institute." "Laws to protect labor in all its branches; let it say what shall be the lowest price for a day's work."

NEWARK.—"Our condition here is fair, but it would be improved by organization." "So far as wages are concerned I have nothing to complain of, but it is the want of employment that leaves me and others in the streets for days together. Eight hours are long enough. Most workmen now have only time to get up, go to the shop and go to bed again." "Better sanitary regulations in our factories."

ORANGE.—"No convict labor. Eight hours for a day. Railroad fare should be cheaper, for the poor man cannot afford to buy a commuter's ticket. Enforce our health laws."

BLACKSMITH: NEWARK.—"Skilled labor ought to be paid by the hour."

BURLINGTON.—"A law regulating the apprentice system would benefit the trade." "The wage system must give way to the co-operation system."

BRIDGETON.—"The prohibitory system would be a great benefit."

CAMDEN.—"Low-priced labor does not make low-priced goods; the quality must be taken into consideration."

NEW BRUNSWICK.—"In a small town like this a temperance crusade would do more good than anything else."

CARPENTER: ORANGE.—"An apprenticeship law, which would compel boys to learn for a few years before going out to compete with the older men. Immigration only can benefit us." "Eight hours both in winter and summer would be better for us all—employer and employed." "We must have less hours or fewer apprentice boys."

JERSEY CITY HEIGHTS.—"Lower rent and more schools."

ELIZABETH.—"A man who first goes to work in our shop has to wait six weeks for pay. Let us have weekly payments."

TAILOR: NEW BRUNSWICK.—"Good, clean and well-ventilated workshops are a benefit, physically."

PATERSON.—"The house-work system makes us work thirteen hours daily; in the busy seasons we often work twenty hours. This would not be the case in work shops; nor would contagious diseases be so liable to be disseminated." "Shorter hours and more wages. We must pay for our own light and fuel. Regular work-shops would prevent a great deal of disease." "Organization." "Abolish tenement-house work."

BAKER: JERSEY CITY.—"The boss bakers go to Castle Garden for help. A shop should not be in a damp cellar. The sewer pipes should not run through the bake house. More factory inspectors."

BARBER: JERSEY CITY.—"We are as bad off as the street car conductors. The only time I see my children is at meals." "Italian cheap labor injures our trade."

SATCHEL MAKER: NEWARK.—"Want the socialistic platform adopted, or the great mass will always be slaves of the few rich." "We work the greater part of the year eight hours daily."

PLUMBER: NEWARK.—"Physically, we are generally healthy. We want better sanitary regulations and cheaper house rent." Tenement-houses should have better sanitary regulations."

JAPANNER: NEWARK.—"Sub-contract work should be abolished." "Fewer hours and more ventilation."

HARNESSMAKER: NEWARK.—"Total abolition of convict labor." "The prices paid are low, and only nine months' work. A man with a family cannot get along." "Prevent boys from coming into the factory."

CLERK: NEWARK.—"To be a clothing clerk is a hardship. The rent here is very high. A clerk gets $10 and $12 and up to $16 per week, although some of the inside ring receive a percentage. All, including the poorly-paid saleslady, have to be on their feet from 8 A. M. to 9 P. M., and on Saturdays till 11 P. M."

MINER: PORT ORAM.—"Foreign labor has not affected us directly."

BRASS FINISHER: NEWARK.—"Most foreigners work for one-third to one-half less than a man who has learned his trade in this country."

PATERSON.—"The deaths in our trade occur between twenty-three and thirty." "Regulate immigration."

PLASTERER: PATERSON.—"The condition of the people here is bad." "Do away with contract work."

PAPER STAINER: NEW BRUNSWICK.—"Less hours of daily work."

FELTER: CRANFORD.—"First enforce the present labor laws."

DRIVER: JERSEY CITY.—"Close stores up early and thus give us poor drivers less work."

SHIPPING CLERK: NEWARK.—"The financial condition of the file workers is very poor, their wages being low, and most of them have families. Physically, they are not up to the mark. The same, intellectually and morally. The passage of a law to enforce weekly payments would be a blessing; so would co-operative stores and factories. Trade and technical schools and compulsory education would benefit future workingmen."

TELEGRAPH LINEMAN: NEWARK.—"Workmen who must go to New York daily, if they can save enough money, can get a yearly commutation ticket for $55, and save at least $17 on what they would have to pay if they bought one every month. We have to go to New York to work and pay our railroad fare out of our wages, which are but $2 to $2.50 per day. That is robbery. We ought not be required to pay more than ten cents each way. We cannot even save enough ($6) a month to get a commutation ticket."

DRESSMAKER: VINELAND.—"When the rights of women are as fully recognized as those of men, their condition will be greatly improved."

STEAMFITTER: JERSEY CITY.—"Organization is what we require. Without it, men and women will remain in ignorance."

BUTCHER: PATERSON.—"Shorter hours would greatly benefit our trade."

METAL SPINNER: NEW BRUNSWICK.—"All in good health and intelligent; as for the morals, I cannot say. My fellow-workmen have all got a little money. Think co-operation would help us more than anything else."

CHAIRMAKER: NEWARK.—"It should be made a criminal offense for employers to impose as condition of employment that their workmen shall not belong to labor organizations. Coin 4,000,000 in silver per month, issue silver certificates and provide for the retirement of national bank notes."

ELECTRIC LIGHT APPARATUS: NEWARK.—"The wages for men vary from $1.50 to $2. Toolmakers get from $3 to $3.50 per day. Boys are paid from $4 to $7 weekly."

DYE-HOUSE HELPER: PASSAIC.—"Abolish all overtime and piece-work."

PEN FINISHER: CAMDEN.—"We want justice and not charity, and then we can help ourselves."

JEWELER: CAMDEN.—"I could get along before the war, making anywhere from $15 to $20 weekly. Now I get but $6 or $7."

HOSTLER: PASSAIC.—"Shorter hours would be a good thing. The majority of hostlers at the hotels in Passaic county work for their board and for whatever may be given to them in 'tips.'"

SOLDERER: NEW BRUNSWICK.—"The foreigners run us down in our prices. We are all poor in pocket and some can hardly read their own names. If we had less hours to work, we would have a better chance to educate ourselves and our children."

POLISHER (FRUIT JAR TRIMMINGS): NEW BRUNSWICK.—"Fair physically and morally, but intellectually and financially poor. Enforcement of an eight hour law would do us good. The State should furnish us with good child-labor inspectors. Free libraries, open *every* day, would decrease crime and drinking. Our condition is getting better, but very slowly."

SHIP CARPENTER: CAMDEN.—"The advantages of organization are seen in our business. We used to get $3; now but $2.80 daily." "Co-operation." "We are ordinarily intelligent."

SILK WORKERS: PATERSON.—"Reduce the hours of labor. I would like to see the system of immigration regulated, for it has injured our trade more than any other. It was stated by a newspaper some time ago, that the iron workers looked a great deal healthier than the silk weavers." "Keep the children out of the mills; compulsory education." "Machinery is an injury to the workingman; improvements should be regulated in such a manner that we will not suffer by their introduction." "The shops should be better ventilated." "We should have more co-operative enterprises, and the government should control all corporations so as to prevent them from imposing on the public." "One week out of every four we have to 'twist in;' we get no pay for this. Wages have been reduced fifty per cent. in three years." "Shorten the hours and no overtime. 'Docking' for being a few minutes late should be prohibited." "Stop the importation of foreign goods." "The workingmen should take hold of the question of co-operation at once." "The shops should be better ventilated, as we can not open the windows in windy or damp weather. Our workshops are very dark and is the cause of eye diseases so common among weavers." "Eight hours." "If you are too old to work you can go to the poorhouse or starve; after fifty they tell you they don't want you any more. We suffer by the competition among the manufacturers here." "Our boss runs his mill overtime nearly every night; also on Sunday." "The best thing would be to stop piece-work." "Eight hours a day and no foreign labor." "Immigration overstocks the market and keeps us constantly out of work." "If we were organized we could have a regular price list, and then the manufacturers would not be underselling each other by reducing our wages, as they are doing now." "Private ownership should be abolished." "Pay a man more for his toil. As labor is so cheap, why not give us cheaper food and rents?" "Foreign wage laborers should be warned as to the condition of things here." "Sunday work and overtime should be stopped." "We live from hand to mouth. There are always plenty out of work here. Although machinery produces more now, we get ten to fifteen per cent. less in wages than ten years ago." "Dyers, when they go to work in the morning, never know how long they will be kept. Sometimes they must work sixteen hours." "Let us have a foreign contract labor law which will be effective." "Silk weavers do not average over eight months yearly." "We do not average more than $5 per week the year round. In England they only work fifty-six hours weekly; here we have sixty; who gets the protection?" "There are too many weavers at the business now." "Permanent organization." "Co-operative production under control of the government." "Trades unions can only improve our condition." "There should be an organization in every shop."

FLAX WORKERS: PATERSON.—"Tariff reform. Take off duty on raw material and put it on the dressed." "Immigrants are coming here every day, only to find themselves disappointed. Reduce the hours of labor." "If the duty were removed from the three grades of raw flax which are imported and placed on the dressed, it would compel our manufacturers to have it dressed here, and thus give employment to three or four hundred more men." "Just now raw flax can be brought in as cheap as dressed." "If we do not take the duty off the raw material, our trade will soon be forgotten here." "Fans should be erected to carry away the dust." "The large amount of lost time is due to the fact that there is not enough raw flax on hand."

"The general government should offer a flax bounty." "The factory acts are not enforced. Paterson is sadly in need of a public library and news room." "The law against child labor has been a farce." "The eight-hour law is the necessity of the day. Compulsory education. The only place of resort here now is the rum shop." "Let there be a strict enforcement of the ten-hour law; no overtime." "Immigration within reasonable limits. Tariff reform is the only means by which we can be helped now; take the duty off of raw flax of fine grades." "The child-labor law is a farce. Let any one come to our gate and see the little ones going out." "If we were intelligent we would not be in our present condition; but with our present wages we cannot improve ourselves." "A weekly payment law." "Greenhorns are around the window every day looking for work." "The Paterson Flax Mill employs about 1,400 hands. The firm has another large mill in Ireland. In this flax business you can find any number of persons who were 'imported' from Ireland. They are coming every day, and as new ones come the older ones are discharged. This, in connection with the present tariff on dressed flax, works a great injury to the older 'hacklers.' There is virtually no difference in the duty on dressed flax ($40) and rough flax ($20), as it takes two tons of the latter to make one of the former. Besides, the customs officers cannot tell the difference. If all the flax were dressed in Paterson, there would be 225 men instead of seventy employed, as at present."

MACHINIST: NEW BRUNSWICK.—"In my trade the men are possessed of average intelligence. In busy times we work a good deal overtime. We favor weekly payments of wages."

ELIZABETH.—"General organization to bring about a reduction of the hours of labor to eight per day; prohibition of child labor under fifteen years of age; do away with the competition system and piece-work."

PATERSON.—"Reduce the hours of labor; enforce the factory laws; relieve the cities of surplus laborers by aiding them to occupy the public lands." "Enforce an eight-hour law; compulsory education; raise the tariff on all manufactures, as partly manufactured iron, steel, brass and copper. Every worker should belong to an organization of his trade, or at least to some labor organization. Fans should be erected in all factories and work-shops to carry away the dust, and factories should be well ventilated." "More wages and shorter hours. The system of letting out work by the piece has been very injurious to the trade, and so has the system of overtime." "The government should aid settlers to go upon the public lands and should allow them to return the money in yearly installments. Eight hours is long enough for a day's work. My actual earnings last year were but $100, while the cost of living was $400. Had it not been for a legacy left me of $300 I do not know how I should have lived. There are a great many poor people out of work in Paterson and it is a wonder to me how they live; so many women have to go out washing and do other work to support their husbands and children that even this resource is very uncertain. I wish you would come here and see the condition of many of our people. Reduce the hours of labor to eight per day." "Less hours of labor; stop overtime; abolish piece-work." "The enactment of laws providing for arbitration between employers and employes and to enforce the decision of the arbitrators would be good." "The piece-work system of giving the different parts of the work by contract to men who employ others at whatever price they can get them, has done more to injure the machinist trade than anything I know of. These contractors hire inexperienced men or foreigners to run the machines at low wages, thereby overcrowding the trade.

The currency of the country, the railroads and telegraph lines should be controlled by the goverment in the interest of the people, and not as now in the interest of banks and corporations. The public lands should be reserved for actual settlers and foreigners prevented from holding land at all."

MILLVILLE.—"Most of the employers have found out, by experience, that the highest-priced labor pays the best." "Foreigners who come here have a very lax idea of religion and the Sabbath day."

NEWARK ELECTRIC LIGHT COMPANY.—"As a rule the men that work here are sober, industrious and moral, making a good appearance, neat and tidy. As a rule we have a fair education. Many of our families complain of sickness, due because of an unhealthy locality of residence and badly built houses, whose sanitation is imperfect and neglected. Our men do not have any more money than will keep them, and some not enough. An eight-hour law, *enforced*, would be a blessing. So also our present child labor law. Universal weekly payments would be better for all concerned. Less hours and more pay is the cry."

LABORERS: CRANFORD.—"I never took any interest in the subject." "We are very poor. Free reading-rooms would help us." "Fair."

PATERSON.—"Stop immigration for ten years." "Times have been so hard here that machinists, blacksmiths and mechanics of all kind have been doing laboring-men's work." "A truthful idea of our situation ought to be published in Europe, and then the foreigners would not be so anxious to get here to better themselves. Shorten the hours of labor, but first enforce our ten-hour law before we talk about eight hours." "A laborer's work is very hard. After coming home from work, frequently being compelled to walk a long distance, he is too tired for anything but to eat his supper and go to bed." "I would like to go back to England again, as this country seems to be getting worse every day."

PERTH AMBOY.—"Less work and more time for pleasure and rest."

NEW BRUNSWICK.—"Too long to work. We railroad people ought to be paid weekly."

JERSEY CITY.—"The government should own the railroads and other monopolies and divide the earnings among the people."

BRIDGETON.—"The child labor law should apply to farming boys. Many of them are overworked and grow up without a chance to get a common school education." "Farmers' wages are too low."

MILLVILLE.—"Technical schools would be a great benefit to our children. The trouble is how to get them a trade." "Our employer does well by us and we do not bother ourselves about the labor agitaaion." "Intelligence and courage are characteristic of the railroad people." "We are all right physically and morally."

WILLIAMSTOWN.—"We read the newspapers and keep posted on the events of the day. That is about the extent of our knowledge."

CLAYTON.—"Not very intelligent. More religious than moral."

WOODBURY.—"Free libraries for the people."

CAMDEN.—"Ironworkers as a rule are not a grumbling set."

BURLINGTON.—"A laborer has not time to think of these matters."

VINELAND.—"We study nights and are making some improvement." "I am not posted as to labor societies, but think that they have helped the working people."

PART III.

SUGGESTIONS IN BEHALF OF WORKINGMEN.

CHAPTER I.—THE DEVELOPMENT OF THE CO-OPERATIVE MOVEMENT.

CHAPTER II.—THE LAW AND THE LABORER. PROGRESSIVE LABOR LEGISLATION IN NEW JERSEY.

CHAPTER I.

THE DEVELOPMENT OF THE CO-OPERATIVE MOVEMENT.

The enormous expansion of modern industrial enterprise requires a constantly increasing working capital, and those who are unable to control it are left behind in the race with their more favored competitors. Thus, there is a concentration of wealth into few hands—a tendency which has become one of the most dangerous signs of the times, for a really healthy competition is possible only with its widest possible diffusion, which is the ideal of the co-operative movement. It is in the successful accumulation of capital by those who have hitherto suffered from its aggressions that the enthusiastic advocates of co-operation see the road which leads towards the solution of the social question. And, while it is not at all certain that the goal will be reached even in this way, we cannot agree with the conclusions drawn by some critics of the development of the co-operative systems in the different countries.* Even industrial co-operation by no means has been the complete failure it is sometimes represented to be, although "it would perhaps have been further advanced to-day if co-operators had not been so faithful in their idolatry of their original ideal and had fostered instead of discouraging varieties of type which may yet justify their superiority by persisting and multiplying."† And may there not be found some valuable suggestions in the answer of the founder of the German people's banks to a French economist who complained at the close of the '60's that the co-operative undertakings in France were in a state of decay because of the want of money, the inability to obtain credit? The establishment of credit institutions ‡ on the German plan, advised the late Dr. Schulze-Delitzsch, would supply this want and give the French enterprises new life. It was wrong, he insisted, to attempt to proceed from the top downwards, for the most difficult form of co-operation, that of production, could not be successfully undertaken before the first stages had been passed. He claimed that a system of credit economy must be the foundation of industrial co-operation, which could only be gradually developed. This was one of the functions of the German credit unions. Their aim was to popularize (*die Demokratisirung*) capital, to assist the smaller tradesmen, artisans and laborers in their projects, as well as to encourage the spirit of saving among them.§

*At the close of this chapter is given a condensed account of the position of European and Australian productive co-operation.

†Rae: "Contemporary Socialism."

‡Vorschuss und Creditvereine. They are variously called loan and credit unions, credit associations or banks, people's or co-operative banks.

§See "*Vorschuss und Credit-Vereine als Volksbanken,*" by Dr. H. Schulze-Delitzsch, published by Ernst Keil, Leipzig, 1876; also the annual reports of the attorney of the German Co-operative Associations (Genossenchafts-Anwalt) organized under the Schulze-Delitzsch system, published

The success of this form of corporation in Germany, we think, justifies us in devoting the greater portion of this chapter to a sketch of the

ORIGIN AND DEVELOPMENT OF CO-OPERATION IN GERMANY.

The idea of people's banks first took hold of public opinion in Germany in 1848, at a time when there was a general demand for banking facilities by those to whom the ordinary institutions were not available. The result was the establishment of a great many credit associations and loan banks in the larger cities. But their course of usefulness was of short duration, and they did not satisfy in the slightest degree the purposes for which they were organized. This collapse was to be expected. Failure was the necessary outcome of the wrong principle on which these pioneer enterprises were based, virtually that of charity. The capital was contributed by a few wealthy people, of good intentions, either outright as a gift, or as a loan, often without requiring or expecting interest for its use. The taint of benevolence stuck to all the business transactions. Ordinary precautions were not taken and considerable sums of money were lost; and the interest in the projects soon died out, for the creditors, instead of receiving thanks for their trouble, were met with reproaches from their debtors, who found themselves disappointed in their expectations. The result was as stated.

In 1850, Dr. H. Schulze, a lawyer in Delitzsch, a small town in Prussian Saxony, made his first attempt in this line and founded a "society of mutual credit" among the poorer mechanics there. This differed from the associations mentioned above only in the fact that he required a stated interest of from five to ten per cent. for the use of money loaned, as well as a regular monthly payment of a few cents (one Groschen), which were credited to the share account of the borrowers, who were also members. Here, indeed, was the germ of the later organized people's banks; but the efficiency of this concern was not great, as the funds collected did not exceed 180 to 200 thalers,* or less than $150. In 1851 a similar association was organized at Eilenburg by two German philanthropists, who proceeded on the principle of the unlimited or joint and several liability (solidarity) of the members, a plan which had been found to work very successfully in connection with two "raw materials" associations of shoe and cabinetmakers, started in 1849, at Eilenburg and Delitzsch. This second bank prospered so well that it was able to advance 8,801 thalers in loans during the first year of its existence. The next year, Dr. Schulze-Delitzsch, who had retired from the Prussian civil service, reorganized the Delitzsch Society on the principle of the present credit banks. Then followed several similar undertakings, and in 1855, when the first edition of "Vorschuss und Creditvereine als Volksbanken" † appeared, seven people's banks were doing a flourishing business. From that time they have been increasing in Germany in number and influence. In his report for 1884,‡ Dr. F. Schenck, the present attorney (Anwalt) of the co-operative societies, stated that 1,965 of these credit associations were in operation in the Empire.

by Julius Klinkhardt; as well as the *Blaetter fuer Genossenschaftswesen*, edited by the attorney, at present F. Schenck, Berlin.

A very superficial view of these institutions is taken in Holyoke's "History of Co-operation." "The difference between German and English co-operation is this: the German co-operator sets up credit banks, the English co-operator sets up stores. The Germans lend money, the Englishmen make it."

*A Thaler was somewhat over 71 cents.

†See above.

‡"Jahresbericht ueber die auf Selbsthuelfe gegruendeten deutschen Erwerbs und Wirthschaftsgenossenschaften." See above.

In 1859, the founder called together a congress of delegates from the existing associations, for the purpose of discussing matters of common interest and in order to adopt general regulations of government. That congress met at Weimar, and one has annually assembled since then, but now includes in its constituency all the co-operative associations belonging to the General Co-operative League ("Allgemeiner Verband der deutschen Erwerbs und Wirthschafts-genossenschaften") whose business affairs are managed by a central bureau (Berlin), under the direction of an attorney. Its interests are further promoted by the publication of a weekly journal, *Blätter für Genossenschaftswesen.* Of very great value also has been the Central German Co-operative Associations Bank.* This was established in Berlin in 1864, and connects the individual societies with the larger banking institutions; its share capital amounts to nine million marks.† Each kingdom and province in addition has its local co-operative league. There are now thirty-three of these sub or provincial leagues, to which an aggregate of 1,030 organizations belong—only a small portion of the total number. In 1884 there were known to be in existence 3,822 of these,‡ comprising 1,965 people's banks, 1,146 societies in various branches of industry (raw materials supply, magazine and productive), 678 consumers' unions and 33 building associations. But it is estimated that the total Schulze-Delitzsch co-operative enterprises aggregate 3,900, with a membership of 1,500,000, and doing business transactions (loans, sales of goods, etc.,) amounting to 3,000,000,000 marks. The total capital employed cannot be less than 800,000,000, of which nearly one-third is share capital and reserve, the balance being borrowed money.

While the co-operative movement in Germany has branched out in all directions, it is especially characterized by the rapid development of the loan or credit banks, popularly known by the name of people's banks, which constitute, at present, the bulk of the co-operative associations. Briefly stated, the scheme of organization is as follows: The borrowers of money, as a general rule, are themselves the owners and managers of the institution which gives them credit; as members they share the profits and losses of the enterprise, which is conducted on strict business principles. Creditors receive interest for the use of their money; and this is also required from those to whom loans are extended. The directors and other officials and employes are remunerated in proportion to services rendered. The members must be stockholders and acquire their shares either by payment for them in full at the start, or in installments. The sum of money actually paid in is the basis for the division of profits as well as of losses. Dividends are credited to the share account until the par value has been reached. Thus a constantly increasing capital is accumulated. All additional money needed is borrowed on the credit of the association, the members of which are also individually liable for the debts thus contracted (*Solidarisher Haft aller Mitglieder*). Provision is made for a reserve fund to be drawn upon in case of extraordinary losses, and for this the entrance fees and a certain percentage of the profits are set apart. The number of members is unlimited. Any one who is legally competent, of good moral character and able to support himself, may join by subscribing for one share but no more. Withdrawal is permitted under certain restrictions.§

*Deutsche Genossenschaftsbank von Sorgel, Parrisius & Co., Berlin.

†A Mark, about 23½ cents.

‡Not including 800 organized under a different system (Raiffeisen) from the Schulze-Delitzsch.

§The General Co-operative Act (1868) of the North German Confederation, now the Imperial Law, requires the articles of association to be signed by all the members of the society, filed with the Commercial Court (Handelsgericht) and recorded in the co-operative register. The

These people's banks have considerable resemblance to our building and loan societies, but differ strikingly from ordinary joint stock companies, in which membership is limited and the main object is money-making by dealing with the outside public. Like all our modern co-operative enterprises, so-called, they are organized primarily to supply the wants of those financially interested, that is, the members themselves. The extension of their facilities to others is a matter of secondary consideration and is only done if there is a sufficient amount of money for the purpose. They are not intended to be general discount banks. That business, again and again warned their founder, should be left to those who have the necessary funds at their disposal; it is not the mission of people who must first obtain credit and cash by association, to incur risks for any one but themselves. Restricting the right of obtaining money from the common treasury, also proves advantageous to the institution. Such a course attracts membership, as it is evident that many persons, if they could secure all the benefits without assuming any of the disadvantages of becoming stockholders, would prefer to do so.

This question of membership is one of very great importance. It is considered bad policy to demand a large sum of money as a condition precedent, as that would shut out many poor people. Founded on the principle of self-help, people's banks should be open to all who can help themselves. Any one who has descended so far in the social scale that there is no likelihood of improvement, even with the aid of a moderate advance, to be repaid with interest, cannot secure membership. If an individual is able to support himself and family, however poorly, and is of good moral character, "let him be taken in," advised Schulze-Delitzsch. If this qualification is wanting he is "dead for the association," and it is the office of public or private charity to look after him. Generally one who can pay a small monthly installment on account of his share, may become a member, as he will have some sort of credit, which, though small at first, will increase with the growth of the sum of the installments. Many a mechanic and laborer were not worth a cent when they first joined the Delitzsch union and could get no credit whatever. In time, however, having regularly paid up their dues, loans were advanced, corresponding to their circumstances. They now belong to the most substantial customers; not a few succeeded in accumulating within a short period from thirty to fifty thalers on their share-account.

The nominal value of shares in the different associations varies from $7 to $150, but the ordinary range is between $20 and $35. They can be paid up at once in lump, but, as before stated, the common practice is monthly partial payments, the installments being placed at so low a figure as to allow the poorest to become a shareholder. The design, nevertheless, is to encourage the augmentation of these payments, which have a minimum and maximum limit, for it is essential that a fair portion of the capital be collected as soon as practical. The rule which prevents the payment of dividends until the par value of the shares has been reached materially contributes to this end, for it is a strong incentive to members to increase their periodical installments. And though small, these individual savings are not to be despised. Few save any money at all before becoming members, and it requires all the inducement which membership offers—the ability to obtain credit and the receipt of dividends—to tempt the majority even to begin. It is just this first step which is all important to those who have been

directors must file, periodically, with the court statements concerning membership, the names of those who have joined and of those who have withdrawn, and in January of each year an alphabetical list of members. Various other formalities also must be complied with. This is considered requisite for the protection of the public, the creditors and the members themselves.

accustomed to live from hand to mouth. The feeling that they have become capitalists, though but in a modest way, belonging to and coming in for a share in the profits of a powerful banking concern, and this, too, by their own exertions, is a most pleasing one. They thus learn to look ahead, and, instead of satisfying passing whims, do not hesitate even to make sacrifices to provide for the future. It increases their own self-respect, while the influence of this little beginning will extend far beyond the co-operative circle.

To prevent the capital from being monopolized by the few, two important provisions are in force—an individual can hold but a single share, while the number of shareholders is unlimited. Application for admission is made to the board of directors, and those who are successful subscribe the articles of association. Rejected applicants may appeal to the general meeting of the members, which alone has the authority to make expulsions. In these associations, where membership is practically unrestricted, it is often necessary to get rid of those who fail to meet their obligations, or because of immoral conduct. Rotten timber must be eliminated, otherwise the whole structure will be put in peril. Still, the decision is wisely left to the body of members themselves. If this were not done, those who have the management of affairs might make use of this power to suppress all opposition and thus perpetuate their own rule. Voluntary withdrawal is permitted under certain conditions which the safety of the association requires to be observed. Due notice of such intention to leave (generally four weeks) must be given; but this cannot be carried into effect until the close of the fiscal year, before which a balancing of accounts is impracticable. Death has the same legal effect as a notice. In all cases where the membership ceases, the shareholder, or his legal representative, is entitled to have refunded the moneys paid on the share-account as well as accrued dividends, but not until the expiration of three months after such cessation.* No part of the reserve fund can be claimed, as this is only distributed on dissolution, after all liabilities of the association have been satisfied, among those members at that time. The reserve fund is the joint property of the association (*Gesammtvermögen des Vereins*) and is accumulated from various sources, chiefly from the entrance fees of those who join after the enterprise has been established, and from a portion of the net profits. It is safely invested and intended for use in case of serious losses, but not until the current income has been applied for the purpose.

A large reserve fund not only is a safeguard against the impairment of the capital, but also strengthens the credit of the association. This is a matter of great concern, for if people's banks were restricted to the small periodic contributions of its members, from whom for a long time comparatively little can be secured, the main object of the organizations could not be accomplished. This requires a fair working capital. Experience has proved that it is imperative to attract outside funds and thus open to the members, workingmen and people of small means, the same sources of credit which are available to the more favored classes of society. But the security offered must in the nature of the case be largely personal and different from that usually recognized in the business world. The individual artisan, without means and on his own account, can hardly ever obtain credit, or at best on the most unfavorable terms and to a very unsatisfactory degree. The only guarantee he is able to offer is the market value of his labor-ability, which constitutes his wealth. That depends on so many contingencies, over which he has no control and which the creditor cannot foresee, that it offers

* The capital cannot be withdrawn, either wholly or in part, *during membership*.

no tangible security. The case is different, however, when a number of mechanics are ready to become severally as well as jointly liable. The risk of loss is greatly lessened, and the individual, who alone is without credit, by a union with his fellows becomes able to obtain it. It is just this idea which gives strength to the co-operative associations, of which we are writing, and on which they are founded. In joint stock companies a stockholder is responsible only for the unpaid balance of the par value of the shares by him subscribed. The German co-operative provision of "solidarity" (*Solidarhaft*), on the other hand, means that each shareholder is liable to the full extent of all losses, each is surety for the other and for all (*Einstehen aller für Einen und Jedes für Alle*). There is considerable risk in this responsibility, although in Germany it has proved more so in theory than in practice. It is somewhat diminished by the fact that the association, not the members, is considered the real debtor, and consequently, the creditors must first look to the joint property. Until the bankruptcy proceedings against the association have been brought to a close, the individual cannot be troubled. Any other course might throw whole communities into insolvency, break up all business and thus injure the creditors themselves by taking away all chance of payment. As soon as it is possible to get at the extent of the deficiency, the directors or "liquidators" prepare a plan of assessing the balance on the members. After approval by the court, judgment is summarily enforced against the debtors. The losses, as well as the profits, are divided in proportion to the amount of money actually credited to each shareholder. This is fair, otherwise the losses would fall heaviest on the poorest, who naturally are most in arrears in their shares. The rigor of the solidarity rule* is further modified by the two years' statute of limitations (*Zweijährige Verjärunsgrecht*), which begins to run in favor of ex-members and their legal representatives. All claims are outlawed two years after the membership ends, either because of the dissolution of the association, or death, withdrawal or expulsion of the member.

These people's banks, founded on such a simple principle, and its advocates declare only because of it, have taken such a strong hold of public confidence in Germany, that their success has been most gratifying. They have steadily increased in number and in membership, while the supply of outside money, loans and deposits, derived from other sources than members' dues, for a long time has been much greater than could be profitably used. Few enterprises can make such a clean showing. In 1884 but two bankruptcies occurred, while only twelve banks went into voluntary liquidation. The average loss of nearly half a million members was not forty-six cents; the average net gain, on the other hand, about $4.25. The average losses per member during the past thirteen years make an interesting showing:

1872	0.63 marks.†	1879	3.80 marks.
1873	3.48 "	1880	2.03 "
1874	1.80 "	1881	1.73 "
1875	3.49 "	1882	2.85 "
1876	2.89 "	1883	2.06 "
1877	3.38 "	1884	1.95 "
1878	2.74 "		

*It is questionable whether this idea of full individual liability would meet with much favor outside of Germany, where the people are very steady and careful. Even there efforts are being made to modify the law, as it is evident, as Dr. Schneider, late attorney, observed in his report for 1882, that the wealthier mechanics and tradesmen, who are becoming interested in the co-operative movement, are afraid of the great risks incurred. A few of the banks have already been reorganized on the joint stock principle.

†A Mark is about 23½ cents.

The total net profits in 1882 (905 banks and 461,153 members reporting) were 8,063,546 marks. These figures had increased in 1883 (922 banks, 466,575 members,) to 8,277,375 marks, of which 1,535,327 were placed to the credit of the reserve fund, 6,476,184 divided as dividends, and 71,422 set apart for educational and other purposes of common utility, including subscriptions for a monument to the late Dr. H. Schulze Delitzsch. The total losses during the latter year were 963,628 marks—only about two-thirds of the amount of the preceding year. In 1884 they were still further reduced (879 banks and 451,779 members) by 79,400 marks. The total net profits were 8,198,864 marks, of which 1,504,047 went to the reserve fund, 6,359,206 for dividends, and 45,694 to the educational fund.

The comparatively small amount of losses shown in the foregoing statement is really remarkable, considering that the bulk of the loans are made on the personal security* of the members, mostly poor people. It shows the great care of those in charge of the management,† who evidently remember Schulze-Delitzsch's warning, that to prevent the facility of obtaining credit from becoming a two-edged sword to him who is without means, and thus doing considerable more harm than good, they must be satisfied with the ability of the recipient of the loan to repay it. An inquiry concerning the applicant's business tact, as well as his moral and financial standing in the community in which he lives, generally will test this. Some sort of guarantee for advances is also required. No one can borrow on his own share, but may give a real estate or chattle mortgage, although an indorsement of the borrower's bill of exchange or promissory note by two fellow-workingmen is preferred. The loan is made for a short time, with permission of renewal (prolongation) for a similar period. It is, nevertheless, considered bad policy to allow many prolongations; and in no case unless an installment be paid on the debt. Otherwise the loan really would be a permanent investment, which is contrary to the interest of these institutions to grant. This plan of renewals has the advantage of allowing a control over the debtor. The bank as well as the indorsers run less risk of loss, for if the borrower's affairs begin to look shaky, it is easy for the surety to refuse to sanction the renewal, which must be in writing. In such a case it will not be granted, but payment of the whole debt demanded at once, and if necessary sued for, so that at least a part may be recovered before complete ruin overtakes the debtor. There is also a constant oversight by those who are mutually responsible. The very commendable sense of honor among this class of the German people also affords a security not to be despised. It is considered very discreditable to let a fellow-workman suffer through one's default. A kind of infamy attaches to the act, and it is not an out-of-the-way occurrence for the wives of unfortunate or delinquent debtors to come to the rescue and pay the husbands' debts out of their own separate property.

The amount of credit extended depends on the money which the association has to dispose of, and on the class of persons to whom loans are to be made. Neither physically nor financially, wisely cautioned Dr. Schulze-Delitzsch, should any one attempt to accomplish more than his strength allows. No bank should give more credit than it itself can command; nor should customers be sought outside of that class which these institutions are especially meant to serve. They are not intended to do a general banking business for the convenience of those who, if they are financially sound,

*Any other kind is not thought desirable.

†These associations have a model organization, consisting of the several assemblies of the members, the board of directors, who grant the loans, but are advised by a committee of control, and the different officials and employes. Directors cannot be interested in the loans made.

can obtain all the facilities they want, and more cheaply, too, from the larger concerns. At best, it looks very suspicious if some of the "big people" (*die grossen Leute*) want to get aid. The credit unions should be on their guard, for something probably is wrong; it is better to have nothing to do with them, even though there is a prospect of a high interest rate, for everything may be lost. Nor must the risk taken with a single borrower at any time be such as would cause serious inconvenience to the institution if default should be made. It is always a matter of deep concern, admonishes the father of German co-operation, if it becomes necessary to use all the profits to balance losses. But if the reserve fund has to go and the share capital is even swallowed up, then that is the end of the enterprise. Although the members individually may not be called upon to make up a deficiency, the labor and sacrifices of years, the hard-earned savings of poor mechanics and laborers have been staked on a single card and lost, public confidence has been shaken and the time indefinitely postponed for any similar undertaking.

To prevent such improper use of the funds by the managers, it is customary for the general meeting of the members to fix, from time to time, the maximum credit which any one individual may claim. This limit generally does not exceed one-fifth, or at most, one fourth of the total assets of the association. In his work,* published in 1876, Dr. Schulz-Delitzsch advised that no single loan by the smaller associations, at the start, should exceed a few hundred thalers; while in well-established concerns it might without danger vary from one thousand to two thousand thalers. In case the industrial middle classes became interested, and the business approximated that of a regular banking house, perhaps the latter figure would be found too low. This latter contingency has arrived in many of the unions, to which a large number of well-to-do tradesmen and farmers belong. The average credit granted in 1884 per *member* (not borrower) of the 879 associations reporting was 3,358 marks; in 1883, 3,244; in 1882, 3,262; in 1881, 3,184; in 1880, 3,142; in 1879, 3,045; in 1878, 3,030. These loans in 1884 amounted in the aggregate to 1,516,952,618 marks, or an average of 1,725,771 to each bank. Most of this was paid out on personal security (bills of exchange, promissory notes, &c.,) and but little on mortgages, or 14,135,015 marks. It is not considered judicious to invest anything but the money belonging to the reserve fund in real estate, even when there is a large surplus on hand,† as the expense and time required to get it back again, if a foreclosure or sale be necessary, will more than balance the advantages to be gained. Nor is it advisable to carry too much borrowed money, for this is a premium on speculation, most likely in stocks, which should be prescribed by all means, as ruin will surely follow. Yet these people's banks should attract just as much money as they safely and profitably can get rid of. But it will not do to use the larger banking establishments as channels through which cash is to flow into or out of the treasury, for that would simply mean being the debtors or creditors of those banks. Such a method of conducting business is not profitable even in prosperous times. When periods of depression come, this source of credit will give out and just at a time when it is most needed. Hence, except in cases of pressing necessity, it is not considered expedient to take such a course. If the managers have

* Vorschuss und Creditvereine als Volksbanken. See above.

† The very complete organization of the German co-operative associations greatly aids the unions in disposing of surplus funds, or in borrowing when necessary. The central league, state or provincial, see to it that those in need of cash are brought into communication with those which desire to get rid of it. Even the central bureau of the general league frequently lends its aid for this purpose.

the confidence of the public and follow ordinary business rnles, all the money needed generally can be obtained from individual creditors in the neighborhood.

As it is evident that no one can safely extend to his debtors a larger credit than is accorded to him by his creditors, deposits in the people's banks cannot be withdrawn at will, for the money thus received either could not be lent out at all or only on call. A previous notice (*Kündigung*) always is required from the depositor, and no interest is allowed if the money be withdrawn before its expiration. Short notices of withdrawal are not favored, as any business disturbance is apt to cause a run on the bank and cripple it. It is considered much safer, if the object is to draw in deposits, to pay a higher rate of interest than the competing establishments. But the best conducted enterprises never do a business not warranted by their resources, and always keep a healthy proportion between their own capital and borrowed money. The aim is to get their assets (active and reserve capital) up to one-third of the total working capital, that is, to fifty per cent. of the borrowed money. While this proportion is seldom reached, it is thought risky to drop below 10 per cent. even at the start; the average in 1884 was 32.18. During the past nine years the average value of shares has been:

1876	206.1 Marks.	1881	221.4 Marks.
1877	210.4 "	1882	223.9 "
1878	214.0 "	1883	225 9 "
1879	220.1 "	1884	235 "
1880	221.4 "		

This increase, though fair, has not been in proportion to that of the loan capital, the average per member of borrowed money having been:

1876	775.5 Marks.	1881	809.7 Marks.
1877	749.9 "	1882	822.7 "
1878	721.3 "	1883	834.5 "
1879	756.3 "	1884	870 "
1880	791.1 "		

The interest allowed to depositors has been steadily reduced—the effect of the supply of money exceeding the demand. In 1884 the average was only 4.05 per cent.; in 1883, 4.11 per cent.; in 1882, 4.22 per cent.; in 1881, 4.22 per cent.; in 1880, 4.29 per cent.; and in 1879, 4.70 per cent. On the other hand, the borrowers have been benefited, for the average gross profits on the working capital was in 1878, 6.57 per cent.; in 1879, 6.33 per cent.; in 1880, 6.13 per cent.; in 1881, 5.99 per cent.; in 1882, 6.03 per cent.; in 1883, 5.82, and in 1884, 5.85 per cent.

The names of 1,965 of these credit associations, or people's banks, are given in the annual report (1884) of the attorney. Full reports were returned by 879, and the summary of these as well as of those made since 1859 will show the extent of the organizations and the progress made:

COMPARATIVE SUMMARY OF STATISTICS OF GERMAN PEOPLE'S BANKS, 1859-1884.*

Year.	Number of ass't's reporting.	Number of members in same.	LOANS AND PROLONGATIONS.		FUNDS BELONGING TO THE ASSOCIATIONS. (EIGENER FUNDS.)				MONEY BORROWED BY THE ASSOCIATION.					Proportion of own to borrowed money, average.
			Total.	Average per ass't'n.	Share capital (active)	Reserve fund.	Total active and reserve.	Average per ass't'n.	From private persons.	From people's banks and other corporations.	Savings deposits.	Total loans, &c.	Average per ass't'n.	
			Thaler.	Thaler.	Thaler.	Thaler.	Thaler.	Thaler.	Thaler.	Thaler.	Thaler.	Thaler.	Thaler	p. ct.
1859	80	18,676	4,131,436	51,642	246,001	30,845	276,846	3,460	501,795		512,350	1,014,145	12,676	27.50
1860	133	31,603	8,478,489	63,748	462,012	66,845	528,857	3,976	1,069,833		1,322,494	2,392,327	17,987	22.10
1861	188	48,760	16,876,009	89,766	799,375	107,238	907,213	4,825	1,983,441		2,649,036	4,632,477	24,641	19.50
1862	243	69,202	23,674,261	97,425	1,199,545	132,893	1,332,438	5,483	3,441,033		2,747,577	6,188,610	25,467	21.10
1863	339	99,175	33,917,948	100,053	1,803,203	218,047	2,021,250	5,962	5,641,820		3,416,220	9,058,040	26,719	22.30
1864	455	135,013	48,147,495	105,818	2,959,296	293,461	3,252,757	7,148	7,401,317		5,355,265	12,756,582	28,036	25.40
1865	498	169,595	67,569,903	135,682	4,442,879	409,679	4,852,558	9,744	11,154,579		6,502,197	17,656,776	35,455	27.40
1866	532	193,712	85,010,145	159,793	5,773,106	556,398	6,329,504	11,897	10,646,394	522,617	8,726,518	19,895,529	37,397	31.80
1867	570	219,358	102,026,152	178,993	6,847,031	660,054	7,507,085	13,170	12,335,960	975,709	11,378,570	24,690,239	43,316	30.40
1868	666	256,337	139,247,793	209,080	9,365,502	865,955	10,231,457	15,362	16,309,078	1,178,367	16,221,592	33,709,037	50,614	30.30
1869	735	304,772	181,602,109	247,078	12,078,464	1,175,138	13,253,602	18,032	19,658,859	1,989,661	21,053,863	42,702,383	58,098	31.03
1870	740	314,656	207,618,287	280,565	13,449,152	1,214,175	14,663,327	19,815	20,136,679	2,360,040	23,502,443	45,999,162	62,161	31.87
1871	777	340,336	241,331,151	310,593	15,530,620	1,505,689	17,036,309	21,925	32,027,943	2,165,160	24,610,177	58,803,280	75,679	28.97
1872	807	372,742	354,519,200	439,305	19,515,767	1,857,762	21,373,529	26,485	41,747,927	4,283,432	31,157,372	77,188,731	95,649	27.69
1873	834	399,741	446,733,015	535,651	23,250,531	2,281,284	25,531,815	30,613	56,145,748	4,383,177	32,891,198	93,420,123	112,014	27.33
1874	815	411,443	451,908,394	554,488	25,711,589	2,479,783	28,191,372	34,590	59,686,384	3,686,272	38,439,274	101,811,930	124,923	27.68
1875	815	418,251	498,549,479	611,717	27,847,336	2,809,327	30,656,663	37,616	64,858,584	4,409,705	40,786,677	110,054,967	135,037	27.85
			Mark.	Mark.	Mark.	Mark.	Mark.	Mark.	Mark.	Mark.	Mark.	Mark.	Mark.	
1876	806	431,216	1,525,389,219	1,892,542	88,876,139	10,015,027	98,891,166	122,694	198,349,234	14,160,425	121,962,922	334,472,581	414,978	29.57
1877	929	468,652	1,550,402,483	1,668,894	98,635,583	12,065,410	110,700,993	119,161	209,285,582	17,141,659	124,591,862	351,019,103	377,846	31.54
1878	948	480,507	1,456,003,733	1,535,869	102,882,342	13,853,027	116,735,369	123,138	208,041,742	17,548,473	121,005,198	346,595,413	365,607	33.68
1879	899	459,033	1,398,120,830	1,555,195	100,996,248	15,117,802	116,114,050	129,160	207,016,091	13,621,864	126,527,520	347,165,475	386,168	33.44
1880	906	460,656	1,447,526,317	1,597,712	102,029,366	16,398,062	118,427,428	130,714	231,005,835	11,371,333	122,072,777	364,449,945	402,262	32.49
1881	902	462,212	1,472,004,974	1,631,934	102,374,010	17,396,157	119,770,167	132,780	240,313,951	10,838,145	123,146,318	374,298,414	414,964	31.99
1882	905	461,153	1,502,367,435	1,660,074	103,286,404	18,182,515	121,468,919	134,219	240,112,136	10,663,765	128,603,391	379,379,292	419,203	32.01
1883	922	466,575	1,513,617,272	1,641,667	105,393,471	19,407,579	124,801,050	135,359	257,584,949	9,869,727	121,904,603	389,359,279	422,298	32.05
1884	879	451,779	1,516,952,618	1,725,771	106,349,385	20,169,599	126,518,984	143,935	257,959,928	10,290,878	124,915,734	393,166,540	447,288	32.18

*The value of the Mark is about 23.5 cents; of the Thaler, 71 cents.

Nearly every occupation is represented in the membership of the people's banks, and, although employers and those having an independent business of their own comprise by far the largest number, the wage-earners make a very good showing. Employes (exclusive of class 7) constitute eleven and one-tenth per cent. of the constituency; in the preceding year it was but ten and eight-tenths. In 1884 there were, in the 802 associations reporting, 43,291 of the latter; in 1883, 43,459 in 825 associations. In 1882 the percentage was still lower, ten and six-tenths, or 41,853 in 819 associations reporting. In the consumers' unions (distributive co-operative associations) the workingmen (or dependent laborers) comprise fifty-three per cent. of the total membership. There are 678 consumers' unions in existence, although in 1884 reports were received from only 163, whose total membership was 114,423. The sales during the year amounted to 33,619,162 marks;* the share capital, 2,816,997; reserve fund, 1,632,392; loan capital, 3,363,459; amount owing for goods (by the unions), 426,168; amount due from members (in 48 unions), 134,132; net profits, 2,846,538.

The following classification of membership in people's banks and consumers' unions is taken from the annual (1884) report of the German Co-operative Association:†

OCCUPATIONS.	PEOPLE'S BANKS. Percentages by Years.		CONSUMERS' UNIONS. Percentages by Years.	
	1883.	1884.	1883.	1884.
1. Independent land cultivators, gardeners, foresters and fishermen	25.4	25.2	3.7	3.7
2. Assistants and laborers of Class I	3.1	3.2	3.7	3.8
3. Manufacturers, mine owners and builders	3.6	3.5	1.7	1.5
4. Independent handicraftsmen	30.9	30.2	15.0	15.4
5. Factory operatives, miners and journeymen mechanics	4.8	4.9	41.2	40.4
6. Independent traders and dealers	9.6	9.7	4.1	4.6
7. Clerks and other assistants to traders	0.7	0.7	1.4	1.6
8. Carriers, ship owners, inn and saloon keepers	5.1	5.1	2.4	2.7
9. Letter carriers, railway, telegraph and post office employes, sailors and waiters	1.9	2.0	7.2	7.0
10. Domestic servants, porters	1.0	1.0	2.3	1.8
11. Physicians, druggists, artists, authors, church and civil service officials	6.7	6.7	10.8	10.9
12. Retired merchants, pensioners, and others of independent income	7.2	7.8	6.5	6.6
Number of associations making returns	802	825	160	154

In addition to these two forms of German co operative development, there is a third, societies in special branches of trade (*Genossenschaften in einzelnen Gewerbszweigen*), of which there are 1,146. These are: The *Raw Materials Supply* of artisans and agriculturists, whose object is to buy wholesale, on joint account, the primary or auxiliary substances required in any particular business, and to sell them in small quantities to their members, who are in no way interfered with by the societies in the independent conduct of their own businesses. *Implement Societies*, which procure for their members the common use of machines and instruments, including, in the case of cattle-breeding, bulls, in order to facilitate or improve production among their

*A mark is about 23.5 cents.

†By F. Schenck, attorney, see above.

individual members. The aim of *Magazine Societies* is the establishment of shops, where articles delivered by members may be sold on account of the persons who send them in, and, to cover the expenses of the society, pay a shop rent and commission on the articles sold. The *Industrial Productive Societies* for the most part comprise only a few members, all of whom are employed by the society. They are confined mainly to hand labor and to the smaller industries. A notable exception is that of the largest German manufactory of chronometers, which is conducted on the co-operative plan. Co-operation, when applied to factory labor, has not been very successful. The *Agricultural Productive Societies*, of which there are 226 mentioned, have hitherto sought, not to carry on agriculture on common account and risk, but only to enable their members to dispose more advantageously of certain agricultural products. Among these the greater number are the dairying and cheese-making, of which 144 are known, and the wine-making, of which there are 20. There are 33 *Building Societies*, which do not seem to be very successful lately, since the demand for dwellings in the larger towns has been supplied.

CO-OPERATION IN ENGLAND.*

Co-operative distribution has met with its greatest success in England, and its history virtually begins with the year 1844, when "the Rochdale Pioneers," twenty-eight poor weavers, established their little store in an old weaver's shop in Toad Lane, Rochdale, with a capital of £28 ($136). The Rochdale store was not the first to engage in co-operative trade, but previous experiments, mostly based on the communistic plan, had practically failed. The reasons of their non-success were various. There was no strict adherence to the cash system; no adequate legal protection. Their general plan of organization was defective.† The Rochdale co-operators, on the other hand, founded and conducted their enterprise upon these cardinal principles: *All profits to be divided on purchases, and all purchasing members to be made shareholders, with a fixed interest on the capital invested. The cash system to be strictly adhered to.* They were successful from the start. To the grocery business was soon added that of linen and woolen drapery, butchering, shoe and clog making, tailoring, coal dealing and baking. A number of branch stores are now carried on in the town, while the old weaver's shop of '44 has given way to extensive buildings. This was the condition of the association on December 31st, 1884:

Members	11,161
LIABILITIES.	
Share Capital	‡ £329,470
Loan "	14,561
Reserve Fund	2,605
ASSETS.	
Value of Salable Stock	£28,593
Value of Lands and Buildings and Fixed Stock	53,442
Investments	242,432

*For the information given in the following pages (and to a large extent for the language used), we are indebted to "A Manual of Distributive Co-operation," published by the Massachusetts Bureau of Statistics of Labor, under a resolve of the Legislature of that State, approved March 12th, 1885. The account of continental and Australian co-operation was condensed from a report to the Seventeenth Annual Co-operative Congress, held at Oldham, England, May, 1885.

†Between 1820 and 1830 great enthusiasm was aroused in England in this direction. In the latter year there were said to be nearly three hundred societies in Great Britain, with an aggregate membership of 20,000. Thirty-seven co-operative societies were registered before 1844. Most of them in time divided their profits on sales.

‡A pound is about $4.86.

TRADE AND PROFITS.

Received for Goods Sold in 1884	£262,270
Total Net Profits	36,992
Average Dividend per £	2s 9¾d.
Applied to Educational Purposes in 1884	£920
" " Charitable " " "	118
Subscriptions to Central Board	£46. 0s. 10d.

The remarkable growth of the association is shown by the following statistics from 1844 to 1867:

YEAR.	No. of Members.	Funds.	Business done.	Profits.
1844	28	£28	.....	.....
1845	74	181	£710	£22
1846	80	252	1,146	80
1847	110	286	1,924	72
1848	140	397	2,276	117
1849	390	1,193	6,611	561
1850	600	2,299	13,179	880
1851	630	2,785	17,638	990
1852	680	3,471	16,352	1,206
1853	720	5,848	22,760	1,674
1854	900	7,172	33,364	1,763
1855	1,400	11,032	44,902	3,106
1856	1,600	12,920	63,197	3,921
1857	1,850	15,142	79,788	5,470
1858	1,950	18,160	71,680	6,284
1859	2,703	27,060	104,012	10,739
1860	3,450	37,710	152,063	15,906
1861	3,900	42,925	176,206	18,020
1862	3,501	38,465	141,074	17,564
1863	4,013	49,361	158,632	19,671
1864	4,747	62,105	174,937	22,717
1865	5,326	78,778	196,234	25,156
1866	6,246	99,989	249,122	31,931
1867	6,823	128,435	284,910	41,619

Nothing succeeds like success. A short time after the beginning at Rochdale, the co-operative movement took a new start all over the United Kingdom, where the number of societies in 1862 was estimated at 450, with a membership of 90,000, who divided net profits to the amount of £166,000. In that year statistical statements were first presented to the Register. From 1862 to 1884 the number of societies has risen to 1,304, an increase of 226 per cent., while the membership, based upon the returns, increased from 90,341 to 680,165, or 652 per cent. During these twenty-two years, the total sales have amounted to £303,326,024, on which there has been a net profit of £24,084,113 made, which was the amount saved to co-operators.

In 1864, the English Co-operative Wholesale Society was formed, followed soon afterwards by the Scottish Wholesale. They are federations to which none but co-operative retail associations are admitted and presuppose their existence. The manner of conducting the wholesale business is analogous to that of the retail Besides largely dealing in groceries and provisions, the English Society manufactures biscuits, sweets, dry and soft soap, and boots and shoes, and supplies drapery, hardware, carpets, crockery, fancy goods and general furnishings. It is the selling agency of several co-operative productive societies manufacturing dry goods, dress goods, ready-made and ordered clothing, miscellaneous textiles, furniture, watches, machinery, etc. The English and Scottish Wholesales at present supply about one-third of the goods required by the retail stores. The English Society had a share capital in 1883

of £183,867, and a loan capital of £123,287. Its total sales amounted to £16,078,929. The statements for the retail societies in the United Kingdom for the year 1883 were as follows:

	England and Wales.	Scotland.	Ireland.
Number of societies	1,020	276	8
Number making returns	870	275	8
Number of members	576,477	102,817	871
Capital—share	£6,871,590	£587,549	8,710
Capital—loan	1,165,956	358,285	100
Sales	23,583,503	4,482,306	23,501
Profits	1,926,488	390,662	1,782
Devoted to education	14,869	885	.....

The leading co-operative society in Australia is the Equitable Co-operative Society, of Melbourne, administered on the Rochdale plan. Business was begun in 1882, and certain errors of management due to inexperience having been remedied, the society is now firmly established and progressing rapidly. Early in the present year, 1885, the number of members was 1,990; paid up capital, £46,100; and deposits, £7,000, drawing interest at five per cent. The departments include groceries, hardware, wines and spirits, crockery, boots and shoes, drugs and chemicals, stationery, drapery, millinery, carpets and upholstery, tailoring and dressmaking. The number of employes in the distributive service is about 90, one-third of whom are boys and girls. About 56 productive employes are also engaged. A monthly journal, called the *Equitable Co-operator*, is published by the society in its interests and circulated free of charge. Goods are delivered free to purchasers in Melbourne and suburbs. An experienced buyer is employed in London, and about one-half the stock in trade is imported.

The following hints about the method of conducting these societies, a summary of essential points and causes of success and failure, as stated in "Workingmen Co-operators,"* will be instructive and interesting:

"*Essential Points*—(*a*) The store is open to all; (*b*) charges ordinary market prices; (*c*) receives ready money only, and gives no credit; (*d*) gives dividend in proportion to purchases; (*e*) every member must have a share or shares, and receives good interest on them; (*f*) all are equal in voting power, whether they have few or many shares; (*g*) the store sells genuine articles, which are what they profess to be; (*h*) the store has an honest manager and an active committee; (*i*) the society insists on an efficient and intelligent audit and stock-taking.

"*Causes of Success.*—(1) A clear understanding and performance of the duties of an officer, an employe, and a member; (2) competent and painstaking officers; (3) competent and trustworthy employes; (4) proper security for the honesty and efficiency of the principal employes; (5) amicable and earnest working together; (6) promptitude and punctuality in business; (7) impartiality, civility and pleasant manners in the members and in the staff; (8) generous treatment of the employes; (9) judicious purchasing and careful regulation of the stocks; (10) ready-money purchases and ready-money sales; (11) carefully regulated expenses; (12) judicious investment of all surplus capital; (13) ample depreciation of property; (14) ample reserve funds; (15) good book-keeping and auditing; (16) officers giving full and free explanations to the members' meetings; (17) members having full confidence in the officers.

"*Causes of Failure.*—(1) Allowing the storekeeper to do as he likes; (2) allowing

*By Arthur H. Dyke and Benjamin Jones, Cassel & Co., London and New York.

credit to purchasers; (3) bad book-keeping and auditing; (4) bad rules; (5) carrying repairs and renewals to property account instead of expenses account; (6) competing with all the "cutting" shops; (7) expenses too great for the business; (8) employment of incompetent persons; (9) dishonesty; (10) injudicious purchasing; (11) injudicious and frequent changes of policy; (12) members purchasing away from the store; (13) not taking ample security from persons in a position to misapply the society's effects; (14) permitting the manager to buy away from the wholesale societies; (15) inefficient officers; (16) members being unreasonable and quarrelsome; (17) purchasing goods on credit; (18) overbuilding; (19) starting branches or new departments before the society is strong enough to bear the burden; (20) waste behind the counter from bad stock-keeping or careless weighing."

Some valuable information regarding the co-operative store is also contained in the following extract from "A Manual of Co operation,"* an epitome of Holyoake's History of Co-operation:

"DISTRIBUTIVE CO-OPERATION—THE CO-OPERATIVE STORE.†

"A modern co-operative store generally commences and obtains success by five things:

"1. Intelligent discontent at being compelled to buy bad articles at a high price.

"2. By opening a small, low-rented, clean shop, and selling good goods by honest measure, and at average prices.

"3. Increasing the cheapness of goods bought by concert of custom. The more money is taken into the market the further it goes in purchasing, while the large custom gives full employment to the shop men and diminishes the relative cost of management.

"4. By buying from wholesale dealers the stock of the store can be obtained from the best markets at the lowest rates, and of uniform good quality. It is by *continuity of quality* that the prosperity of a store is established.

"5. By capitalizing the first profits carried to the credit of the members until they amount to $25 (£5). By this means the first hundred members supply a capital of $2,500 (£500). Less than $25 to each member provides an insufficient capital.

"In commencing a store the first thing to do is for two or three persons to call a meeting of those likely to care for the object in view and able to advance it. The callers of the meeting should be those who have clear notions of what they want to do, how it is to be done, and why it is attempted. Capital for the store is usually provided by each person putting down his or her name for a smaller or larger sum—as each may be able, say from ten cents to twenty-five cents or more per week—toward the payment of five shares of five dollars each. A small store may make a beginning with one hundred members who subscribe one share of five dollars each.

"It is safest for members to subscribe their own capital; borrowed money is a dangerous thing to deal with. Interest has to be paid upon it before any profits are made. By commencing upon the system of the intending co-operators subscribing their own capital, a larger number of members are obtained, all have an equal and personal interest in the store, and give it their custom that their money may not be lost. This plan of dividing profits on purchases secures not only a common interest, but a large and permanent custom. It may take longer to collect the capital, but it lasts longer when it is collected and is much more productive.

"A secretary and a treasurer should be appointed, and two or three nimble footed, good-tempered, earnest fellows to act as collectors, who shall go round to the members and bring into the treasury their various subscriptions. Some will pay their money unasked, but many must be solicited for their subscriptions. These collectors require to be men of infinite patience and of practical sense. They are the real founders of the store; they cause the fund which creates it; they teach the first lessons of providence to hundreds of families who else would never learn them.

"Whatever business is entered into by the store the members should get some intelli-

* Arranged by the Sociological Society of America; published by John B. Alden, New York. Price, 10 cents.

† Chapt. 15.

gent, experienced man to put them in the right way of buying and selling, and preserving stock. There are wholesale stores in England and Scotland of which the smaller stores in those countries purchase. By means of this economical buying first-class goods may be obtained at low price. This is what co-operation can give the members, and nothing save co-operation can do this.

"A true co-operator has three qualities—good sense, good temper and good will. Good sense, to dispose him to make the most of his means; good temper, to enable him to associate with others; and good will, to incline him to serve others, and be at trouble to serve them, and to go on serving them whether they are grateful or not in return, caring only that he does good, and finding it a sufficient reward to see that others are benefited through his unthanked exertions.

"In a properly constituted store the funds are disposed of quarterly in seven ways: 1. Expenses of management. 2. Interest due on all loans. 3. An amount equivalent to 10 per cent. of the value of the fixed stock set apart to cover its annual reduction in worth, owing to wear and tear. 4. Dividends on subscribed capital of the members. 5. Such sum as may be required for extension of business. 6. Say 2½ per cent. of the remaining profit. After all the above items are provided for, to be applied to educational purposes, there remains: 7. The residue, and that only, is then divided among all the persons employed and members of the store, in proportion to the amount of their wages or of their respective purchases during the quarter.

"At the Leicester Congress, 1877, thousands of copies of a clever little statement were circulated, which will suffice to explain to the most cursory reader what advantages a good co-operative store may confer upon a town:

"1. It has made it possible for workingmen to obtain pure food at fair market prices. 2. It has taught the advantage of cash payments over credit. 3. It has given men a knowledge of business which they could not otherwise have obtained. 4. It has enabled them to carry on a trade of £160,000 a year. 5. It has made them joint proprietors of freehold property worth upwards of £20,000. 6. It secures them an annual net profit of £16,000. 7. It has raised many a man's wages two or three shillings a week without a strike. 8. It has alleviated more distress than any other social organization."

So much for English co-operative trading, a field in which this "new power in industry" has won its greatest triumphs.* On the other hand, in co-operative labor, or, as it is commonly called, productive co-operation, the goal of the co-operative endeavor, little has as yet been accomplished. The spinning companies of workingmen at Oldham, the Leicester shoe works and like enterprises, are but joint stock concerns, dividing profits on capital. Nevertheless, there are a few productive societies in Great Britain that permit workers, as workers, to share in the profits, and are managed by the workers themselves. Many of these have share capital also, to which part of the profits go, and some admit customers to participation in the dividend. It has been stated that 224 productive co operative societies, registered under the Industrial and Provident Societies Act, have been dissolved.† Of these 156 were small joint stock companies with no co-operative element in them; 44 divided profits between capitalists and customers, and 24 between capitalists, customers and workers. The Registrar's returns for the year ending December 31st, 1883, exhibit 34 so-called productive societies in England and Wales, and 4 in Scotland. But of these, 14 were corn (flour) mills, in which it is not usual to admit workers to share in profits, and 2 were agricultural. The following table of British co-operative productive societies, at the beginning of 1884, is taken from "Workingmen Co-operators," page 103.

* See the Holyoake Epitome of "English Co-operation in 1885," below.

† "Workingmen Co-operators," see above. See also Holyoake's statement below.

BRITISH CO-OPERATIVE PRODUCTIVE SOCIETIES.

NAME.	Date established.	BUSINESS.	Yearly Sales.	Yearly Profits.	METHOD OF DIVIDING PROFITS.
Arnold Manufacturing,	1868	Hosiers	£200	.....	Between shareholders and workers.
Airedale Manufacturing	1872	Alpacas, cords, etc.	5,799	£427	Between shareholders, customers and workers.
Cobden Mills	1867	Calicoes	52,264	.....	Between shareholders and workers.
Coventry Watchmakers	1876	Watches	2,623	278	Between shareholders, customers and workers.
Co-operative Printers	1869	Printers and stationers.	33,589	2,789	Between shareholders, customers and workers.
Dudley Nailmakers	1874	Nailmakers	1,212	83	Between shareholders and workers.
Dunfermline Manufacturing	1872	Damask table linen	1,672	67	No details.
Eccles Manufacturing	1861	Quilts and toilet covers,	9,767	1,058	Between shareholders and workers.
Edinburgh Printers	1873	Printers and stationers	3,027	236	No details.
Framemakers and Gilders, London	1858	Carvers, gilders and general decorators	6,389	.....	Between shareholders and workers.
Hebden Bridge Manufacturing	1870	Fustian cutters, etc.	22,103	1,980	Between shareholders, customers and workers.
Howley Park Quarry	1872	Stoneworkers.	3,624	500	No details.
Lancashire & Yorkshire Productive	1873	Flannels	16,396	43	Between shareholders and customers.
Leek Silk Twist Manufacturing	1874	Silk thread	2,688	2	No details.
Leicester Manufacturing	1876	Hosiers	6,273	133	Between shareholders, customers and workers.
Leicester Elastic Web	1878	Web weavers	4,493	129	No details.
Sheepshed Manufacturing	1881	Hosiers	92	.....	Between shareholders and workers.
Sheffield Cutlery Manufacturing	1873	Knives and scissors.	439	69	No details.
Sheffield Haft and Scale Cutting	1876	Haft makers	3,906	125	No details.
Paisley Manufacturing	1861	Plaids, shawls, etc.	11,891	568	Between shareholders, customers and workers.
Northamptonshire Productive	1881	Bootmakers	1,662	128	Between shareholders and workers.
Walsall Manufacturing	1874	Lockmakers	3,986	.....	No details.

The following introduction, by Mr. George Jacob Holyoake, to the epitome of his celebrated work on the "History of Co-operation,"* gives such a concise view of "English Co-operation in 1885," that it is well worth reproducing in this connection:

"ENGLISH CO-OPERATION IN 1885.

"Co-operation is organized self-help by honest labor and honest trade; the profits being equitably divided among those who create them, whether by work of hand or work of brain. That is what we understand Industrial Co-operation to be.

"There is a familiar use of the word 'Co-operation,' which means two or more persons or things acting together to produce some result—as when a man and a lever act together to move a log, or a cat's paw is employed to pull chestnuts from the fire; or when one thief holds the bag, while another thief fills it; or as when a physician marries the daughter of an undertaker, with a view to unite the business. In these

*See above.

cases the log is not consulted, the cat gets no chestnuts; the owner is plundered by two thieves united, and the patient does not profit by the union of the pestle and the spade. To the general public, these acts of concert equally mean co-operation. We mean by the word, the Co-operation of honest Industry, with a view to an equitable share of the profits made. We put the word 'honest' into the definition because if the laborer and the trade be not honest, the public is cheated, and Co-operation is but an organized form of fraud.

"Trouble has been taken by recent writers to estimate how far this new scheme of business has gained ground and advanced. It is now generally admitted that eighteen years after the formation of the existing society of Rochdale Equitable Pioneers—that is, in 1862—there were 450 stores established. Ten years later—that is, in 1872—there were 920. In the next ten years—that is, in 1882—the stores had increased to 1,200.

"The number of members, which in 1862 were 90,000, had in 1872 increased to 340,000, and in 1882 they amounted to 640,000. The Share and Loan capital of the stores which was in 1862, £450,000, amounted in the next ten years to £3,340,000, and in 1882, it had reached £8,000,000.

"The business of the stores rose also from period to period. The annual sales increased from £2,350,000 in 1862, to £13,000,000 in 1882. The profits made by the stores were not less remarkable. In 1862 they were £166,000. In 1872, £935,500; while in 1882 they had risen to £2,000,000.

"The sum total of this co-operative activity is, that we now have about 1,200 stores, or Distributive Societies, as we call them, which have 640,000 members, and £6,000,000 of share capital, and the annual sales of the Societies amount to £18,000,000.

"All we have at present to show of workshop Co-operation are about twenty-two Producing, or Manufacturing Societies. These belong to the denomination of Farm or Workshop Societies. The aim of all is to establish the principle of Equitable Profit-sharing among working people. But there is not much done in this way yet.

"There are also five Federal Corn Mills which grind corn for the stores in their districts. There are two Wholesale Societies—one in England and one in Scotland. The business done by the Manufacturing Societies is about £220,000; by the Corn Mills, £1,300,000; by the Wholesale Societies, £6,000,000. The annual business of all the societies exceeds £25,000,000.*

"Distributive Co-operation is well-established, and extending. Leeds, for instance, has upwards of 20,000 members. It has so many branch stores, and is so continually erecting new ones, that they keep a staff of builders who move from place to place as new stores have to be built. During the last twenty years the business done by working men is estimated at £250,000,000, and the profits about £20,000,000, all of which has gone into their own pockets. There are three Civil Service Stores in our Union, which do a business of £2,500,000; but as they are cheap-selling stores their business is not included in the statistics given, which are confined to stores dividing profits on purchases. For the same reason Joint Stock Companies are not included among Co-operative Productive Societies because the workmen do not participate in the profits made.

"Many stores have no Educational Fund, but there is increase in this useful respect. No store that begins with one ever goes back. No store beginning without it ever establishes one, not knowing that no investment pays like associative knowledge.

"The two great Wholesale Buying Societies are more and more appreciated. Without them the stores cannot command genuine goods and commodities, and cannot fulfill the first condition of a store—that of guaranteeing pure, unadulterated articles.

"There have lately been formed two Societies for promoting Co-operative Production. We value the extension of Co-operation to the Workshop, because it increases the means and the prospects of labor, and therefore elevates it; gives labor a dignity—for self dependence and assured competence make dignity. Every Co-operative Workshop in which the worker receives his or her equitable proportion of gain made, allures labor and contents it.

*The latest facts of Co-operative progress, and the principles whence they have arisen, are presented in a new Manual entitled *Working Men Co-operators*, by A. N. Dyke Acland, M.A., of Oxford, and Benjamin Jones, one of the most experienced officers of the movement. Its ability of statement, fullness of detail, and wisdom of suggestion, constitute the book a sign and proof of co-operative progress.

"Next to Co-operative Workshops—and perhaps before them—is Profit—the sharing in factories and places of business and commerce. Manufacturers are increasing who offer their work-people a participation in profits. We hope before long that Trades Unions will encourage their members to prefer working for those firms in which Profit sharing is adopted. One day workmen will refuse to work where this is not done.

"State Socialism signifies State Patronage, which many are ready to administer at the public expense; and many are willing to receive who despair of the better day, because despair has made them abject. When I first knew Rochdale, all the working people needed relief. All who could get it had it, and the chief hope of others was that the workhouse might not be too full when their turn came. Now they subscribe to relief funds, to hospitals, present fountains to the town, and in all things give like gentlemen.

"It is Co-operation which has enabled them to do this. It has transformed a similar class of people in a similar way in many towns. The fear of Ferdinand Lassalle that the working class must always be bound by the 'brazen law of wages' and never have capital of their own, is no longer true, where Co-operation is adopted and persisted in. Many stores have now more money than they know what to do with profitably; it is, therefore, that we are directing attention to investments in houses, farms, and manufactories. Thus it has been abundantly shown in England that Co-operation can permanently and definitely improve the condition of the people. It may accomplish this result slowly, but it accomplishes it faster than revolution would, and without sacrifice of life."

CO-OPERATION ELSEWHERE.

In France a large number of co-operative societies came into being with the revolution of 1848, but few survived the establishment of the second empire. In 1864 the movement obtained new life, and was assisted by favorable legislation. In 1870 twenty workingmen's co-operative societies were engaged in production at Paris; at present there are about seventy-four,* the total number of whose "associates" (workmen shareholders) is 4,920, in addition to many "auxiliaries." The total paid up capital amounts to about $1,116,600, while the result of the work done was valued at $17,800,000. These societies are usually administered by a council, acting through an executive officer, who is termed a delegate administrator, director or *gerant.* Their condition is considered promising and the outlook encouraging, although few exist outside of Paris. In many cases auxiliaries do not share in the profits. Those of the Carpenters' Association of La Villette are locksmiths, sawyers of planks and joiners. Instead of participating in profits, they are paid a larger wage than that allowed by private employers. Provision is also made for an allowance to any auxiliary who is injured while at work, usually amounting to one-half the customary wages, for the time the disability continues. The auxiliaries employed by the Association of Working File Makers, although not allowed to share in the profits, are admitted as associates, without the payment of any fee, after six months' employment by the society. In other societies, notably the Association of Piano-Forte Makers, a similar custom prevails. Many societies have a fund for the care of superannuated members, for insurance in case of accident or death, etc. Most have certain conditions as prerequisites to membership, designed to secure the moral, physical and industrial fitness of those who desire to join. Some require candidates to serve a period of probation before admission. The mode of allotment of profits varies. In many cases a fixed rate of interest is paid to shareholders, and the balance, after providing for the maintenance of reserves, insurance, etc., is divided among associate workers, or

*A table of seventy-four is given in Colonel Wright's Manual, pp. 82-85, taken from *Bureau des Associations Professionelles.*

among associates and auxiliaries. Several societies, which permit auxiliaries to share, restrict the amount of profit out of which such share must be paid.

According to the report of Dr. Ziller, who is at the head of the co-operative societies formed in the Austrian empire, the total number of such societies within Austrian territory in 1881 was 1,515. Of these, 317 were unregistered and 1,198 registered. Five hundred and seventy-two registered societies were with limited liability, and 626 unlimited. One thousand one hundred and twenty-nine, or 74 5 per cent. of all the societies, were people's banks; 235, or 15.5 per cent., were distributive societies, and the balance were as follows: Raw material supply, 6; agricultural material supply, 14; stores, 3; artisan productive, 41; agricultural productive, 61; building, 5; trading, 10; assurance, 2; various, 9. These statistics include Lower and Upper Austria, Lutzburg, the Tyrol, Vorarlberg, Styria, Carinthia, Krain, the Coast Land, Bohemia, Moravia, Silesia, Galicia, Bukowina and Dalmatia. Co-operative distribution does not appear to be very flourishing. It is stated that the number of such societies is scarcely half that formerly existing. Taxation in the form of trading licenses seriously interferes with the prosperity of all co operative enterprises.

Distributive co-operation in Hungary has made little progress; nor are productive societies numerous. The chief avenue of co-operative effort, as in Austria and Germany, is the system of people's banks. Dr. Ziller has presented the following statistics for the societies in Hungary, Croatia and Slavonia, in the year 1883: Total number of societies, 357; people's banks, 308; consumers' societies, 16; raw material supply, 2; depots (for selling), 3; agricultural aid societies, 2; artisans' productive societies, 6; agricultural productive societies, 7; assurance societies, 8; miscellaneous, 5.

In Denmark the co operative movement has grown in importance since 1870, and is confined to consumers' distributive societies. About 150 of these are believed to exist, 70 of which have been grouped in a wholesale union. The English mode is followed.

Co-operation in Spain has as yet made no progress. One or two small associations exist, but they are reported to be in a not very flourishing condition.

In Italy people's banks, on the German plan, have been very successful, and of great benefit to certain classes, chiefly the middle class traders and artisans, but have not materially aided laborers or the masses of the people. They have increased from 4 in 1865 to 252 in 1883, when the capital was about $10,500,000. Other forms of co-operative credit and savings institutions are in progress or contemplated. Distributive co-operation is well known, but the movement lacks organization. The number of consumers' societies in 1878 was 58, and they have considerably increased in number since, but no definite statistics exist. In the country districts of Lower Lombardy there is a system of co-operative bakeries. Productive co-operation is limited to a few societies, and yet in an experimental stage. The oldest and most important is the Artistic Glass Society, of Altare, founded in 1856. Its original capital was about $2,260; in 1883 it amounted to nearly $83,000, and the value of the products produced to $105,000. At Ismola the labor society, founded in 1874, manufactures earthenware and kitchen utensils. In Bologna there are six small productive societies engaged in hemp-dressing, shoemaking, building and woodworking, leather cutting, glove making and printing, and a few others in different localities. The customary division of profits is between shareholders and workers. At Altare and Ismola three per cent. is first paid to shareholders, and of the remaining profit thirty per cent. is carried to a reserve fund; twenty-five per cent. to a subsidy fund; thirty per cent. to shareholders, and fifteen per cent. to workers, in proportion

to the number of days each has worked. Members must become shareholders within four years or leave the society, a requirement that eliminates the thriftless and undeserving.

Another form of productive co-operation in Italy should be noticed—the co-operative associations of day laborers. These arose among the agricultural workers of Romagna, and they had in view the emancipation of field laborers from the power of contractors, whose custom it was to control every extensive operation in road making, earthwork, etc.; farming out the work to sub-contractors and reducing wages to the lowest point, so as to swell profits to themselves, without regard to the rights of the laborers dependent upon them. The work, it will be seen, is very simple, requiring little capital and limited skill, thus rendering it easy of performance upon the co-operative plan. The meagre capital required was readily obtained by savings from wages, the par value of shares being placed at a low figure. Almost the only outlay required was for pickaxes, barrows, etc., and in many cases these were already possessed by the workmen. The plan of operation was simple. Large contracts are taken by the society at fixed rates, and sublet in sections to members, who work by the piece. By this plan individual remuneration is in proportion to the work performed. The workers become directly interested in the work, and their efficiency is proportionately increased. The middleman is abolished, and the laborer is brought into immediate relations with the proprietor, who controls the undertaking. Under these advantages men who previously earned from 7½*d.* to 1*s.* 2½*d.* a day have increased their wages to 2*s.* 5*d.*, and in some cases to 3*s.* 2½*d.* or 4*s.* daily. The first association of this sort, formed at Ravenna with 300 members, grew to a membership of 3,000 within a year. Others upon the same plan are working well.

Co-operation in Sweden, as in Norway and Finland, is still awaiting development, but owing principally to the efforts of Lars Oscar Smith, a wealthy manufacturer of Stockholm, its future is hopeful. He first formed at Stockholm the *Sättskapet Arbetarnes Ring*, or Workmen's Ring Society,* and inspired by this example 80 similar associations sprang up in the Swedish provinces. The business of the Swedish Workmen's Ring is at present confined to groceries and the products of butchering, together with a co-operative steam kitchen for workingmen, originally established by Mr. Smith, but now operated as a department of the society. In general features the organization is based upon that of the English societies, that is, a wholesale department intended ultimately to be owned and operated by a federation composed of numerous retail associations. Unlike the English stores, which began with the retail departments and by natural growth developed their present complete organization, the Swedish societies, by the aid of the capital supplied by Mr. Smith, have at once the advantages of a wholesale department, with the possibility of acquiring its full ownership in the future. Mr. Smith is also the promoter of a co-operative banking society.

About 130 distributive societies are in operation in Switzerland, of which nine only existed prior to 1860. The larger number are in the cantons of Zurich, Bern, Saint Gallen, Neuchâtel, and Glarus, though some are found in every canton except Schwytz, Uri, Unterwald, and Appenzell-Interieur. The total capital invested amounts to about $627,250; estimated number of shareholding members, 30,000; sales, $2,509,000; profits, $289,500.

Co-operation in the Netherlands has made progress since 1876. Divisions of the

*An important object of these societies was emancipation from the "ring" rule carried on by the combined proprietors of brandy shops and public houses.

Workmen's Union exist in several towns and have founded small associations, administered under domestic rules and not incorporated. Under the statute of 1876 there have been incorporated 51 co-operative societies: Co-operative savings and advancing banks, 8; societies of consumers, 23; co-operative bakeries, 2; butchering establishment, 1; building societies, 13; agricultural societies, 3; society for managing funerals (undertakers), 1.

One of the most successful forms of co-operation ever attempted in the United States is that known as the building and loan society, which is really a co-operative savings bank. There are over 3,000 of these associations in this country, with a membership of 450,000, interested to the extent of $75,000,000 capital.* Productive co-operation has yet to be developed here. Distributive co operation has been tried upon various plans, notably under the patronage of the Sovereigns of Industry, Patrons of Husbandry, Knights of Labor, and similar organizations. Being in most instances incidental to the main purposes of such orders, the fate of these distributive stores has usually been determined by the success or the failure of the principal object of the organization. Isolated experiments, not successful, have been made in New York City, Brooklyn, and other localities. In Texas a co-operative wholesale society and about 150 retail stores are in existence in connection with the order of the Patrons of Husbandry. In Philadelphia, the Industrial Co-operative Society has been in successful operation for eleven years. Over 2,000 members (mill operatives) are interested to the extent of $21,000 capital stock paid in. The annual sales approach $250,000. Another one of these co-operative associations is doing business at Phœnixville, Pa., whose transactions for the year just closed amounted to $17,880, of which $12,620 was from the sales of groceries, etc., and $5,260 from coal sold during fourteen weeks, to January 2d, instant. The net profits remaining, after paying 6 per cent. interest on the spare capital, deducting cost of distributions, rent, insurance, 10 per cent. for depreciation of fixtures, and 5 per cent. for sinking fund, amounted to over $400, which has been distributed to the customers of the store in the shape of dividends on their respective purchases, the rate for the last quarter being 7 per cent. to non-members. Coal is sold at a reduction in price of $1.10 per ton from prevailing rates. The association claims an annual saving to the people of that town, by reason of its existence and operations, of $15,000 on coal alone, and as much more on groceries.†

In Massachusetts, the Arlington Co-operative Association (restricted to the Arlington mills employes), began business on September 15th, 1884, and the first fiscal year was closed October 1st, 1885. The average capital for the year, $3,320, was turned over more than eleven times and thus realized a return of nearly 74 per cent. in less than 13 months. The annual statement showed: Total sales, $38,194.94; gross profits, $6,120.04; salaries, expenses and interest, $3,846.98; net profits, $2,276,06; profits divided, $1,949.98; carried to sinking fund, $323.08; interest on capital, $173.24; total return on capital, $2,446.30. "These totals afford the basis for the following statement: The gross profit amounts to 16.02 per cent. on sales; salaries and expenses 10.07 per cent. on sales; net profits, 5.95 per cent. on sales; the profits divided represent an average on checks returned of 6.24 per cent. for full dividend and 3.12 per cent. for half dividend; the sinking fund represents more than 14 per cent. of net profits besides initiation fees; the interest is 5 per cent. on capital, and

*For an account of the New Jersey building and loan associations see reports of this Bureau for 1880, 1882 and 1884.

† This information is taken from the Philadelphia *Record*.

the total return on capital is 73.68 per cent. At the close of the first year's business the share capital represented 664 shares; merchandise in stock, including dry goods and fuel, amounted to $2,554.27; fixtures, $767.28; cash in bank, $1,249.26; and the association might well congratulate itself on the results accomplished, and the prosperous future apparently before it."*

Several distributive co-operative associations already have been organized under the laws of New Jersey,† but we have received statements from only four—those at New Brunswick, Trenton and Kingsland (Bergen county), and at Hammonton. "The New Brunswick Co-operative Association" was incorporated on July 22d, 1881, and issued its fourth annual report for the fiscal year ending November 30th, 1885. The store was opened in the latter part of 1881, with a share capital of $1,000 subscribed. A general grocery business has since been carried on there; its progress may be seen from the following comparative statements for the years named:

	1885.	1884.	1883.	1882.
‡Number members	102	106	105	102
‡Share capital	$3,348 36	$3,230 41	$3,324 83	$3,060 02
Total sales	26,690 85	27,517 70	29,181 25	31,439 07
Gross profits	5,007 68	4,651 09	4,459 46	4,248 07
Salary expenses	2,531 75	2,526 85	2,373 25	2,327 75
Sundry expenses	759 45	772 75	736 48	604 29
Net profits	1,716 48	1,351 49	1,349 73	1,316 03
Interest on capital	188 83	188 04	183 31	151 21
Reserve fund	76 37	58 17	58 36	91 52
Educational fund	36 28	27 61	27 70	44 96
Dividends	1,264 34	940 88	898 41	1,134 17
Fixture and organization account	150 66	136 89	181 95	619 33

The first statement of the "Trenton Co-operative Society" was made on December 31st, 1885, and covered a period of less than eight months (from May 9th). "It shows a net earning of $1,473.70. On October 1st, after carrying to the sinking fund 5 per cent. of the net profits, reserving 2½ per cent. for educational purposes, paying the legal rate of interest on capital stock, and discounting fixtures, etc., at the rate of 10 per cent. per annum, we returned to members a dividend of 7 per cent., and one of 3½ per cent. to non-members, on their purchases at our store during the term. For the quarter ending December 31st, after making the same provision for the various funds, etc., we are able to return to members 8 per cent., and to non-members 4 per cent. on every dollar's worth they have purchased. When it is considered that our members number but 193, many of whom are not heads of families, and that we have not utilized more than one-fourth of the capacity in the store we now occupy, it may readily be seen that, when our membership shall have increased to 1,000 families, the per cent. expense would be much less and the dividends on purchases correspondingly increased." §

*C. D. Wright: A Manual of Distributive Co-operation, p. 106. See above.

†"An act to provide for the formation and regulation of co-operative societies of workingmen," chapter 38, Laws of 1883. See Appendix. This is amendatory and takes the place of the act of 1881 Seven associations, organized under these laws, are now in operation: at New Brunswick, Trenton, Kingsland, Bayonne, North Vineland, South Vineland and Hammonton.

‡ On November 30th.

§ Statement of Board of Directors.

The condensed statement is as follows:

Members	193
Share capital	$2,395 94
Total sales	15,210 17
Gross profits	3,394 65
Salary expenses	1,259 53
Sundry expenses	661 42
Net profits	1,473 70
Reserve fund	111 42
Educational fund	32 97
Interest on capital	47 40
Dividend to members	516 08
Dividend on salary	93 42
Dividends to non-members	234 35
Fixture and organization account	72 99
Balance undivided	365 07

The report of the "Kingsland Co-operative Association" for the year ending January 31st, 1886, shows the total amount of capital stock to be $1,990, divided into 398 shares, at $5 per share.* The "cash account" of the annual statement is as follows:

RECEIPTS.

Amount on hand January 31st, 1885	$309 80
Merchandise sold	16,851 51
Rent for rooms over store	132 00
One hundred and twenty-one shares of stock sold	605 00
Total	$17,898 31

DISBURSEMENTS.

Merchandise	$14,768 91
New fixtures	150 00
Salaries	1,241 43
Rent	300 00
Insurance	20 00
Dividend and interest	753 22
Sundry expenses	184 51
Eighty-one shares withdrawn	405 00
Balance on hand	75 24
Total	$17,898 31

The "Fruit-Growers' Union," of Hammonton, first organized in 1867, was re-organized and incorporated under the co-operative law February 16th, 1884, and is now known by the name of "The Fruit-Growers' Union and Co-operative Society." The paid-up capital at the time of the re-organization amounted to $2,800. The society deals in fertilizers, merchandise, coal, feed, etc. "Thus far," observed the president at the second annual meeting, "it has not been the aim of your officers to show a large net profit at the end of the year, but, on the contrary, to furnish goods to buyers on a margin as small as is consistent with safety." "We cannot expect to make the large percentage on sales as is shown in the reports of co-operative stores in cities, where they handle goods which bring a good profit, while our business must consist largely in feed, fertilizers and such goods as are handled at a less profit. The benefits of patronizing a co operative store are honest weight, good goods at reasonable prices, and no extravagant profits. It is your store; you own it and get all the profits accruing from the business. * * * One of our members kept an account of his

*The par value of the New Brunswick association is $25; that of the Trenton, $5. There are 59 members.

purchases for one month at one of our best stores; he kept himself posted on the prices at the union store, and figured up the difference. At the end of the month he found that he would have saved 20 per cent. on his purchases had he patronized his own store. He then borrowed money, and has since traded here. * * * While the percentage on gross sales is not large, for reasons given, we find that the money invested in our business has earned over 30 per cent. during the year. We call that a handsome interest."* The total number of members is 233, who own 985 shares. Three hundred and seventy-nine dollars has been set aside for the sinking fund during the past two years; that is 5 per cent. on the *capital stock*. For this reason no dividend has yet been declared. The following statement shows the amount of receipts and disbursements at the store:

RECEIPTS.

Cash for sales	$27,363 22
Due on accounts and notes	395 45
Bills paid from 1884	214 22
Goods on hand	4,345 20
Fixtures on hand	433 55
Total	$32,751 64

DISBURSEMENTS.

Goods and fixtures on hand January 8th, 1885	$1,698 97
Fixtures bought during the year	180 40
Bills paid for goods	26,444 18
Bills paid for freight	1,834 06
Bills paid for labor	1,025 00
Railroad fare, postage, &c.	51 37
Bills unpaid	442 21
Rent	100 00
Committee work (finance)	18 00
Insurance	12 00
Tax	14 00
Depreciation on fixtures	40 00
Interest	180 00
Total	$32,040 19
Net profit	$711 45

The laws of New Jersey allow any number of persons, not less than seven, to incorporate themselves into a co-operative society upon signing and acknowledging a certificate of association (charter), and recording the same in the county clerk's office and filing a copy thereof in that of the Chief of the Bureau of Labor Statistics.† The society is then organized and by-laws adopted. These provide for an annual general meeting of the members, at which a president and other officials composing the board of directors are chosen, who elect one of their number treasurer, and oversee the business affairs of the concern. A secretary, business manager and other employes are also selected by the board. All fiduciary officials must give bonds. The annual meeting of the members selects an auditing committee of three from their own number. No member has more than one vote. Regular quarterly and special meetings are also provided for. The general rule followed in business transactions is the cash system.

The following is a copy of the certificate of association of the Trenton Co-operative Society and may serve as a model for prospective organizations of a like character:

* Secretary's report for 1885.

†Before recording the certificate must be indorsed by the Chief.

"This is to certify that we *————, citizens and residents of the county of Mercer and State of New Jersey, and such as now are or who may hereafter become associated with us, do hereby associate ourselves together by the following certificate of association for the purpose hereinafter mentioned, under and by virtue of the provisions of an act of the Legislature of New Jersey, entitled 'An act to provide for the formation and regulation of co-operative societies of workingmen,' and to that end we do, by this, our certificate, designate and set forth :—

"*First* The name of this society shall be 'The Trenton Co-operative Society.'

"*Second.* The place in this State where the business of this society is to be conducted shall be in the city of Trenton, where the principal office shall be located.

"*Third.* The object of said society shall be to engage in the business of trading and dealing in goods, wares, merchandise and chattels, and of buying, settling, selling or leasing, and improving real estate and erecting buildings thereon, and to divide the profits thus realized among its members and others, in proportion as they may have contributed to the production of said profits by their capital, labor or custom.

"*Fourth.* The total amount of the capital stock is five thousand dollars ($5,000), divided into one thousand shares (1,000), of the par value of five dollars ($5.00) each, to be paid in installments of not less than fifty cents ($0.50) per week; the number of shares already subscribed for is one hundred and twenty (120), and the amount actually paid in cash on account of the same is one hundred and fifty dollars ($150).

"*Fifth.* Any person, whose name has been approved by the Board of Directors, may become a member of this society by paying an entrance fee of twenty-five cents ($0.25), subscribing for one or more shares of capital stock, and signing an agreement to abide by the Articles of Association and whatever By-Laws and amendments thereto may hereafter be agreed upon at any regular meeting of the society.

"*Sixth.* Profits shall be divided in the following order:

"1st. Five (5) per cent. of the net profit shall be set apart as a contingent or sinking fund until there shall have accumulated a sum equal to thirty (30) per cent. of the capital stock of the society.

"2d. Interest at the rate of six (6) per cent. per annum shall be paid quarterly upon the share capital of the society on all shares fully paid up at the beginning of the financial quarter.

"3d. If, after paying the sums provided for in paragraphs one (1) and two (2) of this section, the remaining profits of the business of any quarter shall be sufficient to pay a dividend of one or more full per cent. upon the full amount paid as wages during the quarter and the full amount of sales for the quarter, such dividend shall be paid. In the adjustment of the dividend on sales, the non-members shall receive one-half (½) the rate of dividend paid to members. Any amount of undivided profits on the business of each quarter shall be carried forward to the credit of the next financial quarter.

"*Seventh.* Alterations or amendments may be made to this certificate of association and to the by-laws of this society at any regular meeting of the society, provided ten (10) full days' notice be given of such intended alteration or amendments, and two-thirds of those present vote in favor thereof.

"In witness whereof we have hereunto set our hands and seals this sixteenth day day of March, A. D. 1885."

*Names of seven or more incorporators.

CHAPTER II.

THE LAW AND THE LABORER.

PROGRESSIVE LABOR LEGISLATION IN NEW JERSEY.

Distance alone lends enchantment to that view which gives the "good old times" an idyllic character, for the nearer we approach and examine them from the standpoint of what is now considered even the minimum of comfort, the more uninviting do they appear. The present world could not live that way now. The material progress of our time has increased the conveniences of life a thousand fold, and added to the happiness of a greatly augmented population; there has been a general forward movement socially, even though the rate of progress in individual cases has been disproportionate. And this has been most marked within a comparatively recent period. The time when there were no railroads, no telegraph, no sewing machines, no kerosene oil nor gas—the day of the "tallow dip," when even matches had not come into use, hardly yet belongs to history. The lumbering, but romantic, stage-coach ran far into our century, while there are still those among us who sailed on our first steamboats. That was the day of magnificent distances, when it took as much time to get over the ninety odd miles in our State, between New York and Philadelphia, as it does now to perform the journey between the metropolis and the Mississippi. The beginnings of our excellent system of free schools were witnessed by Jerseymen who have but just passed middle age. The newspaper reader is really a creature of modern birth. In 1810 only eight weekly newspapers were published in this State; in 1885 New Jersey boasts of over two hundred local "dailies" and "weeklies," while many thousands consider as necessary as their cup of tea or coffee the regular budget of news served by the New York or Philadelphia press, arriving either by train or through the post office, which is one of the greatest of modern improvements. It was only in 1845 that an act of Congress led to the introduction of the present system of postal rates and stamps. The recipient of letters forty years ago paid the postage, which varied according to the distance and number of *sheets of paper* sent, the lowest rate being six cents for "every letter composed on a single sheet of paper, not exceeding thirty miles," and so on to four hundred miles, when twenty-five cents were charged; for double letters, double rates, etc. The expense was so heavy as to make correspondence a luxury for the great mass of the people, the number of letters sent being very small in proportion to the number of inhabitants. When the national government had got under way, only seventy-five post offices were in existence, and of these New Jersey had but six. Now nearly every hamlet in our State has its daily delivery. Yet less than three-quarters of a century ago the mail was considered "on time" when delivered once a week. "Our mail," observes an enthusiastic chronicler of 1818, "is now transported with uncommon rapidity; daily

between all the great towns and commercial cities; twice a week to the capitals of each State which are not commercial, and once a week to other places."

The main post road ran through a sparsely-settled country, passing not even all of the half dozen New Jersey towns, which contained but a few hundred houses each. The great bulk of our population then and long after continued to follow agriculture as a pursuit—"exclusively an agricultural State" is the expression frequently met with in official documents down to the '40's. The manufacturing enterprises were nowhere worthy of the name. At the close of the preceding century a few iron and shoe factories, tanyards, grist, saw and paper mills completed the infant industries of that day. The attempt which the "Society for the Encouragement of Useful Manufactures" made at the Great Falls* of the Passaic, had proved a discouraging failure, because, as was said, "the whole thing was premature." This state of affairs continued up to the time when the restrictive commercial policy, pursued by our government during the years which immediately preceded and witnessed the war of 1812, almost entirely prevented the importation of foreign goods and necessarily stimulated home production. Here, as elsewhere, every effort was made "to encourage domestic manufactures,"† which, with the return of peace and the reopening of our ports to commerce, had a hard struggle for existence, in "a market inundated with goods of British manufacture,"‡ until relief came with the various tariff acts, culminating in the legislation of 1828—the famous "tariff of abominations," as it was called. But now, with the advent of railroads, which soon followed the introduction of labor-saving machinery, the magnificent inventions of Watt and Arkwright and Crompton and Cartwright, began the development of the factory system—the modern industrial period, although somewhat later in New Jersey than elsewhere.

A generation had not yet passed away since the time of which it was written, that "most of the [Jersey] families in the country and many in the populous towns are clothed in strong, decent homespun." § That probably was a rose colored view of a superficial observer and referred only to the well-to-do classes. The condition of the artisan and laboring part of the population was anything but agreeable at the close of the

*Paterson, 1792.

†"An act to ascertain the state of manufactures in this state" was passed in 1814 and an incomplete census taken under it, the returns giving information only concerning cotton and woolen manufacturing establisments and sheep. Of the thirteen counties, which were inhabited by 250,000 people, Cape May and Hunterdon did not report. In the remaining there were 234,361 sheep, 20 cotton mills, 56 woollen factories, and 140 "carding machines for country business;" the total spindles in use did not equal in number those now employed in a single one of our fifty odd mills.

The act is interesting because it was the first attempt at an industrial census of New Jersey:

"Whereas, it is of great importance that information should be obtained as to the state and extent of the manufacturing establishments in this state and the increase of the same, therefore, etc.,

"1. That it shall be the duty of the assessor of the several townships * * * to take an account and enumeration of all manufacturing establishments within their respective townships working in wool, cotton, flax, hemp or either; all manufactories of glass, iron or brass wire and ironmongery, and all carding machines for carding wool for hire, which shall be used, owned or carried on by any person within this state; and the said assessor shall, in taking the account and enumeration aforesaid, procure, as far as practicable, information as to the amount or extent of the several articles manufactured as aforesaid in each manufactory with an account of the machines or machinery used in the same," etc.

From this time on many special acts were passed "to encourage domestic manufactures" by incorporating companies. The first general manufacturing act was enacted in 1816, but repealed three years later. It allowed ten or more persons "to form a company for the purpose of manufacturing woolen, cotton or linen goods, or for the purpose of making glass, or for the purpose of making from ore bar iron, anchors, mill irons, steel, rail rods, hoop-iron and ironmongery, sheet-copper, sheet-lead or red lead." The next general law was that of 1846; the third was passed in 1849, which does not vary greatly from our present "act concerning corporations"

‡Gov. Dickerson's annual message, 1816.

§ Winterbottom's View of the United States of America, 1795.

eighteenth century,* and their style of living did not improve until the system of household industries gave way to the factory and factory operative. There were no large communities anywhere in the State; the means of the richest were limited, their wants few, while a proportionately large working class resulted in considerable surplus labor. Many of the colored population were still slaves, employed as domestic servants, farm hands and mechanics; and

SLAVERY

made the wage-earner's lot especially hard. It was far more blighting to free labor than the competition of convicts or of pauper immigration in our day. It is true that our lawgivers comparatively early (in 1798) began to discourage it, but no attempt was made at its suppression till 1804, when, on the 15th of February, "an act for the gradual abolition of slavery" became a law. This was supplemented by the legislation of 1820 (February 24th), extending its scope and providing that children born of a slave within the State since February 4th, 1804, should be free at a certain age, which was 21 years for females and 25 years for males.† The education of the slaves was also encouraged.‡ Yet at this time and long afterwards, the local papers were full of advertisements, closing with the stereotyped direction, "for terms apply to the printer" [editor], and announcing "for sale": "Fifteeen years of a negro boy, near 13 years of age"; "a likely negro wench twenty-five years of age," and the like. Another class of advertisements appearing even more frequently than the preceding, were the rewards offered for runaway slaves ⁇ Nor was it less common for the sheriff, who had levied on a judgment debtor's property, to make a return like the following: "By virtue of the within writ I have seized and taken a wench named Rachel, two beddings, one cow," ‖ &c.

* In the low and dingy rooms which he called his home were wanting many articles of adornment and of use now to be found in the dwellings of the poorest of his class. What a stove was he did not know, coal he had never seen, matches he had never heard of. He rarely tasted fresh meat as often as once a week, and paid for it a much higher price than his posterity (?). Everything which ranked as a staple of life was very costly. * * * If the food of an artisan would now be thought coarse, his clothes would be thought abominable. A pair of yellow buckskin or leather breeches, a checked shirt, a red flannel jacket, a rusty felt hat cocked up at the corners, shoes of neat's-skin, set off with huge buckles of brass and a leathern apron comprised his scanty wardrobe. The leather he smeared with grease to keep it soft and flexible. His sons followed in his footsteps or were apprenticed to neighboring tradesmen. His daughters went out to service—*McAllister's History of the People of the U. S., Vol I., page 96*

The price of wheat flour is now less than the average price at any time during the past one hundred years.

† Until then the colored person remained the servant of the owner of the mother. The owner was compelled to file a certificate of the birth within nine months thereafter Slavery existed in this State up to the time of the Proclamation of Emancipation. In 1860 the United States census returns reported 8 slaves in New Jersey. In 1850, the number was 236; in 1840, 674; in 1830, 2,254; in 1820, 7,557; in 1810, 10,851; in 1800, 12,422; in 1790, 11,428.

‡ In the early part of the century many "African schools" were organized.

⁇ "Fifty Dollars Reward.—Ran away from the subscriber on the night of the twenty-seventh of April last past, *a negro man named Silas*, about 27 years old, about 5 feet 9 inches high, stout made fellow, much scarred with the King's evil under his jaws; bred by David B., of Upper Freehold, and sold to his son, who sold him to Robert C., of whom I purchased. Had on when he absconded a short coat and trowsers of dark fulled linsey, striped vest, hat castor about half worn. He is a hypocritical, artful *rascal*, pretends to be a Methodist, carries his hymn book and is often singing. He was seen at David and John Baird's the first of the present week, and I presume is harbored in that neighborhood. Whoever takes up said negro and delivers him to the subscriber shall receive the above named reward.

"Belle Vue, opposite GEORGE F."
"New Brunswick, May 16, 1816."

‖ MIDDLESEX COMMON PLEAS. June term, 1814.

The following bill of sale of a negro, brought from San Domingo, made at New Brunswick in 1829, is in our possession:

"Know all men by these presents that I, Staats Van Deursen, of the city of New Brunswick, in the State of New Jersey, for the sum of two hundred dollars in hand paid, have and do bargain and sell to James Bishop, of the city and State aforesaid, a certain negro man named

All this appears to us in this more enlightened age anything but humane, yet it reflected the spirit of the times, when all manual labor was regarded as "not respectable" and laborers but the "mud-sills of society;" when the

UNFORTUNATE POOR

were considered criminals. By the common law, the creditor, having stripped the debtor of his property and the claim remaining unsatisfied, might throw him into prison and keep him there for life unless he found means to discharge his obligation. "If a person," so runs the opinion in an early New York report, "be taken in execution and lie in prison for debt, he is not to be provided with meat, drink or clothes, but he must live on his own or the charity of others; and if no one will relieve him, let him die."* Such was the inhuman law of imprisonment for debt, which from the earliest times continued to oppress the poor and unfortunate in our State, gradually modified in its ferocity, till it was finally abolished in 1842.† No class felt its hardship more than the mechanic and laborer, and no change has contributed more to their progressive amelioration than the final enactments, which rendered unnecessary the periodical clearing out of jails under acts for "the relief of poor distressed prisoners for debt," or for "the relief of insolvent debtors," which filled our statute books for more than a century. The unlucky workingman who had met with an accident soon found himself in prison, a large portion of whose unhappy inmates were debtors, held in bondage and idleness for very small sums of money and, in many cases, purely out of spite. As a means of collecting debts, this remedy was futile; for the victims, often the poorest laborers, deprived of the use of their time, were only plunged deeper into misfortune. It accustomed them to idleness as well as being a most fruitful parent of crime by throwing them into the society of criminals. This law was not even a respecter of sex, for female imprisonment for debt was not prohibited till 1818. Debtors were really in a worse plight than criminals awaiting trial, who, in most cases, had the privilege of being released on bail—a favor not extended to the former.‡ Their only relief lay in the many temporary "general jail delivery" acts, whose passage was owing not so much to any enlarged humane feeling as to the fact that with increased population and trade

Dick or Richard, aged about twenty-seven years, To have and to hold the said negro man to him, the said James Bishop, his executors, administrators and assigns forever, which said negro man I have this day delivered into his possession. And I do warrant and will defend the said James Bishop in the peaceable possession of the said negro man against me and all persons whatsoever. Witness my hand and seal this fourteenth day of August, in the year of our Lord eighteen hundred and twenty-nine.

"Sealed and delivered in presence of "ABM. S. VAN DEURSEN." "STAATS VAN DEURSEN.

*By our early acts (1733, etc.) the jailer must permit the prisoner to "send for beer, ale, victuals, and other necessary food."

†By act of Legislature. The constitution of 1844 forbade its re-enactment.

‡A little over half a century ago a story, entitled "The Law of Arrest—a tale from facts," went the rounds of the press. See Newark *Advertiser*, May 14, 1832. An Hamburg merchant, who had come over to Portsmouth, England, to collect a £500 debt from an English sea captain, suddenly found himself thrown into prison, on the oath of his debtor, for an alleged debt of £10,000 The German naturally was considerably put out to find himself in jail; and the story runs: "Turning to a lawyer, whom the devil had deserted and who was now with the victims of his profession, he observed, 'Dey tell me dat in England a man be called innoshent till he be proved guilty; but here I am, because one carrion of a shailor, who owesh me 500 pounts, takes an oath that I owesh him 10,000—here am I on that scoundrel's single oath, clapped up into a prishon! Ish dat a man's being innoshent till he's proved guilty, sare?' 'Sir,' grimly said the lawyer, 'you are thinking of criminal cases. But if a man be unfortunate enough to get into debt, that is quite a different thing. We are harder to poverty than to crime.' 'But, mein Gott, ish dat jusdice?' 'Justice! pooh! it is the law of arrest,' said the lawyer, turning on his heel."

came one of the results of this general imprisonment for debt—the filling up of the jails. The first law of this kind seems to have been passed in 1733* and, like those which from time to time succeeded it, was limited in duration of time, only permitting debtors "*now* in confinement," upon complying with certain conditions, to obtain their release. One of these conditions generally required the debtor, having no children, to "signify his willingness" to bind himself as servant for a certain period for the purpose of liquidating his debts. This compulsory servitude provision was re-enacted until 1819, but the insolvent law of the previous year was permanent and the most liberal of any preceding ones. It prohibited the arrest of females and extended the property exemption. From 1830 the debtor, by giving bond "in sufficient freehold security" to appear and petition for discharge, could escape incarceration, and revolutionary soldiers of 70 years and over were exempted from arrest. But with these exceptions the reconstructed statute of 1818 constituted the insolvent law until abolishment of imprisonment for debt, and Gov. Southard was nearly a decade ahead of his time when he declared, in 1833,† that our insolvent acts had not yet reached that point which the friend of humanity and justice desired. "The prevention of fraud should be sought by all means which society can afford, but imprisonment for debt, without fraud, is to be justified on no principle congenial to our institutions." In 1840, a large meeting in Hudson county resolved that "imprisonment for debt is a relic of barbarism and the legislative act authorizing the same is a disgrace and stain upon the statute book," which led Gov. Pennington, in October, to observe that his opinion had ever been "that for debt alone, in the absence of fraud, creditors should not have power to deprive a citizen of his personal liberty." But the Legislature did not arrive at the same conception of public policy till March 9th, 1842, when "an act abolishing imprisonment for debt" was passed. Two years later the constitution forever prohibited it, except in cases of fraud.‡

It speaks well for the humanity of the old "Friends," who were far in advance of their time, that, though imprisonment for debt was allowed in the "Concessions and Agreements" of the proprietors of West Jersey (1676), it was provided that the judgment debtor should be discharged if he could produce three "compurgators" to declare in open court that he was insolvent.

Scarcely of less consequence to the unfortunate debtor and his family than personal liberty, were the

PROPERTY EXEMPTION

provisions, which early were incorporated in the insolvent laws. In 1733, the imprisoned debtor petitioning for discharge, made affidavit that he had delivered up all his estate, excepting "wearing apparel and bedding for me and my family, and the tools and instruments of my trade and calling, not exceeding five pounds of lawful

*"An act for the relief and discharge of poor distressed prisoners for debt." The preamble of the act of 1775 states that "numbers of poor and insolvent debtors appear now to be in imprisonment in the several gaols of this colony."

†This was about the time when Massachusetts and New York abolished imprisonment for debt.

‡In Hood's Index the titles of sixty-four of these insolvent statutes, from 1754 to 1842, are given. Most of these, up to 1818, were temporary acts doled out, at various intervals and with varying liberality. Even these small favors met with great opposition, of which the following correspondent's protest, quoted, rather approvingly, in *Pollock's Gazette*, Elizabeth, May 16th, 1787, in what then passed muster for the editorial column is an example:

"A correspondent, who lately felt the baneful effects of the existing insolvent law, recommends to the Legislature a law of Geneva, which excluded from public offices the children of those who lived or died insolvent, except they discharged their father's debts; and the good effects arising from it were visible. Confidence was established between man and man, and insolvency seldom known in the land."

proclamation money of this Province in value in the whole." Afterwards the value of the exemption was increased to ten pounds,* but the extent of the effects free from seizure, remained the same till 1818, when "one cow" was also reserved "against all creditors" to "any debtor having a family." Eighteen years later † the following quaint law, which the editor of *Niles' Weekly Register* considered "a good act of New Jersey," was passed:

"From and after the fourth of July next one cow, one bed and bedding, one cradle, one stove, one-half cord of firewood, one-half ton of stove coal, one spinning wheel, one table, six chairs, one hog, one hundred weight of flour, one iron cooking pot, one dozen knives and forks, one dozen plates, one dozen spoons, one-half dozen bowls, two pails, one barrel, one coffee pot, one tub, one frying pan, the necessary tools of a tradesman, not exceeding in value 10 (ten) dollars, and all wearing apparel, the property of any debtor having a family, shall be reserved for the use of the family against all creditors."

Probably this was considered, at a time when money went much further than at present, a very fair exemption act, and no attempt was made to liberalize its provisions for fourteen years. The Legislature of 1851‡ was the first to listen to the appeals sent up by petition for several previous years, and which received the indorsement of the retiring governor, Haines, whose words were, that "the State has a direct interest in the welfare and happiness of every citizen, and humanity and sound policy alike require that every man should, as far as practicable, be protected in the enjoyment of so much property as may be necessary to save himself and his family from injury and want." And thus was enacted what is substantially our present exemption law, which reserves to a debtor having a family and residing in this State personal property in value (exclusive of wearing apparel) $200.§ As this did not apply to real property, the "homestead exemption act" ‖ was passed, which allows the widow and minor children to retain the "homestead" to the value of $1,000. But the benefits derived from the latter legislation have fallen far short of the optimistic prophecy of Governor Fort, who contended that the effect would be to maintain our citizens "in the possession of homes and firesides, and relieve them of the apprehensions of poverty and want." Owing to the formalities necessary to be observed to secure the advantages of the homestead exemption law, few care to proclaim themselves bankrupts before misfortune actually overtakes them.

THE LEGISLATION OF 1851.

Neither of these exemption laws equalled in importance some of the measures instigated by the liberal spirit which pervaded our State at the time of which we write. The legislation of thirty-four years ago ¶ effected great improvements in our common school system, in the principle of levying taxes for public purposes, in the abolition of antiquated and anti-republican distinctions founded on property and wealth, and, above all, because of the first attempt made to limit the hours of daily toil, and to protect infantile laborers from those excessive exertions which tend to impair their

* Sometimes the proviso, "as to the judge may seem proper," was added.

† "An act to relieve the poor," passed March 10th, 1836. See Elmer's Digest, p. 417. Before 1818 these exemptions were only effective while the temporary insolvency laws were in force.

‡ Called in derision by the opponents of the political party in power, the "Great Reform" and "Anti-Monopoly" Legislature. Some Legislative wag proposed a constitutional amendment abolishing the Legislature and creating an Emperor, to be called "The Great Monopoly of New Jersey."

§ Revision (1877), section 10. See Appendix, under exemption laws.

‖ Also substantially our present law. See Appendix.

¶ Session of 1851.

health and usefulness.* "You have removed the ancient landmarks of feudalism," was the way in which an enthusiastic editor bid farewell to the legislators of 1851. "No longer will your children be compelled to run riot in ignorance on account of your poverty. No longer will the merciless creditor deprive you of the power to pay demands and rob your family of the very means of obtaining a subsistence. No longer will your capacity to sit upon a jury or occupy an office be measured by the value of your property." †

It is difficult, to-day, to understand the extreme conservatism which did not demand long before 1851, that certain "ancient landmarks of feudalism" be placed in the same category with those other obsolete usages,‡ which an enlightened public sentiment had previously repudiated. The constitution of 1776 restricted the right of suffrage to inhabitants worth "fifty pounds proclamation money clear estate," and permitted none but freeholders to be eligible to the honors and emoluments of many important public offices,§ or to sit on juries. The voting restriction was annulled, so far as an act of legislation could do it, in 1820, when it was provided that those paying a State or county tax, whose names had been enrolled on the "duplicate," should be taken to be worth fifty pounds of clear estate. But in other respects the odious distinctions still remained, although the restrictive provisions had been left out of the new constitution of 1844. Governor Haines, in his last message, considered them "offensive and unjust," and his successor earnestly and successfully recommended the total abolition of the property qualification, asserting what at present no one would attempt to deny, that there was no just reason why the possessor of land should enjoy privileges of which his fellow-citizens, his equals—perhaps his superiors in other respects—was deprived.‖

New Jersey in many ways was behind the times, and it is, therefore, not surprising that the first faint rumblings of the incipient labor movement, which eighteen years before already had begun in the neighboring States, were only just heard here. In 1848 and the succeeding years many petitions were sent to Trenton, praying for a law recognizing ten hours as a full day of toil; to restrain persons from employing children in factories for over eight hours a day, and obliging those employing them to give them an opportunity of obtaining a common school education. The matter was taken up by Governor Fort, fresh from the people, who made what would even yet be considered a good statement of the labor question. "Permit me," suggested the inaugural of 1851, "to recommend a statutory provision which shall limit to ten the hours of daily labor on public works, or in establishments chartered by law. Constant and unremitting toil prevents intellectual improvement and leads to physical and moral debasement. The avoidance of it, when compatible with proper business operations, is emphatically demanded by considerations of humanity and justice. Infant laborers in factories should also be protected from such excessive exactions as are calculated to destroy their physical and mental capacity for health and usefulness.

* Governor Fort's message, 1852.

†Trenton *True American*, May 15th. There was also an agitation of the question of land limitation or "land reform," and a special committee appointed, to which was referred a bill entitled "An act to limit land to 160 acres and prevent monopoly."

‡Only a half century ago did the Legislature abolish the periodic compulsory trainings of the whole mass of militia, to which all male citizens (with a few exceptions) belonged. A failure of duty incurred a fine.

§Councilmen (Senators) were required to be freeholders and worth £1,000; Assemblymen, £500.

‖Petitions had been sent to the Legislature for a number of years advocating this course, to which the Assembly agreed in 1848 and succeeding years. Petitions, as well as remonstrances, for or against measures, were very frequent in those days. In fact, a large part of the legislation was based on petitions from the people.

This is a notorious and acknowledged evil. In close confinement, the severe and protracted toil to which laborers, adults and children are there subjected, in connection with the low rate of wages, the consequent meagreness of their fare, and uncomfortable condition of their homes, prostrates with sure celerity all their powers of mind and body and necessarily terminates in confirmed vagrancy and pauperism. It is our duty to guard against the occurrence of such evils within our jurisdiction."

The result of all this agitation was the very unsatisfactory ten-hour law, as it has been called.* It provides that ten hours of labor shall be considered a legal day's work in certain classes of factories—textile, glass, iron and brass; and, secondly, forbids the employment of minors, over ten years of age, in *any* factory, longer than ten hours a day or sixty hours weekly; under that age they are not permitted to work. It was considered expedient in 1876, by virtually repealing so much of the act as related to the employment of minors over sixteen years of age, to relieve employers, to that extent, of any fear of incurring the fifty-dollar penalty for violating its provisions, notwithstanding the fact that no successful attempt ever seems to have been made for its enforcement during the twenty-five years it remained intact on the statute book. In this case the old aphorism, "What is everybody's business is nobody's business," was only proved. No one was especially directed to enforce the law, which consequently was ineffectual to prevent the growing abuses of

CHILD LABOR.

And because of a like defect, the representatives of the organized labor movement in this State refused, in 1882, to be responsible for the proposed enactment of that year. An unsuccessful effort had been made in 1881 to have the original prohibition of the employment of all minors, over ten hours daily, restored to the act of 1851; but these failures, as well as that of restricting woman labor, did not discourage those who advocated progressive labor legislation. Early in the legislative session of 1883 a measure, substantially the one favored during the preceding winter, was introduced in the Senate. The bill was entitled "An act to limit the age and employment hours of labor of children, minors and women, and to appoint an inspector for the enforcement of the same," and, after material modifications, became a law on March 5th, 1883.†

It has generally been recognized by the workingman that in the restriction of the employment of women and children in our industrial establishments was involved, to a great extent, his very existence. Employers of labor, seeking for the most docile

*The act of 1851 is entitled "An act to limit the hours of labor, and to prevent the employment of children, in factories, under ten years of age." The bill, as originally passed by the House, restricted the limited child labor to "any *such* factories" as were mentioned in the first section, and on any *secular* day. The law does not contain the italicized words, which were struck out in the Senate.

Small as was this favor to "the progressive spirit of the age," it was not granted without opposition, and the arguments used against it were similar to those heard to-day, although their fallacies have been proved over and over again. The correspondent of the Newark *Advertiser* wrote from Trenton, March 13th, 1851: "Another bill which has been insisted on as one of great importance and akin to the progressive spirit of the age (as manifested in New Jersey) came up this morning in the Senate and underwent a scathing from Messrs. Whitehead and Zabriskie. They pronounced the section limiting the hours to ten an inutile humbug, because its effect would only be to graduate the price of a day's work accordingly. The charge of political delving was made upon our Democratic friends and repelled. This bill does not restrict persons from contracting for more than ten hours per day, but its only effect can be to make ten hours the implied length of a day's labor when it is not otherwise expressed. But it apparently protects the laborer from the arrogance of capitalists, and it is therefore proper and just. The humane provision of the second section, that children under ten years of age shall not be employed in factories, met as it deserved the approbation of all."

†See Appendix.

and the cheapest, have been quick to see the advantage they get by employing women and children, whose labor is much lower-priced than that of men. In the factories, where this class is largely engaged, the hours of labor are longer and the rate of wages less than in those where men chiefly work. Then, too, women never agitate; they merely "toil and scrimp and bear." As a consequence, men are gradually being forced out of employment in many industries. Their remuneration, because of female and child competition, has been reduced to such an extent that only with the aid received from the labor of the other members of the family are they able to keep the wolf from the door. The indirect effects of such a state of affairs are also decidedly mischievous. It degrades the workingman, in denying him while young the necessary education; while the drudgery of factory life, to which a whole family is frequently subjected, must be extremely pernicious on both mind and body, especially of the growing children.* It cannot, therefore, be surprising that the enactment of 1883, although far from satisfactory, was regarded as one of the most momentous measures of labor legislation yet effected in this State. Under it the first child labor inspector† was appointed, who found that the provisions could not be successfully carried out unless amended. This was partially accomplished by the legislation of 1884.‡ These laws apply to factories, workshops, mines and establishments where the manufacture of any goods whatever is carried on, and prohibit therein the employment of boys under twelve and girls under fourteen years of age. Children under fifteen, but above the prohibited ages, are allowed to work if they have attended school during the twelve weeks immediately preceding their employment, at which even boys, if below fourteen, cannot be kept longer than ten hours daily. Employers violating the provisions of these statutes forfeit a penalty of $50, and, after judgment, if it remain unsatisfied, are liable to have execution issued against their persons. Against parents or guardians knowingly permitting the illegal employment of their children or wards, the penalty is "not more than $50." The inspector has power to prohibit the employment of minors who cannot obtain a physician's certificate of their physical fitness; and it is made his duty to enforce all laws relating to the sanitary condition of estab-

*There is no question that this evil of child and woman employment has assumed alarming proportions, relatively larger, in some of the States, than in Europe. In the woolen industry this kind of labor was already formidable at the beginning of our century, when, according to Gallatin's estimate, there were employed in 1810: Men over 17 years old, 10,000; children under 17 years, 24,000; women and children, 66,000. Generally, however, it was only recently that the flood began; before the last two censuses no attempt was made to obtain the number of child operatives. But the magnitude of female labor began to appear in the reports of the census of 1850, when nearly one-third of the wage workers in the mechanical and manufacturing industries were females (225,922 women and 731,137 men). In 1880, we find that the per cent. *gain* in the different classes of employes had during the ten preceding years been: Men over 16 years, 24.97; females over 15 years, 64.20; children and youth, 58.71. In New Jersey the relative proportion of men, women and children employes was 68.86, 21.50 and 9.64 per cent respectively. But the significance of this is only apparent when the absolute figures for the past four decades are compared and studied:

	1850.	1860.	1870.	1880.
Males over sixteen	29,068	43,198	58,115	86,787
Females over fifteen	8,762	12,829	11,198	27,099
Children and youths	.....	.....	6,239	12,152

In other words, while there were nearly twice as many children employed in the factories in 1880 as in 1870, the increase in women operatives was 142 per cent., while in adult male labor the gain had fallen short of 50 per cent.

†L. T. Fell, of Newark, called Factory and Worship Inspector by the supplement of 1884. Two additional deputy inspectors were authorized by the latter act, but only until February, 1885.

‡See Appendix.

lishments and to the employment, safety, protection of minors, as well as those acts compelling their attendance at school.*

The general factory and workshop act of 1885 † supplements the preceding enactments by providing for the safety of minors while at work, and by prohibiting their employment, if under sixteen years of age, for a longer time than ten hours daily or sixty hours per week. In addition to these laws, there are a number of statutes relating to the care of children and affecting their moral condition, but these have no connection with our subject,‡ labor legislation, so-called, which even in the limited sense referred to has advanced, in this country, little beyond the incipient stages, and does not compare with the progressive reform, which culminated in the comprehensive English factory act of 1878. ⁑ In New Jersey, we have not reached the end of the chapter yet; still there are enough laws on the statute book, *if properly enforced*, at least to restrain the labor of children within reasonable limits, and to make creditable citizens of them by providing them with a rudimentary

EDUCATION.

The compulsory education act ‖ of the late session of the Legislature is by no means all that could be desired, and the public will before long demand a more comprehensive rule of action, but it is far in advance of anything which has preceded it. Unlike the illusory enactment passed ten years previously, it is made the duty of the Factory Inspectors, assisted by the local aothorities, to enforce its provisions, which require that every boy and girl, between seven and twelve years old, unless bodily and mentally incapacitated, shall receive, each year, at least twenty weeks' instruction in the common English branches; that no child under fifteen years of age shall be employed unless he or she has attended school for twelve consecutive weeks; and that children between twelve and sixteen years old temporarily discharged from employment must be sent to school during the time unemployed Parents and guardians not complying with the requirements of the statute are guilty of a misdemeanor and may be fined or imprisoned. Truant children are to be deemed juvenile disorderly persons and dealt with as such.

The day has gone by when it was still customary to suggest that "books put all sorts of things in the heads of lads and make 'em quite unfit for work," ¶ and now

* The first general act for manufacturing corporations, passed in 1816, and referred to above, contains the following section, which is a compulsory education provision, and shows that the legislators of nearly three-quarters of a century ago fully appreciated the benefits to be derived therefrom:

"Section 9. That the president and directors as superintendents of such factories as may become incorporated under this act, shall cause that the children hereafter employed in such factory or establishment, whether bound by indenture or parole agreement, to be taught in reading, writing and arithmetic, at least one hour in each and every day; and that due attention be paid to the preservation of their morals, and that they be required by their masters or employers regularly to attend some place of religious worship on the Sabbath day, when the same may be within convenient distance."

† "A general act relating to factories and workshops and the employment, safety, health and work-hours of operatives," approved April 7th, 1885. Its provisions are not restricted to minors.

‡ These acts are given in the Appendix in connection with the "labor laws." What little legislation regulating apprenticeship we have, is also added.

⁑ See Report of Bureau for 1882. English workmen are not yet satisfied with this legislation, but are seeking to improve it.

‖ "A supplement to an act to establish a system of public instruction." See Appendix. The acts of 1879 and 1881, "providing for the establishment of schools for industrial education," are also reproduced at the end of this volume. But for the New Jersey "School Law," the reader must consult the Revised Statutes (edition of 1877) or the pamphlet just issued by the Superintendent of Public Instruction.

¶ An English manufacturer's expression.

we are all in favor of education as generally diffused as practicable, and are proud of the progress our State has made in this respect within the life of a single generation. For all that, a glance at the successive tables of statistics given in the late reports of the Superintendent of Education shows that this advance has not kept pace with our increase in population and wealth, that there actually was a retrograde movement during brisk times, when our school children were vigorously drafted into our factories—a state of facts which was the best possible justification of the legislation referred to above,* and might well have recalled the times, not very far off, when the state of education, year after year, was referred to as "deplorable."

Free schools and general education have but a recent history in New Jersey. Although our first school law was enacted by the General Assembly at Perth Amboy, in 1693, because the "cultivation of learning and good manners tends greatly to the good and benefit of mankind, which hath hitherto been much neglected in this province," these good intentions, nevertheless, had not yet borne fruit a century later, when there were only a baker's dozen of "academies" and "grammar schools" in the State. No regular places of instruction for the general public existed, but temporary support of the village schoolmaster was contributed by the inhabitants of the neighborhood. These occasional teachers met with such little encouragement that no person of ability, "adequate to the business," as a contemporary writer puts it, would accept such a position. As a consequence, little advantage was derived from these schools, which were only for the better circumstanced population. The poor were very "inattentive to the education of their children, who are left to grow up in ignorance"† Under the "act to incorporate societies for the promotion of learning" (1794), it became the rage to start in nearly every hamlet "school companies," most of which had a very short career of usefulness. Charity and negro schools were also organized during the early years of the present century, but it was not until 1817 that the first definite step was taken by the Legislature to provide the means of education for the children of the poor. In that year the principle of imposing a tax for educational purposes was established by the act providing that one-tenth of the State tax should be set apart for a "fund for the support of free schools," which were looked at in an entirely different light from that in which we now view them. In 1820 the various townships were authorized to raise money "for the education of such children as are paupers;" and up to 1838 this term of "pauper" appeared in all enactments in behalf of public instruction. The idea that a free schooling meant charity bestowed by one part of the community on the other seemed to be universal.‡ It is therefore not surprising to find in the annual messages of the time repeated warnings of the total inefficiency of the schools, and that "thousands" were growing up in ignorance. The cause of education did not then occupy a very prominent place in the public mind, which was far from agreeing with Governor Pennington, that "it is both the duty and interest of a free State to provide for the education of its children;" and even one of

* In 1873 the school census gave 286,444 children between the school ages, of whom 179,443, or 62.6 per cent. were enrolled in the public schools, and 69,229, or 24.1 per cent., were estimated to have attended no school. In 1882 there were 343,897 school children, of whom 209,526, or only 60 9 attended the public schools, while 89,254 went to no school. In 1878, near the close of the financial crisis, over 62 8 per cent. of our children attended the public schools, and the average attendance (113,604) was actually larger than that four years later (113,482), although the number of children of school age was nearly 22,000 less.

† In 1682 the island of Mittinnicunk, or Free School Island, was given for the use of the city of Burlington; the yearly profits arising from it, amounting to £180 at the close of the eighteenth century, were appropriated for the education of poor children.

‡ "In many, very many, instances parents refuse to send their children to pubic schools, from the conviction that the injury they will receive at them will be greater than the benefit."—*Niles' Reg., 1834.*

his successors, nearly a quarter of a century later,* found it necessary to argue, that "though the establishment of free schools may operate onerously upon some individuals for a temporary period, they with the whole community must feel the benefit eventually, in the decrease of crime and vagrancy, the improvement of public morals and the general increase of industrial habits among the people."

Public interest in the subject first began to be really awakened in 1838, from which time up into the '50's meetings advocating liberal measures to advance education were the fashion in all parts of the State. The new constitution of '44 declared that the school fund for the support of free schools should remain a perpetual fund intact, and be securely invested. The next year the Legislature provided for a State Superintendent of Education, and special laws were constantly passed authorizing townships to raise money for "district" schools. In 1851 † the first comprehensive act to establish public schools was approved, and marks the turning point in our school system. Sixteen years later the present State Board of Education was created, which was authorized to appoint a State Superintendent of Instruction and County Superintendents. Yet only in 1871 were our public schools required to be *free;* ‡ up to that time tuition fees, called "rate bills," were charged in many portions of the State. The uncertain township tax gave way to the fixed two-mill State rate, § redistributed among the districts, while provision for greatly increasing the permanent school fund ‖ was made by adding all moneys derived from the sale or rental of the riparian lands. We have now a public school system second in efficiency to that of few States; yet if our factory inspection and compulsory education laws are permitted to remain dead letters on the statute book, the time is not far off when this State will contain a largely increased number of citizens, physical and mental wrecks, who have never received any of the benefits of common school instruction—a consummation of general concern, for an ignorant, dwarfed and helpless crowd of workers is the most potent agent of poverty and crime, the prevention of which is essential to the well-being of the whole community.

To this extent, at least, all factory legislation is a movement in the interest of society itself. Nevertheless it has been opposed at every step, and, though *laisser-faire*, the extreme let-alone doctrine of the old Manchester school, has been exploded, we are far from recognizing the fact that women, to a certain degree, as well as children are the wards of the State, whose duty it is to protect them, if necessary, even to the restriction of their employment. The only distinctive action, up to the present time, taken in New Jersey for the preservation of the health of adult female employes has been the mandate to employers to provide suitable seats for their use when not engaged at work.¶ A similar law has been passed for the benefit of drivers on the horse cars of our city street railway companies.** The general factory act of 1885, before referred to, and a few other enactments, which apply to all classes of employes, are intended mainly for their personal security—the protection of life, limb, body

* Inaugural of 1851.

† March 14th, 1851 being a supplement to the act of March 1st, 1838.

‡ One of the constitutional amendments of 1875 clinches the nail by making it obligatory on the Legislature to provide "a thorough system of free public schools."

§ Now, under the slightly changed law of 1880, it amounts to $4 per child or about 2½ mills.

‖ In 1871 it amounted to $561,121; now it has reached $3,382,916, of which a portion of the interest ($100,000) is distributed among the districts. This is distinct from the State school tax, which was $1,396,968 in 1884. With the various district taxes, interest from "surplus revenue," etc., the total annual public school expenditures average over $2,300,000.

¶ Chapters 159 and 149 of the laws of 1882 and 1884 respectively, for which see Appendix.

** Chapter 40, laws of 1882; see Appendix.

and health.* Even such legislation has been very limited. In fact our economists still frown on all attempts to interfere with adult labor as a restraint of individual liberty. Then, too, our Legislatures are somewhat hampered by the constitutional restrictions which obtain in the United States, limiting the power of Legislatures to interfere with private property and contracts, in which respect we differ from the English Parliament, which, as the lawyers sometimes express it, can do everything but make a woman a man and a man a woman, that is, its authority is omnipotent in these matters. But, neither have the demands of the American workingmen been very extensive heretofore. While he has always considered sanitary regulations and the like of minor consequence, and we think wrongly, his chief efforts have been confined to securing a reduction of the hours of daily toil, the legal establishment of a nominal working day, and to opposition to any policy unfavorably affecting his wages.†

*See the "factory acts," reproduced at the end of this volume.

†The Knights of Labor of North America now, probably, constitute the largest labor organization in the world, their membership, on June 30th, 1885, reaching nearly 111,400, although only organized fifteen years ago at Philadelphia. "We have formed the Order of the Knights of Labor," states the Declaration of Principles, "for the purpose of organizing and directing the power of the industrial masses." Its object is not a political party, but as the ends in view can only be obtained by legislation, "it is the duty of all to assist in nominating and supporting with their votes only such candidates as will pledge their support to those measures" which will accomplish them. The aims of the Order are:

"I. To make industrial and moral worth, not wealth, the true standard of individual and National greatness.

"II. To secure to the workers the full enjoyment of the wealth they create, sufficient leisure in which to develop their intellectual, moral and social faculties; all of the benefits, recreation and pleasures of association; in a word, to enable them to share in the gains and honors of advancing civilization.

"In order to secure these results, we demand at the hands of the STATE:

"III. The establishment of Bureaus of Labor Statistics, that we may arrive at a correct knowledge of the educational, moral and financial condition of the laboring masses.

"IV. That the public lands, the heritage of the people, be reserved for actual settlers; not another acre for railroads or speculators, and that all lands now held for speculative purposes be taxed to their full value.

"V. The abrogation of all laws that do not bear equally upon capital and labor, and the removal of unjust technicalities, delays and discriminations in the administration of justice.

"VI. The adoption of measures providing for the health and safety of those engaged in manufacturing and mining, building industries, and for the indemnification of those engaged therein for injuries received through lack of necessary safeguards.

"VII. The recognition, by incorporation, of trades unions, orders and such other associations as may be organized by the working masses to improve their condition and protect their rights.

"VIII. The enactment of laws to compel corporations to pay their employes weekly, in lawful money, for the labor of the preceding week, and giving mechanics and laborers a first lien upon the product of their labor to the extent of their full wages.

"IX. The abolition of the contract system on National, State and Municipal works.

"X. The enactment of laws providing for arbitration between employers and employed, and to enforce the decision of the arbitrators.

"XI. The prohibition by law of the employment of children under 15 years of age in workshops, mines and factories.

"XII. To prohibit the hiring out of convict labor.

"XIII. That a graduated income tax be levied.

"And we demand at the hands of CONGRESS:

"XIV. The establishment of a national monetary system, in which a circulating medium in necessary quantity shall issue direct to the people, without the intervention of banks; that all *the national issue shall be full legal tender in payment of all debts*, public and private; and that the government shall not guarantee or recognize any private banks, or create any banking corporations.

"XV. That interest-bearing bonds, bills of credit or notes shall never be issued by the government, but that, when the need arises, the emergency shall be met by issue of legal tender, non-interest bearing money.

"XVI. That the importation of foreign labor under contract be prohibited.

"XVII. That, in connection with the post office, the government shall organize financial exchanges, safe deposits and facilities for deposit of the savings of the people in small sums.

"XVIII. That the government shall obtain possession, by purchase, under the right of eminent domain, of all telegraphs, telephones and railroads, and that hereafter no charter or license be issued to any corporation for construction or operation of any means of transporting intelligence, passengers or freight.

"And while making the foregoing demands upon the State and National Government, we will endeavor to associate our own labors:

"XIX. To establish co-operative institutions, such as will tend to supersede the wage system, by the introduction of a co-operative industrial system.

THE AGITATION FOR A SHORTER WORKING DAY

Began in Massachusetts over half a century ago, when it was still the custom to work "from sun to sun," which meant from nine to twelve hours in winter and from twelve to sixteen in summer. That was really the genesis of the American labor movement.* On September 1st, 1832, a meeting of farmers, mechanics and workingmen of New England was held at the State House, Boston, to protest mainly against excessive hours of labor, imprisonment for debt, the lack of a lien law and the onerous militia system; and on January 21st, 1834, steps towards the organization of a general trades union were taken—an event celebrated on the following 4th of July with a procession, two thousand strong, through the streets of Boston, followed by an oration and dinner at Faneuil Hall. A banner bore the inscription "*Ten hours a day.*" Twenty-two religious societies had refused the use of their churches in which to deliver the address; nor was any clergyman so bold as to be present to invoke the Divine blessing. Edward Everett and Channing had before this advocated the labor cause, and a workingman's party existed in Massachusetts from 1833 to 1835. The 12th of September, 1833, was celebrated by the workingmen of Baltimore as a holiday and they actually nominated two candidates for the State Legislature, A mechanics' convention also met at Utica, N. Y., on August 20th, 1834, to protest against convict labor; † but generally the new movement met with little favor outside of those interested, the authorities of Boston even refusing in 1835 the use of a public hall in which to discuss the ten-hour scheme, which was soon agitated all over the country. The Baltimore mechanics are said to have achieved the earliest success; while the city of Philadelphia was the first to take official action in the matter. The city council, in June, 1835, passed a resolution to the effect "that the hours of labor of the workingmen employed under the direction of the city corporation shall be from 'six to six' during the summer season, allowing one hour for breakfast and one hour for dinner."‡ Otherwise there was no further result till 1840, when President Van Buren, on April 10th, issued the order that "all public establishments will hereafter be regulated, as to working hours, by the ten-hour system," which, nevertheless, was not strictly carried out during the succeeding twenty years. During the '50's such headway had been made, that in many of the States the so-called ten-hour laws were enacted; § and at present not only is the system generally recognized in our industrial establishments, but considerable progress has been towards an eight-hour law. The ideas which led to the demand for the ten-hour legislation, however, are much more succinctly stated by the advocates of the eight hour rule. They assert ‖ that the introduction of steam and

"XX. To secure for both sexes equal pay for equal work.
"XXI. To shorten the hours of labor by a general refusal to work for more than eight hours.
"XXII To persuade employers to agree to arbitrate all differences which may arise between them and their employes, in order that the bonds of sympathy between them may be strengthened and that strikes may be rendered unnecessary."

* But trades unions existed in New York as far back as 1805—those of shipwrights and carpenters, and others mostly of a benevolent nature.

† "The employment of convicts at mechanical branches at present pursued in this and several other States." See *Niles Register*.

‡ This fact does not seem to be commonly known; yet the information was given in *Niles' Register* of June 13th, 1835, under the notice of "ten-hour system," which the editor considered proper. "In general ten hours of labor is as much as a man ought to perform, especially if he be exposed to the sun. The proceeding appears to be agreeable to the working people of Philadelphia. It has long since been established among the mechanics of Baltimore and in cases where the principle is applicable to the business that they pursue."

§ New Jersey in 1851. *See above.* These acts only provide that ten hours shall be considered a legal day's work, but do not prohibit employers from establishing a different rule.

‖ Drury: Polity of the Labor Movement.
The arguments advanced in support of the demands for a shorter working day are thus condensed in the Ohio Labor Bureau's Report of 1878, p. 271:

machinery has so far increased the productivity of mankind, that the following general propositions may be formulated:

1. Labor creates all wealth.
2. The productive capacity of society is superior to the consumptive capacity of society.
3. Whether in the physical or the mental domain, there is a point beyond which the continued exercise of the faculties, without an intermediate interval of repose, is no longer productive; and eight hours of labor per day will furnish the maximum of production with the expenditure of a given amount of physical or mental force.
4. The worth of production does not depend upon the rate of wages.
5. The amount of production does not depend upon the number of hours of labor per day.
6. The production of wealth is in proportion to the intellectual and moral development of producers, and this development can only be effected by a reduction in the hours of labor.

The act of Congress of June 25th, 1868, provided that eight hours should constitute a legal day's work for all laborers, workmen and mechanics employed by or on behalf of the General Government;* and the example thus set has induced the passage of eight-hour laws in a few of the States. In some of the trades, it is even now customary to work only eight hours daily. Moreover, it is the conviction among wage-earners that this rule will become common in a short time. The belief that their expectations will not be disappointed, though the contest may prove a severe one, is justified by the whole history of the successful, progressive labor movement, which has advanced rapidly since the abolition of slavery, a dead weight on free labor. The generation which witnessed its early scenes hardly has passed from the stage, yet the disposition towards it to-day is so entirely different from the bias with which the public regarded it a half century ago that it almost seems as if we were living in another age.

"1. The vast increase in the producing power of machinery has resulted in a decrease in the number of persons required to keep up the supply of any given manufacture in which machinery is employed, so that a large number of persons are at any given time unemployed.

"2. Labor has not received a fair proportion of the benefits of machinery, either in increased wages, increased purchasing power of wages, or decrease of hours of labor per day, though the number of days' labor furnished has decreased.

"3. A reduction of the hours of labor would result in more days' work, less idleness, but more leisure; would destroy the tramp nuisance by taking away the cause, and would force an increase of production by making more consumers.

"4. Eight hours for work, eight hours for recreation, rest and study, and eight hours for sleep, constitute the natural division of the twenty-four hours.

"5. The laborer could, because of increased power, produce as much in eight hours as in ten."

"We sometimes hear," observes a recent writer, "the same pessimist prophecy about shorter hours as we have heard for centuries about better wages, that they will only seduce the working class to increased dissipation. But experience is against this view. Of course, more leisure and more pay are merely means which the laborer may according to his habits use for his destruction as easily as for his salvation. * * * The evidence laid before the House of Lords Committee on Intemperance shows that the skilled laborers of this country [England] are becoming less drunken as their wages and general position are improving; and Porter, in his 'Progress of the Nation,' adduces some striking cases of a steady rise of wages making a manifest change for the better in the habits of unskilled laborers (p. 451). * * * It may be difficult to extirpate drunkenness in our climate even with good wages, but it is certainly impossible with bad, for bad wages mean insufficient nourishment, comfortless house accommodation, and a want of that elasticity after work which enables men to find pleasure in any other form of enjoyment. As with better wages so with shorter hours. There can be no question that long hours and hard work are powerful predisposing causes to drunkenness. Studnitz mentions that several manufacturers in America had informed him that they had invariably remarked that, with solitary exceptions here and there, the men who wrought for the longest number of hours were most prone to dissipation, and that the others were more intelligent and formed on the whole a better class. * * * Their progress in intelligence may therefore be expected to increase their productivity so as to justify a shortening of their day of labor, and the leisure so acquired may be expected to be used so as to increase their intelligence." *Rae's Contemporary Socialism*, p. 343.

*Nevertheless it is only recently that all the departments have begun to obey the law and carry out its provisions in its true spirit, the custom having been more or less generally followed of decreasing wages in proportion to the decrease of working hours. General Grant's executive order of May 21st, 1869, and various resolutions of Congress (which never passed the Senate), attempted to prevent such an interpretation of the statute, but without success.

EARLY LABOR TROUBLES AND HOSTILE PUBLIC SENTIMENT.

The earliest strike of which we have any record in this country occurred in November, 1803, at New York City. A number of sailors there were receiving ten dollars a month, wanted fourteen, struck, formed a band, marched about the city and compelled seamen employed at the old rates to leave their ships and join them. But the constables were soon in pursuit. The leader was arrested, lodged in jail and a summary end put to this labor trouble.* The disturbances in which the succeeding generation† of workingmen took part, were of a far more serious character and not so easily dealt with. One of the earliest published accounts of an organized effort by employes to force their employers to come to terms is found in the following notice from the Connecticut *Courant:*‡

"Thompsonville Carpet Manufactory *v.* W. Taylor and others.—This was a suit against the defendants for conspiring to raise the price of wages, and hindering other weavers from going into the employ of the plaintiff, and a *strike* in July, 1833. The great point in the case was, whether the peaceably conspiring or arguing with the workmen to refuse to work for less than a named sum constituted a ground of civil action on the part of the employer. On this point, the court charged the jury in the negative. The case was much labored, and consumed a week in trying it. Verdict for the defendants."

The journeyman shoemakers of Geneva, N. Y., composing the "trades union of Ontario county," did not meet with such good luck. The proprietor of the shops having refused to dismiss one of the hands who did not live up to the rules of the union, they quit work in a body on August 1st, 1833; and, though their demands were complied with, the strikers were afterwards indicted and punished for conspiracy. Yet, notwithstanding this and similar discouraging results, as well as the denunciation of both press and pulpit, a perfect epidemic of labor troubles soon broke out all over the land. "There has been another riot on the line of the Chesapeake and Ohio Canal, near Galloway's Mill," observes the editor of *Niles' Register*, early in 1835. "Many laborers on a certain section turned out for higher wages, and would neither work themselves nor let others work." A company of riflemen "happily drove them away." A few months later the editorial opinion is that "many of the people of the United States are out of joint," and the New York *Daily Advertiser* on June 6th informs its readers that "strikes are all the fashion," and goes on as follows:

"The stone-cutters not only stand out for $2 a day, which employers are willing to pay, but they are determined to regulate piece-work also. Public opinion appears to be decided that the journeymen are in the wrong. * * * Next come the horseshoers, who are parading the streets with drum and fife for a stand-out. Very few Americans are to be found in their ranks. It is an excellent time for the journeymen to come from the country to this city."

The Schuylkill merchants, on May 26th, pledged themselves not to employ laborers unless they would agree to work by the day, and from sunrise to sunset, "with an allowance of one hour to breakfast and one hour to dinner to June 1st, and from that date one hour to breakfast and two hours to dinner; and that we will not give exceeding $1 per day to laborers." This led an otherwise favorable writer to suggest, that "all combinations are wrong, but, if on the one part, they must be on the other."

New Jersey did not escape the troubles of the year 1835, as the following newspaper item will show. It appeared towards the latter part of August, in the *Intelligencer*, of Paterson, then fast becoming an important industrial center: §

* MacAllister's History of the People of the U. S., vol. 2, p. 618; N. Y. *Evening Post*, Dec. 1st, 1803.
† In the '30's.
‡ See *Niles' Reg.*, Sept. 27th, 1834.
§ See *Niles' Register*, August 29th, 1835.

After six weeks of idleness, arising from an unhappy disagreement between the mill owners and a portion * of the mill hands, relative to the time of working, our town has again resumed its wonted cheerfulness and is now a scene of industry and contentment. Most if not all of the factories have started and are in partial operation, but it will probably be some little time before those of the hands who left town to seek employment will return. The weekly wages paid to cotton mill hands in this town are estimated at $4,000. There has, consequently, in this unfortunate strike been an entire loss of $24,000, which would otherwise have been paid directly to the hands. The time which the hands now make per week is 69 hours, or 11½ per day.

But the "contentment" with working eleven and a half hours daily was not observable in the rest of the country, and the disturbances and disagreements between employer and employed continued. During the spring of 1836 there was much "trouble in several of our large cities and manufacturing towns. The journeymen have had their strikes for higher wages, limiting them chiefly and solely by their own will; and the employers in some instances have associated and refused to give work to any person belonging to a trades union, and even in some businesses which have been free from strikes, that the workmen might not obtain the means of supporting one another."† This newspaper editor thought that the working classes were going a great deal too far, and warned the operatives to recollect that a nimble sixpence was better than a slow shilling, and not to abridge their several businesses at large; while the New York *Commercial Advertiser*, speaking of a late strike among the tailors and of a procession of several hundred who paraded the streets with banners, music, &c., said: "It was truly painful to see such a procession marching for such a purpose, and in some instances with profane mottoes upon their banners. One of these mottoes was: 'No Surrender, by the Eternal.' Another was: 'Mechanics' Rights,' and others of a kindred character."

The public feeling‡ is better shown by the following quaint notice (which it was considered advisable to publish in the papers as an *advertisement*) by Horace H. Dey, who, at the time, had a small shoeshop on Dennis street, New Brunswick, but soon afterwards became widely known as defendant in the famous Goodyear rubber case, argued for the plaintiff by Daniel Webster: ⁇

"The people in general, and my binders in particular, are hereby informed that I have now at work four and twenty good permanent workmen, and several more engaged to commence the first of May, all of whom are alike *unaffected* with the brutal leprosy of blue Monday habits and the moral gangrene of 'trades union' principles. Hence my binders may rely upon steady employment and the public upon good work, punctually performed; and they and myself find just cause to facilitate ourselves upon the prompt and effectual disposal, at once and forever, of the

*A local notice in the *Emporium*, Trenton, stated that the strike had affected twenty mills.

†*Niles' Reg.*, April 2d, 1836.

‡Paragraphs like the following also went the rounds of the press as jokes of the season:

"It is said that the clerks in the public departments at Washington are about to strike for higher salaries."

"SMOKERS' STRIKE.—The editor of the Kennebec *Journal* says that his attention was directed last week to the movements of a number of French-Canadians, who, it seems, had been employed to work on the dam, and had quit in a body because they were not permitted to *smoke their pipes when at work*."—*See Niles' Register, 1836, p. 381.*

In 1836 the Lowell factory girls, who published later *The Offering*, with its motto—"The worm on earth may look up to the stars," were informed that their wages were to be reduced. They marched in a body to a grove and listened to the speech of a young lady, who, standing on an old pump, gave vent to her feelings on the situation, which caused much surprise and consternation among the audience. A little girl, eleven years old, was called the ringleader because she headed the turn-out from the room in which she worked.—*See Cherouny: "The Historical Development of the Labor Question."*

⁇Dey had obtained the secret of the Goodyear rubber vulcanization process, and claimed the right to use it as an unpatented English invention. He made considerable money, but was finally beaten in the courts. For the advertisement see *Niles' Register*.

inconvenience, injustice and nuisance of perpetual vexations, regular combinations and periodical strikes from marauding gangs of transient and tramping trades-unionists, who have proved themselves as destitute of every moral principle, as they have become notorious for their wickedness and folly, their presumption, their violence and audacity.

"HORACE H. DEY,
"*Shoe, Cap and Hat Manufacturer,*

"NEW BRUNSWICK, April 6th, 1836."

Gov. Vroom, as early as October, 1835, thus moralized in his annual message, although he did not refer to the labor troubles alone:

"In some parts of our country there has been exhibited a lamentable spirit of insubordination to the laws, which, dispensing with the ordinary administration of justice, claimed and exercised for itself supreme and uncontrolled authority. Property, liberty and life have all been sacrificed to its power. The evils of its violence will long be felt. Examples have been set well calculated to unsettle peaceful principles among certain classes of the community and loosen the ties which bind society together. * * * From evils and consequences like these we have been mercifully spared. We have not been called on to mourn over the desolations of mistaken zeal or unbridled passion. The supremacy of the law has been maintained and supported, not by the force of the law itself, but by the stronger power of correct public sentiment."

And in the message of Gov. Pennington, 1839, we find the following denunciation, which, it is safe to say, would, under the circumstances, hardly appear in a similar document at the present time:

"The most mischievous of all disorganizers are those who encourage and foment jealousies among the different conditions of society; the demagogues who seek to array the employed against the employer, the rich against the poor, the one branch of industry against the other. Such men war against the peace and harmony of the whole and should be held up for universal condemnation. All prosperous communities are made up of every variety of condition; each has his allotted sphere of usefulness, and there is a mutual dependence and relationship from which none are exempt."

That many insincere and unprincipled persons attached themselves to the early labor associations and their cause goes without saying, for the demagogue flourished in Gov. Pennington's time as well as later; and there can be no doubt that many reprehensible excesses were committed. Trades unions even in our own day often follow a mistaken and wrong policy; unquestionably, the inexperienced and less educated workingmen's combinations of a former generation not unfrequently abused their power in the way of business tyranny. For all that, the way in which public opinion, outside of the working classes themselves, condemned and the authorities dealt with their organizations, was harsh and unfair, and was indirectly responsible for many of the practices censured. Employers never hesitated to exercise all the power they possessed. They combined and "conspired" but escaped punishment; while their employes were made to feel the full weight of the law. "The world is not thy friend, nor the world's law." The journeymen shoemakers of Geneva, New York, who in 1833 refused to work in the shop where a "scab" was employed, soon found that they were as "conspirators" indicted by the grand jury, and the New York Court of Errors and Appeals* affirmed the judgment of the lower court, holding that a confederacy among journeymen for the purpose of raising their wages was a matter of public concern, injurious to trade, and a misdemeanor. Following this decision, the Court of Oyer and Terminer of New York city punished, in 1836, twenty-one journeymen tailors for striking for higher wages and preventing others "by threats and promises and various modes" from working except for the prices fixed by the tailors'

*14 *Wend.* 1.

union. Judge Edwards, in his charge, impressed on the minds of the jury that the case was not to be considered a mere struggle between master and journeymen. It was one on which the harmony of the whole community depended. Let these societies only arise from time to time and they would at last extend to every trade in the city and there would be as many governments as there were societies. There was no necessity for such societies. Combinations were not necessary in this country for the protection of mechanics or any other class. They were of foreign origin, not in harmony with our institutions, or with the character of the people. He believed that they were mainly upheld by foreigners. The jury agreed with the court, and the defendants were sentenced to pay fines ranging from $150, for the president of the union, to $100. "A few hisses were heard," concludes the report in the *Commercial Advertiser* of June 11th, "but not more than five or six."*

This extreme view of the illegality of trades unions seems also to have been entertained by the law officers of Boston, where, in 1840, the members of the Journeyman Bootmakers' Association were indicted, and tried and convicted in the Municipal Court (Judge Thatcher's). The main object of the prosecution was evidently to break up the union, which was shown on the trial to have been engaged in two strikes for higher wages, as far back as 1835 and 1836. Happily for the defendants, these facts were not set out with sufficient clearness in the indictment, which a higher court therefore held to be fatally defective, coming to the conclusion that trades unions, as well as other associations, did not necessarily come under the ban of the law, as they might be organized for benevolent objects and the like. They were conspiracies under the common law only when the combining was for an unlawful purpose †—a term, however, which admits of a very liberal interpretation. So it was held by the Supreme Court of New Jersey as late as 1867, that it was an indictable conspiracy, at common law, for several employes in a patent leather establishment to combine and notify their employer that, unless he discharged certain enumerated persons, they would quit his employment in a body. This was an unwarrantable interference with the conduct of his affairs, observed the Chief Justice; a threat that they would derange his business ‡ However, since the "act relating to persons combining and encouraging other persons to combine," which became a law in 1883,§ New Jersey workmen have the right to combine for such purposes. In some other States there are similar enactments.

Prosecutions like those mentioned, for a long time threatened to discourage organizations for trade purposes, and up to 1860 trades unions led a very precarious existence, although at about this time fully twenty-six trades had national associations.

THE TURN IN THE TIDE.

Since the close of the civil war labor organizations have increased rapidly, and lately conventions of "organized workingmen" have been nearly as common as those

*This is the way the *Journal of Commerce* delivered itself. Commenting on the "reprehensible" conduct of the strikers in "intimidating" their fellows, among others a man by the name of Wright, even to the extent of preventing him from becoming a witness for the prosecution, it concluded: "Finding that threats or promises alike were unavailing to make him [Wright] mention the names of the persons who threatened him, Mr Wyman, the employer, was obliged [*sic*] to commit him to prison for refusing to give evidence, and thus an honest, industrious, poor man, with a large family, has been obliged first to remain idle, and is afterwards committed to prison for fear of disobeying the dictates of a lawless combination."

† See *Commonwealth* vs. *Hunt and others, Thatcher's Criminal Reports* (*Mass.*), and 4 *Metcalf* 111.

‡ *State* vs. *Donaldson and others*, 3 *Vroom* 151.

§ Chapter 28, Laws of 1883; see Appendix.

of the political parties.* In New Jersey the progress of the labor movement has been noticeable within the past decade, especially in the results accomplished, which were of little moment before the renewed labor agitation following the railroad troubles of 1877. At the ensuing session of the legislature our Bureau of Labor Statistics was established—the fifth in the list of these valuable State departments organized, which are the fruit of very recent years. Massachusetts began in 1869, but three years had passed before the example was followed. At present we have sixteen official bureaus, including the National one, for the collection of labor statistics. The New Jersey bureau began operations in the spring of 1878, having been organized under an act approved March 27th.† The original bill introduced was entitled "An act to provide for the collection of statistics relating to the interests of labor and capital," and had been modeled after the Massachusett's law. Provision was made for the appointment of a labor statistscian and clerk, for the purpose of collecting, arranging, systematizing and presenting in annual reports to the Governor statistical details relating to all departments of labor, "especially concerning the commercial, industrial, social, educational and sanitary condition, habits and customs, wages received, wants and needs of the laboring and mechanical classes, with a view to improve the same, harmonize the relation between capital and labor and place industry upon a more comprehensive and scientific basis." But as this was considered too radical, a substitute was adopted somewhat modifying and changing the work of the Bureau, which was enjoined "in all suitable and lawful ways to foster and enlarge our manufacturing and every other class of productive industry, with a view to their permanent establishment upon a prosperous basis both to the employer and employed." In accordance with this law and a supplement passed in 1879, a chief and secretary have been appointed.

CONVICT LABOR.

For some time previous to 1878 the discussion of the policy of contract convict labor had been going on among working people, who strongly objected to this sort of competition with free labor; and the first result of their opposition was the legislative action of that year prohibiting the manufacture of silk and felt hats in State Prison.‡ But the crusade inaugurated by the New Jersey hatters was zealously continued till its successful ending in the winter of 1884, when the system of contracting out the labor of our convicts, or of the inmates of our reformatories, was finally abolished so far as future contracts were concerned,§ although an unsuccessful attempt was made at the next session of the Legislature to modify the prohibition. The law requires the substitution either of the system commonly known as the "piece-price plan," or of that called the "public account system;" and, in accordance with this mandate, the authorities of the State Prison have adopted the former, under which they contract to sell the product of the convicts' labor. From present indications, the result will not verify the gloomy predictions of those who believed in holding on

* Probably nothing shows better the greatly increased interest which, especially, the educated classes are taking in the labor question than the number of articles relating to this subject in the later editions of our many encyclopædias, issued within the past ten years. Previously, it was a rare thing to devote any space to labor topics, excepting a few remarks incorporated in the general essay on political economy.

† "An Act to establish a bureau of statistics upon the subject of labor, considered in all its relations to the growth and development of state industries." See Appendix.

‡ Proviso in "A supplement to an act, entitled 'an act for the government and regulation of State Prison,'" approved March 14th, 1878. See Appendix.

§ Chapters 12 and 158 of Laws of 1884.

to the course heretofore followed.* As the act of March 14th, 1882, (chapter 86,) which required the stamping of goods manufactured in State Prison,† was rendered unnecessary by the legislation of 1884, it was repealed on April 7th, 1885.‡ But the prohibition of the manufacture of hats, and the act of March 25th, 1881, (chapter 181,) which does not permit more than one hundred convicts to be employed at any one time in any special branch of industry, still hold good.

Convict competition with free labor thus, probably, has been restricted as far as practicable in the present state of public opinion, which favors the employment of the inmates of our prisons both for sanitary and selfish reasons, whose force is admitted by workingmen generally. On the other hand, it is highly improbable that the old system will be again restored, unless its advocates are more successful than heretofore in persuading our wage-earners that prison labor is but as a drop in the bucket, and that it is absurd to talk of a few thousand convicts competing with the hundreds of thousands of free workmen. But neither this nor any other plausible argument has succeeded in converting the shoemakers, hatters, harnessmakers and the workers in the few industries carried on in our penitentiaries. The opposition dates with the labor movement itself and is as likely to cease as the resistance to any other policy unfavorably affecting wages. In fact, the whole labor agitation begins and ends with

THE WAGES QUESTION.

The supporters of all economic legislation for our country have rung the changes on its effects on the wages of the American laborer, and the wisest statesmen of the past half century, recognizing the fact that the prosperity of the nation was gauged by the earnings of the working classes, have favored such course of action as would at least secure them. In our State, as early as 1848, an Assembly committee was instructed "to inquire into the expediency of passing a law giving to mechanics and laborers a priority or preference for the payment of any wages due to them for not exceeding six months' work, out of the estate of any employer or employers (whether individuals, copartners or incorporated companies), who has or have been employed in any manufacturing or mechanical business, in the event of the death or insolvency of such employer or employers, out of the proceeds of the sale of the property of such employer or employers, upon notice by such mechanic or laborer of such claim, or out of the estate of such employer or employers assigned for the payment of his or their debts, and notwithstanding a preference is not given in such assignment of such debts." Here the matter rested until the next session of the Legislature, when the following provision was incorporated in the general manufacturing law of 1849,‖ being section 42 of the same:

"That in case of the insolvency of any company formed under the provisions of this act, the laborers in the employ of said company shall have a lien upon the assets thereof, for the amount of wages due to them respectively, which shall be paid prior to any other debt or debts of said company."

This is substantially section 63 of our present "act concerning corporations." A

*"I am satisfied that the 'piece-price plan' recommended by the friends of labor, and adopted by the prison authorities, is the best solution of this labor problem yet presented, and that it cannot fail of success under the management of those who desire that it shall succeed. Errors and mistakes may be made in introducing the system, but with experience there can be no real difficulty in making this system a financial success."—Governor's message, 1886.

† With the words "Manufactured in the New Jersey State Prison."

‡ Chapter 174, Laws of 1885.

‖ This was the third general act; the first, passed in 1816 (and repealed in 1819), and the second, passed in 1846, did not contain any provision such as the one given here.

similar lien is now given to employes of railroad corporations, while the stockholders of gas light companies are also individually liable for debts due to their workmen. Since the act of 1856, "to secure to operatives in manufactories and other employes their wages," the sheriff, if duly notified, has not been permitted to remove the property of a debtor, by virtue of an execution or other process, unless employes are first paid one month's wages due to them; and under a supplement approved March 3d, 1881, those who have bestowed work or labor on any manufactured articles, "in whatever stage the same may then be," are to be compensated before any other creditors, in case the establishment where they are employed pass into the hands of a receiver. Since 1851 mechanics' and laborers' wages, to the extent of $300 per person, have been preferred debts when a debtor makes an assignment for benefit of his creditors,* while a law of 1876 exempts from attachment by non-resident creditors wages due from an employer resident in this State to non-resident employes, provided such exemption is allowed in the State where the debtor resides.† The general workshop and factory act of 1885 prohibits the enforcement of a penalty against an employe in a manufacturing establishment leaving without notice, unless the proprietor is required to give a like notice of dismissal from employment; and another law, the "act for the better securing and enjoyment of wages to workmen and laborers in the State of New Jersey," approved April 22d, 1882, endeavors to prevent them from sacrificing their earnings in an emergency by forbidding an assignment or sale of the same, except for full value, less the legal rate of interest.

Another series of acts‡ "for the better securing of wages to workmen" has been aimed at the odious "truck system," which was very general in this State a few years ago. The first statute, that of 1864, made it unlawful to pay employes in certain industries, limited as to locality, in written or verbal orders or due bills, but was evaded or utterly disregarded by employers. It was of no practical value to the wage-earner, whose only remedy was a civil suit, for no one was bold enough to risk losing employment by taking such a course; besides nine counties, where the evils of store pay were most glaring, were excepted from its provisions. Nothing further was done in the matter until 1877, when it was enacted that a penalty, not to exceed $500, should be forfeited by any person or corporation issuing in payment of labor any paper or order not redeemable for its face value in lawful money of the United States. Nevertheless the evasion of this law also was easy. Employers simply issued scrip ("shinnies"), payable in lawful money five years after date, *but redeemable at sight in merchandise.* Its efficiency was further destroyed by the proviso "that nothing in this act contained shall be held to prevent any employer from making any deduction for money due him from any laborer or employe." By the legislation of 1880, a settlement of wages, in either store goods, merchandise, printed, written, verbal orders or due bills of any kind, has been made a misdemeanor, punishable by fine and imprisonment, while the amount due to the employe may be recovered within one year, notwithstanding such settlement. Still, as the act does not apply to "the offset of any debt voluntarily contracted," or to "the payment of any debt due" from the workman, it has been of little avail to check the abuses complained of. The discontinuance of the truck system, except in a few localities, has been brought about, not by these legislative prohibitions, rendered nugatory by the various

*Incorporated in section 8 of the "Assignment Act," p. 38, Revision (1877).

†Supplement to "Attachment Act," Revision, p. 1,265.

‡For these and preceding laws referred to above, see Appendix.

provisos referred to, but is due almost entirely to the action of the United States court judges and officers in enforcing the nineteenth section of an act of Congress, "An act to amend existing customs and internal revenue laws and for other purposes," approved February 8th, 1875, which section reads as follows:

"That every person, firm, association other than national bank associations, and every corporation, State bank or State banking association, shall pay a tax of ten per centum on the amount of their own notes used for circulation and paid out by them."

Under this section District Attorney Keasbey brought an action in the United States District Court for New Jersey, several years ago, to recover the taxes alleged to be due from a firm of glass manufacturers, in South Jersey, for issuing and paying out as currency their scrip or notes, known as "shinplasters," in payment of wages. The suit was for $6,747.45, or 10 per cent. on $67,474.51 notes issued and reissued within three years. The Court held that the scrip was properly taxable, but only the amount originally issued, or $3,561.75, and directed the jury to find a verdict for the government for only $356.17. From this both sides appealed to the Circuit Court (Judges Bradley and McKennan), which, on October 12th, 1885, sustained the District Attorney's position.*

This welcomed decision, in connection with the awakened antagonistic sentiment, probably will prevent the revival of the truck system, at least to the extent it has been carried on in former years. Present public opinion regards the forced trading out of earnings on a par with monthly payment of wages. Both are impositions on the wage-earner, who looks to his pay for the means of procuring his daily food, clothing and comforts for himself and family. Unless he is paid frequently and in cash, he must resort to the stores and buy what he wants there by means of due bills or store orders, or on his credit. This costs him considerably more than would be requisite if he had the money in his pocket and could go where he pleased and pay as he goes. Besides, he fails to measure his expenses accurately when his bills do not have to be paid for a long period. The credit system is thus an encouragement to extravagance and waste. The end of the month comes and a settlement is had with the employer and storekeeper. Fortunate is the laborer who has any money left when his debts have been discharged.

Mechanics' lien acts, intended to secure mechanics and others payment for their labor and materials furnished for the erection of buildings, in preference to other creditors, form a very important part of the statute law of nearly every State in the Union.† Pennsylvania is said to have originated this legislation, in the United States, in 1784, in which year an act in favor of the ship-builders of Philadelphia was passed; but a beginning was not made in New Jersey until 1820, when "An act securing mechanics and others payment for their labor and materials in erecting any

* For the opinion see end of chapter.

"An act to prohibit the circulating or passing of tickets" was passed by the New Jersey Legislature, February 16th, 1831, and is substantially section 58 of "An act to authorize and regulate the business of banking," approved April 9th, 1875 (Revision). Its object is to prohibit the circulation of tickets intended as a substitute for bank notes or bills or lawful currency. Under the act referred to a penalty of five dollars was sued for in a justice's court, in 1832, by the holder of the following ticket: "The Howell Works Company will pay Henry Clay or bearer, on presentation, the amount of two dollars in goods, at their store." On appeal the Supreme Court, May term, 1833, decided that "the Legislature never intended [by this statute] that a man should not give a due bill or other written evidence of a debt, or promise to pay a debt to his creditor, or an order on his own store or factory, or anybody else for money or goods." See 2 *Green* 21. The trouble originated in Middlesex county, and the case is interesting for the reason that it shows how old the opposition to the truck system is.

†A lien under the common law exists only where the party continues in possession of the property on which he has bestowed his labor; by relinquishing his possession his lien in gone.

house or other building within the limits therein mentioned,"* became law on the petition of Edward Sharp, who owned one hundred and fifty acres in the township of Newton, in and adjoining the town of Camden. As he desired to lay off the land into building lots and dispose of the same, he "represented that it would greatly encourage the erection of buildings on the said lots and thereby more speedily enlarge and improve the said town of Camden, to secure by law to mechanics and others payment for their labor and materials in erecting any building upon the said tract of land." This the Legislature considered "to be just and reasonable" and enacted that "every dwelling house or other building hereafter constructed and erected within the tract of land shall be subject to the payments of debts contracted for or by reason of any work done or materials found and provided by any brickmaker, bricklayer, stonecutter, mason, lime merchant, carpenter, painter and glazier, iron monger, blacksmith, plasterer and lumber merchant, or any other person or persons employed or furnishing materials for or in the erecting and constructing such house and building." This act was afterwards extended to the whole city of Camden and then to other localities, but not before 1851 did its provisions cover the whole State. In 1853 the lien was allowed to attach to both the building and land "on which it stands, including the lot whereon the same is erected." The Revised Statutes of 1874 include substantially the provisions of the early acts, and the material portions of the same, as well as of "An act for the collection of demands against ships, steamboats and other vessels," approved March 20th, 1857, are reproduced at the close of this volume.

While these lien laws are primarily intended for the benefit of contractors, master mechanics and materialmen, they also directly as well as indirectly protect the wage-earning journeyman, who, in case any master workman or contractor refuses to pay him the wages due, may give notice of such refusal to the owner of the building, who must settle the debt. This provision has been incorporated in all this class of statutes since 1835, and provides that any materialman, journeyman or laborer, who has bestowed materials or labor in erecting any building, may give notice to the owner to retain the amount due him. The demand must be made within the proper time; state the exact debt due and that its payment has been refused.

MISCELLANEOUS ENACTMENTS.

In addition to the measures already referred to, many of which do not belong to the class of strict labor legislation, several other enactments of great importance to the wage-earner are in force. The "Act to provide for the arbitration of labor disputes," chapter 138 of the laws of 1880, was a move in the direction of avoiding strikes, and is intended to provide a legal method for voluntarily submitting differences between workingmen and their employers to arbitration. Possibly, in this action our legislators were in advance of the times, but certainly not in supplementing our excellent system of public instruction by the legislation of 1879 and 1881, which encourages the establishment of schools for industrial education.† It is as unnecessary here to re-argue the advantages of giving to the future mechanic practical instruction in his trade, as to recount the benefits to be derived by the wage-laborer by engaging in the co-operative movement, facilitated, as it is, by the laws of this State,‡ and which must advance with increasing intelligence and that disposition

*Page 124, Laws 1820 (2d session).

†Chapters 105 and 164 respectively.

‡Chapter 38, Laws of 1881.

which considers a penny saved as a penny earned. The second decade of this century had nearly ended before the first savings bank was started in Philadelphia,* and it was a Trenton newspaper† that greeted the establishment of the pioneer "New Jersey Savings Bank," at New Brunswick, with the remark that "an institution like this, which affords the industrious and frugal of all classes an opportunity of safely and profitably investing their earnings, however small, has long been wanted in New Jersey; and could the difficulties be surmounted we should be glad to see savings banks spring up in every city and town in the State." This did not appear at all practicable to the editor, and he was right, for the New Brunswick concern had a limited career of usefulness. An act of incorporation not even had been deemed necessary. That was first secured for the "Newark Savings Fund Association," in 1828, which was authorized to receive as deposits such small sums of money, not necessarily less than one dollar, "from tradesmen, mechanics, laborers, miners, servants and other persons as they shall save from their earnings or otherwise lawfully acquire, and from time to time wish to deposit in the said fund for safe keeping." Many special acts for these institutions were granted somewhat later, and up to within ten years of the present day, for our general act for savings banks dates from 1876. Now we have 30 banks with not far from 100,000 depositors and $30,000,000 deposits, which do not include the $7,000,000 invested by more than 20,000 shareholders in our 130-odd building and loan associations. These co-operative societies were not thought of in New Jersey before 1847,‡ when the Legislature considered them entitled to legislative countenance and encouragement under "An act to encourage the establishment of mutual savings associations," because such "associations for investing and accumulating the periodical and other contributions of the associators for the creation of a fund, to be finally distributed equally among them, have in other States been found highly conducive to public and individual prosperity, by encouraging and fostering the virtues of temperance, industry, economy and frugality." A supplement of the following year allowed them "to invest their funds in the purchase of lots and the erection thereon of dwelling houses, to be ultimately divided among the members." In 1849 "An act to encourage the establishment of mutual loan and building associations," was approved, the preamble affirming that "the establishment of associations for the purpose of assisting the members to purchase lots and erect dwelling-houses thereon, or to pay for houses and lots already purchased, by furnishing them with loans out of the funds of the association, to be repaid in some easy and convenient mode mutually agreed on, or by the redemption of shares upon equitable terms, has been found to be highly beneficial, enabling persons of limited means to acquire comfortable homes for themselves and families, without the necessity of taking any large amount from their business or earnings."

This law is substantially the revised act, approved April 9th, 1875, which is reproduced in the Appendix, and any wage-earner, by becoming a member of a society organized under its provisions, if he is willing to save but a fraction of his monthly income, will soon be able to acquire a house of his own. Thus he will be relieved from many of the inconveniences which surround a tenant, whose rights, nevertheless, are protected by the New Jersey law, which is far more liberal than that of many

*1817.

†True American, March 23d, 1822.

‡March 4th, and supplement thereto, March 9th, 1848, also an act approved February 28th, 1849.

other States, especially in the matter of "summary proceedings." * Even if his rent is unpaid or term ended, a tenant cannot be ousted until after a summons (of at least five days) to appear before a justice of the peace has been served; and no summons can be served before a previous notice and demand of possession has been made by the landlord. † The lardlord's right of dispossessing his tenant is further restricted by the "Act regulating lettings in cases where no definite term is fixed," approved April 14th, 1884, ‡ which reads:

"In any letting where no term is agreed upon and the rent is payable monthly, so long as the tenant pays the rent as agreed, it shall be unlawful for the landlord to dispossess the tenant before the first day of April succeeding the commencement of such letting without giving the tenant three months' notice, in writing, to quit; provided, however, that in case any such tenant shall be so disorderly as to destroy the peace and quiet of the other tenants living in said house or the neighborhood, or shall willfully destroy, damage or injure the premises, or shall constantly violate the said landlord's rules and regulations governing said premises, in any such case the said landlord may pursue any of the remedies now provided by law for the removal or punishment of such tenant, this law to the contrary notwithstanding."

Such legislation, while it does not give bread or clothing to the laboring man or increase the duration of his life, helps to make it happier and himself a better and more useful citizen than he otherwise would be. Thus, also, the value of free libraries and reading rooms, as well as of public parks, in our cities are incalculable. Their institution is now everywhere considered essential to the public welfare, and their advantages are fully appreciated in our own State, where several enactments having this end in view have been placed in the statute book § And it is safe to predict that, as the years pass, an enlightened public sentiment will give rise to all the needed humane and liberal law; perhaps, a time even may come when it will be necessary to heed the warning of a New Jersey Governor to a former generation, that there is far more danger of too much than too little legislation ‖ But the American workingman will be slow to condemn the present tendency towards paternal government, however dangerous it may prove when pushed too far; for it is unlikely that he can be persuaded that the high-water mark of State intervention has been reached before we are at least abreast of England, where a comprehensive factory law protects the female operative and her child, where the post-office savings banks already have become popular, and where an employer's liability act affords the crippled employe a chance

* In New York, after a previous demand of three days, a two hours' notification from the justice is all that is required before the tenant may be turned out by the marshal. One of the New York judges thus commented on this law in an interview with a reporter of a New York daily, on April 30th, 1881: "The law says that on two hours' notification he must vacate the premises, and it further says that the judge shall have no option in the matter. That is, the law was framed to kick the tenant out in two hours and then to keep him from getting any satisfaction. Cases come before me that make my heart bleed, but all I can say is that such is the law—I wish I could add the 'infernal law.' Here is an honest fellow, a carpenter, perhaps, on the streets, and that is one of the best classes in New York. He has a wife and a lot of chicks and has got them some furniture and made them happy. He goes home at night and finds his effects on the sidewalk and his wife crying there with a crowd around her, and all the little children crying; and he wants to go and lick somebody. The policeman says, 'Now, my good fellow, don't create any fuss. You were served with a notice to get out.' 'I never got a notice in my life,' says the man, 'and I only left home this morning.' 'I never got a notice,' says the woman, weeping. The officer takes the man up stairs and shows him a little piece of paper on the door, and the noble law of the State of New York says that, when the paper is put on the door, even if no one is around to see it, two hours afterwards the man's effects go out."

† Revision (1877) page 572.

‡ Chapter 116. For restrictions on the landlord in seizing or distraining the property of the tenant for arrears of rent, see "An act concerning distresses," (Revision, page 308), reproduced below.

§ See below.

‖ Annual message (1839) of Gov. Pennington, who supplemented this with the statesmanlike words, that "it is undoubtedly our true policy to have the laws few in number, plain and easy to understand, not fluctuating, but permanent, and *to insist that they be rigidly enforced.*"

of escaping the poorhouse. With the social progress of a people comes also its legislative development; and we, who are enjoying the closing years of the nineteenth century, could no more live contentedly under the customs which prevailed before the advent of the factory and the railroad, than the generation which witnessed the Revolution could have tolerated the "blue laws" of a preceding era. Yet, notwithstanding our industrial progress, the old common law still governs the relations between master and servant. Thus, servants, injured by co-servants, in the same general employment, can expect little pecuniary satisfaction from the employer, who is bound merely to use reasonable care in the selection of employes and furnish them with competent tools and instruments of labor, and a safe means of going to and returning from work. He is only liable in damages if it be shown that he knew the instruments to be defective and the co-servant to be negligent, and that the injured employe did not. In other words, modern industrial development and the consequent great subdivision of employment has virtually made the responsibility of the master *nil.*

OBSOLETE LAWS.

We have already referred to the common law restrictions on the organization of labor, happily abrogated. Nothing similar to the English "statutes of laborers" ever was enacted in New Jersey, yet many of our ancient "servant" laws would now be considered extremely harsh. Most of these have been repealed; others long since have become obsolete, and therefore the necessity of such an act as chapter 74 of the laws of 1880, "An act to amend an act entitled, 'An act for the establishment of work-houses in the several counties in this State,' passed February 20th, 1799," may well be questioned. It reads:

"Whereas, the constitution of the United States provides that 'neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States or any place subject to their jurisdiction;' therefore, be it enacted, &c, that the fifth and sixth sections of the act of which this act is amendatory, and which are in the words following, to wit:

"'5. And be it enacted, That it shall be lawful for any justice of the peace to commit to the said workhouse to hard labor, any stubborn, disobedient, rude or intemperate slave or male servant, on complaint of his or her master or mistress; and also, after due investigation of such complaint, to order such person to be punished by such confinement and labor as the said justice shall think reasonable.

"'6. And be it enacted, That when any servant or slave of the description specified in the preceding section, shall be sent to such workhouse, the master or mistress shall pay for the food and diet of his or her servant or slave such reasonable compensation as the said corporation shall fix,' be and the same are hereby repealed."

These provisions were in force long before their re-enactment at the close of the last century. Not until 1798 was repealed the "Act for regulating of white servants and taking up soldiers and seamen deserting Her Majesty's service and coming into this colony," passed in 1713–14:*

"Whereas, the importation of white servants into this province would be a great benefit to the country in general by settling and improving the same, but hath hitherto been much obstructed, because several ill-minded persons encourage and assist the said servants to run away and absent themselves from their masters or mistresses to the great danger of the said masters or mistresses; for the prevention whereof for the future:

"1. That every servant who shall depart or absent himself from service without leave first obtained shall be adjudged to serve double the time he shall so have absented himself, besides paying all damages and costs sustained by his master. * * *

*13 Anne.

"7. That all seamen, soldiers, servants and other laborers and suspected persons, who shall travel in and through this province without a pass from one or more justices of the peace of this or other neighboring provinces, signifying that he, she or they are free persons, it shall and may be lawful for any constable or other person or persons whatsoever, to take up all such vagrant persons traveling without passes as aforesaid, and him, her or them to carry before any justice of the peace of this province, who shall strictly examine all such persons so brought before him, and all such as can give no account of themselves, and the causes and reasons of their traveling, shall be by said justice committed to the common gaol of the county where taken up, there to remain till thence delivered by order of their captain, master, mistress or other due course of law.*

Any boatman transporting such persons without passes, or any inn keeper who entertained them, forfeited forty shillings. So also, in 1730, retailers of strong liquors were forbidden to sell to servants, or "shall permit any servant or servants to sit, drink or tipple without leave of the master." In 1686 the captors of runaway servants could claim twenty shillings from the master or mistress and "six pence for every mile he or she shall be at the pains and trouble to secure and bring such servant back." The laws of 1682 provided, that "all servants above the age of one and twenty years, transported or to be transported into this province without indentures or other agreements, shall serve four years to commence from the time the ship shall be entered in the said province," and all under twenty-one were to be brought into court, where the length of service was to be determined. But probably a statute like the following † did much in the Proprietors' times, as it would at present, "for the prevention of differences betwixt masters and servants:"

"XXV. At the expiration of his or their service, his or their master, mistress or agents shall furnish the aforesaid servant or servants and each of them respectively with two suits of apparel, suitable for a servant, one good falling ax, a good hoe and seven bushels of good Indian corn.‡

"If a man or woman maim or smite the eye of his or their man or maid servant, being a white servant, so that it perish, or smite out the tooth of his or their man or maid servant, such servant shall go free. If the master or mistress, or agent to such, immoderately correct their servants, they shall be punished for the same by the next sessions of the county court where the fact ariseth or doth appear.

"XXVI. That all masters or mistresses having negro slaves or others shall allow them sufficient accommodation of victuals and clothing."

We conclude this lengthy historical review of legislation directly or indirectly affecting the wage earners, past and present, of New Jersey, with the opinion in the South Jersey "shinplaster" case referred to above.

THE UNITED STATES *v.* WOODWARD WARRICK, SURVIVING PARTNER, ETC.

[United States Circuit Court, District of New Jersey, filed October 12th, 1885.]

BRADLEY AND MCKENNAN JJ. A writ of error to the District Court has been brought by each party in this case. The plaintiff recovered a judgment for $163.31, but being dissatisfied with the smallness of the amount, brought its writ to secure a reversal on that ground. The defendant brought his writ for a reversal of the entire judgment. The action was brought by the United States to recover taxes alleged to

*Our present tramp laws seem to be modeled after this section. For most cases of vagrancy perhaps, they are well enough; but when it comes to punishing the unfortunate with the lazy and vicious, it reverses the good old legal maxim, that it is better for nine guilty persons to escape than that one innocent man shall suffer.

†Leaming & Spicer, 1682–1702, chapter 8.

‡For West Jersey the law read: "Ten bushels of corn, necessary apparel, two horses and one axe."

be due from the defendant and his former partner, constituting the firm of Warrick & Stanger, for using and paying out their notes as currency.

The tax was claimed under and by virtue of the nineteenth section of the act entitled "An act to amend existing customs and internal revenue laws and for other purposes," approved February 8th, 1875, (18 Statutes, 311,) which section is as follows: "That every person, firm, association other than national bank associations, and every corporation, State bank or State banking association, shall pay a tax of ten per centum on the amount of their own notes used for circulation and paid out by them."

Warrick & Stanger were glass manufacturers at Glassboro, Gloucester county, N. J., and in 1877 and subsequent years issued their notes in various amounts from five cents to five dollars each, in payment of wages due to their hands, which notes were in the following form:

REGISTERED. Warrick & Stanger, June 18, 1876, Glassboro, N. J.	GLASSBORO, June 18, 1876. Five years after date we promise to pay the bearer, at our store in Glassboro, Gloucester County, N. J., **FIVE CENTS,** In lawful money of the United States, for value received. This promissory note will be taken by us, at or before its maturity, for the amount named herein, in payment of any debts due us. (Signed,) No..... WARRICK & STANGER.

The notes were in printed form, except the date, number and signature, were on bank paper and had the appearance of notes intended for circulation from hand to hand. They were issued to the amount of $3,561.75 in various denominations, and when redeemed were continually re issued, until the amount paid out from November, 1877, to March, 1880, reached the sum of $67,474.51. The average amount outstanding at any one time was about $2,300. Evidence was given tending to show that *these notes circulated in the community as money*, being used not only in purchasing goods at the store of Warrick & Stanger, but in transactions and dealings between other persons. The court below left it to the jury to determine whether the notes were in fact used for circulation as money in the community, and whether the defendants, in paying them out, knew that they would be so used. Amongst other things, the judge in his charge used the following language:

"We cannot properly affirm that the true nature of the issue can only be determined by considering what was said by the maker when they were paid out. We must take notice how they were used by the workmen and the community with the knowledge of the defendant. We must ask, were they in fact used for circulation, and did the defendant know when he paid them out that they would be thus used? If he did, does not the law necessarily infer that he intended them to be thus used when he paid them out? That is for the jury to say."

The defendants' counsel contended, and asked the judge to charge that, in order to render the defendants liable to the tax it should be shown that they intended to put the notes in circulation as money, and paid them out for that purpose, and that their declarations when they paid out the notes were the proper and only evidences of their intention. The judge charged that it must be shown that it was one of the purposes of the defendants in paying out the notes to put them in circulation, and he told the jury that in order to render a verdict for the plaintiff, they must be satisfied that the notes were paid out with the intent that they should be used for circulation, but declined to charge that the declarations of the defendants were the only evidence of such intention. As already shown, he charged that paying out the notes knowing that they would be used and circulated as money was evidence from which the jury might infer the intention to pay them out for that purpose. We do not well see how the defendants could have reasonably asked a more favorable charge. Other specific charges on this branch of the case were requested, but it is not necessary to enumerate them. We are satisfied from the general character of the evidence, and from the form and appearance of the notes, that it was fairly left to the jury to determine whether

the notes were used for circulation as money, and whether the defendant and his partner issued them for that purpose.

* * * * * * * * * *

Another point was that notes under the amount of one dollar were not taxable under the law. But we see nothing in the language of the act to lay a foundation for any such distinction. The suggestion that the United States or the national banks issued no currency under that amount to which the notes of the defendant could come in competition, has very little pertinency in view of the clear terms of the act, and the suggestion may be met, if necessary to meet it, by the counter suggestion that the government does issue specie currency of various denominations less than one dollar.

As to the amount of the tax (supposing a tax to be due), the plaintiff contended that it was ten per cent of the whole amount of notes paid out by the defendant and his partner, without regard to the fact that the same notes were re issued after being taken up and paid; whilst the defendant contended that the amount of tax was only ten per cent. of the notes that were executed and used, no matter how often they may have been paid out. If the plaintiff was right, the whole amount of notes paid out was $68,474.51, and the tax amounted to $6,847.45. If the defendant was right, the amount of notes executed and used was only $3,561.72, and the tax amounted to only $356.17. The judge charged the jury in accordance with the views of the defendant, and a verdict was rendered for the latter sum with interest. It is for this portion of the charge that the plaintiff has brought its writ of error. We have carefully examined the language of the act, and feel compelled to say that on this point we think the court below erred. We think that every issue of the notes, whether the original issue or a re-issue, was a new issue thereof, and became a part of "the amount of their own notes used for circulation" by the defendants. If instead of using the old notes, already redeemed, the defendants had issued new ones, there can be no doubt that they would have been taxable. But how could it differ in principle or reason of the thing whether they used old notes or new ones? A note redeemed ceases to be a note; it is of no more validity than a blank piece of paper; if it be re-issued it becomes a new note to all intents and purposes.

After a careful examination of the whole record, we think that none of the defendants' assignments of error are tenable; but that the plaintiff's assignment is well taken, and that, for this cause, the judgment must be reversed and a new trial granted.

PART IV.

THE IRON INDUSTRY.

CHAPTER I.—IRON AND ZINC MINES.

CHAPTER II.—ANTHRACITE BLAST FURNACES.

CHAPTER III.—FOUNDRIES, SHEET IRON AND STEEL WORKS.

CHAPTER IV.—GENERAL MANUFACTURES OF IRON, AND SUMMARY.

CHAPTER I.

IRON AND ZINC MINES.

Many of the mines in this State were not operated during the past year, as the general business depression affected this industry very seriously, the prices obtained for ore being very low and the demand light. As a consequence the total output of iron and zinc ores was but little more than one-half of the amount mined in 1882, when the production was 805,672 tons, valued at $3,488,095. Then there were 3,782 men and boys employed, who received $1,524,725 in wages. The current rate was $1.50 per day for men, and from 75 cents to $1.00 for boys. The average annual earnings amounted to $395.08, while the average value of ore per ton was $4.33.

During the year ending July 1st, 1885, forty companies or firms, some of which operate several mines, have been engaged in this industry; twenty-five were busy during the whole twelve months, eleven over and four less than six months. The whole output of iron and zinc ore was 480,677 tons, valued at $1,615,279. The greatest number of hands employed at any one time was 2,819, or an average of 2,562—2,473 men and 89 boys; and the total amount paid in wages $773,377. The daily wages for skilled miners ranged from $1.20 to $1.55 per day; for ordinary labor, from $1.00 to $1.25; boys received from 55 to 75 cents. The average annual receipts of men and boys were $301.86, and the average value of iron ore was $3.36 per ton. Sixteen establishments reported no change in wages, twenty-three a decrease of ten per cent., and one a decrease of twenty per cent. In 1882 the average cost of labor per ton of ore mined was $1.89, which in 1885 had been reduced to $1.61.

The United States census report of 1880 gives the following statistics of the New Jersey iron mines: Maximum annual capacity, 1,487,829 tons; actual product, 754,872 tons, or more than 50 per cent. of the maximum capacity; value of product, $2,910,442;

value of all materials used in regular industry, $584,229, wages paid, $1,606,257; number of employes, 4,811; working capital and value of real estate, $6,201,761. The total product of the iron mines in the United States in 1880 was 7,971,706 tons, valued at $23,167,007. New Jersey produced 9.501 per cent. of this. In the report of the United States census for 1870, sixteen States were reported as producers of iron ore. Then New Jersey was the fourth in rank, the six principal producers being as follows: Pennsylvania, Michigan, New York, New Jersey, Ohio and Missouri. In 1880 twenty-three States were reported as producing iron ore, the six States given above retaining the same relative rank as in 1870, while Alabama, an addition to the list, took seventh place. The first six States produced 87.48 per cent. of the total product in tons and 90.91 per cent. of the total value. Morris county, New Jersey, ranked as the third county in the Union, being exceeded only by Marquette (Michigan) and Essex (New York). Among the largest mines was the Hibernia, Morris county, ranking eighth, with a production of 138,173 tons.*

The following comparative statistics will show the output of our iron mines at intervals back to 1790:

Year.	Tons.	Authority.
1790	10,000	Morse Geography.
1830	20,000	Gordon's Gazetteer.
1855	100,000	Dr. Kitchell's Estimate.
1860	164,900	United States Census.
1864	226,000	Report of State Geologist.
1867	275,067	" " "
1870	362,636	United States Census.
1871	450,000	Report of State Geologist.
1872	600,000	" " "
1873	665,000	" " "
1874	525,000	" " "
1875	390,000	" " "
1879	488,028	" " "
1880	754,872	United States Census.
1881	737,052	Report of State Geologist.
1882	805,672	Bureau of Statistics.
1883	521,416	Report of State Geologist.
1884	393,710†	" " "
1885	480,677	Bureau of Statistics.

*Including Andover, Glendon and Bethlehem.

†The report of the State Geologist does not include the shipment of zinc ore, which amounted to over 40,000 tons in 1884.

The importations, principally from Spain and Africa, affect our mining operations considerably, as the foreign iron ores are of an excellent quality and can be delivered at our furnaces near the railroads at a much lower rate per ton than the New Jersey ore can be profitably mined and placed at the same points.* And this, notwithstanding the fact that the cost of production of our ore has been very materially reduced, not alone by decreasing wages but also on account of the introduction of improved machinery for handling ore, such as power drills, pumps, heavier engines, etc. The plant used in our mining districts is not excelled in any other part of the country. The average yearly imports of iron ore previous to 1879 did not amount to 100,000 tons. According to the annual report of the American Iron and Steel Association for 1885 the importations for the calendar years 1879 to 1883, inclusive, were as follows:

1879	284,141	gross tons.
1880	493,408	" "
1881	782,887	" "
1882	589,655	" "
1883	490,875	" "

In the quarterly report of the Hon. William F. Switzler, Chief of the Bureau of Statistics, Washington, D. C., the imports for the fiscal years ending July 1st, 1884 and 1885, are stated as follows:

Year.	Tons.	Value.
1884	553,806	$1,317,546
1885	425,870	953,596

In some of our mines the wages during the year were reduced to 90 cents per day. This was the exception, however, most of the companies having advanced them to $1.10. The increased demand for ore and consequent better prices indicate a still further advance. Many of the miners are furnished with houses, rent free, by their employers. In regard to the wages question, Hon. George Richards, of Dover, N. J., under date of January 15th, 1886, wrote that there had been no change since December, 1884, but that he would make an advance on February 1st. That gentleman also has kindly prepared the following statement of miners' daily wages, as shown by the books of the Glendon Iron Company, since 1858:

*The Bessemer metal manufacturers use the foreign to the exclusion of the domestic article.

From August,	1858, to January,	1859		$ 75
" January,	1859, to July,	1860		1 00
" July,	1860, to November,	1860		1 12½
" November,	1860, to December,	1862		1 00
" December,	1862, to June,	1863		1 25
" June,	1863, to September,	1863		1 37½
" September,	1863, to March,	1864		1 50
" March,	1864, to April,	1864		1 75
" April,	1864, to July,	1864		2 00
" July,	1864, to April,	1865		2 50
" April,	1865, to July,	1865		2 00
" July,	1865, to November,	1865		1 50
" November,	1865, to March,	1868		1 65
" March,	1868, to April,	1868		1 50
" April,	1868, to April,	1872		1 65
" April,	1872, to November,	1873		2 00
" November,	1873, to December,	1873		1 75
" December,	1873, to January,	1875		1 50
" January,	1875, to September,	1876		1 25
" September,	1876, to November,	1876		1 12½
" November,	1876, to April,	1877		1 00
" April,	1877, to July,	1877		90
" July,	1877, to September,	1879		1 00
" September,	1879, to January,	1880		1 25
" January,	1880, to March,	1880		1 50
" March,	1880, to June,	1880		2 00
" June,	1880, to July,	1880		1 50
" July,	1880, to January,	1882		1 25
" January,	1882, to January,	1883		1 50
" January,	1883, to January,	1884		1 25
" January,	1884, to December,	1884		1 10
" December,	1884, to January,	1886		1 00

In 1858, the earliest date given in the table, wages were exceedingly low, 75 cents per day, the result of the panic of 1857, from which the country had just begun to rally. The civil war caused an advance in values of all classes of goods—in expenses of living as well as in wages. As shown by the table, miners' wages advanced regularly until 1865, when the maximum was reached, or $2.50 per day. It should be remembered, however, that there was a large premium on gold at that time and the purchasing power of the money received as wages was very greatly reduced. In 1873 wages were $2.00 per day, but the panic of that year and the depression for several years after caused a continuous decline until 1877, when they had dropped to 90 cents. Wages again advanced regularly until $2.00

was reached in 1880, and then declined to $1.00 in 1884 and so continued without change to the close of the year 1885.

The following price list (average quotations) of flour, including "Extra State," from 1862 to 1883, will be interesting in connection with the table of wages given above:

Year.	Price per barrel.
1862	$5 78
1863	6 12
1864	8 62
1865	8 06
1866	8 93
1867	10 75
1868	9 13
1869	6 36
1870	5 55
1871	6 63
1872	6 86 @ 7 21
1873	6 79 @ 7 09
1874	5 85 @ 6 03
1875	5 26 @ 5 50
1876	5 03 @ 5 24
1877	6 05 @ 6 43
1878	4 39 @ 4 57
1879	4 43 @ 4 58
1880	4 60 @ 4 79
1881	4 97 @ 5 17
1882	4 29 @ 5 20
1883	4 06 @ 4 64
1884	3 14 @ 3 52

The table given below will show in detail the reports of the forty establishments engaged in mining ore in New Jersey during the year. The amount of working capital and value of the real estate is not stated, but is estimated at two and a half millions of dollars:

IRON AND ZINC MINES.

Office number.	When wages are paid.	Output of ore in tons.	Decrease in wages—Per cent.	Greatest number of hands employed at any one time during the year.	AV'R'GE NUMBER OF HANDS EMPLOYED.		WAGES AND HOURS OF LABOR.					MONTHS IN OPERATION.		Products—Dollars.
					Males above sixteen years.	Youths.	Number of hours worked per day.	Average day's wages for a skilled mechanic.	Average day's wages for an ordinary laborer.	Average daily wages of boys.	Total amount paid in wages during the year.	On full time.	Idle.	
1	Mo'thly	15,350	...	60	54	3	10	$1 55	$1 10	55c	$15,510	10	2	$92,100
2	"	20,610	...	30	24	2	10	1 55	1 10	60c	11,500	12	.....	123,660
3	"	12,750	...	100	70	5	10	1 45	1 10	75c	27,000	11	1	61,000
4	"	39,000	10	200	180	10	10	1 25	1 05	60c	83,000	12	.....	136,500
5	"	1,556	9	8	6	.....	10	.....	1 05	.....	1,850	12	.....	3,800
6	"	24,017	9	175	150	.....	10	1 30	1 05	.....	48,600	12	.....	60,000
7	"	4,035	10	18	15	.....	10	1 25	1 05	.....	5,500	12	.....	10,000
8	"	24,462	10	100	95	3	10	1 35	1 05	60c	28,500	12	.....	61,000
9	"	18,500	9	95	85	2	10	1 40	1 05	60c	27,600	12	.....	46,000
10	"	26,300	9	125	100	4	10	1 40	1 05	70c	32,500	12	.....	66,000
11	"	10,000	10	70	63	2	10	1 30	1 05	.....	18,000	12	.....	25,000
12	"	10,000	10	35	30	2	10	1 25	1 05	60c	12,000	12	.....	26,000
13	"	800	...	10	8	.....	10	1 20	1 00	.....	1,200	2	10	2,000
14	"	2,000	10	12	10	.....	10	1 20	1 00	.....	3,100	8	4	5,200
15	"	16,500	10	75	60	5	10	1 35	1 05	75c	25,800	12	.....	43,000
16	"	20,000	10	120	75	10	10	1 45	1 05	75c	32,400	12	.....	32,400
17	"	600	...	25	20	.....	10	.....	1 25	.....	6,000	12	.....	1,800
18	"	47,974	10	175	160	4	10	1 30	1 05	.....	62,500	12	.....	150,000
19	"	23,000	10	130	120	5	10	1 25	1 05	.....	35,000	12	.....	69,000
20	"	8,500	10	45	40	2	10	1 25	1 05	65c	13,250	12	.....	25,500
21	"	7,200	...	43	40	2	10	1 20	1 10	.....	13,200	12	.....	21,000
22	"	23,000	...	125	85	5	10	1 30	1 10	75c	35,000	12	.....	74,000
23	"	300	...	12	12	.....	10	1 20	1 10	.....	600	2	10	1,000
24	"	5,120	...	75	70	3	10	1 30	1 20	55c	12,600	6	6	20,480
25	"	10,260	20	85	80	2	10	1 20	1 00	60c	23,500	11	1	61,560
26	"	5,500	...	112	90	10	10	1 30	1 10	60c	8,500	3	9	22,000
27	"	5,500	10	38	30	.....	10	1 25	1 00	.....	9,800	12	.....	22,000
28	"	200	...	8	6	.....	10	.....	1 10	.....	995	6	6	2,000
29	"	6,000	10	25	20	.....	10	1 25	1 00	65c	3,800	6	6	18,000
30	"	10,865	...	30	25	.....	10	1 40	1 15	.....	9,400	11	1	35,000
31	"	4,300	...	30	30	.....	10	.....	1 10	.....	4,500	4	8	15,150
32	"	5,300	...	30	30	.....	10	.....	1 10	.....	4,250	6	6	18,500
33	"	17,800	10	150	150	.....	10	1 20	1 00	.....	48,000	12	.....	80,000
34	"	3,883	10	20	20	.....	10	1 20	1 00	.....	5,268	10	2	23,298
35	"	2,529	10	20	20	.....	10	1 20	1 10	.....	5,058	12	.....	5,972
36	"	10,000	...	160	160	.....	10	1 20	1 10	.....	21,000	7	5	27,000
37	"	9,500	10	40	40	.....	10	.....	1 20	.....	16,000	12	.....	28,515
38	"	10,000	10	38	30	8	8	1 75	1 25	.....	15,000	12	.....	30,000
39	"	14,717	...	150	150	.....	10	1 25	1 00	.....	37,096	12	.....	58,868
40	"	2,744	10	20	20	.....	10	1 40	1 00	.....	9,000	12	.....	10,976
	Total	480,677	...	2,819	2,473	89	.....	.....	.....	.....	$773,377	.....	.....	$1,615,279

CHAPTER II.

ANTHRACITE BLAST FURNACES.

The first iron furnace established in New Jersey was located at Shrewsbury. The Oxford furnace, at Oxford, in Warren county, was the second and is probably the oldest in the United States at present in blast. It was built in 1742 by Jonathan Robeson. A pig of Oxford iron, bearing date "1755," is now in possession of the New Jersey Historical Society. Cannon balls were cast at this furnace for use in the French and Indian war and for the Revolutionary army. Many of these are still preserved. The first stack of the Oxford works was 36x10; an additional stack was built in 1872, 50x18. The combined annual capacity now is 17,000 net tons of pig iron.* The product of these furnaces is worked up into rails, nails, etc., on the premises.

During the year ending July 1st, 1885, there were only six furnaces in operation at any one time in New Jersey; only one was in blast all the year, and but two for ten months each.† The total product was 54,427 tons. There are twenty blast furnaces in the State, which have a capacity of 247,600 net tons. The production of pig iron (net tons) from 1874 to 1885, inclusive, has been:‡

Year.	Tons.	Year.	Tons.
1874	90,150	1880	170,049
1875	64,069	1881	171,672
1876	25,349	1882	176,805
1877	52,909	1883	138,773
1878	78,455	1884	82,935
1879	78,143	1885	54,427§

The maximum production was reached in 1882. Then the decline was rapid and continuous until near the close of the year

*According to Chief Justice Allen, of Pennsylvania, (1751–1774), one and a half tons of ore yielded one ton of pig iron, of which a good furnace yielded twenty to twenty-five tons weekly.

† Nine furnaces were reported in blast on January 1st, 1886.

‡ From American Iron and Steel Association reports up to 1884, inclusive, calendar years.

§ Fiscal year. Bureau reports.

1885, when better prices obtained and the production of pig iron largely increased, not only in New Jersey, but throughout the whole country.* The *Iron Age* referring to this improved condition of the trade, observes:

"Since the first of October, 1885, there has been a decided increase. At that time seventy-five anthracite furnaces, with a capacity of 20,318 tons, were in blast. January 1st it had increased to 104 furnaces, with 29,811 tons capacity. The bituminous furnaces had increased in the same time from eighty-eight, with a capacity of 43,234 tons, to 114, with a capacity of 54,199 tons."

The following table will show the course of prices, obtained for No. 1 anthracite foundry pig iron at tide-water, in the first month of each quarter, from 1870 to 1885, inclusive, per gross ton:

Years.	January.	April.	July.	October.
1870	$36 25	$33 25	$32 75	$32 25
1871	30 50	35 50	35 75	26 75
1872	37 00	49 50	51 25	53 25
1873	45 25	47 75	43 75	38 00
1874	32 00	32 00	31 50	29 00
1875	25 75	27 00	26 00	24 00
1876	23 25	22 75	22 00	21 75
1877	20 75	19 50	18 25	18 50
1878	18 50	18 50	17 25	7 00
1879	17 25	18 00	19 25	30 00
1880	40 00	31 00	23 50	33 00
1881	25 00	25 00	24 50	25 50
1882	26 00	25 50	25 50	26 25
1883	25 00	23 50	21 50	21 50
1884	20 50	20 00	20 00	19 50
1885	18 00	17 75	17 50	18 00

Mr. James C. Bayles, editor of the *Iron Age*, has kindly furnished to us the electrotype herewith given,† which clearly shows all the fluctuations in the production and price of pig iron and steel rails from 1872 to 1885. This diagram, according to the *Iron Age*, "is based upon the table compiled by the American Iron and Steel Association, showing the prices of No. 1 anthracite foundry pig in Philadelphia per ton of 2,240 pounds, which was kindly brought up to date for us. We have also drawn upon the report of the Iron and

* Mr. James W. Swank has calculated the total product of pig iron in the United States for the fiscal year ending July 1st, 1885, to have been 4,473,408 tons, and the production of Bessemer steel rails for the same period, at 975,697 tons.

† See below.

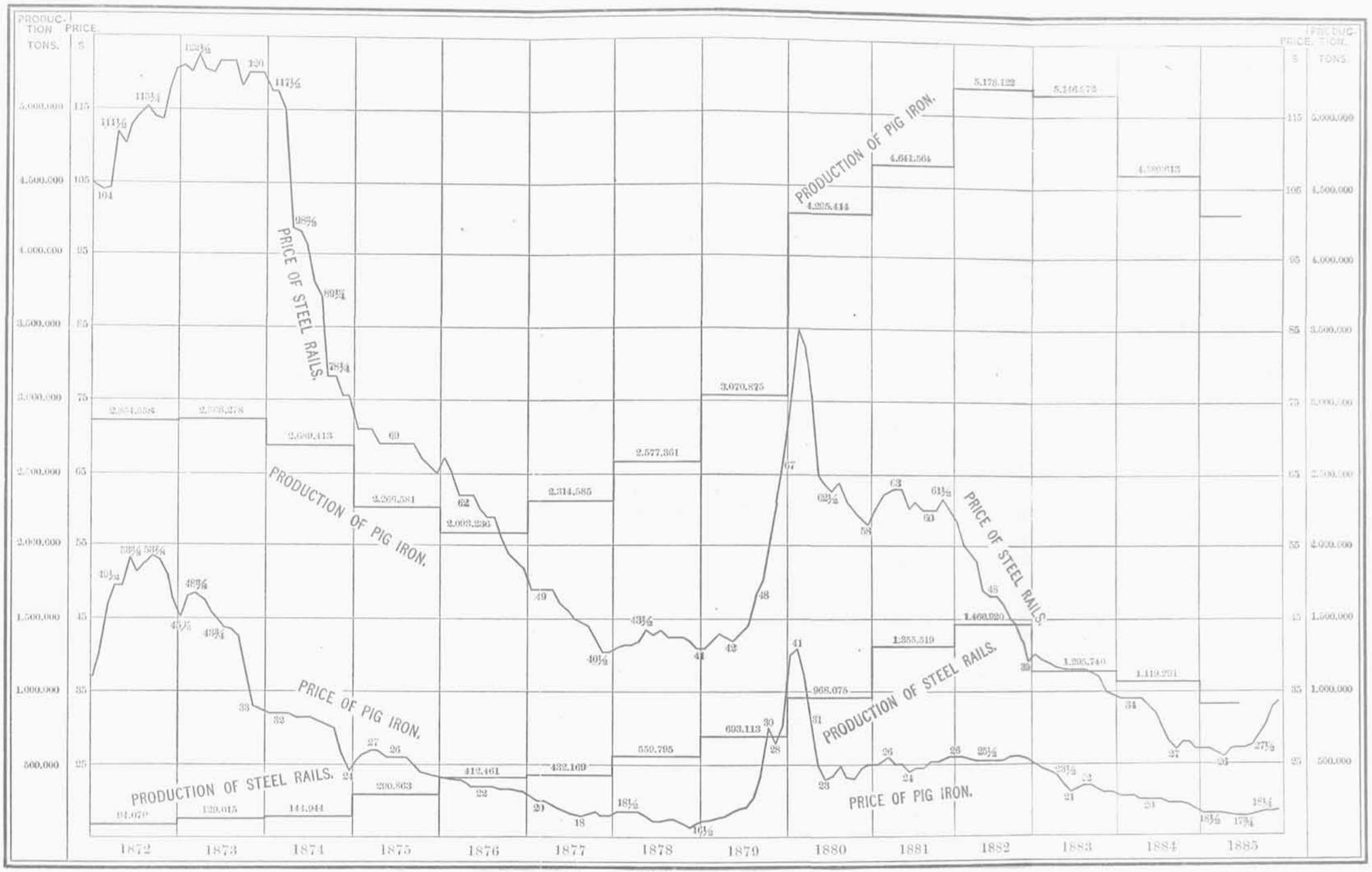


Diagram Showing Production and Price of Pig Iron and Steel Rails, 1872 to 1885.

Steel Association for the figures of production of pig iron in net tons, for the prices of steel rails, and the production of rails."

From the same source we have also received valuable statistical data concerning the capacity, production and dimensions of all the anthracite blast furnaces in this country:

PROPORTIONS OF AMERICAN BLAST FURNACES USING ANTHRACITE COAL AS FUEL.

States and Districts.	No of stacks.	Reported annual capacity, net tons.	Dimensions of furnaces. Height. Maximum.		Height. Minimum.		Height. Average.		Diameter at bosh. Maximum.		Diameter at bosh. Minimum.		Diameter at bosh. Average.		Average capacity per furnace, net tons.
			Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
Massachusetts	1	10,000	.....		.....		50	0	.....		.....		14	0	10,000
New York	40	556,150	71	0	40	0	56	6	18	0	12	0	15	0	13,900
New Jersey	20	281,200	80	0	20	0	54	9	20	6	7	0	14	6	14,000
Pennsylvania—															
Lehigh Valley	51	775,000	75	0	33	0	61	6	19	0	8	6	16	4	15,200
Schuylkill Valley	44	530,600	80	0	40	0	55	3	18	0	11	0	14	4	12,000
Upper Susquehanna	23	284,700	70	0	36	0	51	9	20	6	10	0	14	9	12,400
Lower Susquehanna	37	599,432	80	0	33	0	52	3	20	0	9	6	13	5	16,200
Total for State	155	2,189,732	80	0	33	0	56	1	20	6	8	6	14	10	14,100
Maryland	5	37,000	53	0	32	0	42	2	15	0	11	4	12	6	7,400
Total	221	3,074,082	80	0	20	0	55	8	20	6	7	0	14	10	13,900

The percentage of the whole number of blast furnaces which were in blast from 1873 to 1885, both inclusive, are given in the following table, taken from the annual reports of the American Iron and Steel Association:

Year.	Charcoal.	Anthracite.	Bituminous.	All furnaces.
1873	68.1	66.1	48.5	62.4
1874	51.8	60.3	44.7	52.6
1875	33.8	44.4	47.3	41.09
1876	24.5	31.1	36.3	30.0
1877	26.0	37.2	37.8	33.0
1878	29.0	44.5	41.3	37.7
1879	33.0	42.3	40.3	38.2
1880	38.7	70.7	60.8	55.6
1881	57.6	68.5	65.7	63.6
1882	55.1	71.7	65.7	63.5
1883	51.1	71.5	60.4	60.7
1884	35.0	52.1	47.6	44.9
1885	28.7	38.4	39.1	35.3

The average weekly capacity of the furnaces in blast for the years 1877 to 1885 is stated in the quarterly reports of the *Iron Age* to have been as follows:

YEAR.	Charcoal—Tons.	Anthracite—Tons.	Bituminous—Tons.
1877	6,743	17,302½	20,466½
1878	6,031	19,356¼	21,915½
1879	7,3 4½	22,763½	27,480
1880	10,929½	35,350¾	36,440
1881	14,4 4½	34,117¾	47,039¾
1882	15,277¾	37,566¾	46,209¾
1883	11,957¾	34,158½	50,440¾
1884	9,149½	26,731	45,660¼
1885	7,900	21,007½	42,411

The weekly capacity of the furnaces in blast December 31st, 1885, was as follows: Charcoal, 7,804 tons; anthracite, 29,811 tons; bituminous, 54,199 tons; thus showing a large increase from October 1st to December 31st, 1885, in both anthracite and bituminous or coke furnaces.

From these tables it will be seen that at no time since 1873 have more than 63.6 per cent. of all the furnaces in the country been in blast, while the proportion of active furnaces has been as low as 33 per cent. of the whole. Not more than two-thirds of all the furnaces in the country have been in operation at any one time.

Hon. Robert P. Porter, in a letter to the Philadelphia *Press*, referred to the depressed condition of the business in England:

"Last year was as gloomy and unprofitable for the iron and steel trade of Great Britain as it was for this trade in America. The total quantity of pig iron during 1884 was 7,528,966 tons, against 8,490,224 in the preceding year, a decrease of nearly 1,000,000 tons. The total production of puddled bar was 2,237,535 tons, against 2,730,504 in 1883, a decrease of nearly half a million tons. The total production of Bessemer steel ingots amounted to 1,299,516 tons, against a total of 1,553,380 tons, a decrease of more than a quarter of a million tons, the greatest decrease that has occurred in any one year of the trade. The production of steel rails fell from 1,097,174 tons in 1883 to 784,963 tons in 1884, a decrease of over 312,000 tons. But two branches of the coal and iron and steel industries show an increase—that of open-hearth steel, an increase of 6,465 tons over 1883, and that of tinplate, the quantity produced in 1884 being larger than that of any previous year. The total exports of iron and steel from the United Kingdom in 1884 amounted to 3,496,352 tons, which is 546,956 tons under the exports of the preceding year, and about 650,000 tons under those of 1882.

"The two principal causes for this decline are the sudden stoppage

in building railroads and ships. January 1st, 1882, the tonnage of ships in Great Britain in course of construction or contracted for was 1,264,603 tons. January 1st, 1885, there were only 373,898 tons."

According to Mr. Porter the production of steel rails in the whole world for 1883 was:

	Tons.
United States	1,243,925
United Kingdom	1,097,174
Germany	505,133
France	381,178
Russia	230,000
Belgium	173,000
Austro-Hungary	130,000
Total for World	3,760,410

The total length of railroads in the world in 1882 amounted to 247,529 miles, more than one-half of this mileage being in the United States. The length of single track, including sidings, double tracks, etc., was estimated at 325,000 miles, representing 35,000,000 tons of rails in use at that time. If the life of iron rails be taken to be ten years and that of steel rails twenty years, it would take 3,500,000 tons of iron or 1,750,000 tons of steel rails annually to keep the roads in good condition.

The railroad mileage in the United States in 1830 was 23; in 1880 it had increased to 93,454, and in 1884 to 125,542 miles. The greatest number of miles built in any one year was in 1882, when 11,596 miles were constructed. In 1884 only 3,950 miles were built. The statistics for 1885 are not yet compiled. The prospect is good for a very considerable increase in 1886.*

The cost of production of pig iron for the three years last past has varied from $17.00 to $20.00 per gross ton. The wages ranged from 11 cents per hour for unskilled laborers, to $1.75 and $2.00 per day

* Mr. Porter, in one of his newspaper letters referred to above, has the following to say of comparative English and American railway statistics:

"England has interested in her railways over $3,500,000,000 of capital, she has nearly 20,000 miles of track, carries annually over 600,000,000 passengers, and employs, in round figures, as engine drivers, stokers, guards, flagmen and other officials (other than clerks), 140,000. On the other hand, the United States has 120,000 miles of track, which, with the rolling stock, buildings, etc., is estimated at a value of $7,000,000,000, or double that of England, carrying 312,686,641 passengers, and employing, in round figures, 420,000 persons in various capacities. The pay of those engaged in railroading in England will not average half what it is for the same class of employment in the United States. The Tenth Census Volume of Railroads shows that the average earnings of this class of the population (not including officers) in the United States is $492 per annum. Three-fourths of those employed in England, numbering probably 105,000, earn less than $5 a week or $250 a year; a large proportion of this number do not make over $4 a week or $200 a year."

for skilled mechanics. The actual cost of labor, including handling materials and products, with superintendence, at a well-managed furnace, will average $2.00 to $2.50 per ton of pig iron made. Taking $2.00 as the standard, the items would be about as follows:

Superintendence, including clerical labor	$0 30
Cinder men (removing slag)	30
Fillers (putting materials into furnace)	70
Iron men (preparing beds and handling iron)	20
General men (blacksmiths, enginemen, laborers, etc.)	50

Assuming that $8.00 worth of iron ore will make a ton of pig iron, the cost of labor in producing the ore would be $6.50, about 50 cents for royalty to the owner of the mines and $1.00 for transportation, which would vary according to the location of the mines. The cost of limestone may be safely estimated at from 50 cents to $1.00 for a ton of iron. Of this amount 80 to 90 per cent. is for labor, 5 per cent. for royalty and the balance for transportation. The cost of the coal used in the production of a ton of iron varies from $5.00 to $6.50, according to location, and of this 30 to 60 cents goes for royalty, the balance in labor and transportation. Incidental expenses will average 75 cents per ton of iron, comprising daily repairs to furnace and machinery, feed for horses, oil, light, etc., etc.

The length of time a furnace is kept in blast varies from a few months to four or five years. The relining of the furnace with fire brick and a thorough overhauling of the machinery is necessary at the end of a blast before it can be started up again; still, these expenses differ so much that it is difficult to approximate the average per ton of iron made, but it would not be far from 50 cents. The interest on the capital invested would probably amount to from 38 to 45 cents for every ton of iron. The difference between cost of labor (not including interest on plant and administration) in making a ton of pig iron here and in England is $7.12. The duty on a ton of imported pig iron is $6.72.

The following statement gives the actual cost of making pig iron at four works in different parts of the country east of the Alleghany mountains. These may be taken as typical establishments in the districts where they are located. The statement covers the years 1882, 1883 and 1884:

	Tons iron made.	Fuel.	Ore.	Limestone.	Wages and salaries.	Incidentals.	Repairs.	Total cost.
I	64,200	$5 15	$8 50	$0 97	$2 25	$0 43	.....	$17 30
II	96,000	5 47	9 58	0 42	1 82	72	$0 69	18 70
III	52.152	5 96	9 26	0 82	2 10	62	0 19	18 95
IV	90.500	6 50	9 00	0 69	2 37	1 10	0 50	20 16

The total here given is the absolute expense at the works and does not include cost of sales and general office commissions, interest, taxes, etc. While the direct charge for labor at the furnace ranges from $1.82 to $2.37 per ton of iron, the items of ore, fuel, limestone and repairs also include a considerable expenditure for the same.

From the United States census reports for 1870 and 1880, we find that there was a large increase in the number of hands employed and in the amount disbursed for wages during the decade. The statistics are as follows: In 1870 the number of men employed was 75,037; boys, 2,436; women, 82; total, 77,555. Amount paid for wages, $40,514,981.

In 1880 the number of men employed was 133,203, together with 7,709 boys and 66 women, or a total of 140,978. These were paid in wages $55,476,785, or an increase of 36.93 per cent. The increase in number of hands employed was 81.78 per cent. The average annual earnings of each person employed throughout the country, were $393.51. The average daily wages for skilled labor were $2.59, and for ordinary labor, $1.24. The highest average daily wages were paid in Rhode Island, Colorado and Wyoming Territory, $4.00; the lowest in North Carolina, $1.25. The highest average daily wages for unskilled labor were paid in Wyoming Territory, $2.00; the next highest in Colorado and California, $1.75; the lowest in North Carolina, 54 cents. The average number of hours of labor required per week in these works in 1880, was 65, a little less than 11 hours per day. The highest average was in Vermont, 75 hours; the lowest in Delaware and Kansas, 56 hours. The District of Columbia had a still lower average, or 54 hours.*

During the fiscal year ending July 1st, 1882, sixteen furnaces were in blast in New Jersey, and produced 155,533 net tons of pig iron, valued at $3,580,664. Thirteen were in blast all the year. The average number of men employed was 885, and of boys, 53. The

*These statistics refer to the labor directly employed at the various iron and steel works of the United States, and in mining and other operations conducted in connection with the works.

amount paid in wages was $340,035, or an average of $362.51 for each man and boy employed. The daily wages of skilled workmen were from $1.75 to $2.50, and of unskilled labor from $1.25 to $1.75. Eight of the establishments reported an advance of from 10 to 15 per cent. in wages.

During the fiscal year ending July 1st, 1885, the value of product of our furnaces was $977,713. The average number employed was 415 men and 11 boys, receiving $137,248 in wages, or an average of $322.18 for each. Skilled workmen received from $1.25 to $2.00 per day, and unskilled laborers were paid from $1.00 to $1.50. Boys received from 55 to 66 cents per day. Four firms reported a reduction in wages, amounting to 10 per cent.

The following table contains the detailed reports from the furnaces that were in blast during some portion of the past year in this State:

ANTHRACITE BLAST FURNACES.

Office number.	When wages are paid.	Number tons of iron made.	Decrease in wages—Per cent.	Greatest number of hands employed at any one time during the year.	AV'R'GE NUMBER OF HANDS EMPLOYED.		WAGES AND HOURS OF LABOR.					MONTHS IN OPERATION.		Products.
					Males above sixteen years.	Boys.	Number of hours worked per day.	Average day's wages for a skilled mechanic.	Average day's wages for an ordinary laborer.	Average day's wages for boys.	Total amount paid in wages during the year.	On full time.	Idle.	
51	Monthly.....	15 568	...	80	70	10	10	.....	$1 20	55c	$32 517	10	2	$264,656
52	"	11,600	10	65	65	.....	10	.....	1 00	.....	26,000	10	2	185,600
53	"	6,321	...	60	60	1	10	$1 85	1 15	66c	10,000	5	7	106,757
54	Semi-mo'thly	5,000	10	52	50	.....	10	2 00	1 50	.....	20 000	12	.....	140,000
55	"	3,198	10	35	30	.....	10	2 00	1 50	.....	13 731	9	3	89,600
56	Monthly.....	12,740	10	150	140	.....	10	1 25	1 05	.....	35,000	8	4	191,100
	Total.....	54 427	...	442	415	11	.....	.....	.....	.....	$137.248	.....	.....	$977,713

CHAPTER III.

FOUNDRIES, SHEET IRON AND STEEL WORKS.

The table in this connection contains the statistics from crucible steel works, sheet iron works and foundries, not including machine shops or other manufacturing establishments. Reports received from stove foundries and foundries attached to machine shops and factories are tabulated under general manufactures of iron and steel, in the next chapter.

In the following table the reports from forty-four firms and companies are given, showing an investment of capital amounting to $4,083,000. The product for the year was valued at $5,270,850, or $1.29 for each dollar of capital invested. The proportion of cost of materials to value of product was 54½ per cent.; of labor to product, 29 per cent. The greatest number of hands employed at any one time was 3,682, and the average number, 3,165 men and 218 boys. Skilled mechanics received from $1.60 to $3.50, ordinary laborers from $1.10 to $1.75 and boys from 50 cents to $1.50 per day. The average payment to each employe during the year was $447.78, while the total amount paid for wages reached $1,514,833.

IRON FOUNDRIES, SHEET IRON AND STEEL WORKS.

Office number	When wages are paid.	Per cent. increase in wages.	Per cent. decrease in wages.	Capital—Dollars.	Greatest number of hands employed at any one time during the year.	AVERAGE NUMBER OF HANDS EMPLOYED. Males above sixteen years.	Children and youth.
104	Monthly	.....	10	$10,000	30	30	.....
106	"	.....	10	250,000	380	340	10
138	Weekly	.....	.....	10,000	65	55	6
141	"	.....	5	10,000	40	30	4
142	"	.....	.....	80,000	60	55	5
144	"	.....	.....	4,000	28	20	.....
147	"	.....	.....	30,000	33	25	.....
148	"	.....	.....	10,000	50	30	1
149	"	.....	.....	45,000	45	35	10
150	"	.....	.....	10,000	30	20	.....
154	"	.....	.....	25,000	56	35	15
161	"	.....	.....	2,500	6	6	.....
133	"	.....	10	100,000	100	90	.....
180	"	.....	.....	25,000	45	30	6
181	"	.....	.....	55,000	60	52	2
188	"	.....	10	80,000	90	80	.....
194	"	.....	.....	18,000	40	30	4
195	"	.....	.....	2,000	6	3	1
214	Semi-monthly	.....	.....	3,500	6	6	.....
216	"	.....	10	400,000	180	165	10
223	Weekly	.....	.....	20,000	110	100	10
233	"	.....	.....	13,000	15	13	1
234	"	.....	10	20,000	50	42	3
239	Semi-monthly	.....	.....	20,000	15	8	4
240	"	.....	10	60,000	30	20	5
243	Weekly	.....	.....	1,500	4	4	.....
250	"	.....	.....	62,000	35	25	.....
252	"	.....	10	90,000	100	75	3
258	Semi-monthly	.....	.....	4,000	9	6	.....
262	Weekly	.....	10	200,000	125	125	.....
267	"	.....	7½	500,000	260	258	.....
270	Monthly	.....	.....	100,000	60	50	.....
271	Weekly	5	.....	75,000	150	100	40
289	Semi-monthly	.....	.....	1,500,000	900	800	50
292	Weekly	.....	.....	9,000	10	10	.....
297	"	.....	.....	20,000	45	40	2
300	"	.....	.....	5,000	7	7	.....
301	Monthly	.....	.....	60,000	75	62	11
302	Weekly	.....	.....	3,000	8	6	2
303	"	.....	.....	2,000	5	4	1
308	"	.....	.....	10,000	25	20	2
309	"	.....	.....	3,500	6	6	.....
312	Semi-monthly	.....	.....	35,000	38	32	.....
316	Weekly	.....	10	100,000	250	215	10
	Totals	.....	.....	$4,083,000	3,682	3,165	218

IRON FOUNDRIES, SHEET IRON AND STEEL WORKS—*Continued.*

WAGES AND HOURS OF LABOR.						MONTHS IN OPERATION.					
NUMBER OF HOURS IN THE ORDINARY DAY OF LABOR.											
May to November.	November to May.	Average day's wages for a skilled mechanic.	Average day's wages for an ordinary laborer.	Average day's wages for boys.	Total amount paid in wages during the year.	On full time.	On half time only.	Idle.	Materials—Dollars.	Products—Dollars.	Office number.
10	10	$2 25	$1 10	.....	$12,000	8	4	.....	$8,000	$20,000	104
10	10	1 80	1 20	$0 65	85,000	8	4	.....	150,000	431,550	106
10	10	3 50	1 60	1 20	22,500	12	.....	.....	18,500	50,000	138
10	10	2 75	1 65	1 00	16,500	12	.....	.....	20,000	50,000	141
10	10	2 87	1 75	1 50	41,600	12	.....	.....	25,000	85,000	142
10	10	1 60	1 20	.....	10,400	12	.....	.....	21,000	40,000	144
10	10	2 00	1 30	.....	15,600	12	.....	.....	45,000	65,000	147
10	10	2 75	1 50	50	18,000	12	.....	.....	17,000	45,000	148
10	10	3 00	2 00	1 50	20,500	12	.....	.....	52,000	85,000	149
10	10	3 50	1 50	.....	9,000	12	.....	.....	19,000	36,000	150
10	10	2 00	1 50	1 00	22,000	11	.....	1	20,000	60,000	154
10	10	2 50	.....	.....	3,000	6	6	.....	3,500	10,000	161
10	10	2 50	1 40	.....	51,600	10	2	.....	138,000	230,000	133
10	10	2 50	1 50	66	10,000	6	.....	6	3,000	15,000	180
10	10	2 60	1 50	75	31,200	12	.....	.....	17,000	65,300	181
10	10	3 50	1 35	.....	49,000	12	.....	.....	130,000	203,000	188
10	10	2 75	1 60	66	15,600	10	2	.....	14,500	40,000	194
10	10	2 50	.....	.....	2,850	10	.....	2	2,000	5,500	195
10	10	2 75	1 50	.....	4,200	12	.....	.....	3,800	9,500	214
10	10	2 50	1 40	75	67,000	12	.....	.....	165,000	290,000	216
10	10	2 50	1 25	50	32,000	9	3	.....	33,000	70,000	223
10	10	2 50	1 66	66	8,000	12	.....	.....	8,500	17,500	233
10	10	2 30	1 75	.....	22,500	12	.....	.....	25,000	50,000	234
10	10	2 50	1 50	75	5,750	8	4	.....	5,000	11,000	239
10	10	3 00	1 75	75	14,400	11	.....	1	30,000	50,000	240
10	10	2 50	1 50	.....	3,600	12	.....	.....	2,700	7,000	243
10	10	3 25	1 50	.....	15,000	11	.....	1	70,000	100,000	250
10	10	2 75	1 50	1 00	36,500	12	.....	.....	27,000	80,000	252
10	10	2 15	.....	.....	2,600	12	.....	.....	4,000	8,000	258
10	10	3 50	1 10	.....	70,000	8	4	.....	100,000	200,000	262
10	10	3 00	1 50	.....	165,953	12	.....	.....	530,000	800,000	267
10	10	2 75	1 15	.....	18,000	.....	12	.....	45,000	75,000	270
10	10	2 25	1 50	50	50,000	12	.....	.....	60,000	125,000	271
10	10	2 10	1 00	50	356,280	12	.....	.....	820,000	1,310,000	289
10	10	2 25	1 20	.....	4,500	12	.....	.....	8,500	16,500	292
10	10	2 50	1 35	75	18,500	12	.....	.....	25,000	50,000	297
10	10	2 25	1 25	.....	4,800	12	.....	.....	4,000	10,000	300
10	10	2 25	1 25	75	27,000	12	.....	.....	40,000	100,000	301
10	10	2 25	1 25	75	3,200	12	.....	.....	4,000	9,500	302
10	10	2 25	1 25	75	2,200	12	.....	.....	3,000	6,500	303
10	10	2 50	1 50	1 00	9,000	12	.....	.....	12,500	25,000	308
10	10	2 25	1 25	.....	3,500	12	.....	.....	4,500	9,000	309
10	10	2 90	1 65	.....	19,500	12	.....	.....	21,000	45,000	312
10	10	2 50	1 50	1 00	115,000	12	.....	.....	120,000	260,000	316
.....	.....	.....	.....	.....	$1,514,833	.....	.....	.....	$2,875,000	$5,270,850	

CHAPTER IV.

MANUFACTURES OF IRON AND STEEL.

The statistics of manufactures of iron and steel goods include all reports received from factories producing various kinds of finished products, from a steel pen to a locomotive. The year for which the statistics were taken (ending July 1st, 1885,) was one of general depression in business, but no industry in New Jersey was more seriously affected than the iron and steel. Some manufacturers, producing specialties or patented articles, maintained fair prices, kept up the prices of labor and were moderately busy. Generally, however, the prices obtained for goods were unusually low and the demand very light. Most of the establishments, even though not closed at any time during the year, made a large reduction in the number of hands employed, resulting in a corresponding decrease in the quantity of product to fully 40 per cent. below the capacity of the factories. But at the close of the year 1885, quite an improvement is noticed in all branches of the industry throughout the State. Many of the manufacturers have largely increased the number of their employes and, where wages had been cut down, they are gradually returning to the former figures.

In our tables it will be seen that less than one-quarter (forty-two) of the firms engaged in the manufacture of iron and steel goods report any reduction in wages during the past year. Twenty-three give the average reduction at 10, eight at 5, and seven at 15 per cent., while three firms report an increase of 10 per cent. The total amount paid for wages was $7,552,723. The greatest number of hands employed at any one time was 17,851, and the average, 14,264 men and 1,395 boys, or a total of 15,659. Skilled mechanics received $1.75 to $5.00 per day, ordinary laborers from $1.00 to $2.25, and boys 50 cents to $1.50. The average annual earnings of men were $498.99; of boys, $240.00. The amount of capital invested was

$16,173,400; value of product, $25,106,489; cost of materials, $11,399,566.

The statistics of the iron and steel trade in New Jersey, for the year 1885, are given in detail at the close of the chapter.

The decline in prices and business was not more severely felt in the United States than in the other iron-producing countries throughout the world. Mr. Swank, referring to the condition of the iron trade in Europe, under date of December 30th, 1885, says:

"The European iron trade exhibited no symptoms of a revival in 1885, but on the contrary the backward movement, which has from the first more than kept even pace with our own depression, continued until the close of the year. Taking the iron-making countries of Europe as a whole the iron-trade situation in that grand division is much worse to-day than it was six months ago."

The following statements show the fluctuations in values of rolled bar iron and cut nails for a number of years past. The average wholesale store prices of best refined rolled bar iron (per ton of 2,240 lbs.) from 1844 to 1885, compiled by the American Iron and Steel Association, were:

1844	$85 62	1865	$106 38
1845	93 75	1866	98 13
1846	91 66	1867	87 08
1847	86 04	1868	85 63
1848	79 33	1869	81 66
1849	67 50	1870	78 96
1850	59 54	1871	78 54
1851	54 66	1872	97 63
1852	58 79	1873	86 43
1853	83 50	1874	67 95
1854	91 33	1875	60 85
1855	74 58	1876	52 08
1856	73 75	1877	45 55
1857	71 04	1878	44 24
1858	62 29	1879	51 85
1859	60 00	1880	60 38
1860	58 75	1881	58 05
1861	60 83	1882	61 41
1862	70 42	1883	50 30
1863	91 04	1884	44 05
1864	146 46		

For the months of January, February, March and April, 1885, the average selling price was $40.32. The highest price in any month (from 1844 to 1885) was reached in August, 1864, $170; the lowest price in any month was in January, 1879, and the first four months of 1885, $40.32. The highest average price reached in any year was in 1864, $146.46; the lowest average price in any year was in 1884, $44.05.

The average wholesale store prices of cut nails, from 1860 to 1885, as compiled from original data for the American Iron and Steel Association, were:

1860	$3 13	1873	$4 90
1861	2 75	1874	3 99
1862	3 47	1875	3 42
1863	5 13	1876	2 98
1864	7 85	1877	2 57
1865	7 08	1878	2 31
1866	6 97	1879	2 69
1867	5 92	1880	3 68
1868	5 17	1881	3 09
1869	4 87	1882	3 47
1870	4 40	1883	3 06
1871	4 52	1884	2 39
1872	5 46		

The average price for the first four months of 1885, was $2.24.

"The above figures," observes the report, "are the jobbers' store prices in car load lots. The maximum price was in August and September, 1864, $10.00 per keg, but the manufacturers generally, having contracts, received but little, if any, benefit from that price. The minimum price, $2.10 per keg, was in March, 1879, and also at the close of 1884. At both of these periods several makers closed out their stocks, with a view to suspending production, at 20 cents to 25 cents below our lowest figures of $2.10.

"The effect of the civil war and political excitement is traceable in 1860; it stopped business. In 1861 sales were small, but later a demand set in, gold advanced and all goods with it.

"The culmination came with the end of the war and decline in gold, in 1865."

SOME SPECIAL MANUFACTURES.

The first locomotive built in the United States was the "Tom Thumb," by Peter Cooper, at Baltimore, and was first used in August,

1830, with anthracite coal for fuel. The boiler was tubular, having gun barrels for tubes.

This locomotive was its own tender, and did not weigh a ton. It was really but a model for the more powerful engines which succeeded it. The first American locomotive built for actual service was the "Best Friend of Charleston," in New York, and put in use in 1830. Most of the railroads employed horse power exclusively for some time after they were opened. In 1832 Mr. W. W. Baldwin had finished "Old Ironsides;" the driving wheels had cast-iron hubs, wooden spokes and wrought-iron tires, the driving axle being placed in front of the fire box. It had 9½ by 18-inch cylinders.

The "Sandusky," the first New Jersey engine, was built at the Rogers Works, Paterson, in 1837. It had 11 by 16-inch cylinders, one pair of driving wheels, 4 feet 6 inches in diameter, and took the firm 16 months to complete. On the sixth of October, 1837, a trial trip was made to Jersey City and New Brunswick and back. The shop where it was made was 40x100 feet, three-stories high. In the following year 7 engines were built. After the death of the founder of the works, in 1856, the surviving partners reorganized under a charter, and the name was changed to Rogers Locomotive and Machine Works. In 1869 the company gave up the machinery department and have since devoted their entire attention to the construction of locomotives.

In 1873, just before the panic, there were employed 1,648 men, who were paid $993,500 for their labor, and built 190 engines, valued at $3,300,000. In 1877, the lowest point of the depression that followed the panic of 1873, only 50 men were employed and 14 engines built. In 1883 about 2,000 men were at work, $785,000 paid in wages, and 281 engines, valued at $2,800,000, turned out. In 1885 but 73 engines were made. The flooring space used by the company covers an area of 300,000 square feet in the twenty-five buildings composing the works. The present capacity of the works is 325 engines per annum.

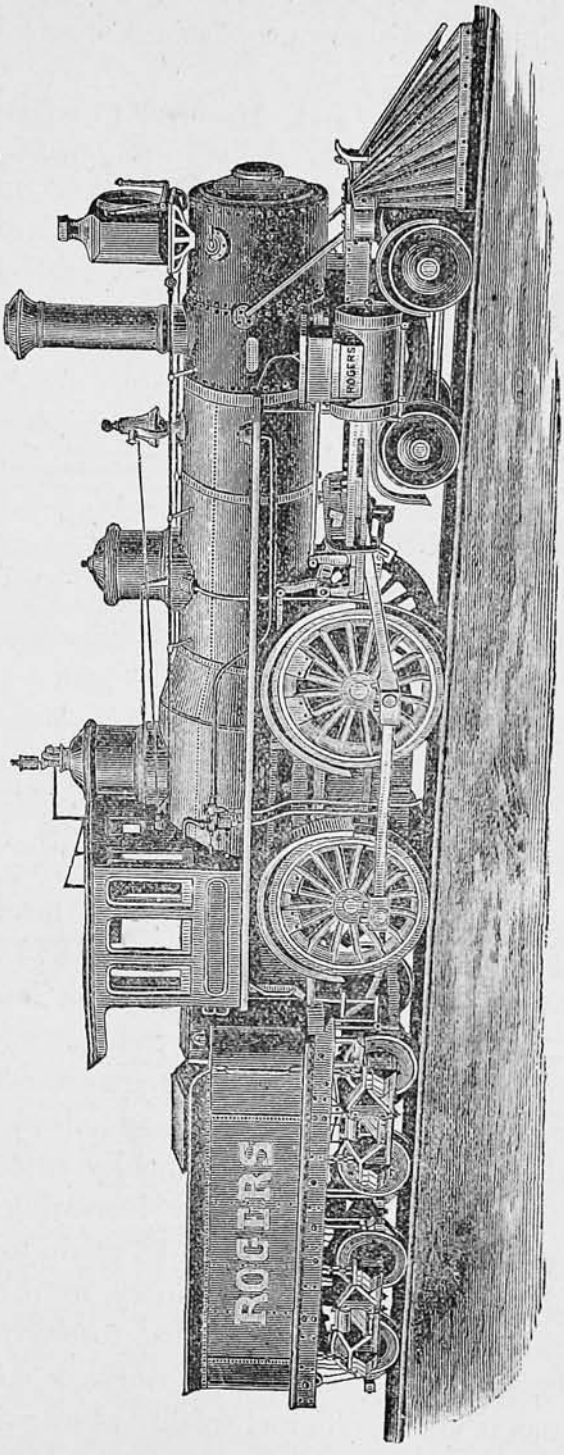
In 1845, Swinburne, Smith & Co., began a general machine business in Paterson, in a two-story building, 60x40 feet. Since 1848 the entire plant has been used in building locomotives. The first engine built by this establishment was finished in 1848, for the Erie Railway Company. In 1849 the business was removed to what is now the main building of the Grant Locomotive Works. This was

a three-story factory, 60x150 feet. In 1852 a charter was obtained under the name of the New Jersey Locomotive and Machine Company. In 1869 this name was changed to that of the Grant Locomotive Works. At these works the "America," which "won the medal and well-merited praise" at the Paris Exposition in 1867, was constructed. In 1859 the number of men engaged was 170, the capacity was 30 engines per annum. In 1873, 744 men were employed, and 131 engines built. The effect of the panic of 1873 was most severely felt in 1875, when only 18 men were at work and 10 engines turned out. In 1882, 850 men were employed, 143 engines, valued at $1,200,000, built, and $425,000 paid in wages. Only 9 engines were finished in 1885.

Charles Danforth & Co. began manufacturing machinery in Paterson in 1848. In 1852 the firm assumed the name of Danforth, Cooke & Co., and the building of locomotives was added to the business. In 1865 a charter was obtained, incorporating the Danforth Locomotive and Machine Company. The first locomotive made by this company was completed in March, 1853. In 1859 the capacity of the works was 35 engines per annum, exclusive of the products of the machine shop. In 1867 the works covered two acres of ground, 700 men producing 70 locomotives and $300,000 in machinery. In 1873, 82 engines were built, 780 hands employed, $420,000 paid as wages, while the product of engines and machinery was valued at $1,569,000. The largest number of locomotives finished by this company in one year was 137, in 1883. In 1885 only 55 engines were built. After the death of John Cooke, in 1882, his heirs purchased the Danforth interest and took the name of The Cooke Locomotive and Machine Company.

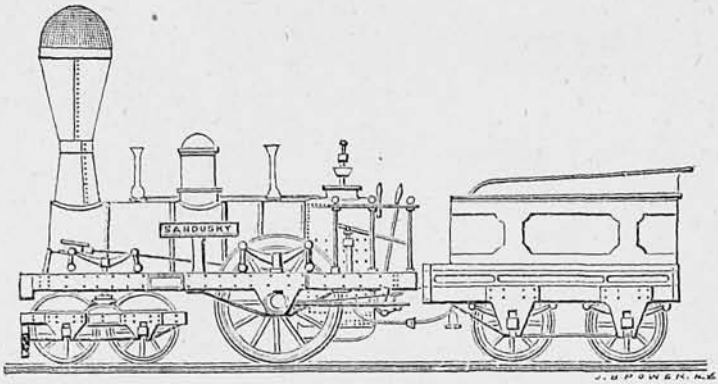
These early engines had neither cabs nor sand boxes. In 1838, Mr. Baldwin thought that an engine weighing 26,000 pounds loaded and with 12½ by 16-inch cylinders was as heavy as would ever be used. Ordinary passenger engines of 80,000 pounds, with 17 by 24-inch cylinders, and freight engines weighing 117,000 pounds, with 20 by 24-inch cylinders, are now made at Paterson. The whole number of engines built there from 1837 to 1885, both inclusive, was 7,160. In 1882 the greatest number made was 554.

The three locomotive establishments in Paterson employ, when busy, about 3,600 men. Not more than one-third of this number were at work during the past year. The capacity of the works combined is


ROGERS
ROGERS

over 600 engines per annum, but the actual number turned out in 1885 was but 137. On the first of January, 1886, the outlook was more encouraging, all the companies having orders in hand and a fair prospect for the coming year.

The Rogers Locomotive and Machine Company have kindly furnished us with electrotypes of the old "Sandusky," and of one of the latest patterns, which are given herewith.



"SANDUSKY."

One of the largest manufactories in our State is the Singer Manufacturing Company. The company established their factory at Elizabethport in 1872, and began manufacturing in the fall of 1873. The capacity then was 3,500 sewing machines per week, giving employment to 1,800 hands and paying $16,000 per week for wages. The company owns thirty-two acres of land, four acres of which are used for the foundry and thirteen acres for flooring space for their regular work. Two locomotives are owned and operated by the company on five miles of track on the premises. A steamer, also belonging to the establishment, is continually running between the factory and New York. The constantly increasing demand for the machines has caused large additions to be made to the foundry and the introduction of new improved machinery, until now every foot of available space is occupied, including that formerly used for storing machines. The present capacity of the works is 8,500 machines per week, and $30,000 are distributed weekly as wages to 3,000 hands. The annual consumption of the Singer sewing machines throughout the world is about 600,000, one-third of this whole product being sold in the United States. There are twenty-six main offices in this

country, each office having a number of branches, of which the Chicago office has eighty-five. Each of these branches has several sub-branches or agencies. About twenty years ago the company established a factory at Glasgow, Scotland, to supply their foreign orders and get the advantage of cheaper labor and freight, but the capacity of the works proved too small for the demand. Recently the company purchased forty acres of land near Glasgow and built extensive works, with a capacity of 10,000 machines per week. The greatest expense is for labor, and in Scotland the labor in the manufacture of a machine costs less than one-half as much as at Elizabethport.

The Domestic Sewing Machine Company moved their works to Newark, in 1873, and began to manufacture there with facilities for an output of thirty thousand machines per year.

The company has a dock and yards in East Newark where materials are landed and stored. Over one hundred thousand dollars are invested in machinery, which is distributed through twenty buildings. These buildings afford a floor space of 235,000 square feet, fully occupied. The present capacity of the factory is about 500 machines per day. From 1,200 to 1,500 mechanics and laborers are employed.

With the growth in business there has been a corresponding improvement in the construction of the sewing machine and in all the methods and processes of manufacture.

The machine of 1885 is the same as that of 1873 in general principles, but very different in detail.

The Trenton Iron Company was incorporated in 1847 with a capital of five hundred thousand dollars.

The incorporators were Peter Cooper, James Hall, Edward Cooper and Abram S. Hewitt. The company purchased the rolling mill in Warren street, Trenton, and began operations. During the following year the Delaware Manufacturing Company was merged in the Trenton Iron Company, which for some time afterwards also carried on the business of manufacturing nails, in a frame building (eighty feet square) on Hamilton avenue. In 1872 a large brick building was erected for the manufacture of wire. The works now cover an area of eleven acres. The annual capacity is thirty thousand tons of wire rope and rods. Five hundred and fifty men are employed and

twenty-six steam engines are used to run the works, aggregating 1,500 horse power. There are two steam hammers, two double puddling furnaces and seven heating furnaces, twelve forge fires and four trains of rolls. In the wire mills are nine hundred wire "blocks," also apparatus for twisting and galvanizing wire.

In 1866 the New Jersey Steel and Iron Company was formed in Trenton, and acquired the property at the foot of Warren street, which had been used as a rolling mill by the Trenton Iron Company. The principal stockholders were Edward Cooper and Abram S. Hewitt; Treasurer, F. J. Slade; Superintendent, Joseph Stokes. The works consist of ten buildings, and include an area of twenty-five acres. The Siemens–Martin process of manufacturing steel was first introduced into the United States in 1868, by this company. One thousand men are employed by this company. The annual production is about twenty thousand tons, and the chief manufactures are rolled I beams, structural and merchant iron in all varieties, bridges, roofs and other iron and steel structures, also chains, &c.

The Hewes & Phillips Iron Works were established in Newark in 1845. The works cover an area of two and a half acres and comprise one of the largest general machine shops in the country. This company rendered valuable services to the State and National Government during the late war by altering 50,000 stand of arms from the old flint-lock style to the modern percussion-cap arm. The establishment also put in the entire motive-power outfits for the monitors "Modoc" and "Cohoes," and parts of the engine and turret mechanism for the famous "Monitor." About 300 men are employed, the value of product averaging $500,000 yearly. The factory is well equipped to handle the heaviest class of work, the principal manufactures being improved Corliss engines, Allen high-speed engines, hydraulic oil presses, shafting, heavy iron and brass castings, horizontal and tubular boilers, etc.

In 1869 a charter was obtained for the Passaic Rolling Mills Company, which now uses about ten acres of ground, five acres being under cover. The product at first consisted of ordinary bars, but now includes structural iron, that is, beams, angles, ties and all parts used in the construction of buildings, bridges and ships. During the

panic and hard times that followed from 1873 to 1877, this company gave steady employment to 600 men and paid out $20,000 per month in wages. Over 25,000 tons of the superstructure of the Ninth and Third Avenue Elevated Railroads in New York were made here. The annual consumption of raw materials include 25,000 tons of coal, 4,500 tons of iron ore and 15,000 tons of pig iron. The company is now putting in a steel plant.

The Machinists' Association was formed in 1851 by seven practical mechanics living at Paterson. Each member contributed $200 and a portion of his time to the manufacture of silk, cotton and woolen machinery. Members received $1 per day for services for a short time, but this allowance was increased at intervals until it reached $4. For a number of years past liberal dividends have been paid in addition to the per diem. The association met with a serious misfortune in 1853 by the destruction of their property by fire; enough had been accomplished, however, to satisfy them that by a union of efforts and strict attention to business they were certain of success. They bought a lot and erected a four-story brick building and also established a foundry. In 1862 articles of agreement were entered into, providing for a continuation of the business after the decease of a member or members of the Association, as follows:

First. In case of the decease of either, or any of the said parties, the copartnership shall not be thereby dissolved, nor shall any bill be filed or suit be commenced for the purpose of dissolving the same by reason of the decease of such party, but the business of the concern shall be continued and carried on after the decease of such party in the same manner, as nearly as may be, as it might or would be in case such copartner had not died.

Second. In case of the decease of any member of said firm the survivors, or such disinterested persons as a majority of them may choose for that purpose, shall forthwith make a full, true and particular account, in writing, of all the stock in trade, moneys, credits, effects, goods, chattels and things then belonging to the said partnership, and of all moneys or debts due or owing by the said partnership, and of all the liabilities of the said partnership, and a just and true valuation or appraisement shall be made of all the particulars included in such account which require or are capable of valuation or appraisement, and immediately after such last-mentioned account, valuation and appraisement shall have been made and taken, the said surviving partners shall pay or make due provision for the payment of all the debts owing by the said partnership, and for meeting all the liabilities

thereof, and the share and interest of the said deceased partner in the concern shall be distinctly ascertained, and the amount of his due proportion of the said stock in trade, moneys, credits, effects and things then belonging to the said partnership, shall be placed to the credit of the heirs or legal representatives of the said deceased partner, and shall be secured to be paid to such legal representative or representatives by a mortgage upon the said partnership property, which shall bear interest at the rate of seven per cent., payable semi-annually, and for a further security therefor, the said partnership property shall be insured and kept insured to the full amount of each deceased partner's interest in the concern, the policy to be held by the holder or holders of such mortgage; and it is further agreed, that the principal due upon such mortgage shall be paid as follows: Five per cent. thereof in six months after the decease of such copartner, ten per cent. thereof in one year after such decease, twenty-five per cent. in two years from such decease, twenty-five per cent. in three years after such decease, and twenty-five per cent. in four years from the time of such decease. And it is further agreed, that ten per cent. of such partner's interest in the said concern shall be paid as soon as his interest shall have been ascertained as aforesaid, and the said mortgage shall be given for the residue.

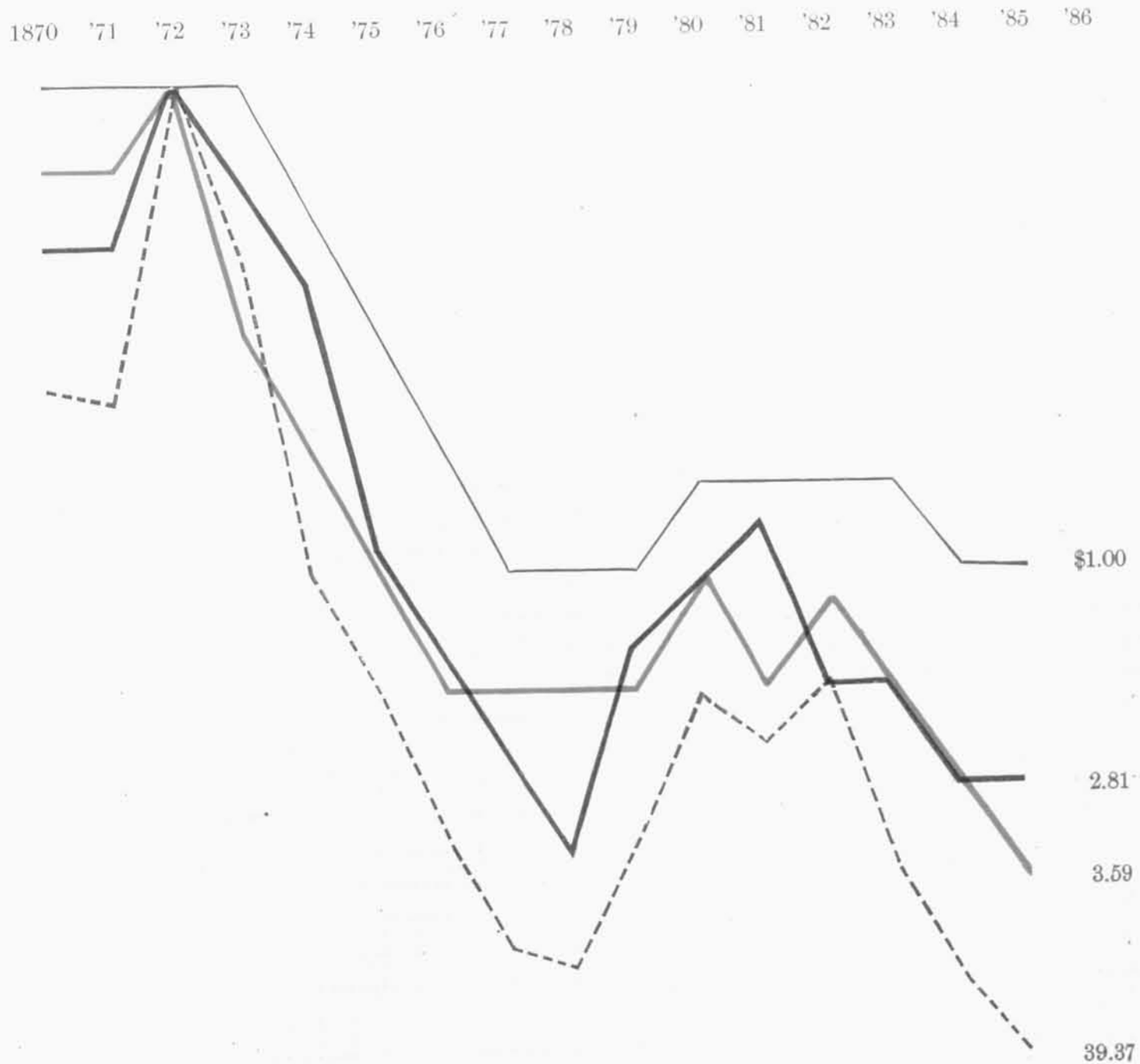
Of the seven men who thirty-five years ago started the association, only one remains in business (Mr. Morehouse), four are dead, one has retired from active business, and one, after acquiring a competency, made unfortunate investments, lost his property, and is now employed by Mr. Morehouse. Many of the sons and relatives of former members of the firm are now engaged at the works, preference being given to them when extra men are required. About 125 men are employed when business is good. The property now used in the business is valued at $50,000, and consists of the main building, 112x45 feet, four-stories; pattern shop, 20x40 feet, two stories; blacksmith shop, 30x40 feet, and foundry, 80x40 feet.

Mr. Frederick J. Slade, Treasurer of the New Jersey Steel and Iron Company of Trenton, has kindly furnished the annexed diagram showing the changes in selling price of iron and in the rates of wages paid by that corporation for the past fifteen years. Taking as a starting point the year 1872, when both the price of iron and the wages for all classes of labor were at a maximum, it is apparent at once from the diagram that the rate of reduction on the price of iron has been greater than that of the rate of wages paid, and that the rate of reduction of the most highly-paid labor is greater than on the

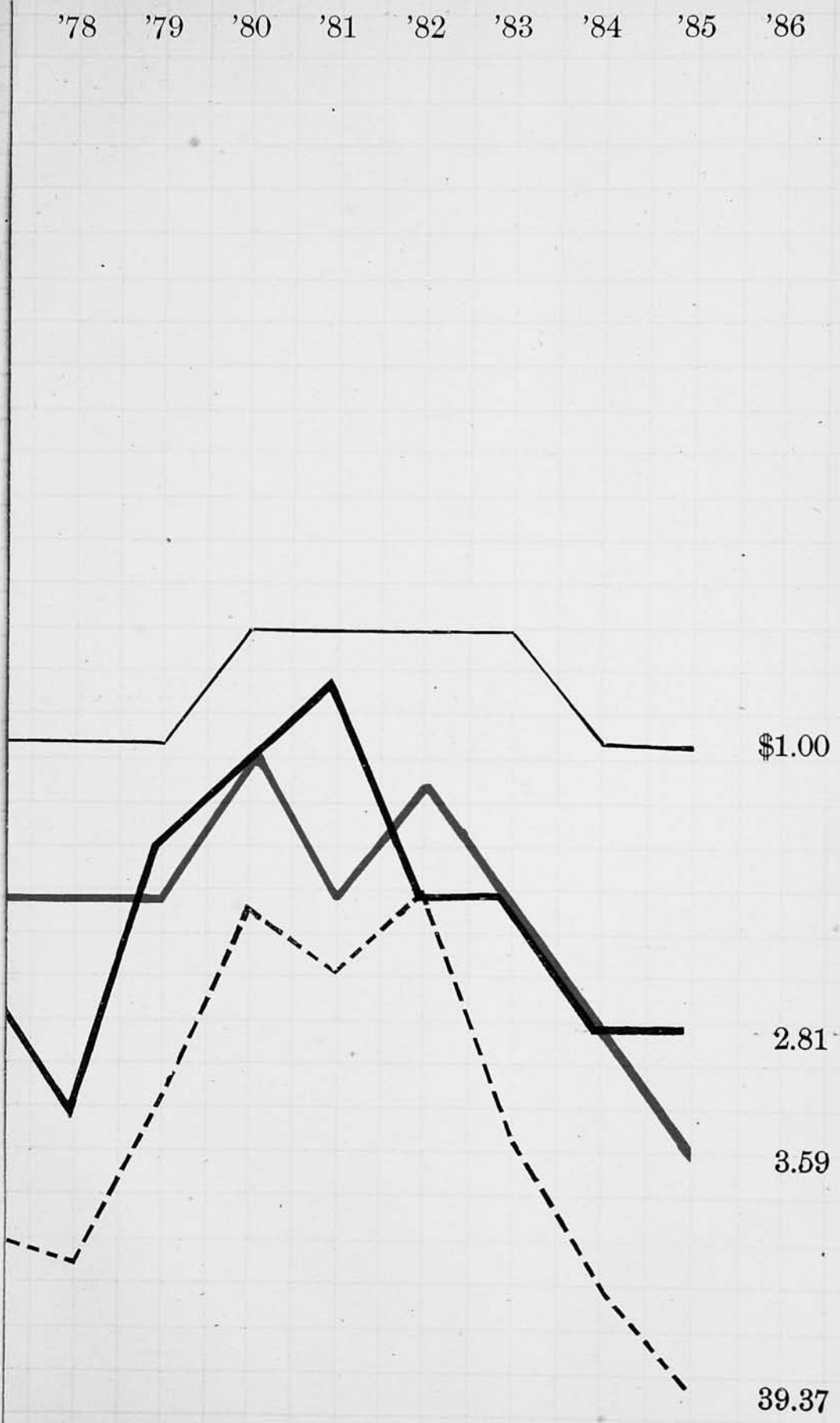
CHANGES IN SELLING PRICES OF IRON AND IN RATES OF WAGES PAID BY THE NEW JERSEY STEEL AND IRON CO.

FOR FIFTEEN YEARS—1870 TO 1885.

Labor per Day.	Puddlers' Earnings per Day.	Small Mill Heaters. Earnings per Day.	Selling Price of Finished Iron.
$1.40–	$4.94–	$7.00–	$97.63–
	4.84–	6.86–	95.63–
	4.74–	6.72–	93.63–
	4.64–	6.58–	91.63–
1.30–	4.54–	6.43–	89.63–
	4.44–	6.29–	87.63–
	4.34–	6.15–	85.63–
	4.24–	6.01–	83.63–
1.20–	4.14–	5.86–	81.63–
	4.04–	5.72–	79.63–
	3.94–	5.58–	77.63–
1.10–	3.83–	5.44–	75.63–
	3.73–	5.29–	73.63–
	3.63–	5.15–	71.63–
	3.53–	5.01–	69.63–
1.00–	3.43–	4.87–	67.63–
	3.33–	4.72–	65.63–
	3.23–	4.58–	63.63–
	3.13–	4.44–	61.63–
	3.03–	4.30–	59.63–
	2.93–	4.15–	57.63–
	2.83–	4.01–	55.63–
	2.73–	3.87–	53.63–
	2.63–	3.73–	51.63–
	2.53–	3.59–	49.63–
			47.63–
			45.63–
			43.63–
			41.63–
			39.63–
			37.63–



JERSEY STEEL AND IRON CO.



more poorly paid labor. Thus the reduction in the *price of iron* from 1872 to 1885 amounts to *58.7 per cent. That on the wages of small mill heaters*, who earned, in 1872, $7.00 per day, amounting in the same period to *48.7 per cent. That in wages of puddlers*, who earned, in 1872, $4.94 per day, amounted to *43.1 per cent. That in the wages of laborers*, who earned, in 1872, $1.40 per day, amounted to *28.5 per cent.*

The decline in iron has been so great that it would appear—and such is the assertion of iron manufacturers—as if the price had reached a point where there is no longer a profit in the business; therefore, while it is true that the rate of wages has been greatly reduced, there yet remains a margin for family support, whereas on the part of the manufacturers there is no profit whatever.

The following valuable data, showing the quantity, value of the annual product, the sum paid for wages and the average number of hands employed at one of our largest iron establishments, for a number of years past, will also be exceedingly interesting. The amount stated to have been paid for wages does not include salaries of officers, foremen and bosses:

YEARS.	Annual product in units manufactured.*	Gross value of total product.	Total sum paid for labor.	Average number of hands employed.	Average yearly earnings of hands.
1872	2,876	$584,415 19	$163,492 00	.....	.....
1873	2,576	494,338 32	149,668 00	.....	.....
1874	3,483	583,750 61	139,208 00	.....	.....
1875	2,943	474,515 88	136,469 00	277	$492 30
1876	3,824	531,431 79	122,551 00	265	462 46
1877	3,455	412,718 24	145,095 00	279	520 05
1878	3,759	536,932 12	179,905 00	382	470 95
1879	4,546	690,462 69	181,318 00	439	413 02
1880	9,146	862,755 61	235,213 00	557	422 28
1881	10,126	956,196 28	272,147 00	625	435 43
1882	11,334	1,114,616 54	304,537 00	738	412 65
1883	10,300	916,288 50	264,124 00	554	476 75
1884	8,743	661,872 49	196,437 00	497	395 24

*Tons of two thousand pounds.

MANUFACTURERS OF IRON AND STEEL

Office number.	When wages are paid.	Per cent. decrease in wages.	Capital.	Greatest number of hands employed at any one time during the year.	AVERAGE NUMBER OF HANDS EMPLOYED.	
					Males above sixteen years.	Youths.
105	Monthly	10	$300,000	240	170	30
108	Semi-monthly	.....	7,500	15	10	.....
109	"	20	65,000	25	15	.....
110	"	.....	50,000	50	30	.....
111	"	.....	2,000	8	5	.....
116	"	15	18,000	30	8	7
124	"	.....	20,000	15	6	.....
134	Weekly	.....	50,000	130	80	12
135	"	.....	100,000	200	180	.....
139	"	.....	5,000	25	20	1
140	"	.....	7,500	10	4	.....
152	"	.....	50,000	25	15	.....
162	"	15	10,000	6	6	.....
163	"	.....	20,000	28	26	.....
164	"	.....	28,000	100	80	3
166	"	.....	3,000	6	6	.....
169	"	.....	6,000	18	18	.....
170	"	.....	1,000	4	3	.....
171	"	.....	1,000	5	3	.....
172	"	.....	4,000	20	16	.....
174	"	.....	6,500	13	10	.....
175	"	.....	90,000	125	70	30
176	"	.....	8,000	15	11	2
177	Semi-monthly	.....	2,000	10	10	.....
178	Weekly	.....	60,000	60	50	.....
179	"	10	50,000	75	60	3
185	"	.....	45,000	50	40	3
186	"	.....	20,000	25	19	1
198	"	.....	30,000	75	53	12
200	"	15	19,000	30	20	5
201	"	.....	1,800	4	4	.....
203	"	.....	15,000	9	9	.....
208	"	.....	28,000	33	20	.....
209	"	.....	20,000	85	45	25
210	"	5	6,000	25	20	3
212	"	.....	70,000	80	65	.....
215	Semi-monthly	.....	175,000	300	225	.....
217	Weekly	.....	20,000	15	10	2
220	"	.....	25,000	35	32	3
221	"	.....	7,500	9	9	.....
222	Semi-monthly	10	300,000	200	200	.....
224	Weekly	10	10,000	30	28	.....
226	Semi-monthly	.....	20,000	15	15	.....
230	Weekly	.....	6,000	10	7	2
236	"	10	30,000	30	21	4
238	Semi-monthly	10	90,000	110	94	6
241	Weekly	5	20,000	25	20	4
244	"	*	4,000	20	14	6
245	"	*10	4,000	6	3	3
247	"	.....	100,000	175	150	25
248	Semi-monthly	.....	200,000	100	80	3
253	Weekly	.....	5,000	7	4	1
254	"	10	800,000	1,300	1,200	20
255	"	5	13,000	50	40	3
256	Semi-monthly	.....	100,000	60	30	.....
259	"	.....	10,000	12	12	.....
261	"	10	590,000	395	320	67
263	Monthly	.....	25,000	50	42	3

* Increase.

MANUFACTURERS OF IRON AND STEEL—*Continued.*

WAGES AND HOURS OF LABOR.						MONTHS IN OPERATION.						
NUMBER OF HOURS IN THE ORDINARY DAY OF LABOR.												
May to November.	November to May.	Average day's wages for a skilled mechanic.	Average day's wages for an ordinary laborer.	Average day's wages for boys.	Total amount paid in wages during the year.	On full time.	On three-quarters time only.	On half time only.	Idle.	Materials.	Products.	Office number.
10	10	$5 00	$1 50	$0 70	$74,500	8	.....	4	.....	$431,000	$525,910	105
10	10	2 40	1 20	.....	5,000	5	.....	7	.....	12,500	25,000	108
10	10	1 75	1 20	.....	13,000	12	.....	.....	.....	26,000	50,000	109
10	10	2 30	1 20	.....	12,000	12	.....	.....	.....	15,000	30,000	110
10	10	2 50	1 50	.....	3,000	12	.....	.....	.....	2,000	5,500	111
10	10	2 50	1 50	55	5,700	12	.....	.....	.....	7,200	17,800	116
10	10	2 00	1 50	.....	4,450	12	.....	.....	.....	4,800	12,000	124
10	10	3 00	2 00	.....	60,000	12	.....	.....	.....	70,000	150,000	134
10	10	3 00	2 50	.....	104,000	12	.....	.....	.....	120,000	250,000	135
10	10	2 50	1 50	66	10,000	12	.....	.....	.....	17,000	35,000	139
10	10	.....	2 10	.....	2,000	10	.....	.....	2	2,500	5,500	140
10	10	2 75	1 75	.....	15,000	12	.....	.....	.....	35,000	60,000	152
10	10	.....	2 00	.....	1,800	10	.....	.....	2	3,800	6,000	162
10	10	2 65	1 60	.....	12,000	12	.....	.....	.....	24,000	60,000	163
10	10	3 25	1 65	66	41,600	12	.....	.....	.....	12,000	75,000	164
10	10	2 50	2 00	.....	2,800	12	.....	.....	.....	1,300	5,000	166
10	10	2 50	1 50	.....	10,400	12	.....	.....	.....	14,000	30,000	169
10	10	2 50	.....	.....	2,250	12	.....	.....	.....	2,000	5,500	170
10	10	2 00	1 50	.....	1,750	12	.....	.....	.....	1,000	3,500	171
10	10	2 50	2 00	.....	9,000	12	.....	.....	.....	4,000	16,000	172
10	10	2 50	2 00	.....	7,500	12	.....	.....	.....	18,000	35,000	174
10	10	2 50	1 50	75	31,500	12	.....	.....	.....	60,000	100,000	175
10	10	2 50	1 50	75	6,600	9	.....	3	.....	12,000	12,500	176
10	10	.....	1 50	.....	5,000	12	.....	.....	.....	6,000	12,000	177
10	10	.....	1 60	.....	26,000	12	.....	.....	.....	65,000	100,000	178
10	10	3 00	1 60	.....	35,000	12	.....	.....	.....	70,000	130,000	179
10	10	2 75	1 75	85	22,793	12	.....	.....	.....	35,000	60,000	185
10	10	2 50	1 50	80	10,500	12	.....	.....	.....	15,000	30,000	186
10	10	2 50	1 60	75	35,600	12	.....	.....	.....	8,000	60,000	198
10	10	1 85	1 15	50	18,500	12	.....	.....	.....	5,200	25,000	200
10	10	.....	2 00	.....	2,200	12	.....	.....	.....	1,800	5,000	201
10	10	2 00	.....	.....	5,400	12	.....	.....	.....	10,000	30,000	205
10	10	3 25	1 75	.....	17,400	12	.....	.....	.....	29,500	58,600	208
10	10	2 75	2 00	60	26,000	12	.....	.....	.....	30,000	60,000	209
10	10	.....	2 00	50	10,400	12	.....	.....	.....	7,000	21,000	210
10	10	2 25	2 00	.....	35,000	9	.....	3	.....	50,000	100,000	212
10	10	3 50	1 50	.....	125,000	12	.....	.....	.....	80,000	350,000	215
10	10	3 00	2 25	80	5,000	12	.....	.....	.....	12,000	25,000	217
10	10	2 00	1 50	75	20,000	6	.....	6	.....	15,000	45,000	220
10	10	2 50	.....	.....	4,500	12	.....	.....	.....	2,000	12,000	221
10	10	2 50	1 20	.....	100,000	12	.....	.....	.....	300,000	460,000	222
10	10	2 00	.....	.....	14,000	12	.....	.....	.....	10,000	30,000	224
10	10	2 00	1 15	.....	60,000	12	.....	.....	.....	10,000	20,000	226
10	10	2 00	1 50	50	4,200	12	.....	.....	.....	6,000	12,600	230
10	10	3 50	2 00	66	10,400	12	.....	.....	.....	12,000	30,000	236
10	10	2 50	1 75	75	35,000	10	.....	.....	2	45,000	150,000	238
10	10	2 00	1 25	70	7,800	12	.....	.....	.....	10,500	30,000	241
10	10	2 00	1 50	1 00	13,500	12	.....	.....	.....	2,000	17,500	244
10	10	2 00	1 35	70	1,550	11	.....	.....	1	800	5,000	245
10	9	2 50	1 50	65	70,000	12	.....	.....	.....	100,000	225,000	247
10	10	2 00	1 30	.....	38,000	8	.....	3	1	75,000	250,000	248
10	10	2 50	1 50	80	3,500	9	.....	3	.....	3,000	11,000	253
10	10	3 00	1 50	80	600,000	9	.....	3	.....	550,000	1,800,000	254
10	10	2 50	1 50	75	19,000	12	.....	.....	.....	18,000	43,000	255
10	10	2 75	1 25	.....	15,000	.....	.....	12	.....	5,000	20,000	256
10	10	2 50	1 25	.....	7,000	9	.....	3	.....	4,500	12,000	259
10	10	2 10	1 18	.....	181,000	12	.....	.....	.....	744,000	980,000	261
10	10	2 75	1 12	50	19,500	12	.....	.....	.....	50,000	72,000	263

MANUFACTURERS OF IRON AND STEEL—*Continued.*

Office number.	When wages are paid.	Per cent. decrease in wages.	Capital.	Greatest number of hands employed at any one time during the year.	AVERAGE NUMBER OF HANDS EMPLOYED.	
					Males above sixteen years.	Youths.
266	Semi-monthly	.....	$1,500,000	750	750	.....
268	Weekly	7½	125,000	43	43	.....
115	"	.....	6,500	20	16	.....
117	Semi-monthly	.....	10,000	15	12	.....
118	"	10	5,000	12	7	.....
120	"	10	12,000	20	18	.....
122	"	.....	9,000	20	15	3
123	"	.....	3,500	6	4	.....
125	"	.....	1,500	6	4	.....
126	"	.....	2,500	7	5	.....
127	"	.....	2,000	6	4	.....
128	"	.....	12,000	30	8	15
129	"	.....	25,000	75	30	30
130	"	.....	150,000	125	80	20
131	"	.....	20,000	25	15	6
158	Weekly	12½	1,000,000	3,500	2,500	575
159	"	.....	3,000	4	4	.....
160	"	.....	3,000	20	18	.....
167	"	.....	6,000	15	12	2
168	Semi-monthly	.....	10,000	15	8	4
173	Weekly	.....	7,500	12	8	.....
184	"	.....	18,000	10	8	2
189	"	.....	4,000	4	4	.....
190	"	.....	5,000	5	3	.....
191	"	.....	2,000	5	2	.....
192	"	.....	4,500	10	5	2
193	"	.....	15,000	28	15	5
196	"	.....	2,500	5	3	.....
197	"	.....	4,000	12	8	2
202	"	.....	15,000	20	13	2
203	"	.....	8,000	15	10	2
204	"	.....	4,000	8	5	1
206	"	.....	1,000	3	3	.....
207	"	.....	4,000	10	8	.....
211	"	10	12,000	10	7	.....
213	Semi-monthly	.....	10,000	10	10	.....
218	Weekly	15	2,500	4	4	.....
219	"	10	3,000	6	6	.....
231	"	.....	5,500	5	5	.....
237	"	.....	10,000	9	5	.....
246	"	.....	25,000	12	8	2
249	Semi-monthly	.....	5,800	25	12	8
272	"	.....	25,000	20	12	2
273	Weekly	.....	5,000	12	10	2
274	"	.....	150,000	75	67	8
275	"	10	8,000	25	22	3
276	Semi-monthly	.....	4,000	8	6	2
277	Weekly	10	300,000	175	122	3
278	"	.....	4,000	14	9	.....
279	"	.....	4,000	6	6	.....
280	"	.....	12,000	10	10	.....
281	Semi-monthly	.....	100,000	140	108	32
282	Weekly	.....	20,000	12	10	2
283	"	15	30,000	10	5	5
284	"	.....	20,000	25	22	2
285	"	.....	100,000	35	35	.....
286	"	.....	500,000	185	175	5
287	"	.....	100,000	35	30	3

MANUFACTURERS OF IRON AND STEEL—*Continued*

WAGES AND HOURS OF LABOR.						MONTHS IN OPERATION.						
NUMBER OF HOURS IN THE ORDINARY DAY OF LABOR.												
May to November.	November to May.	Average day's wages for a skilled mechanic.	Average day's wages for an ordinary laborer.	Average day's wages for boys.	Total amount paid in wages during the year.	On full time.	On three-quarters time only.	On half time only.	Idle.	Materials.	Products.	Office number.
10	10	$2 75	$1 50	.....	$250,000	12	.....	.....	.....	$1,200,000	$1,926,000	266
10	10	.....	.....	.....	29,213	8	.....	.....	4	70,000	122,937	268
10	10	2 25	2 00	.....	5,200	12	.....	.....	.....	3,600	12,000	115
10	10	1 75	1 00	.....	4,800	6	6	.....	.....	3,000	9,600	117
10	10	2 50	2 00	.....	3,600	12	.....	.....	.....	5,500	10,500	118
10	10	2 25	1 80	.....	6,500	12	.....	.....	.....	3,000	10,000	120
10	10	2 00	1 40	$0 50	10,400	12	.....	.....	.....	10,000	26,000	122
10	10	2 00	1 50	.....	2,500	12	.....	.....	.....	3,000	8,000	123
10	10	2 00	1 50	.....	2,800	12	.....	.....	.....	2,500	6,000	125
10	10	2 25	1 50	.....	3,800	12	.....	.....	.....	4,000	9,000	126
10	10	2 25	1 50	.....	2,650	12	.....	.....	.....	3,000	6,000	127
10	10	2 50	1 75	75	8,800	12	.....	.....	.....	4,000	15,000	128
10	10	3 00	1 60	85	25,000	12	.....	.....	.....	8,500	55,000	129
10	10	2 50	1 75	85	41,000	12	.....	.....	.....	25,000	75,000	130
10	10	2 75	2 00	66	7,084	12	.....	.....	.....	7,000	25,800	131
10	10	.....	1 90	1 00	1,500,000	12	.....	.....	.....	1,250,000	4,500,000	158
10	10	2 50	.....	.....	2,800	12	.....	.....	.....	3,600	6,000	159
10	10	2 00	1 15	.....	3,750	9	3	.....	.....	3,000	9,000	160
10	10	2 50	2 00	60	3,500	12	.....	.....	.....	1,800	7,000	167
10	10	2 50	2 00	.....	4,960	12	.....	.....	.....	3,300	10,000	168
10	10	3 00	1 75	.....	5,000	12	.....	.....	.....	6,000	15,000	173
10	10	2 75	1 50	80	5,500	9	.....	3	.....	9,000	20,000	184
10	10	2 00	.....	.....	2,300	12	.....	.....	.....	1,000	5,000	189
10	10	2 25	1 50	.....	2,250	12	.....	.....	.....	7,000	13,500	190
10	10	2 50	.....	.....	1,100	12	.....	.....	.....	1,000	3,000	191
10	10	2 50	1 50	66	2,800	6	.....	6	.....	3,000	6,500	192
10	10	2 50	2 00	80	16,000	12	.....	.....	.....	12,000	35,000	193
10	10	2 50	.....	.....	2,100	12	.....	.....	.....	2,000	6,000	196
10	10	2 50	1 50	85	4,200	12	.....	.....	.....	2,500	8,000	197
10	10	2 75	.....	75	9,000	12	.....	.....	.....	4,800	20,000	202
10	10	2 75	1 50	66	6,500	12	.....	.....	.....	4,000	11,500	203
10	10	2 60	1 50	60	4,200	12	.....	.....	.....	3,000	10,000	204
10	10	2 50	.....	.....	2,100	12	.....	.....	.....	1,000	3,500	206
10	10	2 50	1 60	.....	4,800	12	.....	.....	.....	4,000	10,000	207
10	10	2 35	.....	.....	5,200	12	.....	.....	.....	6,000	12,500	211
10	10	2 75	1 25	1 50	10,500	12	.....	.....	.....	7,000	18,000	213
10	10	2 50	.....	.....	3,000	12	.....	.....	.....	2,500	7,000	218
10	10	2 50	.....	.....	4,000	12	.....	.....	.....	4,000	9,000	219
10	10	2 25	.....	.....	2,600	12	.....	.....	.....	2,000	5,000	231
10	10	2 85	.....	.....	4,200	12	.....	.....	.....	1,000	9,500	237
10	10	2 50	1 25	.....	5,000	12	.....	.....	.....	12,000	40,000	246
10	10	2 50	1 40	.....	8,500	12	.....	.....	.....	7,000	20,000	249
10	10	2 65	1 50	.....	13,000	.....	.....	9	3	13,500	28,000	272
10	10	2 25	1 50	.....	6,000	8	.....	4	.....	2,500	12,000	273
10	10	3 00	1 50	66	38,000	6	6	.....	.....	28,000	120,000	274
10	10	2 15	1 25	.....	8,500	12	.....	.....	.....	8,000	20,000	275
10	10	2 40	.....	80	4,500	12	.....	.....	.....	4,400	11,000	276
10	10	2 45	1 25	.....	42,650	9	3	.....	.....	250,000	360,000	277
10	10	2 50	1 20	.....	2,600	12	.....	.....	.....	6,000	9,000	278
10	10	.....	1 50	.....	3,000	12	.....	.....	.....	3,500	7,500	279
10	10	2 00	1 25	.....	3,250	12	.....	.....	.....	4,800	9,200	280
10	10	2 50	1 50	80	60,000	12	.....	.....	.....	64,000	160,000	281
10	10	2 00	1 50	.....	5,200	12	.....	.....	.....	2,500	10,000	282
10	10	2 50	.....	95	6,000	10	.....	.....	2	4,500	12,000	283
10	10	2 25	1 50	75	10,500	12	.....	.....	.....	15,000	30,000	284
10	10	2 75	1 50	.....	20,000	12	.....	.....	.....	16,500	47,500	285
10	10	2 75	1 50	1 00	100,000	12	.....	.....	.....	150,000	300,000	286
10	10	2 75	1 50	.....	25,000	12	.....	.....	.....	28,000	60,000	287

MANUFACTURERS OF IRON AND STEEL—*Continued.*

Office number.	When wages are paid.	Per cent. decrease in wages.	Capital.	Greatest number of hands employed at any one time during the year.	AVERAGE NUMBER OF HANDS EMPLOYED.	
					Males above sixteen years.	Youths.
101	Weekly	10	$50,000	50	32	5
102	"	5	171,800	115	88	12
103	"	.....	12,000	10	10	.....
107	Semi-monthly	5	75,000	140	100	10
112	"	.....	700,000	700	670	30
113	"	15	600,000	75	50	6
114	"	5	300,000	850	600	.....
119	"	14	60,000	40	30	.....
121	"	.....	50,000	35	30	2
132	"	10	800,000	800	650	.....
136	Weekly	.....	75,000	100	75	6
137	"	.....	20,000	35	19	4
143	"	10*	15,000	15	10	2
145	"	.....	30,000	65	35	3
146	Semi-monthly	.....	40,000	55	45	3
151	Weekly	.....	50,000	80	50	.....
153	"	.....	100,000	80	80	.....
155	Semi-monthly	.....	40,000	80	50	4
156	"	.....	75,000	200	150	6
157	"	.....	30,000	30	30	.....
165	Weekly	.....	25,000	35	22	8
182	"	.....	50,000	35	30	.....
183	"	.....	55,000	50	34	16
187	"	10	238,000	200	175	.....
199	"	.....	60,000	30	25	3
225	"	7½	23,000	18	14	2
229	"	.....	135,000	90	70	.....
227	"	5	50,000	33	30	.....
228	"	.....	250,000	200	140	20
232	"	.....	150,000	100	95	5
235	"	.....	15,000	30	22	3
242	Semi-monthly	.....	30,000	35	20	2
251	Weekly	.....	8,500	25	14	1
257	Semi-monthly	.....	15,000	10	10	.....
260	Weekly	10†	25,000	45	39	6
264	Semi-monthly	.....	50,000	40	18	.....
265	Weekly	.....	5,000	5	5	.....
269	"	.....	75,000	65	40	10
288	Semi-monthly	5	50,000	85	80	.....
290	Weekly	.....	60,000	65	55	5
291	Semi-monthly	.....	1,000,000	600	588	12
293	Weekly	.....	10,000	50	50	.....
294	Semi-monthly	.....	250,000	525	480	45
295	Weekly	.....	125,000	140	130	5
296	Weekly	.....	75,000	40	40	.....
298	Semi-monthly	.....	250,000	225	217	8
299	Weekly	.....	80,000	75	52	20
304	"	.....	60,000	60	50	5
305	"	.....	20,000	18	18	.....
306	Monthly	.....	350,000	325	256	46
307	Weekly	10	150,000	40	35	3
310	"	.....	500,000	350	300	12
311	"	.....	30,000	55	45	.....
313	"	.....	300,000	90	70	15
314	"	.....	40,000	70	54	6
315	Semi-monthly	.....	50,000	80	70	5
	Totals	.....	$16,173,400	17,851	14,264	1,395

* Increase. † Also a like increase.

MANUFACTURERS OF IRON AND STEEL—*Continued.*

WAGES AND HOURS OF LABOR.						MONTHS IN OPERATION.						
NUMBER OF HOURS IN THE ORDINARY DAY OF LABOR.												
May to November.	November to May.	Average day's wages for a skilled mechanic.	Average day's wages for an ordinary laborer.	Average day's wages for boys.	Total amount paid in wages during the year.	On full time.	On three-quarters time only.	On half time only.	Idle.	Materials.	Products.	Office number.
10	10	$2 75	$2 13	$1 13	$21,600	12	.....	.....	.....	$20,000	$45,600	101
10	10	2 50	1 25	80	31,500	8	.....	.....	4	50,000	100,000	102
10	10	2 00	1 65	.....	5,200	12	.....	.....	.....	4,500	25,000	103
10	10	2 00	1 10	.....	30,000	12	.....	.....	.....	50,000	100,000	107
10	10	2 75	1 25	60	286,000	12	.....	.....	.....	350,000	1,100,000	112
10	10	2 10	1 20	1 00	26,500	10	.....	2	.....	45,000	100,000	113
10	10	2 25	1 25	.....	350,000	12	.....	.....	.....	300,000	700,000	114
10	10	2 50	1 10	.....	20,000	.....	12	.....	.....	18,000	43,500	119
10	10	2 35	1 50	75	27,000	12	.....	.....	.....	20,000	50,000	121
10	10	2 20	1 10	.....	212,700	12	.....	.....	.....	225,000	574,000	132
10	10	2 50	1 50	66	46,500	12	.....	.....	.....	55,800	186,000	136
10	10	3 00	.....	1 00	18,000	12	.....	.....	.....	12,000	40,000	137
10	10	2 75	1 75	1 00	11,000	12	.....	.....	.....	30,000	60,000	143
10	10	3 00	2 25	1 00	20,800	12	.....	.....	.....	16,000	48,000	145
10	10	2 50	1 50	60	18,300	12	.....	.....	.....	10,000	30,000	146
10	10	2 75	2 00	.....	30,000	6	.....	6	.....	30,000	120,000	151
10	10	2 75	1 50	.....	50,000	12	.....	.....	.....	50,000	150,000	153
10	10	2 75	1 50	1 00	25,800	12	.....	.....	.....	20,000	50,000	155
10	10	2 50	1 50	1 00	72,000	12	.....	.....	.....	120,000	250,000	156
10	10	4 00	1 75	.....	13,500	5	.....	.....	7	12,500	40,000	157
10	10	3 00	2 25	90	16,500	12	.....	.....	.....	17,000	50,000	165
10	10	3 00	1 50	.....	15,000	8	.....	4	.....	35,000	65,000	182
10	10	3 00	2 00	80	27,250	11	.....	.....	1	14,000	72,000	183
10	10	2 50	1 50	.....	124,965	12	.....	.....	.....	118,385	250,000	187
10	10	3 00	2 25	1 00	12,000	12	.....	.....	.....	12,000	25,000	199
9	9	2 87	1 75	.....	10,940	12	.....	.....	.....	5,481	23,000	225
10	10	2 50	1 50	.....	50,000	8	4	.....	.....	45,000	126,000	229
10	10	2 50	1 75	.....	17,968	10	2	.....	.....	10,000	35,292	227
10	10	2 50	1 50	.....	114,500	12	.....	.....	.....	90,700	222,150	228
10	10	2 50	1 65	.....	60,000	12	.....	.....	.....	75,000	150,000	232
10	10	2 50	1 66	.....	15,600	12	.....	.....	.....	17,000	35,000	235
10	10	2 75	.....	85	14,000	12	.....	.....	.....	10,500	30,000	242
10	10	2 75	1 45	.....	5,000	12	.....	.....	.....	7,000	15,000	251
10	10	2 25	1 25	.....	6,000	10	.....	.....	2	13,000	25,000	257
10	10	2 75	1 50	50	20,800	12	.....	.....	.....	25,000	50,000	260
10	10	2 50	1 50	.....	9,000	12	.....	.....	.....	13,000	27,000	264
10	10	2 25	1 50	.....	2,500	12	.....	.....	.....	2,500	6,000	265
10	10	2 50	1 35	.....	30,000	12	.....	.....	.....	40,000	90,000	269
10	10	4 50	1 75	.....	45,000	12	.....	.....	.....	50,000	100,000	288
10	10	2 40	1 20	70	33,500	12	.....	.....	.....	30,000	75,000	290
10	10	2 50	1 20	.....	192,000	12	.....	.....	.....	325,000	625,000	291
10	10	2 35	1 35	.....	23,400	12	.....	.....	.....	15,000	40,000	293
10	10	2 50	1 25	.....	250,000	12	.....	.....	.....	1,000,000	1,500,000	294
10	10	2 50	1 25	.....	65,000	12	.....	.....	.....	120,000	200,000	295
10	10	2 50	1 50	.....	35,000	12	.....	.....	.....	90,000	160,000	296
10	10	2 75	1 50	75	104,000	12	.....	.....	.....	240,000	400,000	298
10	10	2 25	1 30	75	36,400	12	.....	.....	.....	10,000	80,000	299
10	10	2 25	1 40	75	26,000	12	.....	.....	.....	80,000	120,000	304
10	10	2 25	1 30	.....	9,000	12	.....	.....	.....	20,000	36,000	305
10	10	2 00	1 50	75	125,000	12	.....	.....	.....	90,000	250,000	306
10	10	2 35	1 45	75	19,500	12	.....	.....	.....	21,000	42,000	307
10	10	2 25	1 25	66	120,000	12	.....	.....	.....	290,000	440,000	310
10	10	2 50	1 25	.....	26,500	10	.....	2	.....	25,000	60,000	311
10	10	2 75	1 30	.....	70,000	12	.....	.....	.....	250,000	425,000	313
10	10	2 25	1 25	70	35,000	12	.....	.....	.....	65,000	140,000	314
10	10	2 25	1 25	70	52,000	12	.....	.....	.....	90,000	165,000	315
.....	.....	.....	.....	.....	$7,552,723	.....	.....	.....	.....	$11,399,566	$25,106,489	.....

GENERAL SUMMARY.

BUSINESS.	Number of establishments.	Capital.	Greatest number of hands employed at any one time during the year.	AVERAGE NUMBER OF HANDS EMPLOYED.			WAGES AND HOURS OF LABOR.			Materials.	Products.
				Males above sixteen years.	Females above fifteen years.	Children and youth.	Number of hours in the ordin'ry day of labor.		Total amount paid in wages during the year.		
							May to November.	November to May.			
Iron mines	40	* $2,500,000	2,819	2,473	...	89	10	10	$773,377	.....	$1,615,279
Furnaces	6	* 1,625,000	442	415	...	11	10	10	137,248	.....	977,713
Rolling mills, foundries and steel works	44	4,083,000	3,682	3,165	...	218	10	10	1,514,833	$2,875,000	5,270,850
Manuf'tures of iron and steel	172	16,173,400	17,851	14,264	...	1,395	10	10	7,552,723	11,399,566	25,106,489
Total	.....	.....	24,794	20,317	...	1,713	.....	.....	$9,978,181	.....	.....

* Estimated.

PART V.

THE SUGAR INDUSTRY.

PART V.

THE SUGAR INDUSTRY.

The consumption of sugar is universal in every civilized country. It is no longer considered as a mere luxury, but has become a necessity in every family, whether rich or poor.

There were imported into the United States for the year ending December 31st, 1885, 1,318,326 tons of sugar, valued at $59,197,494. The previous year, 1884, the imports amounted to 1,269,948 tons, valued at $76,419,926. The decreased value of sugar in 1885 was caused by the market having become overstocked on account of the large production of beet sugar in European countries, where that industry had become comparatively profitable. The following table compiled from the price current of the Wholesale Co-operative Society, Manchester, England, for December, 1885, indicates that the beet sugar product for the year 1886 will be greatly reduced :

BEET SUGAR PRODUCTION.

	1884–85. Actual yield—tons.	1885–86. Approximate yield—tons.
Austria	557,766	342,500
Germany	1,154,817	825,000
France	308,410	290,000
Russia	386,433	449,467
Other countries	138,462	70,000
	2,545,888	1,976,967

Deficiency in year, 568,920 tons.
Of Russia's excess, only 29,000 tons now remain available for export.

The beet sugar industry, which has now reached such proportions, was kept alive in its early stages by government assistance, both in France and Germany. This aid, together with the employment of the highest chemical and mechanical skill, both in the process of manufacture and the application to the soil of the proper fertilizers to secure the best results, has placed the industry upon a basis which

in Germany, at least, is now turning into the government a considerable revenue.

The soils of New Jersey, in the lower part of the State especially, were judged to be so well adapted to the cultivation of the sorghum sugar cane that the Legislature of 1881, having in view the encouragement of new productive industries in the State, passed an act entitled "An act to encourage the manufacture of sugar in the State of New Jersey." This act, which was to remain in force for five years, provided for a bounty of one dollar per ton for every ton of sorghum cane raised in the State which should be converted into sugar, and one cent per pound upon every pound of merchantable sugar made therefrom within the State. This act becomes inoperative February 16th, 1886.

Charles M. Hilgerth, of Philadelphia, established a plant at Rio Grande, in the county of Cape May, in the year 1881, and entered into contracts with farmers in the vicinity of the works for a supply of sorghum cane. These farmers sent in their certificates, in legal form, to this Bureau for cane furnished, and received the bounty to which they were entitled, as will appear in the table following; but Mr. Hilgerth made no claim during the season for the sugar he had manufactured, and getting into pecuniary trouble before the close of the year, turned the works over to the "Rio Grand Sugar Company," a corporation which had been organized under the general manufacturing law of the State, for the purpose of manufacturing sugar under the provisions of the bounty act before referred to. Mr. Hilgerth was general manager of the new company, but disappeared about the first of April, 1882, without making a claim for bounty upon the surgar he had manufactured, about 200,000 pounds.

BOUNTY PAID UPON SORGHUM SUGAR CANE, AND UPON THE SUGAR MANUFACTURED THEREFROM, UNDER THE "ACT TO ENCOURAGE THE MANUFACTURE OF SUGAR IN THE STATE OF NEW JERSEY," APPROVED FEBRUARY 16TH, 1881.

DATE.	TONS OF CANE.	BOUNTY PAID.	POUNDS OF SUGAR.	BOUNTY PAID.
1881	1,434	$1,434 00	.....	.....
1882	5,638	5,638 00	319,994	$3,199 44
1883	6,761	6,761 00	282,711	2,827 11
1884	9,876	9,876 00	375,869	3,758 69
1885	7,419.97	7,419 97	280,961	2,809 61
Total	31,128.97	$31,128 97	1,259,535	$12,594 85

During the session of Congress for 1884–5 the Department of Agriculture received an appropriation of $50,000 for "necessary expenses in conducting experiments, including experiments in the manufacture of sugar from sorghum and other vegetable plants."

The Commissioner of Agriculture, desirous of obtaining as speedy results as possible from the process of diffusion on sorghum, authorized the chemist of the department, H. W. Wiley, to make arrangements for purchasing the proper machinery and supplying the necessary apparatus for conducting experiments with this end in view. Negotiations were begun with the Franklin Sugar Company, of Ottawa, Kansas, which resulted in securing the use of their plant for the purpose; but, owing to the delay in getting the machinery upon the ground and in working order, work was not begun till October 8th. A heavy frost on the morning of October 4th had killed the blades of the cane, but did not damage the stalks that were fully matured. It was so late in the season, however, that but a few days were left for work, and only 70 cells of 1,400 pounds each were diffused, or a total of 98,000 pounds of cane. The result showed that sorghum cane diffused with great readiness, and in this respect appeared to have the advantage over the beet. A detailed account of these experiments will be found in Bulletin No. 6 of the Department of Agriculture, Division of Chemistry. Professor Wiley succeeded in getting 95 pounds of worked and dried sugar from a ton of cane worked, a considerable advance over the product of the milling process. This was secured, too, under most disadvantageous circumstances.

The Rio Grande Sugar Works commenced this year on September 2d, and finished working up the cane by November 21st, making a season of 80 days, thus confirming the opinion expressed in former reports of the Bureau with regard to the favorable climatic conditions of Cape May county for the sugar industry.

The law which authorized a bounty from the State will only apply to the product of the present season, as it will have expired before the next crop can be secured. The friends of the sugar industry throughout the State had hoped that the business would have been placed upon such a profitable basis before the expiration of the bounty law, that no further State aid would be necessary. In this, however, they have been disappointed, for the parties who established the Rio Grande works, although they have worked indefatigably to overcome

unforeseen obstacles which from time to time have made their appearance, do not find the business a profitable one.

The outlook at present is more encouraging, as the drawbracks to the business are being gradually removed out of the way. During the present season, through the combined exertions of the New Jersey Agricultural Experiment Station and Mr. Henry A. Hughes, the indefatigable superintendent of the sugar works, obstacles which hitherto had seemed insurmountable, have been overcome.

In former numbers of the Bureau reports reference has been made to the deep interest taken by Professor George H. Cook, Director of the Experiment Station in the experimental work going on at Rio Grand, and quotations have been freely made from reports of that station upon the subject. During the present season this interest on the part of Professor Cook has been renewed, and the chemist of the station, Dr. Arthur P. Neale, was allowed to spend several weeks at the sugar works, where, assisted by Superintendent Hughes, valuable experiments were carried on both with mill product and by diffusion. The most of their experiments have been so satisfactory that it really appears as if the turning point in the sugar industry had been reached; certainly if the suggestion made by Dr. Neale can be carried out during the next year there will be a greatly increased production of sugar, and there is every reason to believe that the industry will become a profitable one in the State.

The work accomplished at Rio Grande is of such importance that we do not feel willing to rely upon the publication of extracts, but will reproduce Bulletin XXXVIII. of the New Jersey Agricultural Experiment Station in December 21st, 1885, upon that subject.

THE RIO GRANDE SORGHUM SUGAR WORKS.

I. Brief history of the Rio Grande Plantation for the season of 1885.

II. The effects of Commercial Fertilizers.
   1. Upon the growth of sorghum.
   2. Upon its yield of sugar, per acre and per ton of cane.

III Milling and diffusion compared, as methods of separating sugar from sorghum.
   1. Mill products from unstripped cane compared with diffusion products from stripped cane.
   2. Diffusion products from stripped cane compared with diffusion products from unstripped cane.

IV. General summary of results.

I.

BRIEF HISTORY OF THE RIO GRANDE SUGAR PLANTATION FOR THE SEASON OF 1885.

The history of the past season at Rio Grande is essentially the same as that of previous years. There has been the same honest effort to reduce working expenses, to discover and avoid wastes, to improve processes and, in brief, to do every thing possible to place this huge experiment upon a strict business basis. The success has been quite as marked as could be expected and at no time in the history of this plantation have its prospects appeared so bright.

In 1884, phosphates were used upon the crop; in consequence it ripened much earlier than had been expected, and throughout the season the fields were in advance of the sugar house, over-ripe cane only being delivered at the mill.

In 1885, the opposite course was followed, no phosphates were used and during the first half of the milling season the sugar house was in advance of the fields, the cane at times being so green that more than once it was almost decided that the house must be closed until ripe cane could be secured. The marked improvements in the clarification of mill juice not only prevented a failure, but even kept the average yield of merchantable sugar, per ton of unstripped and untopped cane, quite up to that of the previous year.

At present the mill is the greatest drawback to the sorghum sugar industry; an experiment upon a large scale, published later in this report, indicating that it fails to secure at least one-half of the sugar existing in the cane. A similar record was made in the last annual report of this Station.

That report also contained the results of an experiment showing that diffusers were much superior to mills, as they wasted approximately five per cent. only of the total sugar. Unfortunately, however, diffusion extracts dark colored and bitter tasting compounds from unstripped sorghum, which make the product almost unsalable; it seemed necessary, therefore, for the present at least, to retain the mill.

It was, however, surmised that both color and taste came from leaves and leaf sheaths. Superintendent Hughes therefore devised a machine by which the cane could be thoroughly and rapidly stripped. His model and plans were submitted to a number of mechanical engineers, whose verdict was that the machine should be constructed. This for various reasous was not immediately undertaken, and the past season has been devoted to proving that such a machine is essential to success. The details are given upon subsequent pages.

Although, from previous trials, it was reasonably certain that the product would be of low grade, it was still deemed best to again operate the diffusiou battery upon mill bagasse, for defects in the apparatus, errors in its manipulation, and all other drawbacks could be discovered by diffusing almost worthless material quite as well as by working valuable cane; the regular "run" of the house, too, would not be disturbed by this arrangement.

The diffusers were therefore used for twenty-six days, and two hundred and twenty-nine barrels of heavy syrup was secured; as expected, it was of medium quality only, but still merchantable for enough to more than pay experimental expenses. It was found, by experiments with a ton of bone black, that the dark color and bitter taste could be removed, the undesirable bone black flavor, however, was substituted. The exhaustion of the bone black also was judged to be too rapid to admit of its profitable use.

A practically automatic apparatus for filling diffusers was devised, tested and found

in all respects thoroughly efficient. The difficulty in removing the spent bagasse from the cells in a great measure disappeared as the experience and skill of the workmen increased, no noticeable delay in working the battery resulting from this source.

No cane was purchased this season, all that was milled having been grown upon the company's plantation, 960 acres yielding 7,420 tons of unstripped and untopped sorghum. Out of this, 281,000 pounds of merchantable suguar, 50,000 gallons of syrup and from 9,000 to 10,000 bushels of seed were secured, these products finding a ready market at satisfactory prices.

The records of this plantation, for the past five years, show that upon the average, seven and seven-tenths tons of unstripped and untopped cane only have been grown per acre, while the average yield of merchantable sugar per ton of cane has not exceeded forty pounds.

To compete successfully with other sources of cane sugar, therefore, the average tonnage of good cane per acre should be at least doubled, while the quantity of merchantable sugar secured per acre should be increased many fold.

The possibility of accomplishing both objects at Rio Grande can be seen from the following experiments, planned by the Station for this plantation. The expenses of the trials were willingly borne by Mr. Potts. The success is largely due to the hearty co-operation and earnest work of Superintendent Henry A. Hughes.

II.

THE EFFECTS OF COMMERCIAL FERTILIZERS.

1. *Upon the growth of sorghum;*
2. *Upon its yield of sugar per acre and per ton of cane.*

The field selected for this experiment is level, uniform in quality and protected from northeast storms by a heavy strip of woodland several hundred feet distant.

Its soil is a very sandy loam, easily worked and responsive to fertilizers. For several years in succession it has been cropped with sorghum, but has never been rated high in fertility.

Before arrangements had been made for this trial the field had been dressed with a compost made of four tons of mill bagasse to one ton of yard manure. This had been spread uniformly at the rate of five tons per acre.

Upon this field a surveyor measured a tract five hundred and forty-eight feet long and one hundred and fiorty-five and two-tenths feet broad. This was bounded upon the northeast by a fence, and upon the southwest by a farm road; upon the northwest and southeast it was isolated from the rest of the field by lanes four feet wide. A headland, from six to eight feet wide, was left at one end of each plot; this afforded an opportunity, in cultivating, to turn the horses without damage to canes at the ends of the rows. The farm road running across to other end of each plot answered a similar purpose.

This tract was first prepared as if intended for Indian corn. By means of lanes four feet wide, it was then divided into sixteen plots, each one-tenth of an acre in area.

The fertilizers were sown broadcast and harrowed in; the quantities and combinations used upon each plot, as well as the cost of material, can be found in the following table. As in former experiments made by this Station, phosphoric acid was used in the form of bone black superphosphate, and nitrogen in the form of nitrate of soda; muriate of potash was applied to some of the plots and sulphate of potash to others.

Two tons of yard manure were spread upon plot 9, and forty pounds of land plaster upon plot 15. Two plots, Nos. 1 and 16, were left without fertilizers in order to learn what the soil alone was able to produce.

On the 22d of April, Early Orange seed was planted in rows three feet apart, making ten rows upon each plot. The plants were thinned out as much as was necessary and cultivated twice during the season; late cultivation was avoided, as this is believed to be injurious, particularly to seed development.

Owing to a misunderstanding, instead of three feet, the rows upon plot 1 were drilled three and one-half feet apart; there were also indications that several of these rows were upon the edge of a former compost bed. This plot was therefore abandoned and comparisons of the effects of fertilizers must be drawn against plot 16 alone.

1. THE EFFECTS OF COMMERCIAL FERTILIZERS UPON THE GROWTH OF SORGHUM.

For several years Mr. Henry A. Hughes, Superintendent of the Rio Grande Plantation, has been keeping a careful weekly record of the development of the cane upon each field; this system he also introduced into this experiment. The following interesting and instructive table is copied from his note-book.

The table shows that six weeks from the date of planting, the canes stood from two to three inches only above the ground; this "moping" characterizes both sorghum and oats; it is their time for root development. Fertilizers in this experiment seem to have had no power to shorten this period.

Nitrogen alone was used upon plot 2, phosphoric acid upon plot 3, and potash upon plot 4. Plot 16 was cropped without fertilizers. At the close of the week ending June 23d, a comparison of the records of these four plots indicates no marked differences in the relative growth of the plants.

During this week, the tenth from the date of planting, upon all of the plots the plants increased in height by one hundred per cent.

From this date the effect of nitrate of soda became more and more marked, until at the close of the week ending July 28th its plants were fifteen inches taller than those upon plots 3 and 4, and twenty-seven inches taller than those upon the unmanured plot, No. 16. This date closed the fifteenth week from the time of planting.

At this point muriate of potash began to exert the most marked effect, and at the close of the week ending August 11th, its plants were quite as tall as those upon the nitrate of soda plot. Upon August 25th, the date of the close of this record, the canes upon muriate of potash plots were three inches taller than those upon the nitrogen plots, ten inches taller than those upon the phosphoric acid plot, and thirty inches taller than those upon the unmanured plot, No. 16.

With the exception of No. 14, the cane upon the muriate of potash plot (No. 4) was the tallest in the experiment. Next in order stood that which had been grown with a combination of nitrogen and potash (No. 6), and last of all, that which had been fertilized with nitrogen and phosphoric acid (No. 5), and phosphoric acid and potash (No. 7).

At the time of harvest, October 11th, the cane upon the muriate of potash plot appeared still to be the tallest in the experiment, being rivaled only by that upon plots 6 and 14. It is estimated that in these three cases the cane stood between eleven and twelve feet high.

Potash, phosphoric acid and nitrogen all react favorably upon sorghum growing

Rio Grande Plantation—Early Orange Sorghum.

WEEKLY RECORD OF DEVELOPMENT, EXPRESSED IN INCHES.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						Potash as Muriate.				Potash as High Grade Sulphate.						
FERTILIZERS. KIND AND QUANTITY USED PER ACRE.		Nitrogen, 22.50 lbs. from Nitrate of Soda.	Phos. Acid, 52.50 lbs. from Bone Black Superphos.	Potash, 75.00 lbs. from Muriate of Potash.	Nitrogen, 22.50 lbs. Phos. Acid, 52.50 "	Nitrogen, 22.50 lbs. Potash, 75.00 "	Phos Acid, 52.50 lbs. Potash, 75.00 "	Nitrogen, 22.50 lbs. Phos. Acid, 52.50 " Potash, 75.00 "	Barn-yard Manure, 20 Tons.	Potash, 80.00 lbs. from Sulphate of Potash.	Potash, 80.00 lbs. Phos. Acid, 52.50 "	Potash, 80.00 lbs. Nitrogen, 22.50 "	Potash, 80.00 lbs. Nitrogen, 22.50 " Phos. Acid, 52.50 "	Potash, 80.00 lbs. Nitrogen, 22.50 " Phos. Acid, 105.00 "	Land Plaster, 400 lbs.	No Fertilizer.
		In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
June 2d	.....	2.50	2.75	2.75	2.25	2.50	2.25	2.50	3.00	2.50	2.25	2.50	2.50	2.50	2.00	2.50
June 9th	.....	3.50	3.50	4.50	3.50	3.50	3.25	3.50	4.00	4.00	4.00	3.75	4.00	4.00	3.50	3.25
June 16th	.....	5.50	4.50	5.00	4.50	5.00	5.00	4.50	5.50	5.00	5.00	4.50	5.00	6.00	4.50	4.00
June 23d	.....	11.00	9.00	10.00	9.00	12.00	10.00	10.00	12.00	9.00	9.00	10.00	11.00	13.00	8.00	8.00
June 30th	.....	18.00	14.00	14.00	14.00	18.00	14.00	15.00	19.00	14.00	14.00	15.00	18.00	22.00	12.00	13.00
July 7th	.....	29.00	23.00	23.00	24.00	27.00	25.00	26.00	30.00	23.00	27.00	26.00	28.00	31.00	21.00	21.00
July 14th	.....	36.00	31.00	28.00	29.00	35.00	32.00	31.00	35.00	29.00	34.00	34.00	33.00	39.00	28.00	27.00
July 21st	.....	52.00	44.00	41.00	37.00	46.00	37.00	44.00	50.00	37.00	44.00	44.00	48.00	51.00	32.00	34.00
July 28th	.....	72.00	56.00	57.00	53.00	62.00	56.00	62.00	66.00	55.00	59.00	61.00	61.00	67.00	42.00	45.00
August 4th	.....	80.00	67.00	70.00	63.00	73.00	66.00	75.00	79.00	68.00	69.00	75.00	76.00	80.00	53.00	55.00
August 11th	.....	89.00	80.00	90.00	76.00	92.00	77.00	87.00	90.00	85.00	82.00	90.00	87.00	90.00	60.00	63.00
August 18th	.....	103.00	96.00	103.00	86.00	104.00	91.00	97.00	100.00	100.00	96.00	100.00	100.00	107.00	67.00	76.00
August 25th	.....	113.00	106.00	116.00	100.00	114.00	100.00	107.00	109.00	109.00	106.00	114.00	110.00	118.00	84.00	86.00
No. tons unstripped and untopp'd cane harvested per acre	.....	19.11	17.17	19.59	18.83	22.19	19.91	19.96	17.53	16.82	16.89	17.03	17.18	16.21	9.81	10.17

upon this plantation; potash, however, commercially the cheapest element, exerts the most marked effect.

Records similar to these are of great value in studying the effects of fertilizing elements at different stages in plant growth. At Rio Grande they have been extremely serviceable in comparing a growing crop at any given time with previous crops from the same field. Such records, however, should not be used as *standards* for determining the value of fertilizers for cane production. For instance, of all the fertilized plots, that with the tallest cane (No. 14) yielded the smallest tonnage per acre. The largest tonnage per acre came from plot 6, which, in height, ranked third only. The cane from plot 7 equaled in weight that from plots 4 and 8, yet it was the shortest of the three, in one case by sixteen inches, and in the other by seven inches.

2. THE EFFECTS OF COMMERCIAL FERTILIZERS UPON THE YIELD OF SUGAR PER ACRE AND PER TON OF CANE.

In order to determine the effects of fertilizers upon sugar production, a representative sample was drawn from each plot and its total sugar determined by analysis. This, with the total weight of cane, furnished all necessary data.

SAMPLING.

It has been already indicated that in each experiment there were ten rows, each row being one hundred and forty-five feet long. It was decided that all canes, large and small, should be taken from approximately one-third of one row, to represent the sorghum growing upon that plot. Upon the 7th and 8th of October this was done, in every case personally by Superintendent Hughes and the Chemist of this Station. The samples varied in weight from seventy-four to one hundred and thirty pounds.

After the seed tops and leaves, exclusive of sheaths, had been removed and weighed separately, the canes were cut into half-inch pieces and shredded in a Lion cutter and crusher. Sub-samples were then drawn and thoroughly dried at 120° F. From these dried samples portions for analyses were ground in a mill until fine enough to pass through a sieve, twelve mesh to the inch.

The sugar was separated from the fiber with boiling alcohol, and, after the removal of the alcohol and clarification with basic lead acetate, the solutions were polarized according to Clerget's method.

EXAMINATION OF ANALYTICAL METHODS.

The fact that manufacturers hitherto have been able to secure relatively only a small amount of sugar, even from rich cane, has naturally awakened a suspicion that the polariscope may give incorrect results when used upon sorghum solutions.

This suspicion is strengthened by the knowledge that many other substances resemble sugar in its effect upon polarized light, and that several compounds of this class have actually been detected in the sugar beet. The question therefore arises—*was sugar the only active substance present in the clarified solutions from the Station's samples?*

Sugar, dissolved in water, turns a ray of polarized light *to the right*, in proportion to the concentration of the solution. If the solution is strongly acidified and heated to 65° C., the sugar will be destoyed, but the products of its decomposition turn a ray of polarized light *to the left*, the degree of rotation depending both upon the concentration of the solution and its temperature. If polarized, when heated to a point between

86° and 90° C., the solution becomes inactive, having no more effect upon polarized light than pure water.

Of all optically active substances at present known, sugar alone is affected in this manner by acids and heat. It is therefore a relatively easy matter to answer the above question.

The polariscope indicated 62.8° *to the right* when a solution was tested which contained 16.35 grammes of pure sugar in a definite volume of water.

It indicated 25.08° *to the left* when the same solution, previously acidified and heated, was cooled to 8° C., and retested; when, however, the test was made at 90° C., the readings were 0.8° and 1.0° *to the right*. The observation tube was made of brass, gold plated, to resist acids.

The solutions from the fifteen samples, taken as above described, were also tested at 90° C.; without exception, they too gave 0.8° rotation *to the right*.

The solutions therefore reacted as pure sugar solutions only can act. It is therefore reasonably certain that sugar was the only optically active compound present in the solutions from the Station's samples.

EXPLANATION OF THE FOLLOWING TABLE:

The following table may be studied from five standpoints.

1. To what extent, and at what expense has sugar production been increased by fertilizers?
2. Is the increased amount of sugar per acre due to improvements in the quality or to gains in the quantity of cane?
3. What element exerts most marked influence upon sugar production?
4. What effect followed the use of phosphoric acid?
5. Is the sulphate or muriate of potash to be preferred in the cultivation of sorghum?

1.

By comparing plot 16 with plots 2, 3 and 4, it may be seen that nitrogen increased the sugar yield per acre by 1,489 lbs. The increase due to phosphoric acid was 1,340 lbs., while that due to muriate of potash was 1,675 lbs. As the unmanured plot gave but 1,255 lbs. per acre, it is evident that the yield of sugar was more than doubled by the application of either nitrogen, phosphoric acid or potash.

The largest increase per acre was caused by the combination of nitrogen and potash upon plot 6. This amounted to 1,979 lbs. As the combination cost seven dollars per acre, the expense of the fertilizers can be estimated at three and one-half mills, only, per pound of sugar.

The use of muriate of potash alone, was, relatively, even more profitable, 1,675 lbs. of sugar resulting from an investment for fertilizers of three dollars per acre. This investment, therefore, amounted to less than two mills per pound of sugar.

2.

The comparison of plot 16 with plots 2, 3 and 4, shows that the application of fertilizers was followed by an increase of from seven to nine tons of cane per acre. The percentage of sugar was also influenced by the fertilizers; the exact amount of this increase in each case can be learned by the following calculation.

Plot 6 yielded at the rate of 44,370 lbs. of cane per acre. Had the quality of this cane simply equaled that from the unmanured plot No. 16, its total yield of sugar would have been 2,638 lbs. per acre (44,370 x 6.17 per cent.) The total yield from

Rio Grande Plantation—Early Orange Sorghum.

TONNAGE OF CANE—SUGAR PER ACRE—SUGAR WASTED BY MILLING.

Fertilizers. Kind and Quantity Used per Acre.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						Potash as Muriate.				Potash as High Grade Sulphate.						
		Nitrogen, 22.50 lbs. from Nitrate of Soda.	Phos. Acid, 52.50 lbs. from Bone Black Superphos.	Potash, 75.00 lbs. from Muriate of Potash.	Nitrogen, 22.50 lbs. Phos. Acid, 52.50 "	Nitrogen, 22.50 lbs. Potash, 75.00 "	Phos. Acid, 52.50 lbs. Potash, 75.00 "	Nitrogen, 22.50 lbs. Phos Acid, 52.50 " Potash, 75.00 "	Barn-yard Manure, 20 Tons,	Potash, 80.00 lbs. from Sulphate of Potash.	Potash, 80.00 lbs. Phos. Acid, 52.50 "	Potash, 80.00 lbs. Nitrogen, 22.50 "	Potash, 80.00 lbs. Nitrogen, 22.50 " Phos. Acid, 52.50 "	Potash, 80.00 lbs. Nitrogen, 22.50 " Phos. Acid, 105.00 "	Land Plaster, 400 lbs.	No Fertilizer.
Cost of Fertilizers per acre..	.....	$4.05	$3.67	$3.00	$7.72	$7.00	$6.67	$.0.72	.....	$4.20	$7.87	$8.25	$11.92	$15.59	$1.50	.....
Per cent. of Leaves and Seed Tops	.....	21.80	21.70	20.50	24.40	18.80	19.30	19.00	18.40	21.00	14.00	19.20	20.80	22.00	24.00	23.00
Pounds of unstripped and untopped cane per acre....	.....	38210	34330	39170	37650	44370	39820	39920	35050	33640	33770	34060	34350	32420	19610	20340
Per c. of Total Sugar in unstrip'd and untop'd cane..	.....	7.18	7.56	7.48	6.57	7.29	7.14	7.50	6.26	7.50	8.19	8.30	7.54	7.46	6.46	6.17
Total amount of Sugar in pounds per acre	.....	**2744**	**2595**	**2930**	**2477**	**3234**	**2843**	**2994**	**2194**	**2523**	**2732**	**2830**	**2590**	**2419**	**1267**	**1255**
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gallons of Mill Juice per ton of uns'p'd a. unt'p'd cane	.....	77.10	87.70	81.20	83.50	83.10	77.40	81.90	83.60	83.80	70.20	75.90	76.90	84.10	75.00	90.90
Pounds of Mill Juice per ton of uns'p'd a. unt'p'd cane	.....	683	774	722	740	736	686	728	743	747	626	675	684	750	667	808
Pounds of Sugar in 100 lbs of Mill Juice	.....	8.69	8.23	9.96	8.89	9.70	9.48	9.96	9.12	11.30	11.21	11.38	11.16	11.03	8.87	9.18
Pounds of Sugar in Mill Juice from one ton of cane	.....	59.40	63.70	71.90	65.80	71.40	65.00	72.50	67.80	84.40	70.20	67.80	76.30	82.70	59.20	74.20
Pounds of Sugar in Mill Juice per acre	.....	**1135**	**1094**	**1409**	**1239**	**1584**	**1294**	**1447**	**1189**	**1420**	**1186**	**1308**	**1311**	**1241**	**581**	**755**
Per c of Total Sugar secured by milling uns'p'd cane....	.....	41.00	42.20	48.10	50.00	49.00	45.50	48.30	54.20	56.20	43.40	46.20	50.60	51.30	45.80	60.00
Per c. of Total Sugar wasted by milling unstrip'd cane	.....	59.00	57.80	51.90	50.00	51.00	54.50	51.70	45.80	43.80	56.60	53.80	49.40	48.70	54.20	40.00
Tons of unstripped and untopped cane per acre	.....	19.11	17.17	19.59	18.83	22.19	19.91	19.96	17.53	17.82	16.89	17.03	17.18	16.21	9.81	10.17

this plot was found, however, to be 3,234 lbs.; the improvement in the quality of cane due to fertilizers was therefore 596 lbs. of sugar. As the total gain upon this plot was 1,979 lbs., it follows that thirty per cent. of the increased yield of sugar resulted from improvement in the quality of the cane, and seventy per cent. from gains in tonnage.

Muriate of potash used alone exerted exactly the same influence, thirty per cent. of its increased sugar yield being due to improvement in quality. Adopting these results as a temporary standard and using the same method of calculation, it follows that phosphoric acid improved the quality of the cane at the expense of its quantity, while nitrogen increased the quantity at the expense of its quality. Barn-yard manure, plot 9, illustrates the extreme in this direction, its increase of 939 lbs. of sugar per acre being due entirely to gains in tonnage; the quality of its cane being inferior to that from the unmanured plots.

3.

By referring to 6, 7, 8 and 12, the only plots from which the sugar yield exceeded 2,800 lbs. per acre, it may be noted that potash was the only element present without exception in every case. The conclusion is, therefore, that potash was the element which exerted most marked effect upon sugar production.

4.

By comparing plot 3 with 2 and 4, it is evident that phosphoric acid exerted less favorable influence upon sugar production than either nitrogen or muriate of potash. When it was combined with nitrogen, plot 5, the yield of sugar fell 267 lbs. below that from nitrogen alone; when combined with muriate of potash, plot 7, the sugar yield fell 87 lbs. below that from potash alone, and when combined with both potash and nitrogen, the sugar yield declined in both cases exactly 240 lbs. (Compare 8 and 13 with 6 and 12.) Further, when the quantity of phosphoric acid was doubled, an additional loss of 170 lbs. of sugar occurred (plots 13 and 14). The same effect was equally noticeable in the College Farm experiments of 1883. Phos. acid in comparison with the other fertilizing elements in every case positively decreasing the amount of sugar per acre.

The opinion at present entertained is that this element hastens the ripening of the plants, and that in the above experiment the report would have been favorable for phosphoric acid had the samples been drawn and the experiment closed two or three weeks earlier in the season.

5.

As far as tonnage of cane and weight of sugar per acre are concerned, muriate of potash and its combinations in all cases excel the sulphate of potash; the highest percentages of sugar, however, were found in canes from sulphate of potash plots.

The calculations used above may be also employed to indicate the effect of the sulphate, compared with th at of the muriate, upon the quality of cane.

In case of plot 6, thirty per cent. of the increased sugar yield was due to improvements in quality; in case of plot 12, forty per cent. of the increased sugar yield was due to improvements in the quality of the cane; in this respect, therefore, the sulphate excels the muriate. The importance of securing cane with the highest possible percentage of sugar is noted in discussing diffusion later in the report.

In order to test the differences between canes fertilized with muriate and sulphate of potash—two large tracts, one eight and one-half acres, the other nine acres, were

taken for experiment. These areas were selected in order to have material enough for a "strike" from the large vaccum pan.

For five years in succession these fields had been cropped with sorghum, but in all cases the yield of cane had been unsatisfactorily.

A plain superphosphate made from bone ash was sown broadcast on both tracts at the rate of 200 lbs. per acre. In addition to this, 200 lbs. of muriate of potash per acre was used upon one field and an equivalent amount of potash, in the form of high grade sulphate, upon the other field.

The muriate of potash tract yielded fourteen tons, and the sulphate of potash tract nearly eleven tons per acre.

The cane from each plot was milled and its juice handled separately. The sugar boiler, Mr. Schatte, claimed that the "pan" from the "muriate" cane was the best one of the season; the yield of sugar was sixty pounds per ton of unstripped and untopped sorghum.

The mill juice from the cane grown with sulphate of potash was very dark colored and could not be properly clarified by the usual method; for this reason it boiled badly in the vacuum pan and the experiment was abandoned.

The cause of this trouble may be entirely foreign to the fertilizers, but the higher price of the sulphate and its relatively low yields of sugar per acre, at present outweigh its heavier yield of sugar per ton of cane.

Briefly the effects of fertilizers may be summed as follows:

A. In nearly every case, the yield of sugar per acre was doubled by the use of either nitrogen, phosphoric acid or potash; in one case (plot 6) the increase was 157 per cent.

B. Of all the elements, potash in the form of muriate exerted most marked effect upon the yield of sugar per acre; its best results being secured when it was combined with nitrogen.

In the form of sulphate, potash affected most favorably the yield of sugar per ton of cane; its best result was also secured when it was aided by nitrogen.

III.

MILLING AND DIFFUSION COMPARED AS METHODS FOR SEPARATING SUGAR FROM SORGHUM.

After the cane from the fifteen experimental plots had been weighed, each portion was separately topped with a guillotine and milled.

When desirable, the mill grinds a bed of cane five feet wide and seven inches thick at the rate of fifteen feet per minute. With the experimental cane the rate was seven feet only per minute, special efforts being made to keep this bed uniform in thickness.

The juice, as it came from the mill, was carefully sampled, measured and analyzed; in this way the quantity of sugar expressed from the cane was accurately determined for each experimental plot. For convenience the results in every case have been tabulated, as *pounds of sugar in the mill juice from one acre of sorghum.*

The total weight of sugar in an acre of cane was also determined in every instance the losses of sugar in the mill bagasse can therefore be readily calculated.

These losses, it will be seen, vary considerably; the maximum being *fifty-nine per cent.*, and the minimum *forty per cent.* of the total sugar produced by the plant.

These enormous wastes are not due to poorly constructed machinery, for the Rio Grande mill is admitted by experts to be one of the best in operation; nor are they

caused by careless management, for an accurate daily record is kept of the mill juice, and constant efforts are made to increase its quantity. The number of gallons of juice secured from a ton of cane appears small; this in a measure is due to the method of calculation followed. A ton of unstripped and untopped sorghum, of the early orange variety, at the beginning of the milling season loses approximately, *thirty per cent.* of its weight, by the removal of seed tops, leaves and leaf sheaths; in reality therefore a ton contains 1,400 pounds only, of material fit for sugar making. Ninety gallons of mill juice from a ton of unstripped and untopped cane is equivalent to one hundred and thirty gallons if calculated upon thoroughly cleaned stalks. This is the basis upon which such calculations should be made.

A well-built cane mill is properly regarded as a model of mechanical skill and workmanship; regarded, however, as a machine for extracting sugar from sorghum, it must be conceded that it is expensive, wasteful and faulty in principle. This opinion is spreading rapidly and mills will soon be forced to make room for diffusers.

The disadvantages arising from milling unstripped cane have been recognized by the Rio Grande Sugar Company for two or three years; the expenses, however, of constructing and testing a stripping machine have been estimated higher than the probable benefits resulting from its use. The advantages to be gained by working thoroughly stripped cane have therefore been carefully studied during the past season.

The following experiments were made in the sugar house by Superintendent Hughes and the Station's Chemist. The objects were:

1. To compare mill products from unstripped cane with diffusion products from stripped cane.

2. To compare diffusion products from unstripped cane with those from stripped cane.

The results of the comparison are as follows:

A. With regard to the *quantity* of sugar extracted from sorghum: mill yields from unstripped cane must be increased by eighty-four per cent., in order to equal diffusion yields from stripped cane.

B. With regard to the *quality* of products: mill juice from unstripped cane is inferior to diffusion juice from stripped cane:

1. In purity, taste and color,
2. In concentration; mill juice from outstripped cane containing less sugar by eighteen per cent. than diffusion juice from stripped cane.

C. Diffusion products from unstripped cane are inferior to those from stripped cane:

1. In color, taste and purity,
2. In concentration. Stripping cane effects a saving of thirty-three per cent. in the weight of water to be evaporated.

DESCRIPTION AND DETAILS OF EXPERIMENTS.

I.

TO COMPARE MILL PRODUCTS FROM UNSTRIPPED CANE WITH DIFFUSION PRODUCTS FROM STRIPPED CANE.

In drawing this comparison the following points have been considered:

1. The total amount of sugar in the cane.
2. Losses of sugar caused by milling unstripped sorghum.

3. The diffusion of stripped cane.
4. Losses of sugar in diffusion bagasse.
5. Milling and diffusion compared, with reference to the amounts of sugar separated from the cane.
6. The quality of diffusion products from stripped cane compared,
   1. With mill products from stripped cane;
   2. With mill products from unstripped cane.
7. Conclusion.

1.

THE TOTAL AMOUNT OF SUGAR IN THE CANE.

A quantity of Early Orange sorghum, weighing twenty-six tons, was divided into fifteen portions, from each of which was drawn a weighed sample of approximately one hundred pounds.

After each sample had been stripped and topped it was passed through a Lion cutter and crusher and thoroughly mixed; sub-samples of four pounds were then taken, dried at 120 deg. Fahr., and preserved for analysis.

The average results from fifteen determinations show that one ton of this unstripped and untopped cane contained one hundred and forty-five pounds of sugar.

2.

LOSSES OF SUGAR CAUSED BY MILLING UNSTRIPPED SORGHUM.

The fifteen portions of green cane, of which the smallest exceeded one ton in weight, were topped with a guillotine and slowly ground in an excellent mill. The juice from each portion was carefully measured and sampled.

The average result from fifteen analyses shows that the mill expressed seventy pounds of sugar from each ton of unstripped and untopped cane.

From the one hundred and forty five pounds of sugar contained in one ton of this sorghum, the mill therefore expressed only seventy pounds, or forty-eight and three-tenths per cent. Consequently more than one-half of the sugar produced by the plant was wasted by the mill bagasse.

3.

DIFFUSION OF STRIPPED CANE.

At Rio Grande there are ten diffusers, each of which has a capacity of seventy-two cubic feet, and consequently can hold forty-five hundred pounds of water.

When in operation each of these cells should be packed with finely-cut sorghum and closed air-tight; water should then be forced through the bottom of the first cell until it flows from the air cock at the top. In passing through this cell the water takes up a very large portion of the total sugar stored in the cane, but the solution is too dilute to admit of economical working; it is therefore slowly forced in succession through the cane in the remaining nine cells and when finally discharged it should be nearly as concentrated as mill juice.

Water fills the first cell whenever dilute juice is forced into the second, third or following cells, consequently when the juice flows from the last diffuser, the cane sections in the first will have been extracted ten times with pure water and should then contain traces only of sugar. This extracted cane is called diffusion bagasse and is removed to the compost field. Cell No. 1 is then refilled with fresh sorghum and becomes No. 10 in battery. When the contents of cell No. 2 have been leached ten

times with water and dilute juice, this cell is also cleaned and refilled with fresh sorghum. As each following cell in turn is treated in a similar manner the process is made continuous.

4.

EXPERIMENT MADE TO DETERMINE THE AMOUNT OF SUGAR LEFT IN DIFFUSION BAGASSE.

One hour's work with thirty men proved conclusively that with unskilled labor it would cost nine dollars per ton to *completely* removes leaves, including the entire *sheaths*, from selected canes. Diffusion upon a large scale with carefully stripped sorghum was therefore impracticable, and the following trials were made in a hastily-constructed apparatus, which allowed only one hundred and sixty pounds of cane to be treated in each experiment.

The following tabulation is intended to show the working of diffusion in cell No. 1; a pound of water being used in each charge for every pound of stripped and topped cane:

	Brix.	Temperature.	Percentage of sugar in juice.	Pounds of juice discharged to 100 pounds of cane.	Pounds of sugar from 100 lbs. of cane.
Discharge No. 1	5.2 deg.	14 deg. R.	3.71 pr. ct.	90.0 lbs.	3.34 lbs.
" No. 2	3.4 "	"	2.46 "	90.6 "	2.23 "
" No. 3	2.1 "	"	1.51 "	90.6 "	1.37 "
" No. 4	1.2 "	"	0.91 "	92.7 "	0.84 "
" No. 5	0.8 "	"	0.60 "	91.7 "	0.55 "
" No. 6	0.6 "	"	0.52 "	91.7 "	0.48 "
" No. 7	0.3 "	"	0.50 "	91.7 "	0.46 "
" No. 8	0.2 "	"	0.20 "	93.7 "	0.19 "
" No. 9	0.0 "	"	0.12 "	94.8 "	0.12 "
" No. 10	0.0 "	"	0.06 "	96.0 "	0.06 "
Total amount of sugar extracted from 100 pounds of cane					9.64 lbs.

The diffusion bagasse, removed after discharge No. 10, was dried and ground to a flour; from this flour boiling alcohol extracted ninety-five one hundredths of one per cent. of sugar, calculated upon the original cane.

The total amount of sugar present before diffusion was determined in a sub-sample from nearly one hundred and fifty pounds of finely cut and thoroughly mixed cane, from which seed tops, leaves and leaf sheaths had been carefully removed. The following balance, therefore, can be readily drawn:

DIFFUSER NO. 1.

	DR.	CR.
To sugar contained in 100 pounds of cane	10.87 lbs.	.....
By sugar discharged in diffusion bagasse	.....	0.95 lbs.
By sugar discharged in dilute solutions	.....	9.64 "
By sugar lost in manipulation	.....	0.28 "
	10.87 lbs.	10.87 lbs.

Of the total sugar present in this cane 88.7 per cent. was found in the diffusion juice; 8.8 per cent. in the diffusion bagasse and 2.5 per cent. appears to have been lost in manipulation.

A ton of sorghum carrying one hundred and forty-five pounds of sugar will therefore yield one hundred and twenty-nine pounds to diffusion.

5.

MILLING AND DIFFUSION COMPARED WITH REFERENCE TO THE AMOUNTS OF SUGAR SEPARATED FROM THE CANE.

Under the above conditions, out of one hundred and forty-five pounds of sugar contained in one ton of cane, the mill secures seventy pounds and the diffusers one hundred and twenty-nine pounds.

Mill products, therefore, must be increased by eighty-four per cent. before they can equal diffusion products.

6.

THE QUALITY OF DIFFUSION PRODUCTS FROM STRIPPED CANE, COMPARED.

1. *With mill products from stripped cane;*
2. *With mill products from unstripped cane.*

In the above description of a diffusion battery it was stated that the sugar solutions from the first cell were too dilute to admit of profitable working and that they were therefore passed in succession through ten cells full of cane in order that they might approximate mill juice in concentration.

The following tabulation illustrates the changes which take place as the juice passes from diffuser to diffuser. The cane used was first stripped and topped, then passed through a cutter and crusher and thoroughly mixed. A portion was ground in a hand mill in order to determine the concentration of mill juice, and a second portion was dried, ground to a flour and extracted with boiling alcohol, in order to determine the total amount of sugar present; this was found to be 10.28 per cent.

In the following trial one and two-tenths pounds of water or juice were used for each pound of cane; it was allowed to act in each diffuser for ten minutes at 140° F.:

	Brix.	Temperature.	Percentage of sugar in juice.	Purity.
Diffuser No. 1	4.2 deg.	18 deg. R.	2.93	69.70
" No. 2	6.6 "	"	4.21	63.80
" No. 3	8.8 "	"	5.84	66.30
" No. 4	10.4 "	"	6.88	66.10
" No. 5	11.9 "	"	7.66	64.30
" No. 6	13.3 "	"	8.92	67.10
" No. 7	14.4 "	"	9.74	67.60
" No. 8	15.2 "	"	10.23	67.30
" No. 9	16.0 "	"	10.87	68.00
" No. 10	17.0 "	"	11.70	68.80
Mill juice from stripped cane	18.8 deg.	15 deg. R.	11.85	63.00 deg.
Mill juice from unstripped cane, average of fifteen analyses	15.1 deg.	15 deg. R.	9.88 pr. ct.	61.20 deg.

1.

THE QUALITY OF DIFFUSION JUICE FROM STRIPPED CANE COMPARED WITH THAT OF MILL JUICE FROM STRIPPED CANE.

The above table indicates that diffusion juice from cell No. 10 contained 11.70 per cent. of sugar, while mill juice from another portion of the same cane contained 11.85 per cent.; in concentration therefore these two juices are practically equal. In purity, however, the diffusion juice excelled by nearly six degrees, that is, one hundred pounds of solid matter from diffusion juice contained 68.8 lbs. of sugar, while one hundred pounds of solid matter from mill juice contained but 63 lbs. of sugar.

In color, taste and freedom from marked acidity, these juices were practically equal.

THE QUALITY OF DIFFUSION JUICE FROM STRIPPED CANE COMPARED WITH THAT OF MILL JUICE FROM UNSTRIPPED CANE.

At the beginning of this report it was noted that the twenty-six tons of unstripped and untopped cane, used in the milling experiment, averaged 7.25 per cent. of sugar.

The smaller quantity of cane used in the above diffusion trial contained 7.20 per cent. of sugar, equivalent to 10.28 per cent. if calculated upon stripped and topped weights. A fair comparison can therefore be drawn in regard to the quality of diffusion products from stripped cane, and mill products from unstripped cane.

For convenience of reference all analyses are included in the above table. It can there be seen that mill juice from unstripped cane is no richer in sugar than diffusion juice from cell No. 7, while in purity it fails to equal it by 6.5 degrees.

In order to equal diffusion juice from cell No. 10, the sugar in the mill juice from unstripped cane must be increased by eighteen per cent. and the purity of mill juice must be improved by nearly eight degrees.

7.

CONCLUSIONS.

The conclusions drawn in the comparison of mill products from unstripped cane with diffusion products from stripped cane may be summed up as follows:

A. The quantity of sugar expressed from unstripped cane by milling must be increased by eighty-four per cent. in order to equal that secured by diffusing stripped cane.

B. The sugar must be increased by nearly eighteen per cent., and the purity must be improved by nearly eight degrees before mill juice from unstripped cane can equal diffusion juice from stripped cane. The diffusion juices also excel both in color and taste.

II.

COMPARE DIFFUSION PRODUCTS FROM STRIPPED AND UNSTRIPPED CANE.

In the comparison of diffusion products from stripped and unstripped cane, the following points have been particularly noted:

1. The volume of water to be evaporated in order to secure a definite weight of sugar.
2. The color, purity and taste of the products.

For comparison with the preceding diffusion trial a quantity of topped but unstripped sorghum was selected which analyzed 8.08 per cent. of sugar, equivalent to 10.65 per cent. if calculated upon a carefully stripped basis.

This cane was cut, crushed, mixed and sub-sampled in the manner already described. In the diffusers it was also treated in the customary manner as far as temperature and time of digestion were concerned; the relative amount of water used, however, was very much increased.

Stripped sorghum is comparatively dense, a cubic foot weighing thirty-seven pounds; unstripped sorghum is bulky, one cubic foot weighing approximately only twenty-one pounds. A diffuser of seventy-two cubic feet capacity would, therefore, hold twenty-six hundred pounds of stripped cane and nineteen hundred pounds of water. The same diffuser, however, would hold only fifteen hundred pounds of unstripped cane and three thousand pounds of water. In the following trial therefore two pounds of water were used for each pound of unstripped cane.

For convenience of comparison the results obtained by diffusing stripped sorghum are here reprinted. A description of the details of this experiment may be found upon a preceding page.

DIFFUSER.	DIFFUSION OF UNSTRIPPED CANE.				DIFFUSION OF STRIPPED CANE.			
	Brix.	Temperature.	Per cent. Sugar.	Purity.	Brix.	Temperature.	Per cent. Sugar.	Purity.
No. 1	2.0 d.	16 d. R.	1.93	96.6	4.2 d.	18 d. R.	2.93	69.7
No. 2	3.7	"	2.33	63.0	6.6	"	4.21	63.8
No. 3	5.0	"	3.14	62.9	8.8	"	5.84	66.3
No. 4	6.6	"	4.02	60.9	10.4	"	6.88	66.1
No. 5	8.3	"	4.85	58.5	11.9	"	7.66	64.3
No. 6	9.7	"	5.63	58.0	13.3	"	8.92	67.1
No. 7	10.4	"	6.06	58.2	14.4	"	9.74	67.6
No. 8	11.9	"	6.84	57.5	15.2	"	10.23	67.3
No. 9	12.8	"	7.35	57.4	16.0	"	10.87	68.0
No. 10	.....	.....	.....	.....	17.0	"	11.70	68.8
Mill juice	16.7	15 d. R.	9.83	58.3	18.8	15 d. R.	11.85	63.0

THE VOLUME OF WATER TO BE EVAPORATED IN ORDER TO SECURE A DEFINITE WEIGHT OF SUGAR.

The following calculations are based partly upon facts stated in the above table, and partly upon analyses showing that a ton of unstripped and untopped sorghum contains one hundred and forty-five pounds of sugar, of which ninety per cent. or one hundred and thirty pounds can be secured by diffusion.

1. The solution from the ninth diffuser working upon unstripped cane, analyzed 7.85 per cent. It would require 1,769 pounds of such a solution to contain one hundred and thirty pounds of sugar.

2. The solution from the ninth diffuser working upon stripped cane, analyzed 10.87 per cent. It would require 1,195 pounds of such a solution to contain one hundred and thirty pounds of sugar.

In order then to obtain a definite weight of sugar, it follows, that if cane is stripped before it is diffused a saving of nearly thirty-three per cent. will be effected in the weight of water to be evaporated. On one hundred and sixty tons of cane, an ordinary day's work at Rio Grande, this saving would amount to nearly 11,000 gallons.

4.

THE PURITY, TASTE AND COLOR OF DIFFUSION PRODUCTS FROM UNSTRIPPED CANE.

The most serious objection to unstripped cane lies in the effect of leaves and leaf sheaths upon the purity, taste and color of diffusion products.

PURITY.

In determining the purity of a solution, its percentage of sugar is divided by its specific gravity, expressed by the Brix hydrometer. The term is therefore used to represent the weight of sugar relative to that of other matter held in solution. When

the purity is stated to be 60, it signifies that out of every one hundred pounds of material dissolved in water, sixty pounds are sugar.

In cultivating, harvesting, milling and all subsequent manipulations, the aim should be to increase the purity of the cane juice; for the higher the purity the larger will be the yield of crystallized sugar.

By referring to the table it is evident, for both mill and diffusion products, that the juice from stripped cane is much purer than that from unstripped cane.

It is also evident, in case of the unstripped cane, that the mill juice is superior to diffusion juice, from cell No. 9; also that cell No. 9 contains the most impure juice in the battery.

In case of stripped cane, however, the diffusion juice from cell No. 9 is five degrees purer than the mill juice; the average purity of the juice in the last five cells is also higher than that in the first five.

These differences in quality between products from stripped and unstripped cane are due to the leaves and leaf sheaths alone. Direct experiments both by milling and by diffusion sustain this opinion. The leaves used were moistened before they were ground. Diffusion products came from cell No. 6.

PURITY OF MILL AND DIFFUSION PRODUCTS FROM LEAVES AND LEAF SHEATHS.

	Brix.	Temperature.	Per cent. Sugar.	Purity.
Mill products	6.0	16	1.14	19.0
Diffusion products	3.6	17	0.49	13.6

Out of every one hundred pounds of solids, separated from leaves, &c., by diffusion, there are eighty-six pounds of worse than worthless matter and fourteen pounds only of sugar. This fact offers a reasonable explanation for the low yields of crystallized sugar and the relatively high yield of syrup, common in the sorghum industry. There seems to be but one rational way of avoiding this trouble, that is to construct a stripping machine; for all of this injurious matter can be kept out of the sugar house, but cannot be readily removed if allowed to go into solutions.

COLOR AND TASTE OF DIFFUSION PRODUCTS FROM UNSTRIPPED CANE.

It has been already stated that in color, taste and acidity, diffusion juices from stripped cane equal mill juice from stripped cane.

In comparison diffusion juice from unstripped cane was dark colored, bitter and decidedly acid.

The diffusion juice from the leaves and leaf sheaths was very dark even when it was drawn from the first diffuser. This color deepened rapidly as the juice grew more concentrated; the bitter taste also became intense. A portion of this juice was allowed to stand over night, and the next morning putrefaction was evident.

The fact that juice of low purity gives very poor yields of crystallized sugar and relatively high yields of syrup has been already noted. Sales of syrup are based almost exclusively upon color and taste, a few shades either way having greater influ-

ence upon the market price than noticeable variations in percentages of sugar. From a financial standpoint, therefore, the effect of leaves upon the color and taste of syrups is of extreme importance.

This effect has been seen upon a large scale at Rio Grande. During this past season, as already stated, the diffusion battery was operated for twenty-six days upon mill bagasse from unstripped cane; this was done partly to avoid waste of sugar, and partly to test the apparatus and train the workmen.

The juice was skillfully handled and clarified, but, owing to the color and taste due to leaves, the two hundred and twenty-nine barrels of heavy syrup secured are not worth more than one-half as much as an equal quantity of the standard syrup made at this house from mill juice.

CONCLUSION.

The comparison of diffusion products from stripped and unstripped cane indicates that the financial success of the sorghum sugar industry now depends largely upon the removal of leaves and leaf sheaths.

1. Because their presence in the diffusers increases the amount of water to be evaporated by thirty-three per cent.

2. Because they impart to diffusion juices a very dark color and intensely bitter taste, the effect of which is to reduce the market value of syrups at least one-half.

IV.

SUMMARY.

When the above conclusions, drawn under the heading II. and III., are studied in connection with the approximately correct reports of expenses and sales, under present working processes, the following general statements seem warrantable:

1. If carefully stripped cane only is used at Rio Grande, the substitution of diffusion for milling will be followed by financial success.

2. If unstripped cane is diffused, financial success will still be problematic:

   1. Because of evaporation expenses;

   2. Because of a serious depreciation in the market value of syrups, due to their inferior taste and color.

GEO. H. COOK, *Director.*

NEW BRUNSWICK, N. J., December 21st, 1885.

APPENDIX.

THE LABOR LEGISLATION OF NEW JERSEY.

LAWS RELATING TO THE EMPLOYMENT OF LABOR AND AFFECTING THE INTERESTS OF WAGE-EARNERS IN THIS STATE.

BUREAU OF LABOR STATISTICS.

An Act to establish a bureau of statistics upon the subject of labor, considered in all its relations to the growth and development of state industries.

WHEREAS, as guardians of the public welfare, the state authorities are called upon to consider and in all legitimate ways endeavor to improve the physical, mental and moral condition of the state, especially those whose daily toil contributes so largely to the prosperity of manufacturing and other productive industries; therefore,

1. Be it enacted by the Senate and General Assembly of the State of New Jersey, That there shall be appointed from this state, on nomination of the governor, to be confirmed by the senate, some suitable person to act as chief of, and who shall constitute a bureau of statistics with headquarters in the state house, who shall hold his office for five years and until his successor is appointed.

2. That the duties of such bureau shall be to collect, assort, systematize, and present in annual reports to the legislature, on or before the last day of October in each year, statistical details relating to all departments of labor in the state, especially in its relations to the commercial, industrial, social, educational and sanitary condition of the laboring classes, and in all suitable and lawful ways foster and enlarge our manufacturing and every other class of productive industry, with the view to their permanent establishment upon a prosperous basis, both to the employer and the employed.

3. That the said chief shall have power to examine witnesses under oath.

4. That the compensation of said chief shall be twenty-five hundred dollars annual salary, and he is hereby authorized, in concurrence with the governor and comptroller, to employ such assistance and incur such expense in the discharge of his official duties, not exceeding the sum of two thousand dollars, including printing, stationery, traveling expenses, postage, and so forth; provided, that no assistant shall receive more than four dollars per day.

5. That the treasurer of this state is hereby authorized to pay from any money in the treasury not otherwise appropriated, and upon receipt of vouchers by the said

APPENDIX.

THE LABOR LEGISLATION OF NEW JERSEY.

Laws Relating to the Employment of Labor and Affecting the Interests of Wage-Earners in this State.

(Compiled from the Public Statutes.)

chief, such sums of money as may be necessary to meet the salaries and incidental expenses incurred by the provisions of this act.

Approved March 27th, 1878. P. L., Chapt. 105.

SUPPLEMENT.

1. That the sum of two thousand dollars* be and is hereby appropriated for the current expenses of said bureau, which amount shall include every expense except printing; the printing of the necessary blanks, pamphlets, etc., shall be paid for in the same manner as is provided for all other state reports presented to the legislature.

2. That the assistant provided for in the fourth section of the act to which this is a supplement, be and he is hereby constituted secretary of said bureau, and he shall receive an annual salary of twelve hundred dollars.

3. That the treasurer of this state is hereby authorized to pay from any money not otherwise appropriated, the sums provided for in the first and second sections of this act.

Approved March 14th, 1879. P. L., Chapt. 112.

ARBITRATION.

An Act to provide for the arbitration of labor disputes.

WHEREAS, Disputes between workingmen and their employers frequently result in protracted strikes, which cause great loss to both parties and to the community at large, and disturb the amicable relations which ought to exist between labor and capital; and whereas, it is desirable to provide some legal method for submitting such differences to arbitration, with a view to an honorable, satisfactory and speedy settlement; therefore,

1. Be it enacted by the Senate and General Assembly of the State of New Jersey, That if a majority of the employes in an manufacturing establishment, or in any particular department thereof, shall give notice to their employer or employers, in writing, signed by themselves, that they are dissatisfied with the terms or conditions on which they are employed, or with the the wages they are receiving, or with any proposed reduction of their wages or proposed alteration of the terms or conditions on which they are employed, and that they propose to submit the matters complained of to arbitration, and shall name an arbitrator to represent them; and if such employer or employers cannot adjust such differences, it shall be the duty of such employer or employers, if they choose to accept this method of compromise, to nominate and appoint in writing an arbitrator to represent him or them, and to give notice to said employes of such appointment.

2. That the two arbitrators so as aforesaid appointed, shall forthwith meet and proceed to select a third arbitrator; and the said three arbitrators shall without unnecessary delay notify the employes and the employer or employers of the time and place, when and where they will meet to hear arguments on the matters in dispute, which meetings shall be held under such conditions, rules and regulations as the said arbitrators may mutually agree upon; the questions at issue shall be submitted to the arbitrators in writing, and their decision shall be confined to the questions so sub-

* 4,000 for 1886.

mitted; either of such arbitrators may administer an oath or affirmation to any person testifying before them, and any person so sworn who shall testify falsely, shall be deemed guilty of perjury; either of the parties to such arbitration may be represented before the arbitrators by counsel, if they so desire, and the arguments may be oral or in writing, as the parties themselves may respectively prefer.

3. That the finding of the said arbitrators shall be reduced to writing, and a copy thereof served upon each of the parties to the dispute, or upon their respective representatives, and shall be deemed to be binding upon both parties submitting the matters in dispute to arbitration, and shall take effect from the date of the finding, unless some other time is fixed in the finding for the taking effect thereof.

4. That the costs of the arbitration shall be fixed and paid as the parties may previously or mutually agree, and if not so agreed upon, they shall be fixed and paid as the arbitrators themselves may decide.

Approved March 10th, 1880. P. L., Chapt. 138.

FACTORY ACTS.

An Act to regulate elections.*

177. That eight hours shall constitute a day's labor on any day whenever any general or municipal election shall be held.

Approved April 18th, 1876.

An Act in relation to legal holidays.†

1. That the first day of January, twenty-second day of February, thirtieth day of May, fourth day of July, Thanksgiving day, twenty-fifth day of December, and all days upon which any general election shall be held for members of assembly, in each year, shall be a legal holiday, and no court shall be held upon said days, except in cases where said courts would now sit upon the first day of the week, and no person shall be compelled to labor upon any of said days by any person or corporation.

Approved April 4th, 1876.

An Act to limit the hours of labor, and to prevent the employment of children in factories under ten years of age.‡

1. Labor performed during a period of ten hours, on any day, in all cotton, woolen, silk, paper, glass and flax factories, and in manufactories of iron and brass, shall be considered a legal day's labor.

2. Hereafter no minor engaged in any factory shall be holden or required to work more than ten hours on any day, or sixty hours in any week; and that hereafter no minor shall be admitted as a worker under the age of ten years in any factory within this state; that if any owner of, or employer in any factory shall knowingly employ any such minor, or shall require any minor over the age of ten years to work more

*Revision, edition of 1877, p. 368.
†Revision, p. 481.
‡Revision, p. 485.

than ten hours a day, or sixty hours in any week, he shall be adjudged to pay a penalty of fifty dollars for each offense, to be sued for and recovered, in any action of debt, in the name of the overseer of the poor of the township in which such minor may be employed, together with costs of suit, and for the benefit of such minor.

Approved March, 1851.

SUPPLEMENT.

That the word factory, where it occurs in the second section of the act to which this is a supplement, shall be construed to mean any building in which labor is employed to fabricate goods, wares or utensils.

Approved February 19th, 1852.

SUPPLEMENT.

That no owner of or employer in any factory shall be adjudged or liable to pay any penalty under the act to which this is a supplement, for employing any minor over the age of sixteen, for the work done or to be done in said factory, and allowing such minor to work under such employment exceeding the time mentioned in the act to which this is a supplement; but in no case shall any minor be employed at an age less than that prescribed by said act; *and provided*, that no such employment shall be compulsory, and the minor, or the parent or guardian of such minor may at any time, by giving the customary notice prescribed in such factory, end such employment or any control in relation thereto different from that permitted by the act to which this is a supplement.

Approved April 21st, 1876.

An act to limit the age and employment hours of labor of children, minors and women, and to appoint an inspector for the enforcement of the same.

1. That after the fourth day of July, one thousand eight hundred and eighty-three, no boy under the age of twelve years, nor any girl under fourteen years of age, shall be employed in any factory, workshop, mine or establishment where the manufacture of any goods whatever is carried on.

2. That on and after the first day of July, one thousand eight hundred and eighty-four, no child between the ages of twelve and fifteen years shall be employed in any factory, workshop, mine or establishment where the manufacture of any kinds of goods whatever is carried on, unless such child shall have attended, within twelve months immediately preceding such employment, some public day or night shool, or some well recognized private school; such attendance to be for five days or evenings every week during a period of at least twelve consecutive weeks, which may be divided into two terms of six consecutive weeks each, so far as the arrangement of school terms will permit, and unless such child, or his parents or guardian shall have presented to the manufacturer, merchant, or other employer seeking to employ such child, a certificate giving the name of his parents or guardian, the name and number of the schools attended, and the number of weeks in attendance, such certificate to be signed by the teacher or teachers of such child; provided, that in case the age of the child be not known, such teacher shall certify that the age given is the true age to the best of his or her knowledge and belief; provided, that in case of orphan children, where necessity may seem to require, the guardian or others having charge of the

same may, upon application to the inspector provided for in this act, receive from him a permit for the employment of such child or children, under such regulations as the said inspector may prescribe.

3. That no child or children under the age of fourteen years shall be employed in any factory, workshop, mill or establishment where the manufacture of any kind of goods is carried on for a longer period than an average of ten hours in a day, or sixty hours in a week.

4. That every manufacturer, merchant or other employer employing any person contrary to the provisions of this act, or who shall be guilty of any violation hereof, shall be guilty of a misdemeanor, and upon conviction be fined for each offense in a sum of not less than fifty nor more than one hundred dollars, and in default of payment of the same, shall be imprisoned in the county jail for not less than thirty nor more than ninety days, and that every head of a family, parent or guardian, who knowingly permits the employment of such children shall be likewise subject to a fine of not more than twenty-five nor less than ten dollars for every child so employed, and for each offense, and in default of such payment, shall be imprisoned in the county jail for a period of not less than ten days nor more than twenty days; a certificate of the age of the minor made by him or her, and by his or her parent or guardian at the time of employment, shall be conclusive evidence of the age of such minor upon any trial for the violation of this act; provided, that the provisions in this act in relation to the hours of employment shall not apply to or affect any person engaged in preserving perishable goods in fruit canning establishments.

5. That the governor shall, immediately after the passage of this bill, appoint, with the advice and consent of the senate, some suitable person, who shall be a resident and citizen of this state, as inspector, at a salary of twelve hundred dollars per year, to be paid monthly, whose term of office shall be for three years; the said inspector shall be empowered to visit and inspect, at all reasonable hours and as often as practicable, the factories, workshops, mines and other establishments in the state where the manufacture or sale of any kind of goods is carried on, and to report to the governor of this state on or before the thirty-first day of October in each year; it shall also be the duty of said inspector to enforce the provisions of this act and prosecute all violations of the same in any recorders' courts of cities and justices' of the peace or other courts of competent jurisdiction in the state.

6. That all necessary expenses incurred by said inspector in the discharge of his duty shall be paid from the funds of the state upon the presentation of proper vouchers of the same; provided, that no more than five hundred dollars shall be expended by him in any one year.

7. That all fines collected under this act shall inure to the benefit of the school fund of the district where the offense has been committed.

8. That all acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

Approved March 5th, 1883. P. L., Chapt. 57.

SUPPLEMENT.

1. That the title of the inspector, under the act to which this act is a supplement, and the deputies hereinafter provided for, shall be, respectively, "factory and workshop inspector" and "deputy inspectors," and it shall be their duty to enforce the provi-

sions of this act, and all other laws relating to the sanitary condition of factories and workshops, and to the employment, safety, protection and compulsory attendance at school of minors, and to institute all suits or actions in the name of the inspector, as in the fifth section hereof provided, for the violation of any of the provisions of this act or the act to which this act is a supplement, but no action shall be begun by any deputy inspector without the written direction of the inspector, and in case of judgment for the penalty in any such suit so instituted the same shall be paid into the treasury of the state, to be used to defray the necessary expenses of the inspector and his deputies.

2. That the inspector appointed under the act to which this act is a supplement, and his successors, shall have authority to appoint, with the approval of the governor and comptroller, two suitable persons, who shall be residents and citizens of this state, as deputy inspectors, who, when appointed, shall hold office until the first day of February next, unless sooner discharged by the said inspector, and which deputy inspectors shall each receive, while acting as such, a salary at the rate of one thousand dollars, to be paid monthly, and shall have like power as the inspector under this act, but shall be governed by, and be subject to the control and direction of, and be liable to be discharged at any time by, the inspector; and the salary of said inspector shall hereafter be eighteen hundred dollars, and said inspector and assistants shall have like right to free passage on all railroads in this state as other state officers now have by law.

3. That the inspector and his deputies shall have power to demand a certificate of physical fitness from some regular practicing physician in the case of minors who may seem to them physically unable to work, and shall have power to prohibit the employment of any minor that cannot obtain such a certificate.

4. That any parent or guardian, when so required by the inspector or one of his deputies, shall furnish to such inspector or deputy, a certificate from the office of registration of births, or, in the absence of such certificate, an affidavit or affidavits of the age of such minor, and if any one shall knowingly swear falsely in any such affidavit, the person or persons so swearing shall be guilty of perjury and liable to indictment and punishment accordingly.

5. That section four of the act to which this is a supplemet shall be amended to read as follows:

[4. That every manufacturer, merchant or other employer employing any persons contrary to the provisions of this act, or who shall be guilty of any violation hereof, shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action of debt in any district court in any city, or before any justice of the peace having due jurisdiction, and that any parent or guardian who knowingly permits the employment of such child or children shall be liable in a like action to a penalty of not more than fifty dollars, as the court shall fix; that such action shall be prosecuted in the name of the inspector; the trial shall proceed as in other actions of debt, and the first process shall be a summons returnable in not less than five days or more than ten after issue, and it shall not be necessary to indorse the same as in qui tam actions; the finding of the court shall be that the defendant has or has not, as the case may be, incurred the penalty claimed in the demand of the plaintiff, and judgment shall be given accordingly; in case an execution shall issue and be returned unsatisfied, the court, on application, after notice to the defendant, may award an execution to take the body of the defendant, and in case such a defendant is com-

mitted under such an execution he shall not be discharged under the insolvent laws of the state, but shall only be discharged by the court making the order for the body execution, or one of the justices of the supreme court, when such court or justice shall be satisfied that further confinement will not accomplish the payment of the judgment and costs; an affidavit of the age of any minor, made by its parent or guardian at the time of its employment, shall be conclusive evidence of the age of such minor upon any trial against a manufacturer or employer for the violation of this act, but any parent or guardian that shall knowingly swear falsely in such affidavit shall be guilty of perjury, and the inspector or deputy inspector shall be authorized, in case they shall find any minor employed under any false affidavit given as aforesaid, to order and compel such minor to desist from work; the provisions of this act in relation to the hours of employment shall not apply to or affect any person engaged in preserving perishable goods in fruit-canning establishments.]

6. That section six of the act to which this is a supplement be amended to read as follows:

[6. That all necessary expenses incurred by said inspector in the discharge of his duty shall be paid from the funds of the state, upon presentation of proper vouchers of the same; *provided*, that not more than one thousand dollars shall be expended by him in any one year.]

7. That all acts or parts of acts inconsistent with this act be and are hereby repealed.

Passed April 17th, 1884. P. L., Chapt. 138.

SUPPLEMENT.

1. That the inspector appointed under the act and the supplement thereto, to which this is a further supplement, and his successors, shall have authority to appoint, with the approval of the governor and comptroller, three suitable persons, who shall be residents and citizens of this state, as deputy inspectors, who, when appointed, shall hold office for a term of one year, at a salary of one thousand dollars per year, to be paid monthly, and shall have like power as the inspector under the act to which this is a further supplement, but shall be governed by and be subject to the control and direction of said inspector.

2. That the inspector of factories and workshops and his deputies shall be furnished with certificates of authority by the secretary of state, and that they shall produce the same if so requested by any occupier of a factory, mine, workshop or establishment.

3. That it will be illegal for any one to personate an inspector of factories or forge his certificate of authority.

4. That it will be illegal for any one to delay the factory inspectors in the exercise of their duties, or to conceal or attempt to conceal any child or children from examination by the inspectors.

5. That every manufacturer, merchant or other person who shall be guilty of any violation of the provisions of this act, shall be liable to a penalty of fifty dollars for each offense, to be recovered in an action of debt in the manner provided in section four of the act to which this is a supplement.

6. That all acts or parts of acts inconsistent with this act be and the same are hereby repealed.

Approved March 22d, 1886. P. L., Chapt. 83.

A General Act relating to factories and workshops and the employment, safety, health and work hours of operatives.*

1. That any person or corporation engaged in manufacturing which requires from persons in his or its employ, under penalty of forfeiture of a part of the wages earned by them, a notice of intention to leave such employ, shall be liable to the payment of a like forfeiture if he or it discharges without similar notice a person in such employ, unless in case of a general suspension of labor in his or its shop or factory,

2. That all accidents in workshops, factories or mines which result in death, shall be reported at once by the occupier to the inspector of workshops at Trenton, and the city or district physician where one is employed as such, which notice may be given by mail.

3. That the belting, shafting, gearing and drums in all factories and workshops when so placed as to be dangerous to persons employed therein while engaged in their ordinary duties, shall be securely guarded when practicable [possible], if otherwise then a notice of its danger shall be conspicuously posted in the factory or workshop.

4. That no minor, under eighteen years of age, or woman, shall be required to clean any part of the mill gearing or machinery in any factory or workshop while the same is in motion, or work between the fixed or traversing part of any machine while it is in motion by the action of steam, water or other mechanical power.

5. That the openings of all hoistways, hatchways, elevators and well-holes upon every floor of a factory or mercantile or public building shall be protected by good and sufficient trap-doors or self-closing hatches and safety catches, or strong guard rails, at least three feet high, and all due diligence shall be used to keep such trap-doors closed at all times, except when in actual use by the occupant of the building having the use and control of the same.

6. That no explosive or inflammable compound shall be used in any factory in such place or manner as to obstruct or render hazardous the egress of operatives in case of fire.

7. That no minor under the age of sixteen shall be employed in any manufacturing, mercantile or mechanical establishment more than ten hours a day, or sixty hours a week.

8. That suitable places shall be provided in all factories and workshops where girls or women are employed, where unclean work of any kind has to be performed, for such girls or women to wash and dress, and that stairs in use by female employes in all factories and workshops be properly screened.

9. That separate water-closets be provided for the use of employes of either sex in all manufacturing, mercantile and mechanical establishments where persons of both sexes are employed.

10. That where the factories or workshops appear so overcrowded, that in the opinion of the inspector of factories there is danger of health, the inspector shall have power, after being supported in their opinion by some reputable resident physician, to prohibit such overcrowding.

11. That the inspectors of factories shall have power to order a fan or other mechanical means of proper construction, if practicable, for the purpose of preventing the inhalation of dust in establishments where any process is carried on by which dust is generated and inhaled by the workers to an injurious extent.

*The acts creating our boards of health, local and state, give them authority to appoint inspectors to preserve the public health, look after the sanitary condition of tenements, factories, &c.

12. That all factories and mines be ventilated, so as to render harmless all impurities as near as may be.

13. That no cellar, room or place shall be occupied as a bakehouse which is less than one-half its height above the level of the street, footway or ground adjoining the same, unless the following regulations are complied with: First, no water-closet, earth-closet, privy or ash pit shall be within or communicate directly with the bakehouse; second, no drain or pipe for carrying off sewage or other impure matter shall have an opening within a bakehouse, unless such drain or pipe be tapped with a six-inch water seal, both within and without the wall of the bakehouse, and have a ventilating pipe of one-half the size of drain pipe between the wall and the outer trap, and which ventilating pipe shall run two feet above the roof of the building.

14. That the sleeping places for workmen and others employed in bakehouses shall be separate and distinct from the places used for making of bread.

15. That any person or corporation, being the owner, lessee or occupant of any manufacturing establishment, factory, mine, workshop or store, or owning or controlling the use of any building or room, shall, for the willful violation of any provision of this act, except sections one and two, be liable to a penalty of fifty dollars for each offense, to be recovered in an action of debt in any district court in any city, or before any justice of the peace having due jurisdiction, and that any employe who shall be guilty of any violation of the provisions of this act, shall be liable in a like action to a penalty of fifty dollars, that such action shall be prosecuted by and in the name of the inspector of factories; the trial shall proceed as other actions of debt, and the first process shall be a summons returnable in not less than five days or more than ten after issue, and it shall not be necessary to indorse the same as in qui tam actions; the finding of the court shall be that the defendant has or has not, as the case may be, incurred the penalty claimed in the demand of the plaintiff and judgment shall be given accordingly; in case an execution shall issue and be returned unsatisfied, the court, on application, after notice to the defendant, may award an execution to take the body of the defendant, and in case such a defendant is committed under such an execution, he shall not be discharged under the insolvent laws of the state, but shall only be discharged by the court making the order for the body execution, or one of the justices of the supreme court, when such court or justice shall be satisfied that further confinement will not accomplish the payment of the judgment and costs; *provided*, nothing herein shall subject any owner of a building or premises to any penalty unless he shall be the proprietor of the business conducted therein.

16. That all acts or parts of acts inconsistent with the provisions of this act be and are hereby repealed.

Approved April 7th, 1885. P. L., Chapt. 168.

An Act to provide for the better security of life and limb in cases of fire in hotels and other buildings.

1. That all persons owning, leasing, or in any manner having charge or control of any hotel or boarding house for the accommodation of the public, any public school or other public building, factory, manufactory or workshop of any kind, in which guests, students, employes or operatives, to the number of thirty or more, are accommodated, or steadily or casually at work, or congregate, when any of such buildings are three or more stories in height, said owners, lessees or other persons having charge

or control of said buildings, shall provide all such buildings with a safe, external means of escape therefrom, and so arranged that in case of fire the ground can be readily reached by the persons occupying the third and higher floors.

2. That it shall be the duty of every fire inspector of any city in this state, or any common council, board of aldermen, or other official board of any city, town, borough, or of any township of this state, by whatever name such authorities may be known, to designate the number, kind and manner of erection of such external fire escapes to any of said buildings, and shall give notice, in writing, to the owner or lessees or the person having charge or control of said building, and set forth in said notice the number, kind and manner in which said external fire escape or escapes is or are to be erected, required by said fire inspector or ordinance of said municipal authorities, or resolution of said other official boards.

3. That any violation of this act, or neglect to comply with said notice to put up said fire escape or escapes within ninety days after said notice is received, shall be deemed a misdemeanor, and any person or corporation convicted thereof shall be liable to a fine not exceeding three hundred dollars, in the discretion of the court, and shall also be liable in an action for damages in case of death or personal injury sustained in consequence of fire breaking out in any such building, and of the absence of such efficient fire escape; and such action may be maintained by any person now authorized by law to sue as in other cases of similar injuries.

Approved March 17th, 1882. P. L., Chapt. 110.

An Act respecting fire-escapes or means of exit in and upon buildings in cities or municipal corporations.*

1. That the common council, board of aldermen or other governing body of all cities or municipal corporations in this State, are hereby authorized, empowered and required to pass, ordain and enforce ordinances and regulations and penalties, respecting the building, erection, equipment, maintenance and use of proper and efficient fire-escapes, or means of exit, in and upon hotels, theaters, halls, school-houses and other public buildings, manufactories or other public buildings where operatives are employed.

Approved March 25th, 1881. P. L., Chapt. 200.

An Act to authorize cities of this state to compel owners of tenement-houses to construct fire-escapes thereon.

1. That it shall and may be lawful for any city of this state, by general ordinance of the common council, board of aldermen, or other governing body, to provide for

*We know of no other city, in this State, except Newark, where this legislative requirement has been followed. The Newark ordinance reads as follows:

"An ordinance relating to the construction of buildings in the city of Newark, approved February 17th, 1879.

"SEC. 1. All dwelling-houses now or hereafter erected in the city of Newark, more than three stories in height, occupied by, or built to be occupied by, three or more families above the first story, and all buildings already erected, or that may hereafter be erected, more than two stories in height, occupied or used, or built to be occupied or used as a hotel, boarding-house, lodging-house or theater; and all factories, mills, manufactories and workshops wherein operatives are employed on any of the stories above the first floor, shall be provided with suitable fire-escapes and alarms when the same shall be ordered by the superintendent of buildings and the committee on fire department; and the said superintendent shall have the power to determine the necessity and method of constructing the same, subject to the approval of the said committee on fire department. And the owner or owners of any building upon which any fire-escape may be erected as aforesaid shall keep the same in good repair, and no person shall at any time place any incumbrance of any kind whatsoever thereon. All persons or corporations shall be liable to a fine of fifty dollars for the violation of any of the provisions of this ordinance, and to an additional penalty of twenty-five dollars for each day such violation shall continue after notice thereof by the said superintendent of buildings.

the construction of fire-escapes on all houses in said city which, in their judgement, shall require the same, and to provide rules and regulations for the construction and regulation of said fire-escapes, and to provide penalties to be imposed on any owner who may refuse or neglect to comply with the provisions of said ordinance, which penalties may be recovered before any police justice or recorder, of cities in which said offices exist, or before any justice of the peace in any other city.

2. That all acts and parts of acts and charter provisions inconsistent herewith be and they are repealed.

Approved March 1st, 1886. P. L., Chapt. 41.

An act entitled "An act relating to the depth and construction of foundation walls of buildings and the responsibility of adjoining property owners to each other in cities in the state of New Jersey."

1. That it shall be lawful for the common council of any city in this state, or other municipal board empowered by the charter to pass ordinances, to provide by ordinance for the depth of excavation below the established grade or curb line of any such city not greater than ten feet, to which the owner of any land may excavate, in the erection of any building upon his own property, and to provide for the giving of notice in writing of such intended excavation to any adjoining owner or owners, and that they will be required to protect and care for their several foundation walls that may be endangered by such excavation, and to provide that in case of the neglect or refusal for ten days of such adjoining owner or owners to take proper action to secure and protect the foundations of any adjacent building or other structure, that the party or parties, or their agents, contractors or employes may enter into any such adjacent property, and do all necessary work to make such foundations secure, and recover for such work and labor in so protecting such adjacent property the cost thereof and to make such further and other provisions in relation to the proper conduct and performance of said work as to said common council or legislative board of any city may seem necessary and proper.

2. That a suit may be maintained in any court having jurisdiction over the amount involved and the person of the plaintiff or defendant, to recover for any work done under any ordinance passed in pursuance of the first section hereof, in the protecting or securing of the buildings or foundation walls of adjacent owners as aforesaid.

Approved May 10th, 1884. P. L., Chapt. 218.

An act to provide for the better protection of the drivers of horse cars on street passenger railroads in the cities and towns of this state.

1. That hereafter all horse car passenger railroads in the cities and towns of this state shall provide a proper seat upon the front platform of each car for the use of the driver on such car, when driving the same, under reasonable restrictions by the company operating such car as to the use of the said seat in going up or down grade or otherwise.

2. That any such company failing to comply with the requirements of the first section of this act shall be liable to a penalty of twenty-five dollars for each day any car belonging to them shall be in use without such seat, to be recovered in an action

of debt, before any justice of the peace, or district court, in the county or city where such railroad may be, by any person suing for the same; one-half of said forfeiture to be paid to the county treasury of the county where such suit is brought, and one-half to the person who shall prosecute the same to effect.

Approved March 3d, 1882. P. L., Chapt. 40.

An act for the preservation of health of female employes.

1. That it shall be the duty of all employers of females in any mercantile business or occupation to provide and maintain suitable seats for the use of such female employes, at or beside the counter or work bench where employed, and to permit the use of such seats by such employes to such an extent as may be reasonable for the preservation of their health.

2. That any violation of this act by any employer shall be deemed a misdemeanor, and, on being thereof convicted, shall be punished by a fine not exceeding one hundred dollars, at the discretion of the court.

Approved March 31st, 1882. P. L., Chapt. 159.

An act for the preservation of the health of female employes employed in manufacturing, mechanical and mercantile establishments.

1. That every person or corporation employing female employes in any manufacturing, mechanical or mercantile establishment in this state shall provide suitable seats for the use of the female employes so employed, and shall permit the use of such seats by them when they are not necessarily engaged in the active duties for which they are employed.

2. That a person or corporation violating any of the provisions of this act shall be punished by a fine of not less than ten dollars nor more than twenty-five dollars for each offense.

Approved April 17th, 1884. P. L., Chapt. 149.

PAYMENT OF WAGES.

An act to secure to operatives in manufactories, and other employes, their wages.*

1. That no goods, chattels or personal property whatsoever, being in this state, and belonging to any manufacturer or other person or persons, or to any corporation, shall be liable to be removed by virtue of any execution, attachment or other process, unless the party by whom or at whose suit the said execution, attachment or other process was issued or sued out, shall first pay or cause to be paid to the operatives, mechanics and other employes employed by such manufacturer, person, persons or corporation, the wages then owing from such manufacturer, person, persons or corporation to the operatives, mechanics and other employes employed by them; *provided*, the same shall not exceed one month's wages, and in case the sum owing as aforesaid

* Revision, pages 749 and 750.

shall exceed one month's wages, then the said party at whose suit such process is sued out, upon paying the said operatives, mechanics and other employes one month's wages, may proceed to execute his process, as he might have done before the passage of this act; and the sheriff or other officer is hereby empowered and required to levy and pay to the plaintiff, as well the money so paid for wages, as the money to be made by virtue of said process.*

2. That if the sheriff or other officer shall, by virtue of any execution, attachment or other process, remove from the possession or premises of any person, persons or corporation, against whom such process may be issued, any goods, chattels or personal property without first paying to the operatives, mechanics and other employes of such person, persons or corporation their wages to the amonnt in the preceding section specified, such goods, chattels or personal property shall not be sold by such sheriff or other officer so taking or removing the same until ten days after such removal, and then not until the plaintiff or party at whose suit such goods or chattels are taken as aforesaid shall, before the sale thereof, pay to the operatives, mechanics and other employes of such person, persons or corporation against whom such process is issued, the wages due them at the time of such removal; *provided*, the same shall not in any case exceed one month's wages, and if more than one month's wages is owing to such operatives, mechanics or other employes, then the party by whom or at whose suit such execution or other process is issued, by paying one month's wages, may proceed to execute his process, and sell such goods as personal property; *provided*, the persons to whom such wages may be owing shall, before the expiration of said ten days after such removal, give notice to the sheriff or other officer holding such process, of the amount of wages due and claim the same, which notice may be served by delivering the same to said officer, or leaving a copy thereof at his usual place of abode.

Approved March 13th, 1856.

SUPPLEMENT.

1. That whenever in any suits at law or in equity pending in any of the courts of this state, it shall become necessary or advisable for such court to appoint a receiver to take the charge and possession of the goods, chattels and personal property of any manufacturer, distiller, hewer or producer of any manufactured articles in whatsoever stage the same may then be, and there being due and unpaid to the mechanics, workmen and laborers employed by such manufacturer and other persons sole or corporate, producing such manufactured articles, wages for the labor and services by such mechanics and workmen bestowed upon the goods, chattels and personal property thus then taken by such receiver, it shall be the duty of the chancellor or of the judge appointing such receiver, on being petitioned by such workmen and employes for the payment of such unpaid wages due to them, setting forth the nature and kind of services performed, and of the amount due to such petitioners, to make an order directing a reference to a master in chancery to ascertain and report upon the correctness of the allegations in such petition contained, and of the amount of wages then due and unpaid to such petitioner and petitioners, and thereupon further direct such receiver forthwith to make sale of so much of such personal property as may be necessary to pay such wages to such employes and workmen in preference to any other creditor and without delay.

Approved March 3d, 1881. P. L., Chapt. 72.

* A landlord's lien for rent is entitled to no priority over the claims of operatives for wages. *In re McConnell, 9 Nat. Bankrupt Reg. 387, Nixon J.*

An Act to secure to creditors an equal and just division of the estates of debtors who convey to assignees for the benefit of creditors.*

8. * * * and the settlement and decree of said court shall be conclusive on all parties * * * provided that the wages of clerks, miners, mechanics and laborers, due at the time of making such assignment, from the person or persons making the same, shall be preferred debts, and shall be first paid by said assignee before any other claim or debt shall be paid; and *provided further*, that no payment shall be made as a preferred debt to any one person to an amount exceeding three hundred dollars.

Approved March 27th, 1874.

An Act to authorize the formation of railroad corporations and regulate the same.†

10. That as often as any contractor for the construction of any part of a railroad which is in progress of construction, shall be indebted to any laborer for thirty or any less number of days' labor performed in constructing said road, such laborer may give notice of such indebtedness to said company in the manner herein provided; the said company shall thereupon become liable to pay such laborer the amount so due him for such labor, and an action may be maintained against said company therefor; such notice shall be given by such laborer to said company within twenty days after the performance of the number of days' labor for which the claim is made; such notice shall be in writing, and shall state the amount and number of days' labor, and the time when the same was performed for which the claim is made, and the name of the contractor from whom due, and shall be signed by such laborer or his attorney, and shall be served on an engineer, agent, or superintendent employed by such company having charge of the section of the road on which such labor was performed, personally, or by leaving the same at the office or usual place of business of such engineer, agent or superintendent, with some person of suitable age; but no action shall be maintained against any company under the provisions of this section, unless the same is commenced within thirty days after notice is given to the company by such laborer as above provided; *provided* that the liability of the company under this section shall not exceed its liability to the contractor; and *provided further*, that any payments made to such laborers shall be a full discharge to the company from such contractor for the amount so paid.

Approved April 2d, 1873.

An Act concerning corporations.‡

63. In case of the insolvency of any corporation, the laborers in the employ thereof shall have a lien upon the assets thereof for the amount of wages due to them respectively, which shall be paid prior to any other debt or debts of said company; and the word "laborers" shall be construed to include all persons doing labor or service of whatever character, for or as workmen or employes in the regular employ of such corporations.§

Approved April 7th, 1875.

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*Revision, pp. 38 and 750.

†General railroad law, Revision, p. 925.

‡Revision, pp. 188 and 1.289.

§Includes all laborers in the employ of the company at the time of its suspending business operations. The apprentices of such company are entitled to their wages without regard to the time that they were last actually laboring for the company. *Bedford* v. *Newark Machine Co.*, *1 C. E. Green 117.*

An Act for the relief of citizens on the line of any railroad that has or may hereafter fail or neglect to operate.*

2. That whenever the chancellor shall appoint a receiver of any railroad company, said receiver shall apply all unincumbered personal effects and all moneys which may be transferred to him at the time of entering upon his duties as such receiver, toward the payment of wages at that time due the employes of said company, and the chancellor may from time to time make such orders as he may deem proper to equitably carry out the provisions of this section; *provided*, that no such payments shall be made for more than two months' wages.†

Approved February 12th, 1874.

SUPPLEMENT.‡

1. That whenever any incorporated railroad company in this state shall become insolvent, and the property of such company shall have passed into the hands of a receiver by the order of the chancellor, * * * and all expenses incident to the operation of said railroad shall be a first lien on the receipts, to be paid before any other incumbrance whatever.

Approved February 11th, 1874.

An Act to authorize the formation of gas-light corporations and regulate the same.§

16. That the stockholders of any company organized under the provisions of this act shall be jointly and severally individually liable for debts that may be due and owing to all their laborers, servants and apprentices for services performed for such corporation.

Approved April 21st, 1876.

An act for the better securing of wages to workmen and laborers in the State of New Jersey.‖

1. That it shall not be lawful for any iron-master, foundryman, collier, factoryman, employer or company, their agents or clerks, to pay the wages of workmen or laborers by them employed in either printed, written, or verbal orders, except for the payment of money, upon any storekeeper or storekeepers, or other dealers in merchandise or other articles, whether connected in business with the said iron-master, foundryman, collier, factoryman, employer, or company, or not; any iron-master, foundryman, collier, factoryman, employer, or company, paying to the said workman or laborer so as aforesaid by him employed, or authorizing their agent or agents or storekeeper so to do as aforesaid, shall forfeit the amount of said pay, or any part of the wages of said workman or laborer given in orders upon any such store, except as aforesaid, or any orders so given or paid, and the same shall not be offset against the

*Revision, page 943.

†An incumbrance existing at the time of the passage of this act is superior to wages afterwards accruing. *Williamson* v. *N. J. Southern R. R. Co., 1 Stewart 277; see also 9 C. E. Green 398, 402; 11 C. E. Green 539.*

‡To "An act to prevent frauds by incorporated companies," approved April 15th, 1846, which was repealed in 1875, but not this supplement. See Revision of 1877, page 196, section 106.

§Revision, p. 462.

‖Revision, p. 750.

wages of said workman or laborer, but he shall be entitled to recover the full amount of his wages as though no such order or orders had been given or paid; and no settlement made with such employer shall bar such action until after the lapse of six months from such settlement.

2. That the provisions of this act shall extend to all seamstresses or females employed in factories or otherwise.

3. That this act shall be taken and deemed to be a public act, and take effect on the fourth day of July, eighteen hundred and sixty-four, except in the counties of Morris, Sussex, Somerset, Middlesex, Monmouth, Burlington, Warren, Ocean and Hunterdon, which counties are specially excepted from the provisions of this act; and excepting, also, the county of Essex, in which county this act shall take effect on the first day of January, eighteen hundred and sixty-five.

Approved April 14th, 1864.

An Act for the better securing of wages to workmen and laborers in the state of New Jersey.*

1. That it shall not be lawful for any person or corporation in this state to issue for the payment of labor any order, or other paper whatsoever, unless the same purport to be redeemable for its face value in lawful money of the United States by the person giving or issuing the same; *provided, however*, nothing in this act contained shall be held to prevent any employer from making any deduction for money due him from any laborer or employe.

2. That if any person or corporation shall issue for payment of labor any paper in violation of the first section of this act, he, she or they shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not to exceed five hundred dollars, at the discretion of the court.

Approved March 9th, 1877. P. L., Chapt. 147.

SUPPLEMENT.

1. That section one of an act entitled "An act for the better securing of wages to workmen and laborers in the state of New Jersey," approved March ninth, one thousand eight hundred and seventy-seven, be and the same is hereby amended so that the same shall read and be:

[1. That it shall not be lawful for any person or corporation in this state to issue for payment of labor, any order or other paper whatsoever, unless the same purport to be redeemable for its face value, at sight, in lawful money of the United States, by the person giving or issuing the same; *provided, however*, nothing in this act contained shall be held to prevent any employer from making any deduction for money due him from any laborer or employe; *and provided, however*, nothing in this act contained shall prevent any private individual from giving any orders for goods and merchandise on any store in which such private individual has no interest, directly or indirectly, in the profits or business.]

Approved February 23d, 1880. P. L., Chapt. 36.

* Revision, p. 1,375.

An Act to secure to workmen the payment of wages in lawful money.

1. That it shall not be lawful for any glass manufacturer, ironmaster, foundryman, collier, factoryman, employer, cranberry grower, or his agent or company, their agents or clerks, to pay the wages of workmen or employes by them employed, in either store goods, merchandise, printed, written, verbal orders, or due bills of any kind.

2. That any glass manufacturer, ironmaster, foundryman, collier, factoryman, employer, cranberry grower, or his agent or company, paying to the said workmen or employes, or authorizing their clerks or agents to pay the wages, or any part thereof, in either store goods, merchandise, printed, written, verbal orders, or due bills of any kind, except as aforesaid, shall forfeit the amount of said pay or any part of wages of said workman or employe given in store goods, merchandise, printed, written, verbal orders or due bills of any kind, and the same not be offset against the wages of said workmen or employes, but he or they shall be entitled to recover the full amount of his or their wages as though no such store goods, merchandise, printed, written, verbal orders or due bills had been given or paid; and no settlement made with such employer shall bar such action until after a lapse of one year from such settlement.

3. That the provisions of this act shall extend to all seamstresses, females and minors employed in factories or otherwise.

4. That any glass manufacturer, ironmaster, foundryman, collier, factoryman, employer or company offending against the provisions of this act, the same shall be a misdemeanor, and punishable by a fine of not less than ten dollors or more than one hundred, for each and every offense, or imprisonment not to exceed the term of thirty days, at the discretion of the court; but nothing in this act shall apply to or affect any private individual giving orders as aforesaid on a store in the business or profits whereof he has no interest, directly or indirectly, or to the offset of any debt due from such workmen to any glass manufacturer, ironmaster, foundryman, collier, factoryman, employe or company, where the said debt is voluntarily contracted by the employe, or to the payment of any debt due from such workman to any glass manufacturer, ironmaster, foundryman, collier, factoryman, employer or company.

3. That all acts and parts of acts inconsistent with the provisions of this act be and the same are hereby repealed.

Approved March 12th, 1880. P. L., Chapt. 198.

An Act for the relief and protection of workmen in the purchase of store goods and supplies.

1. That it shall not be lawful for any manufacturer, firm, company or corporation, their agents, clerks or superintendents, in this state, who own or control a store for the sale of general store goods or merchandise in connection with their manufacturing or other business, to attempt to control their employes or laborers in the purchase of store goods and supplies at the aforesaid store, by withholding the payment of wages longer than the usual time of payment, whereby the employe would be compelled to purchase supplies at said manufacturer's, firm's, company's or corporation's store.

2. That any manufacturer, firm, company or corporation offending against the pro-

visions of this act, the same shall be a misdemeanor, and on conviction in any court having jurisdiction thereof, shall be fined, not to exceed one hundred dollars, with costs of suit, for each offense, to be sued by and for the benefit of any citizen of this state.

Approved March 25th, 1881. P. L., Chapt. 190.

An Act for the better securing and enjoyment of wages to workmen and laborers in the state of New Jersey.

1. That it shall not be lawful for any person or persons to purchase or have assigned to him or them any pay or wages due or to become due to any laborer or employe of any corporation or individual or individuals doing business in this state for any work or labor to be rendered by such laborer or employe of any such corporation or individual or individuals upon which such person or persons so purchasing or having assigned to him or them, shall directly or indirectly have received, or contracted to receive, from such laborer or employe more than the legal rate of interest established by the laws of this state upon the amount of such pay or wages due or to become due, so purchased or assigned.

2. That any person or persons violating the first section of this act shall be deemed guilty of a misdemeanor, and on conviction therof shall be punished by a fine not exceeding five hundred dollars, at the discretion of the court; *provided, however*, that this act shall not apply to any assignment of such pay or wages made for the payment of any goods, wares or merchandise sold to such employe for the full value or for any professional service rendered to such laborer or employe mentioned in such assignment.

Approved April 22d, 1882. P. L. Chapt. 166.

An Act to amend the law relating to the property of married women.*

4. That the wages and earnings of any married woman, acquired or gained by her after the passage of this act, in any employment, occupation or trade in which she is employed, and which she carries on separately from her husband, and all investments of such wages, earnings, money or property, shall be her sole and separate property, as though she were a single woman.†

15. That in all cases in this act in which property, things in action or other rights or interests are herein declared to be the separate property of a married woman, such property, things in action, and rights and interests shall not be subject to the disposal of her husband, nor liable for his debts.

Approved March 27th, 1874.

[As to protection of wages of employes in the building trades, see below, Mechanics' Lien Laws, Section 3.]

* Revision, p. 637.

† At common law the husband was entitled to the wife's earnings. *2 Beas. 403; 2 McCart. 478; 1 C. E. Green 265; 2 C E. Green 367; 10 C. E. Green 45; 1 Vroom 430.*

MECHANICS' LIEN LAWS.

An act to secure to mechanics and others payment for their labor and materials in erecting any building.*

1. That every building, hereafter erected or built within this state, shall be liable for the payment of any debt contracted and owing to any person † for labor performed or materials ‡ furnished for the erection and construction thereof, which debt shall be a lien on such building, and on the land whereon it stands, including the lot or curtilage whereon the same is erected.

2. That when any building shall be erected in whole or in part by contract in writing, such building and the land whereon it stands shall be liable to the contractor alone for work done or materials furnished in pursuance of such contract; *provided*, such contract, or a duplicate thereof, be filed in the office of the clerk of the county in which such building is situate, before such work done or materials furnished ⁑

3. That whenever any master workman or contractor shall, upon demand, refuse to pay any person who may have furnished materials used in the erection of any such house or other building, or any journeyman or laborer employed by him in the erecting or constructing any building, the money or wages due to him, it shall be the duty of such journeyman or laborer, or materialman, to give notice in writing to the owner or owners of such building of such refusal, and of the amount due to him or them and so demanded, and the owner or owners of such building shall thereupon be authorized to retain the amount so due and claimed by any such journeyman, laborer and materialman, out of the amount owing by him or them to such master workman or contractor, giving him written notice of such notice and demand; and if the same be not paid or settled by said master workman or contractor, such owner or owners, on being satisfied of the correctness of such demand, shall pay the same, and the receipt of such journeyman, laborer or materialman for the same shall entitle such owner or owners to an allowance therefor in the settlement of accounts between him and such master workman or contractor as so much paid on account.‖

4. That if any building be erected by a tenant or other person than the owner of the land, then only the building and estate of such tenant, or other person so erecting such a building, shall be subject to the lien created by this act and the other provisions thereof, unless such building be erected by the consent of the owner of such lands, in writing, which writing may be acknowledged or proved and recorded; the record thereof and copies of the same, duly certified, shall be evidence in like manner ¶

* Revision, page 668.

† An architect may have a lien. *11 C. E. Green 389.*

‡ *1 McCarter 189.*

⁑ Filing the contract only protects the building from work done or materials furnished on the contractor's account A lien attaches for materials ordered or mechanics employed by the owner. *8 C. E. Green 318.* The employe of a contractor can proceed under the lien law for work done, unless the contract is in writing. *2 Vroom 331; see also, 1 Dutch 474; 3 Dutch 154; 4 Dutch. 484.*

‖ As to priority of claims, *2 McCart. 22.* Notice by the workman operates as an assignment of the debt due from the owner to the contractor to the extent of the amount due from the contractor to the workman. In a suit by contractor against owner the owner cannot claim any deductions for sums due the workman (for which he has given notice), unless the owner has made payment. *11 C E Green 489.* There must be a debt due from the owner to the contractor at the time the notice is given. *8 Vroom 549.* No action can be maintained when the owner has reasonable cause to dispute the claim of the person serving the notice. *9 Vroom 125.* The claimant must first verify it by judgment against the contractor *Ibid.* A claim by a workman or materialman for *more* than has in fact been earned by him is fatal. *Ibid.*

¶ *3 Dutch. 154; 10 C. E. Green 242; 5 Dutch. 415; 5 C. E. Green 13; 8 C. E Green 369.*

5. That any addition erected to a former building, and any fixed machinery or gearing, or other fixtures for manufacturing purposes, shall be considered a building for the purposes of this act; but no building shall be subject to the provisions of this act for any debt contracted for alterations made therein.*

6. That the words "fixtures for manufacturing purposes," as used in the next preceding section, shall be construed to include any building, erection, or construction, of whatever description, attached or annexed, or intended to be attached or annexed, to any land or tenement, and designed to be used in the building or repairing of vessels, whether the same be permanently attached to the freehold, or so built as to be removed from place to place, and only temporarily attached to the land, and whether the same be intended and designed for use on land or water.

7. That the lien given by this act is hereby extended to all mills and manufactories, of whatever description, within this state, and to the lots of land or curtilages whereon the same are erected, for all debts contracted by the owner or owners thereof, or by any other person, with the consent of such owner or owners in writing, for work done or materials furnished for or about the repairing of any fixed machinery, or gearing, or other fixtures for manufacturing purposes on the same

8. That the lien given by this act is hereby extended to all buildings, of whatever description, within this state, and to the lots of land and curtilages whereon the same are erected, for all debts contracted by the owner or owners thereof, or by any other person, with the consent of such owner or owners in writing, for work done or materials furnished for or about the repairing of such buildings or any of them; *provided, also*, that said lien shall not be valid against a *bona fide* purchaser or mortgagee before the said lien is filed in the office of the clerk of the county †

9. That any married woman upon whose land any building or buildings shall hereafter be erected or repaired, or whereon any fixtures shall be put, shall be taken as consenting to the same, and such building or buildings and curtilages whereon the same are erected, shall be subject to the lien created by this act; *provided always*, that in case said married woman shall cause to be filed in the clerk's office of the county wherein such building or buildings are located, a notice in writing, describing the property, and that she does not consent to the erection or repairing of such building or buildings on her lands, and that the same is being done against her wishes and consent, then, in such case, the building or buildings, and the curtilages whereon the same are erected, of any married woman, shall be free from the lien given by this act from the time she shall have filed a notice as aforesaid; ‡ and *provided further*, that nothing in this act contained shall be so construed as to make the lands of any person liable for any building or repairs not authorized by the owner, or built or done without the knowledge of the owner.ƹ

10. That the lien given by this act is hereby extended to all docks, wharves and piers erected upon any navigable river in this State, and to the lots of land in front of which such docks, wharves or piers may be erected, and to all the interest of the owner or owners of such land in the soil or waters of such navigable river in front of said lands, for all debts contracted by the owner or owners thereof, or by any other

*3 Stockton 321, 413; 8 C. E. Green, 174; 3 Dutch 131; 6 Vroom 481; see 5 Vroom 352; 2 Vroom 477; 5 Dutch. 550, 468; 4 Dutch. 39; see 2 Harr 181, 183.

† A mechanic's lien takes priority upon the *building* over a prior mortgage upon the land. 2 Beasley 133; 1 Hal. Ch. 485. As to preference of purchase-money mortgage, see 10 C. E. Green 242, 11 C E. Green 195.

‡ 11 C. E. Green 195; 3 Dutch. 239; 4 Vroom 266; 5 Vroom 18.

ƹ As amended by act approved March 30th, 1876.

person with the consent of such owner or owners, in writing, for work done or materials furnished for or about the erection or filling in of said docks, wharves or piers.*

11.† That every person intending to claim a lien upon any building or lands by virtue of this act, shall, within one year after the labor is performed or the materials furnished, for which such lien is claimed, file his or her claim in the office of the clerk of the county where such building is situate, which claim shall contain these matters:

I. A description of the building and of the lot or curtilage upon which the lien is claimed, and of its situation sufficient to identify the same.

II. The name of the owner or owners of land or of the estate therein in which the lien is claimed.

III. The name of the person who contracted the debt, or for whom, or at whose request the labor was performed, or the materials furnished for which such lien is claimed, who shall be deemed the builder.

IV. A bill of particulars exhibiting the amount and kind of labor performed and of materials furnished, and the prices at which, and times when the same was performed and furnished, and giving credit for all the payments made thereupon, and deductions that ought to be made therefrom, and exhibiting the balance justly due to such claimant; which statement, when the work or materials, or both, are furnished by contract, need not state the particulars of such labor or materials, further than by stating generally that certain work therein stated was done by contract at a price mentioned; and such bill of particulars and statements shall be verified by the oath of the claimant, or his agent in said matter, setting forth that the same is for labor done or materials furnished in the erection of the building in such claim described, at the times therein specified, and that the amount as claimed therein is justly due, and when such claim shall not be filed in the manner or within the time aforesaid, or if the bill of particulars shall contain any willful or fraudulent misstatement of the matters above directed to be inserted therein, the building or lands shall be free from all lien for the matters in such claim.

[For further information regarding the filing of the claim, suit and proceedings to enforce the same, and the discharge from lien, see Revision, pp. 670–674.‡]

SUPPLEMENT.

WHEREAS, It is the practice of owners of lots or tracts of land to dispose of the same to a builder or builders, taking therefor a mortgage or mortgages in excess of the purchase-money price of said lot or tract of land, the mortgagee agreeing to pay such excess to the aforesaid builders from time to time as the building or buildings progress, such mortgages being known as advance-money mortgages; therefore,

1. Be it enacted by the Senate and General Assemby of the State of New Jersey, That in all such transactions the building or buildings so erected shall be liable for the payment of any debt contracted and owing to any person or persons for labor performed or materials furnished for the erection and construction thereof, which debt shall be a lien on such building or buildings and on the land whereon they stand, including the lot of curtilage whereon the same are erected, and that the lien for labor

*See *2 Vroom 477; 5 Dutch. 550.*

† As amend by act approved April 1st, 1878, (Chapt. 158). See also, Chapt. 209, P. L. 1878.

‡Also, chapt. 175, P. L. 1884, approved April 25th.

performed or materials furnished for the erection and construction of any such building or buildings shall be a prior lien to the lien of a mortgage created on such building or buildings and lot or tract of ground to secure either in whole or in part any advances in money to be used in and about the construction of such building or buildings (except only so much of the amount of said mortgage as shall be for the purchase-money of the lot or tract of land whereon the said building or buildings shall be erected); *provided*, that nothing in this act shall interfere with a mortgage or mortgages to secure bona fide loans of money not advances as aforesaid, such bona fide loans to be paid in full, anything in this act to the contrary notwithstanding.

Approved March 4th, 1879. P. L. Chapt. 52.

SUPPLEMENT.

That the lien given by the act to which this is a supplement shall be and is hereby extended to all buildings, of whatever description, within this state, and to the lot or curtilages whereon the same are erected, for all debts contracted or owing to any person for work done or materials furnished in and for the alteration of any such building; *provided*, that work done or materials furnished under contract in and for such alterations shall be liable to the contractor alone, in the manner provided by the second section of said act.

Approved February 8th, 1883. P. L. Chapt. 14.

An Act authorizing persons having liens for work, labor or materials employed in the repair or construction of any article to enforce such lien.

That the lien which any person may have upon any chattel in his possession for labor or materials bestowed or employed in the repair or construction thereof, shall be in no wise waived, merged or impaired by the recovery of any judgment for the moneys due for such labor or materials; and such lien may be enforced by levy and sale under execution upon such judgment.

Approved February 16th, 1885. P. L. Chapt. 15.

An Act for the collection of demands against ships, steamboats and other vessels.*

1. Whenever a debt shall be contracted by the master, owner, agent or consignee of any ship or vessel within this state for either of the following purposes:

I. On account of any work done, or materials or articles furnished in this state, for or towards the building, repairing, fitting, furnishing or equipping such ship or vessel;

II. For such supplies, provisions and stores furnished within this state for the use of such ship or vessel at the time when the same were furnished;

III. On account of the towing of such ship or vessel, the wharfage of such ship or vessel, and the expenses of keeping such ship or vessel in port, including expenses incurred in taking care of and employing persons to watch such ship or vessel; such debt shall be a lien upon such ship or vessel, her tackle, apparel and furniture, and

*Revision, p. 586. Section 1 is given as amended by Chapt. 169 of Laws of 1884 (April 24th). This supplement repeals supplement approved March 18th, 1858, (see Revision, p. 591,) and the second section of supplement approved March 20th, 1878, (Chapt. 92.)

continue to be a lien on the same until paid, and shall be preferred to all other liens thereon, except mariners' wages.*

2. Any person having due him any sum upon any debt contracted for any of the purposes hereinbefore specified, may make application to any officer authorized by law to perform the duties of a commissioner, appointed by the justices of the supreme court to take special bail, and to administer oaths or affirmations, or to one of the justices of the supreme court, or to one of the judges of the court of common pleas of the county, for a warrant to enforce the lien of such debt, and to collect the amount thereof.†

3. Such application shall be in writing, and shall specify—

I. By whom such debt was contracted, and for what ship or vessel;

II. The items composing such debts;

III. It shall be verified by the affidavit of the creditor, or of the person making the application in his behalf, stating that the sum claimed in such account is justly due to the person in whose behalf such application is made over and above all payments and discounts;

And the facts and circumstances to establish such demand shall also be verified by the affidavits of one or more disinterested witnesses.

4. The officer to whom such application shall be made, shall thereupon issue his warrant to the sheriff or any constable of the county, or, in their absence, to any coroner of the county, commanding him to attach, seize and safely keep such ship or vessel, her tackle, apparel and furniture, to answer all such liens as shall be established against her according to law, and to make return of his proceedings under such warrant to the said officer within ten days after such seizure.

[For further proceedings, after issuing and return of the warrant, see sections five to forty-three of act in Revision.]

Approved March 20th, 1857.

EXEMPTION LAWS.

An Act in relation to operators and others in the employment of telegraph companies in this state.‡

1. That the operators and assistant operators, superintendents, managers, line-men and those directly engaged in the business of receiving and forwarding messages by telegraph shall be exempt from militia duties and serving on juries, and from any fine or penalty for neglect thereof.

Approved February 27th, 1862.

An Act respecting executions §

10. ‖ That goods and chattels, shares of stock in any corporation, and personal

*A debt contracted in *building* a vessel is not a maritime contract. *5 Vroom 96; 7 Vroom 449; 21 Wall. 532.*

†Thus amended by supplement, approved March 20th, 1878, (P. L., Chapt. 92.)

‡Revision, p. 1176.

§Revision, p. 391.

‖As amended, Feb. 18th, 1879. See P. L., Chapt. 14.

property of every kind, not exceeding in value (exclusive of wearing apparel*) the sum of two hundred dollars, and all wearing apparel the property of any debtor having a family residing in this state,† shall be reserved, as well after as before the death of the debtor, for the use of his family, and shall not be liable to be seized or taken by virtue of any execution or civil process whatever, issued out of any court of this state, except the same be issued on a judgment founded on a contract made before the fourteenth day of March, one thousand eight hundred and fifty-one; *provided*, that nothing herein contained shall be deemed or held to protect from sale, under execution or other process, any goods, chattels or property, for the purchase whereof the debt or demand for which the judgment on which such execution or process was issued shall have been contracted;‡ or to apply to process issued for the collection of taxes.

12. * * * In case the amount of said appraisement [made under authority of sheriff] shall exceed two hundred dollars, then the defendant may select from such inventory [made by sheriff] articles to amount of two hundred dollars to be reserved for the use of himself and family, and shall annex a written statement thereof, signed by himself, to said inventory.§ * * *

14. When several executions into different counties shall issue on the same judgment, the proceding, to set off the property under the preceding sections [11 and 12; see Revision] for the benefit of the family of the defendant, shall be had in the county in which his family resides, and not in any other county to which execution shall have issued, except for the deficiency of goods and chattels of the defendant in the former county, to make the amount which is reserved by law.

15. If the defendant in execution shall be absent from his place of residence when the appraisement by the said appraisers [see Revision] is completed and cannot readily be found, or shall refuse to make selection from the goods and chattels inventoried and appraised, such selection may be made by the wife or family of the defendant, or by the appraisers, and the statement annexed to and returned with the execution shall be signed accordingly. * * *

16 In case the defendant in execution shall die after execution issued, and a levy and sale of goods and chattels be made thereafter, the selection of goods and chattels to be reserved for the use of his family shall be made by the person or persons entitled to make the selection under the act entitled "An act respecting the orphans' court and surrogates;" ‖ *provided*, that if the property reserved for the benefit of the family of the deceased shall be set off under the provisions of the latter act, the property so set off shall also be the property exempted from sale under such execution. * * *

23. When an execution against the property of any debtor, upon a judgment recovered or docketed in the supreme court, or in the circuit court, or court of common

*A lace shawl is wearing apparel; rings and jewelry are not. *4 C. E. Green 316.*

†If the family reside here, the goods of an absconding debtor are exempt, *5 Dutch. 435.*

‡The articles must have been purchased with the purpose of defrauding the plaintiff, or the credit therefor obtained by false or fraudulent representations. *2 McCarter 33.*

§The officer has a right to seize and hold the goods of the debtor until an appraisement can be made, and will not be liable in trespass although their value is less than $200. *5 Dutch. 435.* See *1 Vroom 332.*

‖Revision of 1877, p. 762, section 52. Widow of deceased or his executor or administrator may select from inventory made, goods and chattels, money or effects to the value of two hundred dollars. The wearing apparel of deceased is also excepted under this act. A like exemption obtains in "assignment for benefit of creditors," "whether the same be reserved by the terms of the said deed of assignment or not." See Revision, page 38, section 9. See, also, a similar provision under "Act concerning distresses," below.

pleas, for any county in this state, or which now is or hereafter shall be docketed in the court of common pleas from any of the courts for the trial of small causes of this state, shall be returned by the officer to whom it is delivered unsatisfied, in whole or in part, it shall be lawful for any judge of the court out of which said execution issued, in term time or vacation, on application by the judgment creditor in the manner hereinafter provided [see act], to make order requiring the judgment debtor to appear and make discovery on oath concerning his property and things in action before said judge or a commissioner of the supreme court, to be designated in said order, at a time and place in said order specified; *provided, nevertheless*, that no such order shall be made when the amount due on such judgment shall be less than fifty dollars.*

Approved March 27th, 1874.

An Act to exempt from sale or execution the homestead of a householder having a family.†

1. That in addition to the property now exempt by law from sale under execution, there shall be exempt by law from sale or execution, for debts hereafter contracted, the lot and buildings thereon, occupied as a residence and owned by the debtor, being a householder and having a family, to the value of one thousand dollars; such exemption shall continue after the death of such householder for the benefit of the widow and family, some or one of them continuing to occupy such homestead, until the youngest child shall become twenty-one years of age and until the death of the widow; and no release or waiver of such exemption shall be valid.

2. That to entitle any property to such exemption, the conveyance of the same shall show that it is designed to be held as a homestead under this act, or if already purchased, or the conveyance does not show such design, a notice that the same is designed to be so held, shall be executed and acknowledged by the person owning the said property, which shall contain a full description thereof, and shall be recorded in the office of the clerk of the county in which the said property is situate, in a book to be provided for that purpose, and to be known as the "Homestead Exemption Book;" and such notice and description, as aforesaid, shall also be published once in each week, for at least six weeks, in one or more public newspapers in the county in which such property is located; and if no newspaper be published in such county, then in a newspaper published nearest to the same; but no property shall, by virtue of this act, be exempt from sale for non-payment of taxes or assessments, or for any labor done thereon, or materials furnished therefor, or for a debt contracted for the purchase thereof, or prior to the recording of the aforesaid deed of notice.

3. That if, in the opinion of the officer holding an execution against such householder, the premises claimed by him or her as exempt are worth more than one thousand dollars, he shall summon six qualified jurors of the county, who shall, upon oath or affirmation, to be administered to them by such officer, appraise said premises; and if, in the opinion of the jury, the property may be divided without injury to the interests of the parties, they shall set off so much of said premises, including the dwelling-house, as in their opinion shall be worth one thousand dollars, and the residue of said premises may be advertised and sold by such sheriff.

* A "bill of discovery" may also be filed in chancery, provided the judgment debt, exclusive of costs, exceeds one hundred dollars. See "An act respective the court of chancery." Revision, p. 120, section 88.

† Revision, p. 1055.

4. That in case the value of the premises shall, in the opinion of the jury, be more than one thousand dollars, and cannot be divided as provided for in the last section, they shall make and sign an appraisal of the value thereof, and deliver the same to the officer, who shall deliver a copy thereof to the execution debtor, or to some of his family, of a suitable age to understand the nature thereof, with a notice thereof attached that unless the execution debtor shall pay to said officer the surplus over and above one thousand dollars within sixty days thereafter such premises will be sold.

5. That in case such surplus shall not be paid within the said sixty days it shall be lawful for the officer to advertise and sell the said premises, and out of the proceeds of such sale to pay such execution debtor the sum of one thousand dollars, which shall be exempt from execution for one year thereafter, and apply the balance on such execution; *provided*, that no sale shall be made unless a greater sum than one thousand dollars shall be bid therefor, in which case the officer may return the execution for want of property.

6. That the costs and expenses of setting off such homestead, as provided herein, shall be charged and included in the officer's bill of costs upon the said execution.

7. That in case any lot and building have been declared, according to the provisions of this act, a homestead, it shall be reserved as such for the use of the family, and shall not be sold, aliened or incumbered by the owner thereof nor leased for a longer term than one year; and any such sale, alienation, incumbrance or leasing shall be void unless the same be made with the full consent of the wife or husband of said owner (if he or she have any), by deed duly acknowledged, and unless the consideration paid for the same be its full fair value, and the same, or one thousand dollars thereof, shall be actually invested in the purchase of other lands and buildings, declared to be a homestead in the manner herein provided; and the title of such purchaser shall not be good until such purchase-money is so invested, and also except in cases when such householder has removed out of the state, nor shall any homestead be rented out or leased for any time without the consent of the wife of the owner.

Approved March 17th, 1852.

An Act for the relief of creditors against absent and absconding and absent debtors.*

12. That the personal property of a non-resident of this state, being in this state, shall not be liable to attachment at the suit of a non-resident creditor, when the said property is exempt by the law of the state of which the said debtor and creditor are residents †

Approved March 27th, 1874.

An Act to amend an act entitled "A further supplement to the act entitled 'An act for the relief of creditors against absconding and absent debtors,'" approved April sixteenth, one thousand eight hundred and forty-six, which further supplement was approved April fifth, one thousand eight hundred and seventy-six.

That the wages, salaries or other compensation for labor, work or services done or rendered within this state, or elsewhere, due to a non-resident employe, shall not be

*Revision of 1877, p. 42.

†Applies only to personal property, as goods and chattels, and not to rights and credits, as wages. *3 Vroom 355.* But see the act which follows.

liable to attachment at the suit of a non-resident creditor, or his or her assigns, where the wages, salary or other compensation due to or earned by such employe, at the time any writ to attach his rights and credits, moneys and effects and goods and chattels may be executed, is not in excess of one hundred dollars; and if more than one hundred dollars be then due to or earned, such excess only shall be liable to attachment, and that only when the same is not exempt from attachment by the law of the state of which the said employe is resident.

Approved February 26th, 1886, (P. L., Chapt. 37.)

An Act concerning distresses.*

1. That all distresses made or taken, or to be made or taken for any cause whatsoever, shall be reasonable and not too great; and if any person shall take great and unreasonable distress or distresses, he or she shall answer the damages to the party aggrieved.

2. That no person shall take any distress wrongfully, or cause any distress to be driven or conveyed out of the county where it shall be taken.

3. That no person shall be distrained for any cause whatsoever, by his or her beasts of the plow, or sheep, or by the implements of his or her trade, while other distress or chattels whereof the debt or demand may be levied, or sufficient for the same, may be found; except the distraining and impounding beasts found on the ground of any person damage feasant. * * *

7. That it shall and may be lawful for any person or persons, having rent in arrear and due † upon any such demise, lease or contract as aforesaid [whatsoever; see section 6, Revision], to seize and secure any sheaves, cocks, or stacks of wheat, rye, buckwheat, barley, oats, Indian corn, or other corn or grain loose or in the straw, or flax, hemp, or hay, lying or being in any barn, crib or granary, or upon any hovel, stack, rick or barrack, or elsewhere upon any part of the land charged with such rent, and to lock up or detain the same in the place where the same shall be found, for and in the nature of a distress, until the same shall be replevied, upon such security to be given as aforesaid [Section 6]; and in default of replevying the same as aforesaid, within the time aforesaid [10 days], to sell the same, after the appraisement thereof, in the manner as above directed. [Section 6, Revision]

8. That it shall and may be lawful for all and every lessor or landlord, lessors or landlords, or his, her or their steward, bailiff, receiver or other person or persons employed by him, her or them, to take and seize as a distress for arrears of rent, any of the goods and chattels of his, her or their tenant or tenants, and not of any other person, ‡ although in possession of such tenant or tenants, which may be found on the demised premises, except such goods and chattels as are by law privileged from distress; ‖ and also any hogs, horses, cattle or stock of his, her or their respective tenant or tenants, and not of any other person, although in possession of such tenant or tenants, feeding or depasturing on the demised premises, or upon any common appendant or appurtenant, or anyways belonging to all or any part of the premises demised or holden; and also to take or seize all or any wheat, rye, buckwheat, barley, oats,

* Revision, page 308.

† A distress will not lie for rent until it is due. *3 Dutch. 243; 1 Dutch. 544.*

‡ Goods owned jointly by the tenant and a stranger may be distrained. *4 Zabriskie 443.* Even after an assignment for benefit of creditors. *4 Halsted 110.*

‖ Where the tenant makes a verbal contract with a third party to work a farm on shares, such party is not a tenant and hence not entitled to the exemption. *5 Vroom 259.*

indian corn, or other corn or grain and grass, hops, roots, pulse, fruits, vegetables or other produce whatsoever, growing or being on the premises or any part thereof, so demised or holden as a distress for arrears of rent, and the same to cut, dig, pull, gather, make, cure, carry and lay up in some proper and convenient place on the premises, and for want thereof in some other place to be procured by such lessor or landlord, lessors or landlords, (due notice of such place being given to such tenant or lessee, or left at his or her place of abode,) and to appraise, sell and dispose of the same in time and manner hereinbefore directed [see Revision]; *provided, always*, that it shall not be lawful for any lessor or landlord, at one time, to distrain for more than one year's rent in arrear, and that such distress must be made within six months after the same shall become due; or where the rent is payable in installments, then within six months after the year's rent shall have become due.* * * *

24. That goods and chattels of every kind, not exceeding in value (exclusive of wearing apparel) the sum of two hundred dollars, and all wearing apparel the property of any tenant having a family residing in this state, shall be reserved, as well after as before the death of such tenant, for the use of his family, and shall not be liable to be sold as, or for, a distress for rent, by force of this act or of any usage or law of this state; that from the inventory of the goods appraised under the sixth section of this act [see Revision], such tenant, or in his absence his agent, attorney or any member of his family, may select articles, the value of which, according to said appraisement, shall not exceed two hundred dollars; and if such tenant, or a member of his family, his agent or attorney, cannot readily be found, such selection may be made by the said appraisers; and the goods so selected shall be left for the use of the family of said tenant.

25. That in case the landlord, his attorney or agent, shall not within two days after being served with a request in writing from his tenant to proceed and have the distrained goods appraised in the manner directed in the sixth section of this act, it shall be lawful for such tenant, after five days' notice thereof to his said landlord, his attorney or agent, to apply to the sheriff or to any constable of the county, and have the said goods inventoried and appraised in the manner appointed in said sixth section; and from such inventory and appraisement the goods exempted for the use of the family of the tenant may be selected in the manner provided in the next preceding section, and with like effect.

26. That the provisions contained in the next two preceding sections shall apply to the case of undertenants.

Approved March 27th, 1874.

APPRENTICESHIP.

An Act respecting apprentices and servants.†

1. That if any male person within the age of twenty-one years, or any female person within the age of eighteen years, shall be bound by indenture, of his or her own free will and accord, and by and with the consent of his or her father,‡ or in

*This section authorizes the landlord to distrain *all* grain, etc, "growing or being on the premises." whether belonging to tenant or other person. *2 Vroom 552.* But see *3 Zab. 390; 3 Dutch. 177; 5 Vroom 259.*

†Revision, p. 30.

‡Supplement, approved February 15th, 1871, also requires mother's consent. See *post.*

case of the death of his or her father, by and with the consent of his or her mother or guardian, to be expressed in such indenture, and signified by such parent or guardian sealing and signing the same indenture, and not otherwise,* to serve as a clerk, apprentice or servant, in any art, craft, mystery, science, profession, trade, employment, manual occupation or labor, until, if a male, he arrive to the age of twenty-one years, and, if a female, until she arrive to the age of eighteen years, or for any shorter time, then the said clerk, apprentice, or servant, so bound as aforesaid, shall serve accordingly.

2. That the age of every infant, who shall be bound to serve as a clerk, apprentice or servant, according to the preceding section, shall be mentioned and inserted in his or her indentures, but such entry shall not be conclusive as to the age of such infant, and the true age of such infant may be inquired into and given in evidence in any court or before any magistrate, when the same shall or may come in question; and in case any infant shall be bound to serve beyond the time at which said infant, if a male, shall have arrived at the age of twenty-one years, or, if a female, at the age of eighteen years, the said indenture shall be void as against such infant, so far as the age inserted in said indenture shall exceed the age aforesaid; *provided*, that nothing in this section shall in any way impair the obligation of any covenant entered into by the parent or guardian of such infant, nor shall it impair or affect any contracts or indentures made with foreigners to serve for a term of years.†

3. That all indentures, covenants, promises and bargains of or for the having, taking or keeping of any clerk, apprentice or servant, hereafter to be made or taken otherwise than by this act, or by any act authorizing overseers of the poor and justices of the peace to bind out children in certain cases, is limited and prescribed, shall be utterly void in law as against such clerk, apprentice or servant only.

4. That no deed, contract or agreement or writing whatsoever, made or to be made for binding any person or clerk, apprentice or servant as aforesaid, shall be deemed to be void and of no effect by reason of such deed, contract, agreement or writing not being indented only.

5. That if any master or mistress shall be guilty of any misusage, refusal of necessary provision or clothing, unreasonable correction, cruelty or other ill-treatment, so that his or her said clerk, apprentice or servant shall have any just cause to complain, or if the said clerk, apprentice or servant shall absent himself or herself from the service of his or her master or mistress, or be guilty of any misdemeanor, miscarriage or ill behavior, or do not his or her duty to his or her master or mistress, then the said master or mistress,‡ or the said clerk, apprentice or servant, being aggrieved and having just cause of complaint, shall repair to one justice of the peace within the

*The apprentice is not bound unless he sign the indenture. *Pennington* *845, *1 South.* *86 (a); and seal it. *1 Halstead 169.* Indenture need not state in express words that binding was minor's own free will and accord. *4 Vroom 100.* Apprentice bound if signing is proved, without proving that of master. *1 Green 222* Otherwise as to father, guardian or person hiring. *Penn.* *845, *540; *1 South.* *84; but see *Penn.* *952. Person hiring is bound after the services are rendered, although the assignment of the indenture was by parol. *Coxe 445* Parent cannot sue master for services of minor, after signing. *Penn.* *725. Recovery may be had after breach of any covenant. *1 South.* *84. An indenture valid in state where executed will be enforced here, if not against public policy. *3 C. E. Green 285.*

Binding by indenture mentioned in section 1 may be made by managers of the House of Refuge incorporated by State of Pennsylvania. *P. L of 1859, p. 281.* May be made by Northern Home for Friendless Children (Penn.). *P. L of 1862, p. 254;* also by managers of Society for Reform of Juvenile Delinquents (N. Y.). *P. L. of 1864, p. 660.* See also *post* acts.

†An indenture binding a foreigner, signed by the father only, and stating the year but not the day or month of his birth, held good. *Penn.* *467.

‡An order, made on complaint of an apprentice's father, quashed, *4 Hal. 65.* No costs allowed. *Penn.* *335.

county where the said master or mistress dwells, who shall, in his wisdom and discretion, take such order and direction between such master or mistress and his or her clerk, apprentice or servant as the equity of the case shall require; and if the said justice of the peace cannot compound or agree the matter between such master or mistress and his or her clerk, apprentice or servant, then the said justice shall call to his assistance two other justices of the peace of the said county, unconnected with either of the said parties, which three justices, when met, shall constitute a court for the hearing of the said matters in difference, and, having heard the same, shall have authority to discharge, if they think proper, by writing, under their hands and seals, or the hands and seals of any two of them, the said clerk, apprentice or servant of and from his or her clerkship, apprenticeship or service, and to order such part or proportion of the money as shall have been given, paid, contracted or agreed for with or in relation to such clerk, apprentice or servant as they shall think just and reasonable to be refunded or paid back to the person who paid the same, his or her executors or administrators, or to be deducted, as the case may require; and such writing as aforesaid shall be a sufficient discharge for the said clerk, apprentice or servant against his or her master or mistress and his or her executors and administrators, the said indenture or any law to the contrary notwithstanding; and if the default shall be found to be in the clerk, apprentice or servant, then the said court shall cause such due correction or punishment to be administered unto him or her as they shall deem to be just and reasonable; and if any person shall think himself or herself aggrieved by such adjudication of the said justices, he or she may appeal to the next court of general quarter sessions of the peace, in and for the county where such adjudication shall have been made, such person giving six days' notice of his or her intention of bringing such appeal and of the cause and matter thereof, to the adverse party, and entering into a recognizance within three days after such notice, before some justice of the peace of the said county, with sufficient surety, conditioned to try such appeal at, and abide the order or judgment of, and pay such costs as shall be awarded by the said court; which said court, at their said sessions, upon due proof upon oath or affirmation of such notice being given and of entering into such recognizance as aforesaid, shall be and hereby are empowered and directed to proceed in and hear and determine the cause and matter of such appeal, and give and award such judgment therein, with costs, to either party, appellant or respondent, as they in their discretion shall judge proper and reasonable.

6. That every person who shall counsel, persuade, entice, aid or assist any clerk, apprentice or servant to run away, or absent himself or herself from the service of his or her master or mistress, shall forfeit and pay the sum of thirty dollars, to be sued for and recovered by action of debt, with costs, by such master or mistress, in any court of record having cognizance thereof.*

7. That every person who shall entertain, harbor or conceal any clerk, servant or apprentice, knowing such clerk, apprentice or servant to have run away, shall forfeit and pay one dollar for every day's entertainment, harboring or concealing as aforesaid, to be sued for and recovered by action of debt, with costs, by such master or mistress, in any court of record having cognizance thereof †

8. That whenever a male servant above the age of twenty-one years, or a female servant above the age of eighteen years, shall abscond from his or her master or

*An action for enticing, &c., will not lie when apprentice has not signed the indenture. *Penn.* *977.

†An action for harboring, &c., will not lie. *Penn.* *845; *4 Vroom 100.*

mistress' service, or run away, it shall be lawful for such servant, when apprehended, to be taken by such master or mistress before three justices of the peace of the county where such master or mistress resides, who, upon the hearing of the whole matter, shall adjudge the said servant to serve any term, not exceeding double the time he or she so absented him or herself, besides paying or serving for all damages and costs which such master or mistress shall be adjudged to have sustained by such unlawful absence or departure.

9. That every clerk, apprentice or servant, under the ages mentioned in the preceding section, who shall absent himself or herself from the service of his or her master or mistress, without leave first obtained,* or who shall run away, so that the said master or mistress shall be deprived of his or her service during the remainder of the term or any part thereof for which he or she was bound to serve, then, and in such case, it shall be lawful for the master or mistress of such clerk, apprentice or servant to have an action on the case, in any court having cognizance thereof, against such clerk, apprentice or servant for the damage that such master or mistress may have sustained by reason of the absence of such clerk, apprentice or servant; *provided*, such action shall be brought within the term of six years after such clerk, apprentice or servant shall arrive at full age.

10. That no writ of certiorari, or other process, shall issue or be issuable, to remove into the supreme court any proceeding had in pursuance of this act, before any justice or justices of the peace, or before any court of general quarter sessions of the peace.†

11. That no indenture made prior to the twelfth day of March, eighteen hundred and forty-five, shall be adjudged or held to be void, merely for that such indenture is made to several persons constituting a firm or copartnership, but that all such indentures, being in other respects legal, shall be deemed and held valid and effectual in law; *provided, nevertheless*, that nothing herein contained shall be so construed as to render valid any indenture of apprenticeship made to any incorporated company.

12. That in all cases of indenture whereby an apprentice or servant was bound prior to the said twelfth day of March, eighteen hundred and forty-four, to serve several persons constituting a firm or copartnership, and one or more of such persons shall die before the expiration of the term of apprenticeship or service mentioned in any such indenture, then that the covenants and agreements contained therein, on the part of the parent or guardian of such apprentice or servant, and on the part of such apprentice or servant, shall accrue and be performed to the survivors or survivor, and such survivors or survivor shall perform and fulfill to the apprentice or servant, all the covenants and agreements contained in any such indenture on the part of the persons to whom such apprentice shall be bound, to be performed, fulfilled and kept.

Approved April 10th, 1846.

SUPPLEMENT.‡

1. The binding by indenture mentioned in the first section of the act to which this is a supplement may lawfully be made to two or more persons constituting a firm or copartnership; and all such indentures, if in other respects conformable to the provisions of said act, shall be deemed and held to be valid and effectual in law; *provided*,

*A subsequent approval by the master of the apprentice's enlistment held good. *2 South. *555.*

† But see *Penn. *258, *336; 3 Hal. 268; 4 Hal. 65.*

‡ Revision, p. 33.

that nothing herein contained shall be so construed as to render valid any indenture of apprenticeship made to any incorporated company.

2. In all cases of an indenture, whereby an apprentice or servant is or shall be bound to serve several persons constituting a firm or partnership, and one or more of such persons shall die before the expiration of the term of apprenticeship or service mentioned in any such indenture, then the covenants and agreements contained therein, on the part of the parent or guardian of such apprentice or servant, and on the part of such apprentice or servant, shall accrue and be performed to the survivors or survivor, and such survivors or survivor shall perform or fulfill to the apprentice or servant all the covenants and agreements contained in any such indenture on the part of the persons to whom such apprentice shall be bound, to be performed, fulfilled and kept.

Approved March 17th, 1854.

SUPPLEMENT.*

1. That hereafter the binding by indenture mentioned in the first section of the act to which this is a further supplement, shall not be lawful without the consent of mother, if living, to such indenture, signified by her signing and sealing the same.

Approved February 15th, 1871.

An Act to authorize citizens of this state to take apprentices bound to them outside of this state.†

That citizens of this state may take and enter into indenture executed outside of this state, whereby minors are bound to them to serve in this state, and that in all such cases parties binding said minors, and the masters or mistresses of said apprentices, shall be entitled to the same remedies against each other as if the said indentures had been duly executed in this state.

Approved March 15th, 1875.

An Act to establish and regulate pilots for the ports of Jersey City, Newark and Perth Amboy, by way of Sandy Hook.‡

18. That to each and every boat in the pilot service, to and from Sandy Hook, there shall not be less than two ⁑ [one] apprentices, who shall be indentured to the master of the said boat or boats, or some other branch pilot attached to the said boat or boats, for a term not less than four years; and it shall be the duty of the master pilot to whom such apprentices shall be indentured, to attend diligently to the instruction of said apprentices in the art and mystery of a pilot, from time to time, and not less frequently than once in every month of the last two years of the said apprenticeship, to take such apprentices on board of ships or other square-rigged vessels, for the purpose of teaching said apprentices to work and manœuvre such ships or vessels. Every person who shall have served four years as an apprentice to a licensed pilot, and two years as a deputy pilot, shall be entitled to be examined and licensed as a branch pilot, if found qualified, in preference to any other applicants; and every person

* Revision, p. 33.
† Revision, p. 34.
‡ Revision, p. 819.
⁑ See below. Supplements.

having served four years as an apprentice to a licensed pilot, shall be entitled to be examined and licensed as a deputy pilot, if found qualified, in preference to any other applicants; *and further*, that the said commissioners [of pilotage *] shall annually, in the month of May, cause all the said apprentices to be examined in their office, in the presence of two or more of the branch pilots (who are hereby required to attend for that purpose), touching and concerning their knowledge of the tides, bearing and distances of the several shoals, reefs, bars and points of land, currents and every other matter the said commissioners may think proper, tending to promote the safe navigation of vessels between Jersey City, Newark, Perth Amboy and Sandy Hook.

19. That the branch pilots, deputy pilots and apprentices indentured as above mentioned, and the boat-keepers (to be selected from the apprentices) shall be the only persons employed in the pilot service to and from Sandy Hook.

Approved April 17th, 1846.

SUPPLEMENT.†

46. That to each and every boat in the pilot service to and from Sandy Hook there shall be one apprentice instead of two, as provided in the eighteenth section of the act to which this is a supplement, and that every apprentice shall serve at least one year as a boat-keeper before he shall be licensed as a deputy pilot.

Approved March 5th, 1867.

SUPPLEMENT.

1. That no apprentice, taken after the passage of this act, shall be licensed unless he shall have served for not less than three consecutive years as a boat-keeper of one of the duly licensed Sandy Hook pilot boats of this state.

Approved March 8th, 1883. P. L. Chapt. 75.

An Act in relation to apprentices in the service of pilots for the ports of Jersey City, Newark and Perth Amboy, by way of Sandy Hook.

1. That hereafter every boat belonging to the pilots licensed by the laws of this state shall have but one indentured apprentice, who shall be attached to said boat, and indentured to its masters, and serve as said apprentice under the laws of this state at least four years, and at least three consecutive years of said apprenticeship as a boat-keeper on said boat, and shall be subject to all the laws now in force for the government of pilots of this state; shall be examined as now directed by law, and after said examination shall be licensed as a deputy pilot, at and under the discretion of the pilot commissioners of this state, and no person shall be appointed a pilot of this state by way of Sandy Hook except as herein provided.

2. That all laws or parts of laws inconsistent with this act, be and the same are hereby repealed.

Approved March 10th, 1884. P. L. Chapt. 39.

An Act concerning disorderly persons.‡

12. It shall be lawful for any two justices of the peace, at their discretion, to bind out the child of any beggar, vagrant, vagabond, common drunkard or common prosti-

*See section 1 Revision.

†Revision, p. 826.

‡Revision, p. 306.

tute, or of any person who shall not provide for such child, as a servant or apprentice to any person who may be willing to take such child, till the age of twenty-one years, if a male, or eighteen years, if a female, or for a less time.

Approved April 9th, 1875.

An Act for the settlement and relief of the poor.*

1. That * * * every person who shall have served an apprenticeship under indenture † and every indentured servant legally and directly imported from Europe, or brought in from neighboring states into this state, shall obtain a legal settlement in the township in which such apprentice or servant shall first serve with his or her master or mistress for the space of one year; ‡ and if afterwards such apprentice or servant shall duly serve in any other place for the space of one full year, § such apprentice or servant shall obtain a legal settlement in the township where such apprenticeship or service was last performed, either with his or her first master or mistress, or with the assignee or assignees, on an assignment of the said indentures, ‖ and that all mariners coming into this state, and having no settlement in this nor any of the neighboring states, and every other healthy person directly coming from Europe into this state, shall be legally settled in the township in which he or she shall first settle and reside for the space of one year. * * *

12. It shall and may be lawful for the overseers of the poor, or any two of them, with the assistance and approbation of two justices of the peace of any county or township of this state, and they are hereby enjoined and commanded to put forth and bind out any poor child or children who have no parents, ¶ or whose parents shall apply to the said overseer or overseers for relief, or the child or children of any poor parent whatsoever, who shall bring up their said children in sloth, idleness and ignorance, and upon advice and direction given by the said overseer or overseers, shall for three months after such advice and direction refuse or neglect to put forth and bind out such child or children for such a number of years as the said justices and overseers, in their discretion, shall think proper, for a male person till they shall arrive at twenty-one years of age, and for a female till they arrive at eighteen years of age, and no longer; and the said justices, in conjunction with said overseers, or any two of them, amongst the common covenants in the indenture and indentures made and agreed upon between the parties, shall always insert the following clause, that every such master and mistress to whom such poor child or children shall be bound out as aforesaid, shall cause every such child or children to be taught and instructed to read and write; and the said justices, overseers, or any two of them, are hereby appointed the guardians of all and every such poor child and children so put forth and bound out as aforesaid, to take care that the terms of the indenture or indentures, covenant and covenants, agreed upon between them and the master or mistress of every such poor child, be performed and fulfilled, and that he, she or they be not abused or ill-used; which said justices, overseers, or any two of them as aforesaid, or the major part of them, are hereby empowered and directed to inquire into the same, and to

* Revision, p. 834; see also, Chapt. 80, P. L. of 1881, as to aliens' children, who may gain a settlement in the manner and under same restrictions as native-born parents.

† *1 Green 187, 222; 2 Green 549; Penn. *442, *445; 3 Hal. 257; 1 Hal. 169; 1 Harr. 535; 2 Green 321.*

‡ *Coxe 289.*

§ *Penn. *422.*

‖ *2 Green 321.*

¶ Overseers may bind a pauper to serve in another township or county. *Penn. *442.*

redress any such grievance or grievances in such method as the law hath prescribed. * * *

29. The president of the board of trustees of every poorhouse now established, or that may hereafter be established in any county of this state, by and with the consent of a majority of the board of trustees, or, where no trustees are or shall be appointed, the director of the board of chosen freeholders, by and with the consent of a majority of the board of chosen freeholders, be and he is authorized and empowered and it shall be his duty to bind out the poor children who now are or may hereafter become chargeable upon such county, in the same manner and under the same conditions as those by which justices of the peace and overseers of the poor are authorized to bind out poor children by this act; and the said president of the board of trustees, or director of the board of chosen freeholders for the time being, who shall bind out any poor child or children, as the case may be, are hereby appointed guardian of all and every child or children bound out by the said president or director, in the same manner and with the like powers and authority, and under the same obligations of duty, as the justices and overseers of the poor are by the same act invested with and directed to perform.

Approved March 27th, 1874.

An Act to establish and organize the state reform school for juvenile offenders.*

8. That they [trustees] may bind out boys committed to the school as apprentices or servants until they become twenty-one years of age, or for any less time; stipulating in the indentures for the needful amount of school learning, and from time to time, as the rightful guardians of the boys, ascertaining whether the duties and obligations of the master or mistress are faithfully performed, and, if not, applying the proper remedy; in binding out boys, they shall have scrupulous regard to the religious and moral character of those to whom they are to be bound, that they may secure to the boys the benefit of a good example and wholesome instruction and the sure means of improvement in virtue and knowledge, and thus the opportunity of becoming intelligent, moral and useful and happy citizens.

Approved April 6th, 1865.

[Section 10 of "An act to establish a state industrial school for girls," approved April 4th, 1871, (Revision, p. 954,) authorizes the trustees to bind out as apprentices all girls (inmates) until "they shall have arrived at the age of eighteen years."]

EDUCATION AND PROTECTION OF CHILDREN.

The legislature shall provide for the maintenance and support of a thorough and efficient system of free public schools for the instruction of all the children in this state between the ages of five and eighteen years.—*Constitution*, art. iv., sect. vii., par. 6 †

*Revision, p. 919.

†Amendment of 1875.

An Act to establish a system of public instruction.*

94. That * * * it shall not be lawful to charge tuition fees for the support of public schools in this state, but that all such schools shall be free to all persons over five and under eighteen years of age residing within the district, so long as such schools can be thus maintained with the public school funds.

Approved March 27th, 1874.

Supplement to an act to establish a system of public instruction.†

1. That every parent, guardian or other person having control and charge of any child between the ages of eight and fourteen years, shall cause such child to attend some public or private school, at least twelve weeks in each year, six weeks at least of which attendance shall be consecutive, or to be instructed at home at least twelve weeks in each year, in the branches of education commonly taught in the public schools, unless the physical or mental condition of the child is such as to render such attendance inexpedient or impracticable.

2. That any person failing to comply with the provisions of this act shall, on written notice of such failure from the district clerk of the school district, or the person designated by the board of education of the city where such offense has occurred, forfeit for the first offense, and pay to the township collector or city treasurer the sum of two dollars; and after such first offense, shall, for each succeeding offense in the same year, forfeit and pay to the township collector or city treasurer, the sum of three dollars for each and every week, not exceeding twelve weeks in any one year, during which they, after written notice as aforesaid, shall have failed to comply with the provisions of this act.

3. That it shall be the duty of the district clerk of each school district, and of some person in each city to be selected by the city board of education, to report to the township collector of the township, or city treasurer of the city where the offense has occurred, the names of all parents, guardians or other persons who fail to comply with the provisions of this act; and the officer to whom such report is made shall proceed to collect the penalties imposed by this act, in any court of competent jurisdiction, in the county in which such city, town, township or school district may be situated; the said penalties, when paid, to be added to the public school money of said school district in which the offense occurred; *provided*, this law shall not be operative in those school districts of the state where there are not sufficient accommodations to seat the children compelled to attend school under the provisions of this act.

Approved April 9th, 1875.

SUPPLEMENT.

1. That all parents and those who have the care of children, shall instruct them or cause them to be instructed in spelling, reading, writing, English grammar, geography and arithmetic, and every parent, guardian or other person having control and charge of any child or children, between the ages of seven and twelve years, shall be required to send any such child or children to a public day school for a period of at least twenty weeks in each year, eight weeks, at least, of which attendance shall be consecutive, unless such child or children are excused from such attendance by the

* Revision, p. 1087.

†Revision, p. 1088.

board of the school district in which such parents or guardians reside, upon its being shown to their satisfaction that the bodily or mental condition of such child or children has been such as to prevent his, her or their attendance at school, or that such child or children are taught in a private school, or at home by some qualified person or persons, in such branches as are usually taught in primary schools.

2. That no child under the age of fifteen years shall be employed by any person, company or corporation to labor in any business whatever, unless such child shall have attended, within twelve months immediately preceding such employment, some public day or night school, or some well-recognized private school; such attendance to be for five days or evenings every week during a period of at least twelve consecutive weeks, which may be divided into two terms of six consecutive weeks each, so far as the arrangement of school terms will permit, and unless such child or his or her parents or guardian shall have complied with the provisions of the act approved March fifth, eighteen hundred and eighty-three, limiting the employment hours of the labor of children.

3. That every parent, guardian or other person having charge or control of any child, from twelve to sixteen years of age, who has been temporarily discharged from employment in any business in order to be afforded an opportunity to receive instruction or schooling, shall send such child to some public or private day school for the period for which such child shall have been discharged, unless such child shall have been excused from such attendance by the inspectors of factories and workshops, or by the board of the school district for reasons as stated in section one hereof.

4. That in case any parent, guardian or other person shall fail to comply with the provisions of sections one and three of this act, such parent, guardian or other person shall be deemed guilty of a misdemeanor, and shall, on conviction, be liable to a fine of not less than ten dollars nor more than twenty-five dollars for the first offense, and of not less than twenty-five dollars for each subsequent offense, or to imprisonment for not less than one month nor more than three; the said fines, when paid, to be added to the public school money of said school district in which the offense occurred

5. That all children between the ages of seven and fifteen years, who are habitual truants from school, or who, while in attendance at any public school, are incorrigible, vicious or immoral in conduct, and all children between the said ages who absent themselves habitually from school, and habitually wander about streets and public places during school hours, having no business or lawful occupation, shall be deemed juvenile disorderly persons, and subject to the provisions of this act.

6. That in all cities having a duly organized police force, it shall be the duty of the police authority, at the request of the inspectors of factories and workshops, or of the school authority, to detail one or more members of said force to assist in the enforcement of this act, and in districts having no regular police force, subject to this act, it shall be the duty of the board of education, or the school district officers, to designate one or more constables of said city, township or village, whose duty it shall be to assist in the enforcement of this act, as occasion may require, and said board of education shall fix and determine the compensation to be paid such police officer or constable for the performance of his duties under the act; members of any police force or any constable designated to assist in the enforcement of this act, as provided in this section, shall be known as truant officers; *provided*, that in districts where no constable resides the said board shall have power to appoint some other suitable person as truant officer.

7. That it shall be the duty of any such truant officer or officers detailed to enforce the provisions of this act to examine into all cases of truancy, when requested so to do by the inspectors of factories and workshops, or by a district school board, and to warn such truants, their parents or guardians, in writing, of the final consequences of truancy, if persisted in, and also to notify the parents, guardian or other person having the legal charge and control of any juvenile disorderly person, that the said person is not attending any school, and to require said parent, guardian or other person to cause the said child to attend some recognized school within five days from said notice, and it shall be the duty of said parent, guardian or other person having the legal charge and control of said child, to cause the attendance of said child at some recognized school; if said parent, guardian or other person having the legal charge and control of said child shall willfully refuse, fail or neglect to cause said child to attend some recognized school, it shall be the duty of said officer to make or cause to be made a complaint against said parent, guardian or other person having the legal control and charge of such child, in any court of competent jurisdiction in the school district in which the offense occurred, for such refusal or neglect, and upon conviction thereof said parent, guardian or other person, as the case may be, shall be punished by a fine of not less than ten dollars nor more than twenty five dollars, or the court may in its discretion require the person so convicted to give bond in the penal sum of one hundred dollars, with one or more sureties, to be approved by said court, conditioned that said person so convicted shall cause the child or children under his or her legal charge or control to attend some recognized school within five days thereafter, and to remain at said school during the term prescribed by law; *provided*, that if said parent or guardian or other person in charge of said child shall prove inability to cause said child to attend said recognized school, then said parent or guardian or other person shall be discharged and said court shall, upon complaint of said truant officer or other persen that said child is a juvenile disorderly person, as described in section five of this act, proceed to hear such complaint, and if the said court shall determine that said child is a juvenile disorderly person within the meaning of this act, then said court shall thereupon sentence said child to a juvenile reformatory until such child shall arrive at the age of sixteen years, unless sooner discharged by the board of control of said juvenile reformatory; *provided, however*, that such sentence may be suspended in the discretion of said court for such time as the child shall regularly attend school and properly deport himself or herself; *it is further provided*, that if for any cause the parent or guardian or other person having charge of any juvenile disorderly person as defined in this act shall fail to cause such juvenile disorderly person to attend said recognized school, then complaint against such juvenile disorderly person may be made, heard, tried and determined, in the same manner as is provided for in case the parent pleads inability to cause said juvenile disorderly person to attend said recognized school; *and it is further provided*, that no child under the age of nine years shall be sent to a juvenile reformatory under the provisions of this act.

8. That it shall be the duty of the officers empowered, detailed or appointed under the provisions of this act to assist in the enforcement thereof, to institute or cause to be instituted proceedings against any parent, guardian or other person having legal charge and control of any child or any person, company or corporation violating any of the provisions of the sections of this act; *provided*, this law shall not be operative in those school districts of the state where there are not sufficient accommodations to seat the children compelled to attend school under the provisions of this act; and

that no prosecution shall be instituted against any parent, guardian or child unless they have received due notification from an officer empowered under this act that they are acting in violation of the provisions of this act.

9. That when there is not within the distance of two miles from the factory or shop in which a child under the age of fifteen years is employed, or from the residence of the child, a recognized efficient school, attendance at a school temporarily approved by an inspector of factories and workshops, shall, for the purposes of this act, be deemed attendance at a recognized efficient school, and the inspector of factories shall immediately report to the education department every case of the approval of a school by him under this section.

10. That two weeks' attendance of children between twelve and fifteen years of age at a recognized half time or evening school shall for all purposes of this act be counted as one week at a day school.

11. That when any of the provisions of this act are violated by a corporation proceedings may be had against any of the officers or agents of said corporation who in any way participate in or are cognizant of such violation by the corporation of which they are the officers or agents, and said officers or agents shall be subject to the same penalties as individuals similarly offending.

12. That all acts and parts of acts inconsistent with this act are hereby repealed, and that this act shall take effect on the first day of September, one thousand eight hundred and eighty five.

Approved April 20th, 1885. P. L., Chapt. 217.

An Act authorizing limited appropriations for the relief and education of certain indigent children in the cities of the state.

That in addition to its yearly appropriations for school purposes, it shall be lawful for the body having control of the finances of any city in this state to raise, in its annual tax levy, a sum of money not exceeding one thousand dollars, which, together with any moneys obtained therefor by voluntary contributions, shall be expended for the relief and primary education of such indigent, homeless or deserted children of said city as, by reason of their age, their inability to obtain suitable clothing, their necessary occupations, or otherwise, are unable to attend the public schools; *provided, however*, that the moneys thus appropriated shall be expended under the direction of the mayor of said city.

Approved March 23d, 1883. P. L., Chapt. 162.

A Supplement to an act entitled "An act to establish a system of public instruction" [Revision], approved March twenty-seven, one thousand eight hundred and seventy-four.

1. That no child, between the age of five and eighteen years of age, shall be excluded from any public school in this state on account of his or her religion, nationality or color.

2. That any member of any board of trustees of any school district, or any member of any board of education in this state, who shall vote to exclude from any public school in this state any child between the age of five and eighteen years of age, on account of his or her religion, nationality or color, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than

fifty dollars nor more than two hundred and fifty dollars, or by imprisonment in the county jail, workhouse or penitentiary of the county in which the offense is committed not less than thirty days or more than six months, or both fine and imprisonment may be imposed, in the discretion of the court.

Passed March 23d, 1881. P. L, Chapt. 159.

An Act to provide for the establishment of schools for industrial education.

1. That the state board of education may, in their discretion, establish schools for industrial education, upon the application of not less than ten citizens of this state, who shall agree to pay a suitable part of the expense of maintaining any such schools; and the said board of education shall have power to prescribe and cause to be enforced all rules and regulations necessary for carrying into effect the provisions of this act.

2. That such schools, when organized, shall be for the training and education of pupils in any industrial pursuits now established in this state, including agriculture, so as to enable them to perfect themselves in the several branches of industry which require technical instruction.

3. That there shall be a board of trustees of each of such schools, to consist of five members, who shall have control of the buildings and grounds owned or used by such schools, the application of the funds for the support thereof, the regulation of the tuition fees, the appointment of teachers, and the power of removing the same, the power to prescribe the studies and exercises of the school, and rules for its management, to grant certificates of graduation, to appoint some suitable person treasurer of the board, and to frame and modify at pleasure such by laws as they may deem necessary for their own government; they shall report annually to the state board of education their own doings, and the progress and condition of the schools.

4. That the said trustees shall consist of the governor, ex-officio, who shall be president of the board, two persons to be selected by the state board of education, one selected by the citizens contibuting, and one to be appointed by the common council or township committee of the locality where such school is established.

5. That the said trustees shall receive no compensation for their services, but the expenses necessarily incurred by them in the discharge of their duties shall be paid upon the approval of the governor.

6. That any city, town, township or county shall have the power to appropriate for the support of any such school such amount as they may deem expedient and just.

7. That the said school shall be supported, (1) by the amount received from tuition fees; (2) by the money contributed by the petitioning citizens; (3) by the amount appropriated by the city, town, township or county; and (4) by the amount contributed by the state board of education; provided, however, that the sum annually contributed by the said board shall not exceed the sum of one thousand dollars, nor shall any one school receive more than five hundred dollars of said amount, and the treasurer is hereby authorized to pay, upon the warrant of the comptroller, approved by the governor, such sum, not exceeding the amount above specified, as may be called for by the trustees.

Approved March 14th, 1879. P. L., Chapt. 105.

An Act providing for the establishment of schools for industrial education.

WHEREAS, The establishment of well-conducted and liberally-supported schools for the training and education of pupils in industrial and mechanical pursuits must tend to supply a growing want in our community of skilled mechanics, artisans and agriculturists; and whereas, it is especially the duty of the state to afford good educational facilities to its youth in those technical studies which are directly associated with the material prosperity of its people; therefore,

1. That whenever any board of education, school committee, or other like body, of any city, town or township in this state, shall certify to the governor that a sum of money, not less than three thousand dollars, has been contributed by voluntary subscriptions of citizens, or otherwise, as hereinafter authorized, for the establishment in any such city, town, or township, of a school or schools for industrial education, it shall be the duty of the said governor to cause to be drawn, by warrant of the comptroller, approved by himself, out of any moneys in the state treasury not otherwise appropriated an amount equal to that contributed by the particular locality as aforesaid for the said object; and when any such school or schools shall have been established in any locality as aforesaid, there shall be annually contributed by the state, in manner aforesaid, for the maintenance and support thereof, a sum of money equal to that contribnted each year in said locality for such purpose; *provided, however*, that the moneys contributed by the state, as aforesaid, to any locality shall not exceed in any one year the sum of five thousand dollars.

2. That all moneys raised and contributed as aforesaid shall be applied under the direction of a board of trustees, organized as hereinafter provided, to the establishment and support of schools for the training and education of pupils in industrial pursuits (including agriculture), so as to enable them to perfect themselves in the several branches of industry which require technical instruction.

3. That any city, town or township shall have power to appropriate and raise by tax for the support of any such school therein, such sum of money as they may deem expedient and just.

4. That there shall be a board of trustees of each of such schools, which shall consist of the governor, ex-officio, who shall be president thereof, two persons selected by the state board of education, two by citizens and associations contributing, two by the board of education, school committee, or other like body of the locality where such school is established, and one by the common council, township committtee or other governing body thereof, if such city, town or township shall contribute to the maintenance of such school; the said board of trustees shall have control of the buildings and grounds owned and used by such schools, the application of the funds for the support thereof, the regulation of the tuition fees, the appointment and removal of teachers, the power to prescribe the studies and exercises of the school, and rules for its management, to grant certificates of graduation, to appoint some suitable person treasurer of the board, and to frame and modify at pleasure such by-laws as they may deem necessary for their own government; they shall report annually to the state and local boards of education their own doings and the progress and condition of the schools.

5. That the said trustees shall receive no compensation for their services, but the

expenses necessarily incurred by them in the discharge of their duties shall be paid upon the approval of the governor.

6. That all acts or parts of acts inconsistent herewith are hereby repealed.

Approved March 24th, 1881. P. L, Chapt. 164.

An Act to protect children.

1. That all and every person or persons having in his, her or their custody or control, lawful or unlawful, any minor child under the age of eighteen years, who shall apprentice, give away, let out, hire or otherwise dispose of such minor or minors for the purpose of begging, singing and playing on musical instruments, or for any other mendicant business whatsoever, or in any immoral conduct or occupation in the streets, roads and other highways and public places of this state, and whosoever shall take, receive, hire, employ, use or have in custody, any such minor or minors, under the age of eighteen years, and use or employ him, her or them in any mendicant or immoral business whatsoever, either in public or private places within this state, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined or imprisoned; the fine not to exceed one thousand dollars, and the imprisonment not to exceed two years in hard labor in the discretion of the court.

2. That if upon such conviction the minor or minors shall have no home or means of support and no one to take proper care of him, her or them, the court may, in its discretion, if it shall appear a humane and proper thing to do, commit such minor or minors to the state reform school for boys or the state industrial school for girls, until said minor or minors attain the age of eighteen years, or for a less age in the discretion of the court.

Approved March 9th, 1885. P. L., Chapt 57.

An Act to protect children from neglect and cruelty, and relating to their employment, protection and adoption.

1. That any person whatsoever who shall cruelly ill-treat, abuse, or inflict unnecessarily cruel punishment upon any infant or minor child, and any person having the care, custody, or control of any minor child who shall willfully neglect to supply the same with sufficient food, clothing, regular school education, or who shall willfully abandon or neglect the same, shall be guilty of a misdemeanor, and upon conviction thereof before any justice of the peace, magistrate, or court of record, shall be fined by such justice, magistrate, or court of record not less than ten dollars nor more than fifty dollars for each offense.

2. That any person having the care, custody, or control of any minor child under the age of fifteen years who shall in any manner sell, apprentice, give away, or otherwise dispose of such child, and any person who shall take, receive, or employ such child for the vocation or occupation of rope or wire walking, or as an acrobat, gymnast, contortionist, or rider, and any persons having the care, custody, or control of any minor child whatsoever who shall sell, apprentice, give away, or otherwise dispose of such, or who shall take, receive, or employ such child for any obscene, indecent, or illegal exhibition or vocation, or any vocation injurious to the health or dangerous to the life or limb of such child engaged therein, or for the purpose of prostitution, and any person who shall retain, harbor, or employ any minor child in or about any assignation house or brothel, or in any place where any obscene, indecent or illegal exhibition takes place, shall be guilty of a misdemeanor, and upon conviction

thereof before any justice of the peace, magistrate, or court of record, shall be fined not less than fifty dollars nor more than one hundred dollars for each offense.

3. That any person having the care, custody, or control, lawful or unlawful, of any minor child under the age of eighteen years, who shall use such minor or apprentice, give away, let out, hire, or otherwise dispose of such minor to any person for the purpose of singing, playing on musical instruments, begging, or for any mendicant business whatsoever, in the streets, roads or other highways of this state, and whosoever shall take, receive, hire, employ, use or have in custody any such minor for the vocation, occupation, calling, service, or purpose of singing, playing upon musical instruments, or begging upon the streets, roads, or other highways of the state, or for any mendicant business whatsoever, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than fifty dollars nor more than one hundred dollars.

4. That any person having the care, custody, or control of any minor child under the age of fifteen years, who shall in any manner sell, apprentice, give away, or permit such child to sing, dance, act or in any manner exhibit in any dance-house whatever, or in any concert saloon, theater, or place of entertainment where wines or spirituous or malt liquors are sold or given away, or with which any place for the sale of wines or spirituous or malt liquors is directly or indirectly connected by any passage-way or entrance, and any proprietor of any dance-house whatever, or any such concert saloon, theater, or place of entertainment so employing any such child, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than fifty dollars nor more than one hundred dollars for each offense.

5. That any person who shall take, receive, hire, or employ any child under twelve years of age in any underground works or mine or like place whatsoever, shall be guilty of a misdemeanor, and upon conviction thereof in the manner provided in the first section of this act, shall be fined not less than ten dollars nor more than fifty dollars.

6. That whenever any person shall, before a magistrate or justice of the peace, make oath or affirmation that the affiant believes that this act has been or is being violated in any place or house, such justice or magistrate shall forthwith issue a warrant to a constable or other authorized officer to enter such place or house and investigate the same, and such person may arrest or cause to be arrested all offenders and bring them before any justice, magistrate or court of record for a hearing of the case; and it shall be the duty of all constables and policemen to aid in bringing all such offenders before said authorities for a hearing.

7. That whenever any person having the custody or control of any minor shall be convicted of a violation of any of the provisions of this act, it shall be lawful for any person to apply to the orphans' court of the county wherein the offense has been committed for the appointment of a proper guardian for the person of such minor, and the said court may in its discretion make any such appointment, having due regard in the selection of a guardian to the religious persuasion of the parent or former guardian, or it may place such child in an asylum or home for children, with the powers of a guardian of the person, as may be most expedient, and the said court may order the parent to pay such a reasonable sum towards the maintenance of such child, and at such times and in such amounts as the said court may see fit; and such courts may at any subsequent time, upon being satisfied that the parent has become a fit person to resume the custody of said minor, and upon reasonable

security to be fixed by the court, being given for the faithful observance of the provisions of this act, remand such minor to the custody of such parent, subject, nevertheless, to the obligation of any indentures or legal engagements already entered into on behalf of said minor by his or her guardian.

8. That any duly organized or incorporated humane society, having for one of its objects the protection of children from cruelty, may offer any agents or officers employed by them to the mayor of any city for the purpose of being commissioned to act as police officers through the limits of said city, for the purpose of arresting all the offenders against this act or any of the provisions thereof, whereupon the mayor in such city shall, if such persons are proper and discreet persons, commission them to act as such police officers, with all the rights and powers appertaining thereto; but no such city shall be liable in any way for the salary or wages of such officers, or for any expense whatever in relation thereto, except for the detention of prisoners; and in district or township not incorporated such humane society may offer similarly qualified persons to the court of common pleas of the county, whereupon such court, or any judge thereof, shall, if they be fit persons, commission such persons to act as constables, with power to arrest all offenders against this act or any provisions thereof; but no township, borough or county shall be in anywise liable for the salary or wages of any such officer, or for any expense in relation thereto, except for the detention of prisoners; all persons thus qualified under this section shall be deemed to be constables and authorized officers within the meaning of section six of this act, and the keepers of jails or lock ups or station-houses in any of said counties are required to receive all persons arrested by such policemen or constables.

9. That whenever any person having the custody or control of any minor child shall be convicted of an assault and battery upon such child or of any violation of the provisions of this act, it shall be lawful for the justice of the peace, magistrate or court before whom such conviction has taken place, or where the parents or proper guardian of any child cannot be found, it shall be lawful for any magistrate or court to commit such child to the care and custody of any duly authorized or incorporated humane society within this state having for one of its objects the protection of children from cruelty, and such society shall thereupon have all the rights of a guardian of the person of such child; but such society may at any time apply to the orphans' court of the proper county for the appointment of a guardian of the person or the commitment of such child to an asylum or home for children, as provided in the seventh section of this act.

10. That whenever it shall be made to appear to the satisfaction of the court of common pleas of any county that any minor child has been deserted by its parents or surviving parent, and that it has no legal guardian, it shall be lawful for any person desirous of adopting the said child to adopt the same in the manner now provided by law in the case of the death of the parents.

11. That in default of payment of the fine or penalty imposed under any of the sections of this act, together with the costs of the proceedings, then the said justice of the peace, magistrate or court of record shall commit said offender to the county prison, there to remain for not less than twenty nor more than ninety days, or until discharged by due course of law; provided, that when the fine imposed exceeds the sum of ten dollars, the party complained against may appeal from the decision of said justice of peace or magistrate to the court of quarter sessions, upon his entering bail in the nature of a recognizance in the usual manner for his appearance at said court, when the offense shall be prosecuted in the same manner as is now directed by law in

other cases of misdemeanor; if, in lieu of deciding the cause, such justice of the peace or magistrate shall bind over or commit such person to appear at the court of quarter sessions, or if such person shall appear as aforesaid, or upon such binding over or commitment appear before the said court and be there convicted of such misdemeanor, he shall be sentenced to pay fine not exceeding two hundred dollars, payable as aforesaid, or undergo an imprisonment not exceeding one year, or both, at the discretion of the court.

12. That whenever the parents or proper guardian of any infant unable to support itself have been convicted of any of the offenses enumerated in this act, or are dead, or cannot be found, and there is no other person legally responsible for the maintenance and support of such child willing to assume such support or to be found within the county, any magistrate or court of record of the county in which such child may be found may commit such child to the care and custody of the guardians of the poor of the said county; but nothing herein contained shall exempt any person from the duty of maintaining and supporting such child as now imposed by law.

Approved March 4th, 1880. P. L., Chapt. 95.

An Act to protect the health of boys and girls, and to secure to parents the control of their children.

1. That no vinous, spirituous or other alcoholic liquors, and no ale, strong beer, lager, porter or other malt liquors, shall be sold or given, in great or small quantities, to any boy or girl under the age of eighteen years, by any wholesale or retail liquor dealer, any tavern keeper, saloon keeper or other dealer in such alcoholic or malt liquors, their servants or agents, if the parent or guardian of said boy or girl shall forbid in writing or verbally such sale or gift.

2. That no saloon keeper, tavern keeper or other dealer in alcoholic or malt liquors shall permit any boy or girl, under the age of eighteen years, to lounge in or frequent the rooms or places where such liquors are kept or sold, if the parent or guardian of such boy or girl shall notify the saloon or tavern keeper or other dealer in such liquors not to permit the child to visit their rooms or places.

3. That for every such offense against this act, the party offending shall forfeit and pay the sum of sixty dollars, which penalty shall be recovered in an action of debt, and given to the overseer of the poor of the township in which such offense occurs, for the use of the poor.

4. That the action for the recovery of the penalty aforesaid shall be instituted in the circuit court or court of common pleas of the county in which the offense occurred, and shall be in the corporate name of the township in which the offense occurred, and the name of the person complaining shall be joined as a co-plaintiff in such action.

5. That in case judgment is recovered for penalty, full costs of suit shall be taxed and recovered against the defendant or defendants, as in the case of judgment for debts or damages over one hundred dollars, and execution for said penalty and costs shall issue against the goods and chattels, lands, tenements and hereditaments of such defendant or defendants, and in default of any personal or real property to satisfy such execution, that the body of such defendant shall be taken and confined in the common jail of the county until such execution is paid or the court orders his discharge from custody; and further, such defendant or defendants shall not have the benefit of the insolvent laws.

6. That in any action instituted to recover the penalty aforesaid, and judgment shall be rendered in favor of defendant, he or she shall recover from the complainant joined as aforesaid as co-plaintiff, full costs of suit, as now taxed by law in the circuit court or court of common pleas, and shall have the like execution against such complainant as is heretofore provided in case judgment is rendered against such defendant.

7. That if the provisions of this act shall be violated more than three times within six months by the same person, his agents or employes, that he or she shall be indictable for misdemeanor, and on conviction shall be punished by a fine not exceeding two hundred dollars, or imprisonment in the county jail not exceeding six months, or both.

Approved March 10th, 1880. P. L., Chapt. 136.

An Act for the punishment of cruelty to children.

1. That whoever, having the care, custody or control of any child within the state, shall willfully cause or permit the life of such child to be endangered, or its health to be injured, or who shall willfully cause or permit such child to be placed in such situation that its life may be endangered, or its health injured, or who shall willfully, maliciously, or in a cruel and inhuman manner beat, whip or punish any child so as to endanger its life or injure its health, upon conviction thereof shall be deemed guilty of a misdemeanor, and shall be punished by imprisonment in the county jail for a term not exceeding six months, or by a fine not exceeding one hundred dollars, or by both such fine and imprisonment in the discretion of the court.

2. That it shall be lawful for any society, incorporated and organized under an act entitled "An act for the incorporation of societies for the prevention of cruelty to children," approved April eighteenth, one thousand eight hundred and seventy-six, to prefer a complaint against and cause to be arrested and prosecuted before any court or magistrate within this state having jurisdiction for the trial of misdemeanors, any person or persons who shall offend against any of the provisions of section one of this act and may aid in bringing the facts before such court or magistrate in any proceeding taken under this act.

3. That whenever, upon conviction of any person of a criminal assault upon any child in his or her custody, the court or magistrate before whom such conviction is had shall deem it desirable for the welfare of such child that the person so convicted shall be deprived of its custody thereafter, such court or magistrate may commit such child to any orphan asylum, children's home, or other charitable institution for its best care, welfare and protection.

4. That all fines, penalties and forfeitures imposed and collected in any case where any society, organized under the provisions of the act mentioned in the first section of this act, shall be complainant, shall inure to such society, in aid of the purpose for which it was incorporated; all other fines, penalties and forfeitures imposed and collected by any court or magistrate shall be paid to the overseer of the poor of the city or township wherein the conviction shall be had, to be applied by the overseer of the poor for the benefit of the poor of such city or township.

Approved January 30th, 1883. P. L., Chapt. 4.

An Act to prevent gaming and the use of gaming implements by minors in places where alcoholic, vinous or malt liquors, or intoxicating drinks of any kind are sold.

1. That if any proprietor or keeper of any saloon or other place where alcoholic, vinous or malt liquors, or intoxicating drinks of any kind are sold, shall himself, or by his agent, barkeeper or other employe, permit or allow in any such place any gaming by minors, or any playing by minors, under the age of eighteen years, with cards, dice, billiard or pool balls, or any other article, device, tool or instrument whatever, such as are used in gaming, he shall be deemed to have committed a misdemeanor, and, upon conviction thereof, shall be subject to a fine or imprisonment, or both, as follows: for the first offense a fine of not less than ten dollars and not more than twenty five dollars, or imprisonment in the county jail for a term not exceeding ten days, at the discretion of the court; for the second offense, a fine not less than twenty-five dollars and not more than fifty dollars, or imprisonment in the county jail for a term not exceeding thirty days, at the discretion of the court; and for each and every subsequent offense a fine of not less than fifty dollars and not more than one hundred dollars dollars, or imprisonment in the county jail for a term not exceeding three months, or both, at the discretion of the court; *provided*, this act shall not be construed to prohibit playing by minors when accompanied by a parent or guardian; or when parents or guardians have previously given to the keeper of the saloon or other place where intoxicating drinks are sold written permission for their sons or wards to play in such saloon.

Approved March 25th, 1881. P. L., Chapt. 219.

An Act regulating billiard and pool rooms in this state.

1. That hereafter it shall not be lawful for any minor, under the age of eighteen years, to play any game in this state commonly called billiards or pool, in any saloon or room kept by any person or persons for the purpose of profit or gain.

2. That any person or persons keeping such saloon or room, knowingly allowing any such minor to play such games, shall be liable to a penalty of twenty dollars for each every offense; such penalty to be sued for by, and in the name of the parent or guardian of such minor, in any court of competent jurisdiction in this state, such penalty to go to the overseer of the poor, for the use of the poor in said city, borough or township wherein the violation of this act occurs.

Approved April 4th, 1884. P. L , Chapt. 94.

An Act to prevent vending, using or exploding of guns, pistols, toy pistols, or other fire-arms to or by persons under the age of fifteen years, in this state.

1. That it shall not be lawful for any person or persons to sell, barter or exchange or to offer or exhibit for sale, barter or exchange, any gun, pistol, toy pistol or other fire-arms in this state, to any person under the age fifteen years.

2. That it shall not be lawful for any person to sell, hire or loan to any person under the age of fifteen years, any gun, pistol, toy pistol or other fire-arms, or for any person under the age of fifteen years to purchase, barter or exchange or carry, fire or use any gun, pistol, toy pistol or other fire-arms in this state.

3. That any person offending against the provisions of this act shall be deemed guilty of a misdemeanor, and on being thereof convicted shall be punished by a fine not exceeding one hundred dollars, or imprisonment at hard labor for any term not exceeding three months, or both, at the discretion of the court.

Approved February 10th, 1882. P. L., Chapt. 4.

An Act prohibiting the sale of cigarettes or tobacco in any of its forms to minors.

1. That hereafter no person or persons in this state shall knowingly sell any cigarette or cigarettes or tobacco in any of its forms, to any minor under the age of sixteen years.

2. That if any person or persons in this state shall violate the provisions of this act, he, she or they shall be liable to a penalty of twenty dollars for each and every such offense; such penalty to be sued for by and in the name of the parent or guardian of such minor, in any court of competent jurisdiction in this state, such penalty to go to the county collector for the use of the county wherein the violation of this act occurs.

Approved March 22d, 1883. P. L., Chapt. 90.

An Act for the incorporation of societies for the prevention of cruelty to children.*

1. That any five or more persons of full age, a majority of whom shall be citizens of and residents within this state, who shall desire to associate themselves together for the purpose of preventing cruelty to children, may make, sign and acknowledge before any person authorized to take the acknowledgment of deeds in this state, and file in the office of the secretary of state, and also in the office of the clerk of the county in which the business of the society is to be conducted, a certificate in writing, in which shall be stated the name or title by which such society shall be known in law, the particular business and objects of such society, the number of trustees, directors or managers to manage the same, and the names of the trustees, directors or managers of the society for the first year of its existence; but such certificate shall not be filed unless the written consent and approbation of one of the justices of the supreme court of the district in which the place of business or principal office of such society shall be located, be indorsed on such certificate.

2. That upon filing the certificate as aforesaid, the person who shall have signed and acknowledged such certificate, and their associates and successors shall thereupon, by virtue of this act, be a body politic and corporate, by the name stated in such certificate, and as such shall have power:

I. To have perpetual succession by its corporate name.

II. To sue and be sued, complain and defend, in any court of law or equity.

III. To make and use a common seal, which may be affixed by making an impression directly on the paper, and alter the same at pleasure.

IV. To appoint such officers, managers and agents as the business of the corporation may require.

V. To make by-laws, not inconsistent with the laws of the state or of the United States, for the management of its property and the regulation of its affairs.

*Revision of 1877, p. 1344.

VI. To contract and be contracted with.

VII. To take and hold by gift, purchase, grant, devise or bequest any property, real or personal, and the same to dispose of at pleasure; but such corporation shall not, in its corporate capacity, hold real estate the yearly income derived from which shall exceed the sum of twenty-five thousand dollars.

VIII. To exercise any corporate powers necessary to the exercise of the powers above enumerated and given.

3. That any society so incorporated may prefer a complaint before any court or magistrate having jurisdiction for the violation of any law relating to or affecting children, and may aid in bringing the facts before such court or magistrate in any proceeding taken.

4. That all magistrates, constables, sheriffs and officers of police shall, as occasion may require, aid the society so incorporated, its officers, members and agents in the enforcement of all laws which now or may hereafter be enacted relating to or affecting children, and that, for the purpose of bringing offenders against such laws to justice, the like powers shall be and are hereby given to the members, officers and agents of any such incorporated society as are given by law to the members, officers and agents of the society for the prevention of cruelty to animals.*

5. That the provisions of this act shall not extend or apply to any association or individuals who shall, in the certificate filed as hereinbefore provided, use or specify a name or style the same or substantially the same as that of any previously incorporated society in this state.

Approved April 18th, 1876.

An Act for the establishment of orphan asylums.

1. That it shall be lawful for any five or more persons to form themselves into an orphan asylum association for the purpose of receiving, supporting and educating orphan children, upon making and filing a certificate in writing of their organization in the manner hereinafter mentioned.

2. That such a certificate in writing shall set forth:

I. The name assumed to designate such association.

II. The place in this state where such asylum shall be located and the objects for which the association shall be formed.

III. The period at which such association shall commence, which certificates shall be signed by the persons intending to form such association, and shall be proved, or acknowledged and recorded, as required in case of deeds of real estate, in a book kept for the purpose of recording certificates of incorporation in the office of the clerk of the county where such asylum shall be located, and after being recorded, shall be filed in the office of the secretary of state.

3. That the said certificate, or a copy thereof duly certified by said clerk or secretary, shall be evidence in all courts and places.

4. That upon making said certificate and causing the same to be recorded and filed as aforesaid, the said persons so associating, their successors and assigns, shall be from the time of commencement fixed in said certificate, incorporated into an association by the name mentioned in the said certificate.

5. That all associations that may hereafter be established within this state, under the provisions hereinbefore contained, shall have power as follows:

* Revision of 1877, p. 26.

I. To apply for and accept the guardianship of orphans or children who have no mother, upon giving proper security and complying with the laws of this state relative to guardianship.

II. To bind out such children as shall have been under their care for more than one year, as said association may deem advisable; *provided*, that when the parent of any such child shall pay anything to the said association for its support, the consent of such parent to the exercise by said association of such control over the said child shall be required.

III. To receive and retain all or any such orphan child or children or child having no mother as may be placed under their charge, subject to such rules, by-laws and regulations as may from time to time be passed by the managers of said association.

6. That any associations organized as aforesaid shall be governed by a board of managers of not less than five or more than fifteen, who shall be elected by the members of the association in such manner as the by-laws may provide, the first election to be held within three months next after filing the certificate of incorporation.

7. That the legislature shall have the right to repeal this act and the charter of any association at pleasure.

Approved March 9th, 1877. P. L., Chapt. 132.

SUPPLEMENT.

1. That the board of chosen freeholders of any county that has or shall have assumed the maintenance of the poor are hereby empowered to make provision for children between the ages of three and sixteen years, whose support they have assumed, by committing them to the care and control of such duly incorporated charitable institution in this state as they may select, and for such time as they may see fit, during the minority of such child or children; said commitment shall be in writing and signed by the trustees of the county poorhouse, and shall be subject to the approval of the trustees or managers of such charitable institution, who shall signify their approval by indorsing the same upon the back of a duplicate copy of said commitment, as accepted subject to the provisions of this act, and sign their names thereto, and the trustees of said county poorhouse shall keep said duplicate copy of commitment on file, and also, in a suitable book for such purpose, shall keep a record of such commitment, showing the date thereof, the name, age, color, nativity, sex and mental and physical condition of each child thus committed, and the length of time for which committed, and shall report the same monthly to the board of chosen freeholders of said county, who are hereby authorized and required to pay out of the funds belonging to said county, to the trustees or managers of such charitable institution, a sum not exceeding one dollar and fifty cents per week for each and every child thus committed during their continuance in said institution, for the board, maintenance and education of such child until it arrives at the age of sixteen years; and the county collector of such county is hereby authorized to pay the same, upon an order drawn upon him and signed by the director of said board, for that purpose.

2. That the said trustees or managers of such charitable institution shall make an annual report to said board of chosen freeholders as to all such commitments made to the institution, the date of each, the name and age of each child thus committed, the number of such children in said institution each month, the date of the discharge of each, and the amount of money received by the institution each year for their sup-

port, and such other information as may be required by said board of freeholders as to the care and condition of the children thus committed.

3. That notwithstanding the commitment of such children to any charitable institution, at any time during their stay at said institution, the board of freeholders, through the trustees of the county poorhouse, shall possess and are hereby authorized to exercise the same power now given to them by law, to bind out any such child to learn some trade or business, whenever a suitable place or person can be found.

4. That no child or children shall be committed by any board of chosen freeholders in any county in this state to any charitable institution in this state or elsewhere under the control and management of any religious denomination.

Approved March 25, 1881. P. L., Chapt. 196.

SUPPLEMENT.

WHEREAS, there exist in the several counties of this state duly incorporated charitable institutions known as "children's homes," having for their object the care, management and support of children who, from any cause whatever, may be considered entitled to charity and deserving of assistance, and affording them the advantages of moral, religious and useful training, thereby relieving the several counties of the support of such children at the county poorhouses; therefore,

1. That whenever any application shall be made to any overseer of the poor of any township of this state for the relief and in behalf of any poor child or children under twelve years of age, in accordance with section thirty-one of the act to which this is a supplement as now amended, it shall be lawful for a majority of the judges of the court of common pleas of the several counties where children's homes may be located, to make an order committing such child or children to the care and control of the trustees or managers of any such duly incorporated children's homes, subject to the approval of such trustees or managers, and shall keep a record of the date of such commitment, the name and age of the child committed as nearly as can be ascertained, and report the same to the board of chosen freeholders of the said county, who are hereby authorized and empowered to pay out of the funds belonging to said county, to the trustees or managers of such homes as have received the child or children so committed to them, a sum not exceeding one dollar and fifty cents a week for each and every child during their continuance in such home, as and for the board, maintenance and education of such child until it attains the age of fifteen years, and the county collector of said county is hereby authorized to pay the same upon an order drawn upon him for that purpose; and the said trustees or managers of such homes shall make an annual report to the said board of chosen freeholders, giving the dates of all commitments made to them, the names and ages of all children so committed and the places from which they were committed, as nearly as can be ascertained, and the amount of moneys received by them each year for their support, so that said freeholders shall at all times be correctly informed as to the faithful disposition of the moneys appropriated by them for that purpose; *provided* that the provisions of this act shall not apply to counties in which there is a city of over twenty thousand inhabitants.

Approved March 14th, 1879. P. L., Chapt. 122.

FREE PUBLIC PARKS AND LIBRARIES.

An Act to provide for the purchase, construction and maintenance of public parks by the cities and other municipalities in this state.

1. That in any city or other municipality in this state wherein there are now no grounds owned by such other municipality and used as a public park, the common council, board of aldermen, board of trustees or other governing body may, by ordinance passed by a two-thirds vote of all the members of such body, purchase one or more tracts of land lying wholly or partly within or without the limits of such city or other municipality, for the use of the inhabitants of such corporation as a public park or parks; and may dedicate the same to such use, and may lay out, embellish and maintain the same, and may pass ordinances regulating and controlling the same, and providing for the proper and convenient use thereof by the inhabitants aforesaid.*

2. That the mayor and common council, or other municipal authority of the cities or municipalities of this state, by like vote, shall have power to issue bonds of such city or municipality for the purchase, construction and maintenance of said public parks, and carrying this act into effect, to an amount not exceeding the proportion of five thousand dollars to each one thousand of inhabitants of such city or municipality; which bonds shall not have more than twenty-five years nor less than fifteen years to run, and shall bear interest at a rate not to exceed five per centum per annum, and shall pledge the faith, credit and property of said city or other municipality for the payment of the principal and interest thereon, and shall provide for the redemption of said bonds by taxation.

3. That all acts and parts of acts inconsistent with this act be and the same are hereby repealed.

Approved March 14th, 1883. P. L., Chapt. 87.

An Act to authorize cities to establish and maintain free public libraries and reading-rooms.†

1. That the common council of each incorporated city of this state shall have power to establish and maintain a public library and reading-room for the use and benefit of the inhabitants of such cities, and for such purpose may levy a tax of not more than one-fifth of one mill on the dollar annually on all the taxable property in the city, such tax to be levied and collected in like manner with other general taxes of said city, and to be known as the "library fund;" and whenever in any such city a public library and reading-room shall have been established under and pursuant to the provisions of this act, and shall have existed for three years or more, and the title to property of the value of at least thirty thousand dollars shall have become vested in the board of directors of such library and reading-room, the board of directors of such library and reading-room shall, on or before April of each year, determine the amount, not exceeding one-half of one mill on the dollar on all the taxable property in the city, which will be required in such year for the maintenance of such library and reading-room, and, by its president, certify such amount to the

*As amended by Chapt. 87, Laws of 1885.

†As amended by Chapt. 50, P. L. 1886.

common council of such city, and such common council shall thereupon order and cause to be assessed and raised by tax in such year for such purpose the amount so certified; such tax to be levied and collected in like manner with other general taxes of said city, and to be known as the "library fund."

2. That when any such common council shall have decided to establish and maintain a public library and reading-room under this act, the mayor of such city shall, with the approval of its common council, proceed to appoint a board of nine directors for the same, chosen from the citizens at large, with reference to their fitness for such office.

3. That said directors shall hold office, one-third for one year, one-third for two years, and one third for three years, from the first day of July following their appointment, and annually thereafter the mayor of said city shall, before the first day of July of each year, appoint three directors, to take the place of the retiring directors, who shall hold office for three years, and until their successors are appointed; the mayor may, by and with the consent of the common council, remove any director for misconduct or neglect of duty.

4. That vacancies in the board of directors from any cause, shall be filled by the mayor, and no director shall, as such, receive any compensation.

5. That said directors shall, immediately after appointment, meet and organize by the election of one of their number president, and by the election of such other officers as they may deem necessary; they shall make and adopt such by-laws, rules and regulations for their own guidance and for the government of the library and reading-room as may be expedient, not inconsistent with this act; they shall have the exclusive control of the expenditure of all moneys collected to the credit of the library fund, and of the construction of any library building, and of the supervision, care and custody of the grounds, rooms or buildings constructed, leased or set apart for that purpose; *provided*, that all moneys received for such library shall be deposited in the treasury of said city, to the credit of the library fund, and shall be kept separate and apart from other moneys of such city, and drawn upon by the proper officers of said city, upon the properly authenticated vouchers of the said board of directors; said board shall have power to purchase or lease grounds, to occupy, lease or erect an appropriate building or buildings for the use of said library; shall have power to appoint a suitable librarian and necessary assistants, and fix their compensation, and shall have power to remove such appointees, and shall, in general, carry out the spirit and intent of this act in establishing and maintaining a public library and reading-room.

6. That every library and reading-room established under this act, shall be forever free to the use of the inhabitants of the city where located, always subject to such reasonable rules and regulations as the library board may adopt, in order to render the use of said library and reading-room of the greatest benefit to the greatest number; and said board may exclude from the use of said library and reading-rooms any and all persons who shall willfully violate such rules; and said board may extend the privileges and use of such library and reading room to persons residing outside of such city, in this state, upon such terms and conditions as said board may from time to time by its regulations prescribe.

7. That the said board of directors shall make, on or before the second Monday in June, an annual report to the common council of said city, stating the condition of their trust on the first day of June of that year, the various sums of money received from the library fund, and from other sources, and how such moneys have been

expended, and for what purpose, the number of books and periodicals on hand, the number added by purchase, gift or otherwise during the year, the number lost or missing, the number of visitors attending, the number of books loaned out, and the general character and kind of such books, with such other statistics, information and suggestions as they may deem of general interest; all such portions of said report as relate to the receipt and expenditure of money shall be verified by affidavit.

8. That the common council of said city shall have power to pass ordinances imposing suitable penalties for the punishment of persons committing injury upon such library, or the grounds or property thereof, and for injury to or failure to return any book belonging to such library, and said penalty may be enforced by rules adopted by the board of directors for that purpose, and in any manner provided in the charter of said city for the enforcement of other penalties for violation of ordinances.

9. That any person desiring to make donations of money, personal property or real estate for the benefit of such library, or for the establishment or maintenance of an art gallery and museum in connection therewith, may do so, and is empowered to vest the title to the money, personal property or real estate donated in the board of directors created under this act for the time being, to be held and controlled by such board, and its successors, when accepted, according to the terms of the deed, gift, devise or bequest of such property; and any building or real estate so donated may be accepted by such board upon and subject to a trust that the same, or such part thereof as the donor or donors shall designate and appoint for such purpose, shall be set apart and appropriated and forever maintained as and for an art gallery and museum for the encouragement of art and scientific study among the inhabitants of the city where located, subject to such reasonable rules and regulations concerning admission to and the use of the same, not inconsistent with the terms of the deed, gift, devise or bequest of such property, as such board or its successors shall from time to time establish; and any money or personal property so donated may be accepted by such board upon and subject to a trust that the same shall be applied to or towards the maintenance or enlargement of any such art gallery and museum; and all moneys received for admissions to or the use of such art gallery and museum shall be applied to the maintenance or enlargement of such art gallery and museum, or to the general purposes of such library and reading-room, as the board of directors shall from time to time determine; and as to all property so donated the said board shall be held and considered to be special trustees.

10. That every public library established under the provisions of this act, shall be entitled to receive, for the use of such library, a copy of the laws, journals, reports and other works published by the authority of this state.

Approved March 14th, 1879. P. L., Chapt. 163.

An Act for the encouragement of free libraries in cities.

1. That in all cities in which a public library, lyceum and reading room association now exists, incorporated under and in pursuance of an act entitled "An act to incorporate associations for the establishment of lyceums, libraries and literary and scientific societies" [Revision], approved April ninth, one thousand eight hundred and seventy-five, and the supplements thereto, the common council, board of aldermen, board of education or other municipal body having control of a free library established and maintained from public moneys, shall have, and such board or

municipal body is hereby given power to lend and transfer, without receiving compensation therefor, such free library to such public library, lyceum and reading room association, for such time and upon such provisions for its safety as may be agreed upon between such board or municipal body and such public library, lyceum and reading room association, and during the said time said board or municipal body shall pay to such public library, lyceum and reading room association, any sum or sums of money that such board or municipal body may be empowered to appropriate and expend for the establishment and maintenance of a free library, provided the powers hereby given shall not be exercised unless the by-laws of such public library, lyceum and reading room association shall, during said last-mentioned time, make the mayor of such city and the presiding officer of such board or municipal body and the superintendent of the public schools of said city ex-officio trustees of such library, lyceum and reading room association, and also make provision for keeping open such free library and the lyceum and reading room of such association in some convenient place for the free use of the teachers and pupils of the public schools and citizens of such city, subject to such rules and restrictions as the trustees, ex-officio and otherwise, of such association may from to time deem necessary or advisable.

Passed March 18th, 1884. P. L., Chapt. 54.

An Act to authorize the establishment of free public libraries in the cities of this state.

1. That any city within this state be and it is hereby authorized, in the manner hereinafter provided, to establish a free public library within its corporate limits.

2. That the provisions of this act shall remain inoperative in any city in this state until assented to by a majority of the legal electors thereof, voting at an election at the time fixed by law for the election of municipal officers therein to be held in said city next after this act shall take effect, of which election the city clerk of said city shall cause public notice of the time and place of holding the same, to be given by advertisements signed by himself and set up in at least five public places in said city, for at least ten days previous to the day of such election, and published in one or more newspapers printed therein for at least ten days previous to the day of such election; the ballots used at such election shall be printed or written or partly printed and written, and the same may be printed or written on the general ballots used at such election, on which may be either the words "for the adoption for this city of the provisions of an act entitled 'An act to authorize the establishment of free public libraries in the cities of this state,'" or "against the adoption for this city of the provisions of an act entitled 'An act to authorize the establishment of free public libraries in the cities of this state;'" the election officers of said city shall return to the canvassing board of the same a true and correct statement in writing, under their hands, of the result of said election, the same to be entered at large upon the minutes of said body.

3. That if a majority of all the ballots cast at such election in any city shall be "for the adoption for this city of the provisions of an act entitled 'An act to authorize the establishment of free public libraries in the cities of this state,'" it shall become the duty of the appropriate board of said city annually thereafter to appropriate and raise by tax in the same manner as other city taxes are assessed, levied and collected in said city, a sum equal to one-third of a mill on every dollar of assessable property returned by the assessors of said city for the purposes of taxation in such city, which sum, when so appropriated, shall be used for no other purpose than that of a free

public library, and shall be paid by the disbursing officer of such city to the treasurer of the board of trustees of the free public library as hereinafter provided.

4. That a board of trustees of the free public library shall be immediately formed in any city when a majority of the votes cast shall be "for the adoption for this city of the provisions of an act entitled 'An act to authorize the establishment of free public libraries in the cities of this state,'" consisting of seven members, one of whom shall be the mayor of such city ex-officio and one the superintendent of public instruction therein ex-officio, or president of the board of education in case no office of superintendent exists, and five to be appointed by the mayor of the city from among the citizens of the same city, to serve for the terms of one, two, three, four and five years respectively; and upon the expiration of the term of office of any trustee the mayor of the said city shall appoint to the vacancy for a term of five years.

5. That the board of trustees shall be a body corporate under the name of the Trustees of the Free Public Library of the city of , naming the city wherein said library shall be established, with corporate powers of succession, to sue and be sued, and to adopt a corporate seal; such board shall meet at some convenient time and place in such city within ten days from the time of their appointment; they shall immediately proceed to organize by the election of one of their members to be the president, and one to be the treasurer of the board; they shall also make and execute, under their hands and seals, a certificate setting forth their appointment, their organization, and the names of the officers elect and appointed, which certificate shall be acknowledged in the same manner that conveyances of real estate are required to be acknowledged and recorded in the clerk's office of the county in which such city is located; they shall also cause a certified copy of such certificate to be filed in the office of the secretary of state, but shall not be required to pay any fee for such recording and filing; the said certificate, or a copy thereof duly certified by said clerk or secretary, shall be evidence in all courts and places of the incorporation of said board; the treasurer shall give bonds in an amount to be fixed by the board of aldermen of said city, payable to the said city by its corporate name, conditioned for the faithful performance and discharge of his duties; the said board shall, by its treasurer, upon its warrant signed by its president, receive of the disbursing officer of such city the money raised by taxation for library purposes as is provided in section three of this act; it shall hold in trust and manage all the property of said library; it shall have power to rent rooms, or when proper to construct buildings for the use of said library, to purchase books, pamphlets, documents, papers and other reading matter, to hire librarians and other necessary servants and to fix their salaries, to make proper rules and regulations for the government of said library, and generally to do all things necessary and proper for the establishment and maintenance of the free public library in such city.

6. That the said board of trustees shall receive no compensation for their services, and shall never incur any expense or enter into any obligations in excess of the annual appropriations for library purposes and of its funds on hand.

7. That the said board of trustees shall annually make a report of their transactions, accounts and the state and condition of said library to the board of aldermen or common council of said city.

8. That the said board of trustees may have and receive, hold and manage any devise, bequest or donation heretofore made or hereafter to be made and given for the establishment, increase or maintenance of a free public library within their city.

Passed April 1st, 1884. P. L., Chapt. 78.

An Act to incorporate and establish free public libraries in this state.

1. That it shall be lawful for three or more persons to organize a corporation for the purpose of establishing a free public library by making and filing a certificate in writing of their organization in the manner hereafter mentioned.

2. That such certificate in writing shall set forth:

a. A name to designate such corporation and a statement of its object;

b. The place in this state where such library shall be located;

c. The time when such library shall be opened to the public, if not already open.

Said certificates shall be signed by the persons intending to form such corporation, shall be proved or acknowledged as required in the case of deeds of real estate, and shall be recorded in the book kept for the purpose of recording certificates of incorporation in the office of the clerk of the county where such library shall be located, and after being recorded shall be filed in the office of the secretary of state.

3. That the said certificate, or a copy thereof duly certified by said clerk or secretary, shall be evidence of its contents in all courts and places.

4. That upon making said certificate and causing the same to be recorded and filed as aforesaid, the persons who signed the same, their successors and assigns, shall constitute a corporation by the name mentioned in the said certificate.

5. That every corporation formed under this act shall have power:

a. To buy, hold, lease, accept by gift, devise or otherwise, and sell real and personal property suitable for the purposes of such corporation and for its use;

b. To sue and be sued, complain and defend in any court of law or equity;

c To make and use a common seal and alter the same at pleasure;

d. To limit the duration of the membership of the original incorporators and provide a method of filling vacancies in such membership caused by death, resignation or expiration of terms of office;

e. To elect officers and appoint agents such as the business of the corporation shall require;

f. To make, adopt, alter and amend a constitution and by-laws to carry out the purpose of the corporation; *provided*, that nothing in said constitution and by-laws be repugnant to the constitution or laws of the United States or of this state.

6. That every library established under this act shall be forever free to the use of the inhabitants of the city or other municipality where the same shall be located, subject only to such reasonable rules and regulations as may be adopted concerning the same, and all property, real and personal, while owned by and actually used in the legitimate operations of such corporations, shall not be taxed.

7. That the Legislature may, at any time, alter, modify or repeal this act and dissolve any corporation organized under the provisions of this act.

Passed April 8th, 1884. P. L., Chapt. 98.

An Act to encourage the establishment of public libraries in any town or municipality in this state, and to provide for taking care of and perpetuating the same.

1. That when any person or number of persons shall have heretofore or shall hereafter subscribe any amount of money, not less than two thousand dollars, for the purpose of a public library, in any town or municipality in this state, and shall, by

deed acknowledged in due form of law, appoint certain persons as trustees, not less than ten in number, to use and administer said trust or gift for the benefit of a public library; and shall, by said deed, provide that the said trustees may, for the proper management of any such library, and taking care of and perpetuating the same, fill any vacancies in their own number, such trustees shall, upon the recording of any such deed in the office of the clerk of any county where the said library is located, and in the office of the secretary of state, be and become a body politic and corporate in law, without capital stock, with such corporate name as may be provided for in any such deed of trust appointing said trustees.

2. That such corporation shall have the right of succession, to sue and be sued, with power to hold such real estate as may be necessary to carry out the purposes of a library for the benefit of the inhabitants of any such town or municipality; and such trustees may, from time to time, adopt all needful rules and regulations regarding their organization, the tenure of their own offices, the filling of all vacancies in their own number, the election of their own successors, and the use and management of any such library.

Approved March 1st, 1882. P. L., Chapt. 30.

CO-OPERATION.

An Act to provide for the formation and regulation of co-operative societies of workingmen.

1. That it shall be lawful for any number of persons, not less than seven, residents in this state, to associate themselves into a society for the purpose of carrying on any lawful mechanical, mining, manufacturing or trading business, or for the purpose of trading and dealing in goods, wares and merchandise or chattels, or for the purpose of buying, selling, settling, owning, leasing and improving real estate and erecting buildings thereon, within this state, upon making and filing a certificate of association, in writing, in manner hereinafter mentioned, and as such shall be deemed to be a corporation, and to possess all powers incident thereto.

2. That such certificate of association shall set forth:

I. The name assumed to designate such society and to be used in its business and dealings, which name shall have the word "co-operative" as a distinguishing part thereof, but shall in no respect be similar to that of any other society organized under this act;

II. The place or places in this state where the business of such society is to be conducted, and the location of the principal office of the same;

III. The objects for which the society shall be formed;

IV. The total amount of capital stock of such society, the number of shares into which the same is divided, the par value of each share, the manner in which the installment on the shares shall be paid, the number of shares subscribed, and the amount actually paid in cash on account of the same;

V. The terms of the admission of members;

VI. Mode of application of profits;

VII. The mode of altering and amending the certificate of association and the by-laws of the society.

3. That the said certificate of association shall be signed by the persons originally associating themselves together, and shall be proved or acknowledged by at least seven of them before an officer qualified to take acknowledgments of deeds of real estate, and, after being approved by the chief of the bureau statistics of labor and industries, shall be recorded in the office of the clerk of the county where the principal office or place of business of such society shall be established, and a copy of such certificate shall be filed in the office of the chief of the bureau of statistics of labor and industries.

4. That the business of every such society shall be managed and conducted by a board of not less than five directors, who shall respectively be members of said society and shall be annually elected at such time and place as shall be provided in the by-laws of the society, and one of such directors shall be chosen president and one of them shall be chosen treasurer, and such directors and officers shall hold their respective offices until their successors are duly qualified; and that such society shall also have a secretary and such other officers, agents and factors as may be necessary to carry on its business, and shall choose them in the manner prescribed by the by-laws thereof.

5. That the first meeting of such society shall be called by a notice signed by a majority of the persons named in the certificate of association, and designating the time, place and purpose of the meeting, and shall be personally served on all the persons signing said certificate, or by advertisement in a newspaper published in the county where such society shall have been incorporated, if such personal service cannot be made; and at such meeting so called, or at any adjourned meeting thereof, a majority of the persons so signing shall constitute a quorum for the transaction of business, and shall have power to elect the directors and other officers provided for in section fourth (4) of this act, who shall serve until their successors duly qualify, and to adopt by-laws, rules and regulations for the government of such society.

6. That the by-laws of such society shall provide:

I. For an annual meeting of the members thereof, and such other regular and special meetings as may be deemed desirable, the number of members necessary to constitute a quorum for the transaction of business, and the right of voting at the same;

II. For the election of directors and other officers, agents and factors, and their respective powers and duties;

III. For the limitation of the amount of such real and personal estate as the purposes of the society shall require;

IV. Whether the shares, or any number of them, shall be transferable, and in case it be determined that the same shall be transferable, provision for their transfer and registration, and the consent of the board of directors to the same; and in case it shall be determined that the shares shall not be transferable, provision for paying to members the balance due to them on withdrawal, or of paying nominees in cases hereinafter mentioned;

V. How members may withdraw from the society.

VI. Whether and by what authority any part of the capital may be invested in or on security of another society through which its products are disposed of or its supplies secured;

VII. Whether and to what extent credit in its business transactions may be given or taken;

VIII. In what sum and with what sureties the treasurer and other fiduciary officers or agents shall give bonds for the faithful performance of their respective duties;

IX. For the audit of accounts;

X. For the distribution of the net profits;

XI. For the custody, use and device of the seal, which shall bear the incorporated name of the society.

7. That every society incorporated under this act shall paint or affix, and shall keep painted or affixed, its name on the outside of every office or place in which the business of the association is carried on, in a conspicuous position in letters easily legible.

8. That every society incorporated under this act shall have a registered office to which all communications and notices may be addressed, and notices in writing of the location of such office, and of any change therein, shall be filed with the chief of the bureau of statistics of labor and industries, and in the office of the clerk of the county where the office of such society is located.

9. That the capital stock of such society shall be divided into shares the par value of which shall not be more than fifty (50) dollars, and no share shall be issued for less than its par value; and that no certificate of shares shall be issued to any member until the shares are fully paid up.

10. That no member of such society shall be entitled to more than one vote upon any subject, which vote must be cast in person; and that the board of directors shall have power, unless otherwise provided in the by laws of the society, to fix and regulate the number of shares to be held by any one member.

11. That any society incorporated under this act may hold in its corporate name any amount of interest in any other society through which its products are disposed of or its supplies secured; *provided*, that such interest so held shall not exceed one-third in value of the paid-up capital of the society holding said interest.

12. That the board of directors of every society incorporated under this act shall annually make a statement in writing of the condition of such society, setting forth the amount of capital stock, the number of shares issued and the par value thereof, the number of stockholders and number of shares held by each, the amount and character of the property of the society and of its debts and liabilities; and said statement shall be signed and sworn to by a majority of directors, including the treasurer, and filed in the office of the clerk of the county where the principal office of such society is located, and that immediately thereafter a copy of such statement shall be forwarded to the chief of the bureau of statistics of labor and industries, who, if he shall have reason to doubt the correctness of such statement or upon the written request of five members of such society, shall cause an examination of the books and affairs of such society to be made and render a correct statement to the members thereof; and every member or creditor thereof shall be entitled to receive from the secretary a copy of such annual statement; and every director or other officer refusing to comply with the requirements of this section, or making and signing a false annual statement of the condition of the society, shall forfeit for each offense the sum of one hundred dollars, to be recovered in an action of debt in any court of competent jurisdiction in this state by any member or creditor of the society who shall sue for the same.

13. That any member or other person having an interest in the fund of any such society, may inspect the books thereof, at all reasonable hours, at the office thereof.

14. That there shall be such distribution of the profits of such society, among the workmen, purchasers and members, as shall be prescribed in the certificate of association, at such times as therein prescribed, as often at least as once in twelve months;

provided, that no such distribution shall be made until a sum equal to five per centum of the net profits shall have been appropriated for a contingent or sinking fund, and that such appropriation shall continue to be made until there shall be accumulated a sum equal to thirty per centum of the capital stock of such society.

15. That any member of such society, by writing under his hand, delivered at the office of the society, may nominate any person, being the husband, wife, father, mother, child, brother, sister, nephew or niece or other relative of such member, to whom his or her share or shares of the capital stock of the society shall be transferred at his or her decease, and from time to time may revoke or vary such nomination, by a writing similarly delivered; and such society shall keep a book, wherein the names of all persons so nominated, and the number of shares to be transferred, shall be recorded; *provided, nevertheless*, that in lieu of making such transfer, the society may provide for payment to all such nominees of the full value of shares intended to be transferred; *provided, also*, that if by the by-laws of the society the shares are transferable, this section shall not be construed to forbid the transfer of such shares by sale or will or otherwise, subject to the consent of the board of directors.

16. That any such society may be dissolved in the manner in which any other corporation may be dissolved under existing laws.

17. That where the whole capital of such society shall not have been paid in, and the assets of such society shall be insufficient for the payment of its debts, liabilities and obligations, each stockholder shall be bound to pay, on each share held by him, the sum necessary to complete the amount of such share, as fixed in the certificate of association, or such proportion as shall be required to satisfy such debts, liabilities and obligations; *provided, however*, that no such contribution shall be required from any person after the expiration of one year from the time he has ceased to be a member, or for any debt, liability or obligation contracted after he has ceased to be a member of such society.

18. That an act entitled "An act to encourage the organization and regulate co-operative associations of workmen," approved March twenty-second, one thousand eight hundred and eighty-one, be and the same is hereby repealed, but no association established under said act, or any person having claims or demands against such association shall be affected by the repeal thereof, but in respect to such association, the said act shall still be in full force and effect; *provided, however*, that any such association may come under and be subject to the provisions and liabilities of this act, in the same manner as if formed under the same, if such association make and file the certificate of association required by this act.

Approved March 10th, 1884. P. L., Chapt. 38.

An Act to encourage the establishment of mutual building and loan associations.*

1. That any number of persons, not less than five, may associate and form an incorporated company for the purpose of assisting each other and all who may afterwards become associated with them, in acquiring real estate, making improvements thereon, and removing incumbrances therefrom, by the payment of periodical installments; and for the further purpose of accumulating a fund to be returned to its members who do not obtain advances, for purposes above mentioned, when the

* Revision, page 92.

funds of such association shall amount to a certain sum per share, to be specified in the articles of association.*

2. Any such persons who shall sign a certificate, setting forth that they have formed such an association under the provisions of this act, and the name adopted for such association, and the city, borough or township where it is to be located and its business transacted, and who shall cause the same to be delivered to the clerk of the county which embraces the place of its location, thereupon, together with all who may afterwards become members, their successors and assigns, shall be a body corporate and politic in law, with all the powers mentioned in the first section of the act entitled "An act concerning corporations."

3. The said clerk shall immediately file said certificate, and record the same in a book to be kept for that purpose, for which he shall be entitled to receive the sum of twenty-five cents.

4. Parents and guardians may take and hold shares in such associations in behalf of their minor children or wards, and trustees in behalf of married women, and may act in such associations in behalf of those they represent.

5. The right of membership in all associations formed under this act shall consist in the periodical payment of such sum of money, at such times, and subject to such penalties as shall be determined by the constitution adopted and filed as aforesaid, or in payment of a principal sum specified in such constitution, to be repaid by the company, in such way and manner as shall therein be designated, with interest, not exceeding seven † per centum per annum.

6. The funds of every association formed under this act shall be invested in the purchase of lands or building lots, and erecting buildings and improvements thereon, or in the purchase of lots and houses already built; which lands, dwellings and improvements shall be sold to the members of such associations, payable in the shares of the company, or in periodical installments for a period such as shall be agreed upon and designated in their constitution, and which shall not exceed the term of twenty years; at the expiration of which term the lands, dwellings and improvements so sold and conveyed to the members of such associations shall become the property of the grantees, discharged from all further payment and clear of all incumbrance; or in loans to members on mortgage of real or personal estate, payable in shares of said company, or by such periodical installments, or in the redemption of shares, or in all or any of these modes. (See Section 8, below.)

7. It shall be lawful for married women and minors to hold shares in any associations formed under this act; *provided*, said shares are paid for out of the earnings of said married women and minor children, or with money given to them by others than the husbands of said married women, or the male parents of minor children.

8. Every company formed under this act shall adopt a constitution, which shall embrace all the provisions of the foregoing sections, and such articles for their government and management of their business as they shall deem proper; *provided*, the same shall not be inconsistent with this act or with the act concerning corporations aforesaid, and shall not contravene the laws or constitution of this state or the

* If a shareholder, by a purchase of a loan at a discount, pays more than legal interest for the money he borrows, it is not usurious, *5 Dutch. 225*. See further on this point, *3 Stockt. 382*. As to mortgages, *1 McCart. 219; 2 C. E. Green 497*. An agreement to wind up the association by paying the owners of the unredeemed shares the sums they had advanced, with interest, and that the owners of the redeemed shares who had given mortgages for the price of redemption should be discharged upon paying the amount of their mortgages with interest, is valid and will be enforced, *2 Beas. 428*.

† Six at present.

United States, and may alter and amend the same, from time to time, in the manner therein provided; the investments of every such association shall be made either in loans to or in redemption of the shares of, or in purchasing lots and erecting dwellings for the members, or in all of said modes, or in such other ways as the constitution of the particular association shall provide; and no premium given for priority of loan or acquisition of a building, or discount given on the redemption of shares, shall be deemed to be usurious.*

9. Every company formed under this act shall furnish to the secretary of state, if required, an annual statement of the business and condition of the company, which shall be duly attested, under oath or affirmation, by the proper officers of said company.

10. Any company formed in pursuance of this act shall have power to dispose of or sell any lands and tenements to others than those constituting the said company, on terms according to or not inconsistent with the constitution of such company; and the purchasers of said tenements so sold or disposed of shall not thereby be constituted members of any such company formed as aforesaid.

11. The original associates, or those formed into companies under this act, or their assigns, and who shall have actually created a fund and expended the same in acquiring lands and tenements shall be alone deemed to have and to exercise the right of members in said companies.

12. All deeds of conveyance of lands or tenements granted by any company formed in pursuance of said act shall be held to be valid and binding, with all the restrictive clauses as against nuisances, or what may be deemed nuisances by the constitutions of any companies so formed as aforesaid, unless the same are in violation of the constitution of this state or the laws thereof, or of the United States.

13. All matters not herein provided for shall be regulated by the constitution and by-laws of said associations, respectively.

14. The legislature may at any time alter, amend or repeal the charter of any association created under this act.

15. That companies organized under this act may divide or partition the lands by them owned among their members by lot, in such way as to them may seem most advantageous, and all conveyances made in pursuance of such allotment shall, for all purposes, be valid and effectual.

Approved April 9th, 1875.

SUPPLEMENT.†

1. That any mutual loan, homestead or building association heretofore organized under the laws of this state shall have power to meet and re-organize and provide for the transaction of their future business under the provisions of the act to which this is a supplement, by giving notice thereof by advertisement for four weeks successively, at least once in each week, in a newspaper published or circulating where such company or association is located, which advertisement shall be signed by the secretary and state the time, place and purpose for which such meeting is called, and also by sending a written or printed notice to each stockholder containing the same information; when so assembled they shall have power, by a two-thirds vote of the stock present, to change, alter or repeal their present constitution and by-laws and to

* As amended by act approved February 29th, 1876. See Revision, page 1272.
† Revision, p. 1272.

adopt such new constitution and by-laws as they may deem needful for their future government; *provided*, the same do not conflict with the laws or constitution of this state or of the United States.

Approved March 15th, 1876.

SUPPLEMENT.*

That nothing in the act to which this is a supplement shall be construed to prevent any association formed under the provisions of the said act from taking a premium for priority of loan or acquisition of real estate, or discount on the redemption of shares; and that no premium or discount so taken for such purpose shall be deemed to be usurious.

Approved April 21st, 1876.

CONVICT LABOR.

A Supplement to an act entitled "An act for the government and regulation of the state prison," approved April twenty-first, eighteen hundred and seventy-six.

1. That section four of an act entitled "An act for the government and regulation of the state prison," approved April twenty-first, one thousand eight hundred and seventy-six, be and the said fourth section is hereby amended by adding to article two of said section the following proviso:

"*Provided*, That nothing in this section shall be deemed or taken or construed to authorize said supervisor or board of inspectors to contract with any person or corporation to hire or contract out the labor of the prisoners or any part of them, in or about the business of the making or manufacture of felt and silk hats, or the manufacture of any part or parts thereof."

Approved March 14th, 1878. P. L., Chapt. 73.

SUPPLEMENT.

1. *Provided, further*, That nothing in section four shall be deemed, taken or construed to authorize said supervisor or board of inspectors to contract with any person or corporation to hire or contract out the labor of the prisoners, or any part of them, exceeding one hundred persons in number, at any time, in the prosecution or conduct of any special branch of industry, trade or business, or making or manufacturing goods, wares or merchandise of any kind whatsoever.

Approved March 25th, 1881. P. L, Chapt. 181.

[Chapt. 86, Laws of 1882, requiring goods, &c., manufactured in state prison to be stamped "manufactured in the New Jersey State Prison," was repealed by Chapt. 174, Laws of 1885.]

An Act to provide for the employment of the inmates of any prison, penitentiary, jail or public reformatory institution located within this state.

1. That the prisoners or persons confined or kept in any prison, penitentiary, jail or public reformatory institution located within this state, shall, so far as practicable in the judgment of the managers of such prison, penitentiary, jail or public reform-

* Revision, p. 1273.

atory institution, be employed in the manufacture or at work upon goods used in such institutions as are under state control, and all prisoners or persons not employed for said purpose shall be employed on what is commonly known as the "piece-price plan," as the managing authorities of such prison, penitentiary, jail or public reformatory institution may be able to arrange for with parties desiring such labor, or they shall be employed under what is known as the "public account system;" and the revenue derived from any such employment in the state prison or any public reformatory institution shall be paid into the treasury of the state; and if derived from any penitentiary or jail in any county of this state, it shall be paid to the county collector of such county.

2. That the authorities managing the state prison or any reformatory institution shall, with the assent of the governor, purchase any tools, machinery, or stock necessary to carry out the provisions of this act, and the money necessary therefor shall be paid by the treasurer upon a warrant of the comptroller; and the authorities of any penitentiary or jail may, with the assent of the board of chosen freeholders of the county, purchase any tools, machinery, or stock necessary to carry out the provisions of this act, and the county collector shall pay the expenses thereof by resolution of the board of chosen freeholders.

3. That the authorities of any prison, penitentiary, jail or public reformatory institution, before they shall make any agreement with any party or parties for the labor of the prisoners or persons in their charge under the "piece-price system," or before they shall dispose of any goods made in their institution under the "public account system," shall advertise in not less than four of the principal newspapers of the state for the space of three weeks, once a week, calling for public bids, so that there shall be a proper and just competition either for the labor of the prisoners or persons confined in such institutions or for the sale of goods; this advertising may be done before or after the goods are completed, and every effort shall be made to obtain current market prices for the same.

4. That nothing in this act contained shall be construed to in any way abridge the powers of any board of chosen freeholders in any county in this state to employ any persons confined in any penitentiary or jail in said county in any other capacity they may deem wise, except under the "contract system" now in use in the state prison, and the authorities of any reformatory institution are also authorized to apprentice any of the minors in their institution.

5. That any party or parties who may employ any portion of the prisoners or persons within the limit prescribed by law, shall have power to place one or more instructors, if necessary, in any prison, penitentiary, jail or public reformatory institution of the state, where their work is being done, the expenses or salary of said instructor or instructors to be paid by the party or parties so employing them; or if the work is done under the "public account system," that such instructor or instructors shall be paid by the state; such instructors shall in no wise interfere with the discipline or management of the prisoners, and shall be, while so employed in the prison, subject to all the rules and regulations made by its officers for its government.

6. That all acts or parts of acts inconsistent with the provisions of this act, be and the same are hereby repealed; *provided, however*, that no such prisoners or persons shall be employed at any trade where such employment is now prohibited by law; *and provided further*, that no greater number of persons shall be employed in any business or occupation than is now provided by law.

Passed April 18th, 1884. P. L., Chapt. 158.

An Act to abolish and prohibit the employment under contract of convicts and inmates of prisons, jails, penitentiaries and all public reformatory institutions in the state of New Jersey.

1. That it shall be unlawful for the principal keeper, supervisor and board of inspectors of the state prison of this state in any wise to contract for the labor of the prisoners confined in said prison or for any portion thereof.

2. That it shall be unlawful for any keeper, warden, superintendent or other official, or member of any governing body or board of any prison, penitentiary, jail or public reformatory institution, located within this state, in any wise to contract for the labor of the inmates of any such prison, penitentiary, jail or public reformatory institution.

3. That any principal or other keeper, supervisor, inspector, warden, superintendent or other officer, or any member of any governing body or board aforesaid, who shall violate any of the provisions of the two preceding sections of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding two thousand dollars, or by imprisonment, at hard labor, in the state prison not exceeding two years, or both.

4. That all acts and parts of acts, whether general or special, inconsistent with the provisions of this act, be and the same are hereby repealed.

Approved February 21st, 1884. P. L., Chapt. 12.

MISDEMEANORS.

An Act relative to persons combining and encouraging other persons to combine.*

1. That it shall not be unlawful for any two or more persons to unite, combine or bind themselves by oath, covenant, agreement, alliance or otherwise, to persuade, advise or encourage, by peaceable means, any person or persons to enter into any combination for or against leaving or entering into the employment of any person, persons or corporation.

2. That all acts or parts of acts inconsistent with the provisions of this act be and the same are hereby repealed.

Approved February 14th, 1883. P. L., Chapt. 28.

An Act respecting railroads and canals.†

1. That any engineer, officer, agent or employe of any railroad company, who, in this state, shall willfully or negligently disregard and disobey any rule, regulation or published order of any said company or companies in regard to the running of trains, shall be deemed guilty of a misdemeanor, and shall, on conviction thereof, be pun-

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*This act abrogates the old common law rule, which regarded strikes and all other combinations as conspiracies, and punishable as such. See remarks on this subject above, also, *3 Vroom (N. J.) 151; Commonwealth* v *Hunt and others*, in *Thatcher's Criminal Cases (Mass.) 609*, and *4 Metcalf 111;* also *Wharton's Crim. Law 487*, and the various "digests" of the common law, under heading of "conspiracy." *Query?* Does the act of 1883 permit combinations among employers to effect lockouts, etc.?

†Revision, p. 909.

ished by a fine not exceeding one thousand dollars or imprisonment at hard labor for any term not exceeding one year, or both, at the discretion of the court; but nothing in this act contained shall be construed to repeal any acts or parts of acts punishing either of the persons aforesaid in any other manner than that pointed out in this act.

Approved March 27th, 1874.

An Act to authorize the formation of railroad corporations and regulate the same.*

22. That every conductor, baggage master, engineer or other servant of any railroad company employed in a passenger train or at stations for passengers shall wear upon his hat or cap a badge, which shall indicate his office and the initial letters of the style of the corporation by which he is employed; no conductor or collector without such badge shall be entitled to demand or receive from any passenger any fare or ticket or to exercise any of the powers of the office, and no officer or servant without such badge shall have authority to meddle or interfere with any passenger, his baggage or property. * * *

31. That if any person shall, while in charge of a locomotive engine running upon the railroad of any such corporation, or while acting as the conductor of a car or train of cars on any such railroad, be intoxicated, he shall be deemed guilty of a misdemeanor.

Approved April 2d, 1873.

An Act to provide for the better protection of passengers upon railroads, and to insure the prompt transportation and delivery of freights.†

WHEREAS, Strikes by locomotive engineers and other railroad employes, and the abandonment by them of their engines and trains at points other than their schedule destination, endangers the safety of passengers and subjects shippers of freight to great inconvenience, delay and loss; therefore,

1. That if any locomotive engineer or other railroad employe within this state, engaged in any strike, or with a view to incite others to such strike, or in furtherance of any combination or preconcerted arrangement with any other person to bring about a strike, shall abandon the locomotive engine in his charge, when attached either to a passenger or freight train, at any place other than the schedule or otherwise appointed destination of such a train, or shall refuse or neglect to continue to discharge his duty or to proceed with said train to the place of destination as aforesaid, he shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than one hundred nor more than five hundred dollars, and may be imprisoned for a term not exceeding six months, at the discretion of the court.

2. That if any locomotive engineer or other railroad employe within this state, for the purpose of furthering the object of or lending aid to any strike or strikes organized or attempted to be maintained on any other railroad, either within or without this state, shall refuse or neglect, in the course of his employment, to aid in the movement over and upon the tracks of the company employing him, of the cars of such other railroad company received therefrom in the course of transit, he shall be deemed

*General Railroad Law, Revision, p. 925.

†Revision, p. 946.

guilty of a misdemeanor, and upon conviction thereof shall be fined not less than one hundred nor more than five hundred dollars, and may be imprisoned for a term not exceeding six months, at the discretion of the court.

3. That if any persons in aid or furtherance of the objects of any strike upon any railroad shall interfere with, molest or obstruct any locomotive engineer or other railroad employe engaged in the discharge and performance of his duty as such, every person so offending shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than one hundred nor more than five hundred dollars, and may be imprisoned for a term not exceeding six months, at the discretion of the court.

4. That if any person or persons, in aid or furtherance of the objects of any strike, shall obstruct any railroad track within this state, or shall injure or destroy the rolling stock or any other property of any railroad company, or shall take possession of or remove any such property, or shall prevent or attempt to prevent the use thereof by such railroad company or its employes, or shall, by offer of recompense, induce any employe of any railroad company within this state to leave the service of such company while in transit, every such person offending shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding five hundred dollars, and may be imprisoned not more than one year, at the discretion of the court.

Approved March 9th, 1877.

An Act to incorporate and regulate telegraph companies.*

13. In case any person, superintendent, operator, or who may in any other capacity be connected with any telegraph line in this state, shall use or cause to be used, or make known or cause to be made known, the contents of any dispatch sent from or received at any office in this state, or in anywise unlawfully expose another's business or secrets, such person, being duly convicted thereof, shall, for every such offense, be subject to a fine of not less than one hundred dollars, or imprisonment not exceeding six months, or both, according to the circumstances or aggravation of the offense.

Approved April 9th, 1875.

An Act for suppressing vice and immorality.†

1. That no traveling, worldly employment or business, ordinary or servile labor or work, either upon land or water (works of necessity and charity excepted), nor shooting * * * nor * * * pastimes or diversions, shall be done, performed, used or practiced, by any person or persons within this state, on the Christian Sabbath or first day of the week, commonly called Sunday‡; and that every person, being of the age of fourteen years or upwards, offending in the premises, shall, for every such offense, forfeit and pay, to the use of the poor of the township in which such offense shall be committed, the sum of one dollar; and that no person shall cry, show forth or expose for sale, any wares, merchandise, fruit, herbs, meat, fish, goods or chattels, upon the first day of the week, commonly called Sunday, or sell or barter the same, upon pain

*Revision, p. 1174.

† Revision, p. 1227.

‡The effect of this statute is to render void every transaction which, if performed on a week day, would be enforceable in a court of justice. *2 Vroom 224.* A promissory note made on Sunday is void, &c.

that every person so offending shall forfeit and pay to the use of the poor of the townships where such offense shall be committed, the sum of two dollars. * * *

3. If any stage or stages shall be driven through any part of this state on the first day of the week, called Sunday, except sufficient reason shall be offered to show that it be done in cases of necessity or mercy, or in case of carrying the mail to or from any post office, the driver or drivers, proprietor or proprietors of such stage or stages, shall, on being therefor convicted before any justice of the peace for the county where the offense shall be committed, upon the view of the said justice, or confession of the party offending, or testimony of any witness or witnesses, forfeit and pay the sum of eight dollars for every such offense; * * * and every justice of the peace in this state is hereby empowered and required, upon his personal knowledge or view or other due information, of any stage or stages being driven or run through any part of this state as aforesaid, to stop and detain the same or order and direct the same to be stopped and detained, at the cost and expense of the proprietor or proprietors of such stage or stages, until the following day, and then be dealt with as hereinbefore directed.

4. No wagoner, carter, drayman, drover, butcher or any of his or their servants, shall ply or travel with his or their wagons, carts or drays, or shall load or unload any goods, wares, merchandise, or produce, or drive cattle, sheep or swine in an any part of this state on the first day of the week, called Sunday, under the penalty of two dollars for every offense, to be levied, recovered and applied. * * *

13. No transportation of freight, excepting milk, on any public highway, railroad or canal shall be done or allowed by any person or persons within this state, on the first day of the week, commonly called the Christian Sabbath; *provided*, that nothing in this act contained shall be construed so as to prevent the transportation of the United States mail by railroad or on the public highways, or to the regular trips of ferry boats within this state, or between this and another state.

Approved March 27th, 1874.

An Act for the punishment of crimes.*

160. If any apprentice or servant, whether bound or hired, to whom any money, bank bill or note, or goods or chattels, shall be, by his or her master or mistress, delivered, to be safely kept, shall withdraw himself or herself from his or her said master or mistress, and go away with the said money, bank bill or note, goods or chattels, or any part thereof, or otherwise convert the same to his or her own use, with like purpose to steal the same, and defraud his or her said master or mistress thereof, contrary to the trust and confidence in him or her reposed by his or her master or mistress, or, being in the service of his or her said master or mistress, shall embezzle the said money, bank bill or note, goods, chattels, or any part thereof, or otherwise convert the same to his or her own use, with like purpose to steal the same, then, and in every such case, the person so offending shall be adjudged guilty of a high misdemeanor, and on being thereof convicted shall be punished by fine not exceeding one hundred dollars, or by imprisonment at hard labor for any term not exceeding two years, or both; *provided*, that this clause or section shall not extend to any apprentice or servant, guilty of any of the premises therein mentioned, within the age of fourteen years.

161. If any servant, employe or agent of any individual or incorporated company shall take or receive any money, bank bill or note, of or above the price or value of

* Revision of 1877, p. 255.

twenty dollars, belonging to his master, employer, or to the said incorporated company, with intent to defraud such master, employer or incorporated company thereof, and shall willfully retain and appropriate to his own use the said money, bank bill or note, knowing the same to belong to his master, employer, or to the said incorporated company, every person so offending shall be deemed guilty of a misdemeanor, and on conviction shall be punished by fine not exceeding five hundred dollars, or imprisonment at hard labor not exceeding three years, or both. * * * *

165. If any person into whose hands or possession any goods or materials may have been placed or may hereafter be placed for the purpose of being manufactured, repaired, made up, or having any labor bestowed thereon for the benefit of the owner, shall, without the consent of the owner, unlawfully sell and dispose of the same, or shall, with intent to defraud the owner, on payment or tender of all just claims and liens for work or labor done upon such goods or materials, unlawfully refuse or neglect to deliver the same to the owner, or to his order or demand, then every such person so offending shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding three hundred dollars, or imprisonment at hard labor not exceeding three years, or both.

166. If any person or persons, who shall be hired or employed to prepare or work up any silk or other manufacture, shall purloin, embezzle, secrete, sell, or otherwise unlawfully dispose of any of the materials with which he, she or they shall be respectively intrusted, whether the same or any part thereof be or not first manufactured in merchantable wares, or be finished or unfinished, he, she or they shall be deemed guilty of a misdemeanor.

167. [Applies to "receivers" of materials, etc., from operatives referred to in preceding section.]

168. Any person or persons, convicted of any misdemeanor in the last two sections of this act mentioned, shall be punished by a fine not exceeding one thousand dollars, or imprisonment in the penitentiary not exceeding two years, or both, at the discretion of the court.

Approved March 27th, 1874.

An Act regulating proceedings in criminal cases.*

22. No person shall be committed to or detained in the jail of any county for securing his or her appearance as a witness against any person charged with a crime or misdemeanor, except in cases punishable by imprisonment in the state prison; nor shall persons so detained be kept in the same department with or provided with the same fare as persons charged with or convicted of crime, but the boards of chosen freeholders for each county shall take care that they be comfortably lodged and provided for, and no further restricted of their liberty than is necessary for such detention.

Approved March 27th, 1874.

An Act concerning inns and taverns.†

24. That if any inn-holder or tavern-keeper shall sell any vinous, spiritous or strong liquors to any apprentice or servant, knowing or having reason to suspect or

*Revision, p. 266.
†Revision, p. 489.

believe him or her to be such, without the consent of his or her master or mistress, such inn-holder or tavern-keeper shall, for every offense, forfeit the sum of four dollars, to be recovered by action of debt, with costs, by the master or mistress of such apprentice or servant, in any court of record having cognizance thereof.

25. That if any inn-holder, tavern-keeper or other person or persons shall take or receive, directly or indirectly, from any apprentice or servant any clothing or other goods, chattels, wares or merchandise in payment for any vinous, spiritous or strong liquors, or in pawn or pledge to secure such payment, then he, she or they, so offending, shall forfeit and pay unto the master or mistress of such apprentice or servant treble the value of all such clothing or other goods, chattels, wares or merchandise which he, she or they shall have so taken or received as aforesaid, to be recovered by such master or mistress, his or her executors or administrators, by action of debt or on the case, with costs, in any court having cognizance of the same.

Approved April 17th, 1846.

An Act for the safety of travelers.*

7. That no person hereafter driving any stage-coach, wagon, sleigh or other carriage upon any turnpike, road or public highway within this state, shall willfully so drive the same as to run against, delay or hinder any other stage-coach, wagon, sleigh or other carriage, or shall run his horses, to pass or prevent being passed by any other stage-coach, wagon, sleigh or other carriage, or on any other occasion, or for any other purpose; and every person offending against the provision of this section, shall, for every such offense, forfeit and pay the sum of thirty dollars, to be recovered, with costs of suit, in an action of debt, before any justice of the peace having cognizance thereof, by any person who shall first sue for the same to effect; and the owner or owners of any such stage-coach, wagon, sleigh or carriage used for carrying passengers for hire, whether with or without passengers, the driver of which shall offend against this section, are hereby made jointly and severally liable for the said penalty.

8. That it shall not be lawful for the driver of any stage-coach, wagon, sleigh or carriage, used for carrying passengers for hire or reward, to leave the horses attached thereto without first making them fast with a sufficient rope, chain or halter, or placing the lines in the hands of some other person to hold, till he, the said driver, shall return and take charge of said horses; and if such driver shall offend against this section, he shall be liable to a penalty of twenty dollars, to be recovered in an action of debt, with costs of suit, before any justice of the peace having cognizance thereof, by any person who shall first sue for the same to effect; and the owner or owners of any such stage-coach, wagon, sleigh or carriage, the driver of which shall offend against this section, shall be jointly and severally liable for all damages and losses occasioned by such offense.

9. That it shall be and hereby is declared to be the duty of the owner or owners of every stage-coach, wagon or other carriage used for conveying passengers for hire or reward, to employ none but prudent, careful and sober drivers of every such stage-coach, wagon or other carriage; and in case any such stage-coach, wagon or other carriage, in which any passenger or passengers shall be traveling, shall be overset in consequence or by reason of the intoxication or misconduct of the driver thereof, the

*Revision, p. 1,210.

driver so offending shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by fine or imprisonment, or both, at the discretion of the court before whom such conviction shall be had, the fine not to exceed one hundred dollars, nor the imprisonment twelve months; and the owner or owners of any stage-coach, wagon or other carriage, which shall be overset as aforesaid, shall be jointly and severally liable to each and every passenger who shall be personally injured thereby, for all the damages thereby sustained.

10. That in all cases where the owner or owners of any such stage-coach, wagon or sleigh or other carriage, shall pay or be compelled to pay, any fine or damages recovered against him or them for anything prohibited by this act, occasioned by the act or neglect of any driver, such owner or owners may set off the amount thereof against any sum which may be due to such driver from said owner or owners.

Passed February 28th, 1828.

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