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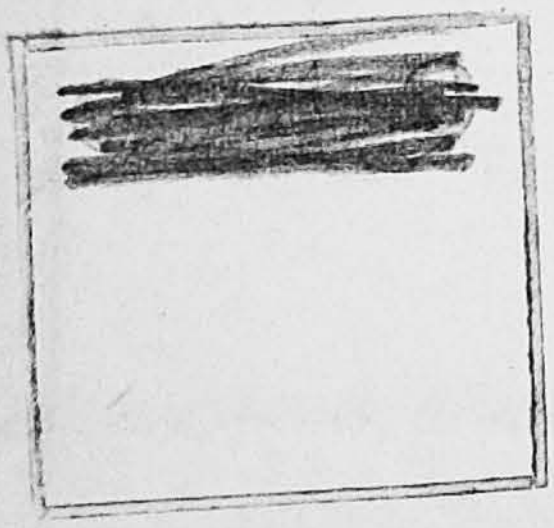

SIXTH ANNUAL REPORT

OF THE

BUREAU OF STATISTICS

OF

LABOR AND INDUSTRIES

OF

NEW JERSEY,

FOR THE YEAR ENDING OCTOBER 31st,

1883.

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STATE OF NEW JERSEY, OFFICE OF BUREAU OF
STATISTICS OF LABOR AND INDUSTRIES,
TRENTON, October 31st, 1883.

To His Excellency, George C. Ludlow, Governor:

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

JAMES BISHOP,
Chief.

ERRATA.

Page 35, No. 309, read "lamp workers" for "lamp makers."

Pages 179 and 180, foot-notes to tables, read "new" for "men."

Glass industry:

The statement on page 288, that Robert Hewes' glass-factory is the earliest of which we have reliable information, has been found to be incorrect; the New Jersey factory at Allowaystown, the date of which is twenty years earlier (page 289), is well authenticated.

The two caves, at right angles to one another (page 295), are not used in New Jersey.

Pots in use in New Jersey are from thirty to thirty-two inches in height (thirty-four inches being extremely high), and not four feet, as stated on page 297.

Window-glass cylinders (page 301) are not opened with purcellas—an operation manifestly impossible to a single workman, and not employed.

None but "professional" cutters or apprentices are ever employed; the statement on page 302 is therefore non-essential.

Bottles (page 303) are usually annealed in ovens, and not in leers, the latter method being the exception, not the rule.

On page 304, two lines from bottom, read for "in sections," "which is in sections."

INTRODUCTION.

The chief object of this Bureau from its organization, as was clearly stated in the First Annual Report, and as has been urged in each subsequent report, has been to stimulate and assist the wage-worker in his endeavor to reach a higher social position. Statistics have been collected and collated in order to furnish him facts upon which he may intelligently examine into the causes of his unsatisfactory condition, and he has been urged to use every lawful expedient to remove these causes. The most potent cause of the disadvantage of the laborer in the distressing war between labor and capital, and the direct obstacle to the reconcilement of these great forces, which are not essentially opposed to one another, has seemed, in the light of facts arrived at, to be the uneducated mind of the average worker.

The training of his mind would do much to improve the judgment of the workingman in exercising his undoubted power. The laborer has therefore been urged to see to it that his children be given every educational advantage within their reach, that they may be qualified, upon reaching maturity, to occupy that social and political position to which all citizens of our Commonwealth may aspire, that will place them on the same intellectual plane as the capitalist and compel his respect. There are, indeed, growing out of the defeat of labor in its struggle with capital, very grave dangers to society, to avert which a close study of political economy by the masses of our land is necessary. The wonderful concentration of wealth which has marked our years of prosperity may yet prove our ruin unless, by wise legislation and by processes yet to be devised, this tendency of wealth to accumulate in the hands of comparatively a few persons can be checked. It cannot be denied that murmers of dissatisfaction with this state of things are heard on every side, and the time has come when, to avert impending danger, the conservative forces existing amongst us should be roused into action to devise some means whereby the laborer may receive a larger share in the profits of his labor. When we see hundreds of millions of dollars concentrated in the hands of a single person, accumulated,

indeed, under the sanction of law, yet, by processes the morality of which is at least questionable, and behold this superfluity sharply in contrast with the almost impoverished condition of large numbers of wage-workers who feel that by their daily toil and lives of self-denial this wealth was largely accumulated:—when we consider this state of things, can we wonder that there is discontent? The question naturally arises how the condition of the workingman may be improved, and how the harmonious relation which, under a well-regulated industrial system, must exist between labor and capital may be brought about—a question, surely, of sufficient importance to command the attention of every patriot, be he plain citizen, student or philanthropist. Upon the solution of this question may hang the destiny of our republican institutions. May the time never come when a close observer may travel round the world and then say of any city of our fair land what Professor Huxley recently said of London, that "in all his studies of savage life he found no people so miserable, wretched and degraded as those who exist in the poorer quarters of London." The schemes of gradual social revolution already proposed, and to some extent tested, should first be studied, for among them perhaps may be found one of promise. In England, France, Germany and Switzerland, co-operation among workingmen for business purposes is now being fairly tested, and already associations for co-operative purposes have multiplied to such an extent, and have been carried on with such success that they are commanding the attention of large numbers of wage-workers. Co-operative work not only brings these men nearer together socially, but it teaches them that by handling among themselves the exchange of commodities necessary for the support of their families, as well as by engaging in industrial manufacturing, they can divide among themselves the large profits which have usually gone into the hands of the middleman, who is not really a producer of wealth, but merely a handler of exchange. To give some idea of the extent to which co-operation is carried on in England, we give the following condensed statement taken from the report of the Co-operative Wholesale Society (Limited,) for the quarter ending December 22d, 1883.

Total capital of the society, £691,181, $3,455,905.

Net goods invoiced during the quarter, £1,227,781, $6,138,905.

Profit, after deducting all expenses, £14,966 4*s.* 6*d.*, $74,831.

Dividends to members on their purchases, £13,357 15.*s* 9*d*., $66,785.
Dividends to non-members, £432 4.*s* 9.*d*, $2,161.
Writing off bad debts, £314, 7*s*. 3*d*., $1,572.
Balance to reserve fund, £861 16*s*. 9*d*., $4,309.

During the quarter the society supplied goods to 801 retail stores, 659 of which were members of the federation, which had an aggregate individual membership of 433,151.

That the adulteration of articles of food is largely carried on in this country as well as in England is not doubted, and as co-operative societies guard well this point in the purchase of their supplies, a great advantage is afforded those who join them. A recent writer in the "Co-operative News" on this subject, remarks, "The lengths to which this kind of dishonesty is carried on are almost beyond belief," and adds, "From the fraudulent admixture of some kind of cheapening ingredient with a penny's worth of mustard up to shipping insurance frauds, in which tens of thousands of pounds and many hundreds of human lives are played with and lost or won, the game goes steadily on, in defiance of law or conscience, with little or no hope of amendment short of co-operative transformation, that shall make the gain of distribution, production and carriage the general gain, and not the gain of a few individuals anxious to become rapidly rich, without caring much as to the means by which they accomplish their object."

In France a notable instance of the success of co-operative effort may be seen in the success which has attended the efforts of M. Godin, the founder of the Society of the Familistère at Guise, regarding which a condensed statement may be found in our Fifth Annual Report. During the past year M. Godin was called upon to give evidence before the parliamentary committee of inquiry into workingmen's associations at one of their sessions held in Paris. After having re-affirmed to the committee the success of the association at Guise, he says, "It would be easy in Paris to unite in a true palace from 3000 to 4000 employes and the *élite* of the workmen, and connect with their abode industrial workshops, commercial stores, school-rooms for children. M. Barbent, a member of the commission, stated that there were now in the department of the Seine from 35 to 40 co-operative associations for consumption, comprising from 15,000 to 20,000 members.

In Germany, in 1880, there were 645 *consumvereine* or distributive co-operative associations organized under the Schulze plan, 195 of

which sold goods to the amount of $7,589,750. The credit unions, which owe their existence to the philanthropic labors of Dr. H. Schulze, of Delitzsch, are, in Germany, more important than the co-operative shops. These unions, which are really co-operative banks, subject to general banking laws, number more than 2000. In 1880, 906 of these gave credit, upon no security, upon promissory notes and upon mortgage to the amount of $239,772,057. Members of these unions may borrow up to $730, and each member may borrow, *without security*, $44 upon a share of $29.20. The capital is derived from entrance fees and the subscriptions of members, money being borrowed, when needed, at the current rates of interest.

In his annual report for 1880, the late Dr. Schulze-Delitzsch, the founder of the Schulze-Delitzsch co-operative associations, reported them to be in a very flourishing condition, numbering, in 1880, 3250, an increase of 47 over the previous year. The total number of co-operative associations in 1880 in the German Empire was over 3300, with a membership of nearly 1,100,000, and a share capital of $47,000,000. The business transactions exceeded $500,000,000.

In Switzerland there existed on December 31st, 1883, 121 distributive co-operative societies, 109 of which had been established within the last 20 years. The annual sales, as declared by 85 societies, amounted to 12,170,000 francs, or $2,434,000, to which may be added the sales of the 36 societies which sent in no returns and which were estimated at 833,000 francs, making a total of 13,000,000 francs, or $2,600,000 per annum.

In this country like associations have been organized in many localities, and wherever properly conducted have met with success; but, having no central wholesale association, as in England, it is difficult to obtain accurate statistics with regard to their number or the extent of their business. Among the many instances of success which we could name we will refer to only one, which was organized among the mill operatives of a neighboring city, and which has been steadily growing, numbering at present 2221 members. The balance sheet of the Philadelphia Industrial Co-operative Society, to which we refer, shows, in the Thirty-seventh Quarterly and Ninth Annual Report, ending November 17th, 1883, the following result for the year:

Capital stock paid in	$21,177 21
Sales during the year	241,291 11

Gross profits	$20,761 02
Dividends paid to members	16,450 80
" " " non-members	1,927 93

If it be true that co-operative effort can improve the condition of wage-workers, and that they would enter heartily into the work if they had confidence in their ability to carry it on successfully, then the question of technical education becomes an all-important one, since through educational processes alone can the necessary confidence be imparted to them. Hitherto it has been thought that boys and girls, furnished with "directive power," to use a word much employed, would take naturally to the trades for which their abilities fitted them, and under the industrial system of half a century ago this actually happened in many cases. Now, however, training through State action is necessary in order that children may be led into mechanical pursuits. To establish technical schools, fully equipped, would involve an outlay much larger, probably, than public opinion is at present prepared to sanction; but a practical method of accomplishing the object is within reach, viz., that of adding elementary industrial instruction to our present public school system, which, with very little expense, can be changed to admit of this addition. With the view of finding out how the proposed system is working in actual experiment, the Bureau detailed an agent to examine into the results of industrial education in New Haven, Conn. The following was the result of the inquiry:

At the Skinner school, State street, New Haven, Conn., of which Mr. J. R. French is principal, the experiment of industrial education has been tried since the 1st of October last. Mr. French first conceived the idea in consequence of the agitation of the subject by Prof. C. M. Woodward, of St. Louis, and by other educators in Chicago and Cleveland. Prof. Felix Adler's labors also had their effect. The janitor of the Skinner school chanced to be a skilled mechanic, and, though an old man, possessed the faculty of controlling boys. The board of education furnished the meagre sum of $50, and also voted some slight increase in the salary of the janitor. Mr. French succeeded in raising sufficient money to enable him, with the aid of the sum granted by the board of education, to fit up a room in the basement of his school with two carpenter benches, well supplied with the necessary tools, and to provide lumber and other materials needed.

With a class of less than a dozen volunteers, working the last half hour of the afternoon session of the school, the experiment began. The boys chosen for the class were not those of the highest mental ability, but rather those who, as Mr. French expressed it, "needed to be made to feel that they were trusted." So successful was the first class, that another class was formed, and the number of pupils soon reached the neighborhood of thirty. The boys are deeply interested in their work, and a visible improvement has resulted, not only in the manual skill, which has been wonderfully developed, but in their deportment in the class-rooms. Many have availed themselves of the privilege accorded them of working during hours when the school is not in session, and some have spent a portion of their vacation at work. The hold which the work has taken upon the boys is shown by the fact that the principal put the question to the school as to whether it should be given up, and obtained from the boys a unanimous vote in favor of keeping it up. The deepest interest is manifested in the filling of vacancies in the classes, and Mr. French is confident that *every boy in the school* would willingly take part. The system of instruction from the beginning is briefly as follows:

At half-past three the first class went to the basement of the school and were shown how the hammer should be handled to insure a square blow. Boards were then given them, each with one hundred black spots on it, and every boy was required to strike a hundred blows, endeavoring to cover a spot squarely with each blow. On this the boys were marked, as for a lesson. Then the use of the plane was taught, and the boards were planed. In another lesson the various nailings of flooring were taught, and the use of the saw was shown. Soon the mitre-box was brought into use, the boys making their own mitre-boxes. The making and fitting of joints was also taught, and then various articles began to be made. All articles made by the boys are of practical use, and this fact does not a little to keep them interested in the work. Mr. French has in his study specimens of nail-boxes, small looking-glasses or pivoted frames, frames with movable feet for drawings, boxes with inclined board for polishing knives (made in one hour), all showing admirable workmanship and careful instruction. Some of these articles are of particular interest from their having been made by very young and by very incorrigible boys. One boy of 12 years, so short that he had to have a stool to reach the bench, did very good

work, and a boy of Irish parentage, who is a hopelessly bad speller, has discovered an excellent knack at turning. A boy who had shown an ugly temper in the class-room became very much interested in his work and has given no trouble of late to his teachers.

The scheme met and still meets with considerable opposition from the conservative element in the school board and in the community—as all good things, when they are new, must meet with old fogy opposition. Mr. French, however, thoroughly believes in his work, and has reason to be proud of its success. To boys who are dull of intellect it gives confidence. It increases the power of observation, so that the boys begin to inquire into the different kinds of wood, spending hours in talking over trees among themselves. It gives the boys a trade which they feel that they *know*, and removes the feeling of contempt, all too prevalent, for manual labor. Sons of the richest work beside sons of the poorest, and class feeling never appears. Habits of order and economy are fostered, and the eye and hand are educated.

About $250 will cover the expenses at the Skinner school this year.

At the Dwight school, under the auspices of its principal, Mr. Camp, a similar experiment is in progress, with similar results. The details are about the same, except that entrance to the classes is gained by superior scholarship, and that the girls are taught branches suitable for them.

The experiment of the last five months in New Haven is a grand success, and unless economical obstacles interfere, the work must prove a great boon to our unpractical grammar schools. Mr. French favors a special school, as a matter of convenience, to which classes from the grammar schools shall be detailed at certain hours. Good instructors are naturally a necessary condition of success, and with these the scheme cannot but succeed. There must be no play-school about it, but it must be as steady as work at lessons, and such it has been at the Skinner and Dwight schools at New Haven.

Hitherto but little attention has been given in this country to technical education. We have allowed England, France and Germany, to a large extent, to educate for us skilled workmen who command the highest wages. In England, the South Kensington Museum has established industrial art schools in every business centre, and technical schools are organized in Nottingham, Manchester, Leicester, Sheffield, Middleborough, Belfast and Bradford. Public attention is, however,

becoming aroused, and already technical schools have been established at Boston, New York, Philadelphia, Baltimore, Chicago and St. Louis. One is being organized at Newark, in this State, which, if successful, will doubtless be followed by schools of like character in all our large manufacturing towns.

The following extracts are made from the fourth annual catalogue of the Manual Training School of Washington University. Professor C. M. Woodward has for many years given this subject careful study.

SPECIAL TRADES ARE NOT TAUGHT.

All the shop-work is disciplinary. Special trades are not taught, nor are articles manufactured for sale.

The scope of a single trade is too narrow for educational purposes. Manual education should be as broad and liberal as intellectual. A shop which manufactures for the market, and expects a revenue from the sale of its products, is necessarily confined to salable work, and a systematic and progressive series of lessons is impossible, except at a great cost. If the object of the shop is education, a student should be allowed to discontinue any task or process the moment he has learned to do it well. If the shop were intended to make money, the students would be kept at work on what they could do best, at the expense of breadth and versatility. In a factory intellectual life and activity is not aimed at; its sole object is the production of articles for the market. In a manual training-school everything is for the benefit of the boy; he is the most important thing in the shop; *he is the only article to be put upon the market.*

Even in manual teaching the chief object is mental development and culture. Manual dexterity is but the evidence of a certain kind of mental power, and this mental power, coupled with a familiarity with the tools the hand uses, is doubtless the only basis of that sound, practical judgment and ready mastery of material forces and problems which always characterize one well fitted for the duties of active industrial life. Hence the primary object is the acquirement of skill in the use of tools and materials, and not the production of specific articles. We therefore abstract all the mechanical processes and manual arts and typical tools of the trades and occupations of men, arrange a systematic course of instruction in the same, and then incorporate it in our system of education. Thus, without teaching any one trade, we teach the essential mechanical principles of all.

Accordingly, the shop-training is gained by regular and carefully-graded lessons designed to cover as much ground as possible, and to teach thoroughly the use of ordinary tools. This does not imply the attainment of sufficient skill to produce either the fine work or the rapidity of a skilled mechanic. But a knowledge of how a tool or machine should be used is easily and thoroughly taught. The mechanical products or results of such lessons have little or no value when completed, and they are generally used as new material for more exercises. * * * Hitherto, men who have cultivated their minds have neglected their hands, and those who have labored with their hands have found no opportunity to cultivate their brains.

The crying demand to-day is for intellectual combined with manual training. Our motto is, and every medal given to-day bears it in plain letters,

"The cultured mind,
The skilful hand.'

One great object of the school is to foster a higher appreciation of the value and dignity of *intelligent* labor, and the worth and respectability of laboring men. A boy who sees nothing in manual labor but mere brute force despises both the labor and the laborer. With the acquisition of skill in himself comes the ability and willingness to recognize skill in his fellows. When once he appreciates skill in handicraft, he regards the *skilful* workman with sympathy and respect.

THE GENERAL VALUE OF MANUAL TRAINING.

It is not assumed that every boy who enters this school is to be a mechanic. Some will find that they have no taste for manual arts, and will turn into other paths—law, medicine or literature. Some who develop both natural skill and strong intellectual powers will push on through the Polytechnic School into the realms of professional life as engineers and scientists. Others will find their greatest usefelness as well as highest happiness in some branch of mechanical work into which they will readily step when they leave school. All will gain intellectually and morally by their experience in contact with *things*. The grand result will be an increasing interest in manufacturing pursuits, more intelligent mechanics, more successful manufacturers, better lawyers, more skilful physicians and more useful citizens.*

Several errors in the Chapter on Glass, Part IV., will be found corrected in the *errata*. Mr. Simmerman is not responsible for the article, which, through an oversight, was not seen by him.

* "Manual training is essential to the right and full development of the human mind, and therefore no less beneficial to those who are not going to become artisans than to those who are. * * * The workshop method of instruction is of great educational value, for it brings the learner face to face with the facts of nature; his mind increases knowledge by direct personal experience with forms of matter and manifestations of force. No mere words intervene. Abstract statements, definitions and rules are of secondary value; they are not knowledge, but only the empty frames into which knowledge may be put when once it is got."

The manual exercises of the shop "train mental power rather than load the memory; they fill the mind with the solid merchandise of knowledge, and not with its empty packing-cases."—*Prof. Edwin P. Seaver, Superintendent Boston Public Schools.*

"Whatever cultivates care, close observation, exactness, patience and method, must be valuable training and preparation for all studies and all pursuits."—*Prof. John D. Runkle, Massachusetts Institute of Technology.*

LABOR STATISTICS.

During the year the Bureau circulated two forms of blanks to be filled out by workmen, one for individuals, to ascertain the earnings, cost of living, and other facts reported in Tables Nos. 1 and 3, Part I., from individual wage-workers; the other, for the purpose of obtaining the various subdivisions in establishments, and the data given in detail in Tables Nos. 2 and 3, Part I.

A summary of the principal items returned is here given. The average annual earnings and the general condition of wage-receivers is fairly shown by these tables.

The amount of average earnings in some of the trades reported in Tables 1 and 2, differ slightly. This can be accounted for by the difference in time reported lost, which item is exact in the individual returns; while in the general blanks, having been estimated from the number of days the establishment was not in operation, it is only approximately correct. The first gives the actual time lost, the other the possible average time that could have been made by employes.

SUMMARY OF COLLATED STATISTICS.

TABLE 1.—INDIVIDUAL EMPLOYES.

OCCUPATION.	Individual earnings.		Earnings of others in family.		Cost of living for self and family.			Number reporting savings and debts.					Average number of days lost time.
	Number reporting.	Average annual earnings.	Number reporting.	Average annual earnings.	Number reporting.	Number in family.	Average cost of living.	Savings in former years.	Savings during past year.	Number saving in former years.	Number saving in past year.	Fallen in debt during past year.	
Glass blowers (green glass)	57	$1,075 44	17	$245 35	57	5⅓	$824 69	45	44	2	11	8	60
" " (flint glass)	7	1,064 43	....	.....	7	5⅔	889 33	4	4	....	3	3	60
Miscellaneous workmen in glass factories, skilled and partly skilled	35	546 57	18	193 61	30	5½	617 18	17	15	4	17	19	56
Window glass blowers	9	525 00	5	155 00	9	6⅔	716 62	1	1	....	8	8	130
" " flatteners	7	507 00	3	250 00	6	5½	683 00	3	2	....	3	4	130
" " cutters	5	582 00	....	.....	5	3¾	560 00	3	2	....	2	2	130
" " gatherers	6	368 33	3	200 00	4	5⅓	555 00	....	....	....	4	4	130
" " master shearers	3	566 60	3	175 00	3	6⅓	735 00	1	1	....	2	2	130
" " other workmen	6	398 50	5	244 40	5	5½	508 20	1	....	1	5	6	90
Hat finishers	19	437 21	7	309 43	13	5	578 08	7	1	9	8	16	106½
" makers	24	382 58	8	209 62	14	5⅓	487 93	10	1	20	11	19	106½
Miners, iron ore	28	356 61	14	218 57	28	5½	463 36	17	8	7	11	19	31
Silk weavers, power loom	15	428 79	9	261 00	14	7⅛	551 00	8	8	1	6	5	71
" " handkerchief	11	433 00	6	245 83	10	6¼	517 77	4	4	1	5	6	71
" " hand loom handk'f	3	412 00	2	225 00	1	7	650 00	2	2	....	2	2	71
" " " " dress goods	6	419 00	1	500 00	1	9	900 00	5	3	....	1	1	71
" " ribbons	11	585 45	8	312 50	11	6	770 45	5	3	1	6	8	71
" warpers	4	421 00	2	150 00	4	4¼	487 00	3	3	1	1	1	71
Doublers, winders, finishers—females	8	276 68	....	.....	5	....	282 96	1	1	....	5	5	71
Silk weavers, Hudson county	12	411 00	1	150 00	10	3¾	550 38	3	2	3	8	9	
Loom fixer " "	1	780 00	....	.....	....	....	.....	1	1				
Boss " "	1	882 00	1	260 00	1	6	600 00	1	....	1	1	1	
Cotton weaver	4	311 25	2	300 00	3	5⅔	566 66	1	1	....	2	2	36
" " females	7	284 28	....	.....	....	....	.....	....	....	....	4	4	36
" operatives (skilled)	7	463 46	....	350 00	6	5	481 91	3	4	....	4	3	36
Woolen weaver	7	370 00	4	.....	6	5	591 60	3	1	1	5	6	40
Wool sorter	1	600 00	....	.....	....	5	600 00	....	....	....	1	1	40
Cigar maker	5	527 22	....	.....	3	2⅞	418 14	2	2	1	4	4	36
Ship carpenter	9	798 33	3	200 00	11	6	815 90	5	5	....	5	4	37
Carpet factory operatives	7	507 14	3	116 00	7	5	503 43	5	5	....	2	2	48
Shirt makers (females)	17	311 35	1	200 00	16	....	309 81	....	....	....	....	....	22
Jewelers	8	667 87	1	200 00	7	3½	703 43	3	....	5	5	8	59
Shoemakers	18	496 00	7	323 30	17	5¾	671 17	11	3	10	8	15	104
" females	6	290 00	....	.....	6	....	247 00	....	....	....	3	3	122
Blacksmiths	13	642 30	5	162 40	13	5½	643 00	7	5	1	6	8	37
Machinists	35	604 56	11	230 18	29	5¾	600 93	12	11	9	22	23	43
Carpenters	17	635 70	7	253 71	19	5½	689 21	8	2	3	12	16	42
Rolling mill (skilled)	14	946 25	5	316 40	15	5½	836 66	8	11	....	6	4	50
Iron moulders	9	641 66	3	166 66	9	5⅞	653 33	7	4	1	3	5	32
Puddlers	9	986 11	2	245 55	9	6	893 33	7	8	....	2	1	25
Stone cutters	4	719 26	....	.....	4	4	652 26	1	3	2	3	2	87
Japanner (leather)	1	475 00	....	.....	7	7	496 00	....	....	2	2	2	50
Engineers (stationary)	5	638 00	....	.....	5	5	623 00	3	1	1	2	4	22
Painters	2	538 00	1	375 00	1	....	750 00	1	2	1	1	1	
Wood turners	3	483 00	3	83 30	3	4⅓	483 00	2	2	....	1	1	
Pattern makers	2	740 00	1	250 00	2	6½	685 00	1	1	....	1	1	
Boiler makers	2	650 00	....	.....	2	6	650 00	....	....	....	2	2	
File "	5	506 84	1	300 00	3	4	517 00	1	2	1	3	2	
Saw "	1	750 00	....	.....	....	3	800 00	....	....	1	1	1	
Carriage works	4	475 00	....	.....	4	5	475 00	2	1	1	2	3	
Hod carrier	1	600 00	1	100 00	1	6	700 00	....	....	....	1	1	
Harness maker	1	468 00	....	.....	1	4	468 00	....	1	1	1	1	
Pearl button maker	1	504 00	....	.....	....	5	.....	....	....	1	1	1	
Designer	1	681 00	....	.....	....	3	360 00	1	1				
Dress makers—female	2	200 00	....	.....	2	....	200 00	....	....	....	2	2	
Laborers	21	361 00	20	233 87	20	5½	550 45	5	3	4	14	16	31
Potters	2	522 85	....	.....	....	....	366 11	2	1	....	1	2	

TABLE 2.—ESTABLISHMENTS.

GLASS WORKERS (Bottle and Vial.)

Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.	Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.
Blowers	363	$1,025	60	Shearers	38	$399	60
Tending-boys	415	148	60	Packers	57	364	60
Master shearers	19	776	60	Pot makers	7	814	60

WINDOW-GLASS WORKERS.

Blowers	27	$459	182	Flatteners	7	$457	182
"	32	750	78	"	8	750	78
Gatherers	27	294	182	Cutters	16	400	182
"	32	463	78	"	16	778	78

FLINT-GLASS WORKERS.

Blowers	159	$987	60	Stopper grinders	25	$900	60
Tending-boys	440	158	60	Lamp workers	47	650	
Batch makers	7	520	60	Cutters	22	750	60
Mould "	27	800	60	Box makers	12	590	60

SILK WORKERS.

Weavers, ribbon	120	$567	77	Doubling, females	480	$250	27
" power loom	437	417	63	Finishing	63	368	27
" hand "	140	550	93	Spinning, boys	390	183	27
" females	160	397	64	Winding, females	1,135	249	27
Warpers	63	469	26	Dyeing	178	492	27
" females	160	450	27	Budlers	30	500	
Quilling, "	100	196	27				

COTTON MILL OPERATIVES.

Weavers	213	$330	8	Speeders	87	$500	30
" females	708	231	8	" females	23	264	10
Carders	73	271	10	Spinners	55	456	12
" females	120	180	12	" females	104	240	10
" grinders	8	348	9	Frame tenders	25	250	
" strippers	12	260	12	" females	106	102	7
" tenders	45	214	12	Warpers	3	383	
" " females	16	150		" females	37	220	
Pickers	21	308	10				

BLEACHERIES.

Finishers	33	400		Bleachers	11	366	
Dyers	45	467		Sewers	3	350	
Folders	43	500		" females	4	250	

TABLE 2.—ESTABLISHMENTS—*Continued.*

WOOLEN MILLS.

Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.	Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.
Weavers	377	$393	15	Spinners, boys	54	$100	23
" females	181	314	14	Pickers	65	289	15
Dyers	91	507	8	Finishers	56	336	5
Carders	50	266	16	Wool sorters	32	675	14
Feeders, strippers and tenders	57	195	16	Fullers	40	350	
Spinners	43	788	11	Giggers	56	342	
" females	50	350	11				

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Heaters	24	$1,053	18	Drag-outs	6	$433	12
Helpers	132	421	12	Puddlers	25	936	8
Rollers	13	1,140	15	" helpers	18	333	12
Roughers	28	666	8	Moulders	220	728	16
Catchers	12	410		Core makers	73	672	18
Hookers	17	450	12	Pattern "	36	718	10
Straighteners	12	450	12	Boiler "	575	558	
Pilers	12	450	12				

BOOTS AND SHOES.

Sewing machine	18	$450	66	Stock fitting	17	$399	24
Finishers	50	532	76	" females	433	282	50
Burnishers	30	536	69	Operators, "	12	224	90
" females	6	225	24	Trimming	9	580	25
Heelers	29	527	67	Edge trimming	9	656	24
Lasters	66	527	60	" setting	8	631	24
Cutters	72	637	51	Beating out	4	396	24

MINING—IRON ORE.

Miners	1,294	$347	43

HATS.

Sizing	104	$660	30	Colorers	3	$450	60
Finishing	87	700	30	Shaving	4	450	60
Pouncers	16	534	30	Blocking	4	600	60
Packing	3	700	60	Trimming, females	65	234	30

CARRIAGE WORKS.

Body makers	15	$481	26	Painters	10	$455	26
Trimmers	10	502	26	Platers	2	545	
Finishers	4	440		Gear makers	2	490	

TABLE 2.—ESTABLISHMENTS—*Continued.*

ORGANS.

Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.	Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.
Clerks	60	$500	10	Fly finishers	81	$963	11
Bookkeepers	4	900	10	Tuners	72	958	11
Case makers	120	800	11	Box makers	13	715	11
Action "	91	865	11	Varnish finishers	10	600	11

BAKERS.

Bread makers	13	$624		Cake and pie makers	25	$520	
Cracker "	20	520		Helpers	25	390	

SHIP-BUILDING.

Carpenters	172	$800	28	Fasteners	17	$456	32
Caulkers	27	785	32	Joiners	15	617	33

PAPER.

Skilled help	10	$550	15	Stock cutters	1	$375	12
" partly	146	438	15	Boxes	15	660	2
" females	11	256	18	" females	135	350	2
Finishers	2	450	12				

LEATHER.

Tanners, curriers and japanners	169	$549					

BREWERIES.

Brewers	150	$724					

JEWELRY.

Jewelers	10	$650	90	Swivel makers	1	$1,000	90
Bracelet makers	6	900		Polishers	4	750	60
Ring makers	11	632		" boys	2	200	60
Stone setters	7	911		Engravers	21	630	
Finishers	4	750	60	Enamelers	1	900	36
Chain makers	25	600		Melters	1	1,000	
Spring-ring makers	2	700	90	Tool makers	3	750	6

TABLE 2.—ESTABLISHMENTS—*Continued.*

TRUNKS, BAGS AND SATCHELS.

Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.	Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.
Cutters	8	$600		Sewing machine	1	$450	

TOBACCO.

Cigar makers	227	$542	40	Rollers, females	25	$300	30
" females	5	500	30	Bunch breakers, boys	10	350	30
Rollers	5	600	30				

RUBBER.

Skilled workmen	13	$575		Sawing	30	$525	30
Partly skilled	100	425		Rubbing	75	575	30
" females	60	275		Polishing	42	475	30
Stock department	140	550	30	" females	70	225	30
Turning	50	550	30	Packing	10	475	30
Grinding	35	425	30	" females	30	230	30
Cutting	45	525	30	Paper boxes	4	425	30
" females	20	275	30	" females	20	275	30

BUTTONS.

Cutters	4	$578	53	Finishers	3	$270	30
Backers and turners	10	593	53				

PRINTING AND PUBLISHING.

Newspaper hands	44	$430		Type-setting	3	$750	
Job and book "	26	375		Pressmen	3	675	

ENGRAVING.

Die workers	9	$1,100		Machine engravers	3	$1,050	
Cleaners	1	900					

MISCELLANEOUS.

Stone cutters	30	$900		Carpenters	587	$594	
Engineers (stationary)	82	502		Laborers	1,839	351	
Blacksmiths	562	654		Wood turners	6	480	12
Machinists	749	629		Pin makers	8	$600	

TABLE 2.—ESTABLISHMENTS—*Continued.*

FLAX-SPINNING WORKS.

Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.	Occupation.	Number of employes reported.	Average annual earnings.	Average number of days lost time during the year.
Spinners	2	$275		Carders, females	25	$175	
" females	105	225		Flax dressers	75	550	
Preparers, "	40	200		Reelers, females	105	200	

FLAX, JUTE AND HEMP.

Men	25	$500		Women	.....	$250	

FUR CUTTERS.

Fur-cutting	8	$500		Fur-cutting, females	.....	$300	

SMELTING.

Gold and silver	3	$600					

PART I.

INFORMATION CONCERNING WAGE-WORKERS.

Based on Blank No. 3 for Employes.

TABLE NO. 1.—COLLATED STATISTICS FROM INDIVIDUAL EMPLOYES, SHOWING THE NUMBER OF HOURS EMPLOYED DAILY, EARNINGS OF SELF AND FAMILY, COST OF LIVING FOR SELF AND FAMILY, NUMBER IN THE FAMILY, TIME LOST AND ACCUMULATION OF SAVINGS.

TABLE NO. 2.—COLLATED STATISTICS FROM VARIOUS 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 PRICES RECEIVED BY PIECE-WORKERS, AND THE QUANTITY PRODUCED DAILY OR WEEKLY; ALSO, THE AGES AT WHICH WORKMEN BEGIN TO DECLINE AND BECOME INCAPACITATED FOR ACTIVE WORK, AS WELL AS THE DISEASES PECULIAR TO THE VARIOUS TRADES.

STATE OF NEW JERSEY,
BUREAU OF STATISTICS OF LABOR AND INDUSTRIES,
TRENTON, July 1st, 1883.

[BLANK No. 3, FOR EMPLOYES.]

This Bureau earnestly desires individual workmen to fill out, as fully as possible, the questions asked in this blank, and to return it at their earliest convenience. The support of individual workmen, as well as the encouragement of labor organizations, is necessary, to enable us to obtain reliable statistics, to be used in our official reports of the condition of wage-receivers in this State. Without such information, no correct understanding of the needs of the laboring classes can be formed, and no recommendations for their advancement can be made.

JAMES BISHOP,
Chief.

CHARLES H. SIMMERMAN,
Secretary.

1. Name in full.....
2. Residence.—Post-office address.....
3. By whom and where employed.....
4. Occupation.....
5. Subdivision of trade in which engaged.....
6. Number of hours employed daily.....
7. Quantity produced in a day or other period of time.....
8. If paid by the piece, the price received for the piece.....
9. What constitutes a piece?.....
10. Earnings—Per day..... Per week..... Per month.....
11. Total earnings, *i. e.*, actual income, from July 1st, 1882, to July 1st, 1883.....
12. Number of days lost during the year, not including legal holidays—Total ..... From sickness..... From inability to obtain work..... From other causes.....
13. Earnings of all others in your family, from July 1st, 1882, to July 1st, 1883 .....
14. Cost of living during the year for self and family—Total cost..... Rent ..... Groceries..... Meat and provisions..... Clothing..... Fuel..... Sundries.....
15. Total number in your family.....
16. Number engaged in working for wages.....
17. Have you accumulated any savings during former years?..... During the past year?
18. Have you run into debt during the year?.....
19. How many families live in the house in which you reside?.....
20. What are the diseases peculiar to your occupation?.....
21. At what age do those engaged in your trade begin to decline?..... At what age do they become incapacitated for active work?.....
22. Remarks on any subject of interest to workmen, especially regarding the social, moral and intellectual condition of your fellow employes and their families.....

TABLE No. 1.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL-GLASS BLOWERS (Green Glass.)

Blowers do not Work During July and August. These Months are not Included in Time Reported Lost.

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
264	Millville	Blower	8	$5 00	$30 00	$125 00	$1,400 00	.....
265	Bridgeton	Gaffer	8¼	5 00	30 00	120 00	1,200 00	$700 00
266	"	"	8½	3 40	20 00	80 00	700 75	.....
269	"	Moulding	8½	5 00	30 00	130 00	1,300 00	.....
268	"	Blow and finish	8½	3 02	18 24	79 04	790 04	.....
269	"	"	8½	5 00	30 00	120 00	1,080 00	.....
270	"	Gaffer	8½	4 00	24 00	108 00	1,000 00	.....
271	"	"	8¼	3 46	.....	76 41	764 00	.....
272	"	"	8½	4 00	.....	100 00	1,020 00	500 00
273	"	Blow and finish	8¼	.....	.....	118 00	1,180 00	700 00
274	"	Blower	8¼	.....	30 00	120 00	1,100 00	.....
275	"		8¼	3 50	21 00	90 00	900 00	140 00
286	Millville	Gaffer	8½	.....	.....	125 00	1,200 00	.....
373	Clayton	"	8½	.....	.....	125 00	1,200 00	.....
374	"	"	8½	.....	.....	125 00	1,200 00	.....
376	"	"	8½	.....	.....	125 00	1,200 00	100 00
377	"	"	8½	.....	.....	95 00	900 00	.....
378	"	Blow and finish	8½	.....	.....	105 00	900 00	130 00
379	"	Blow in shop	8½	.....	.....	125 00	.....	96 00
380	"	"	8½	.....	.....	120 00	760 00	.....
381	Millville	"	9	.....	.....	.....	.....	.....
382	"	"	9	.....	.....	125 00	.....	.....
388	Woodbury	Blow and gaffer	8¾	.....	.....	120 00	1,100 00	.....
389	"	Blow in shop	8¾	.....	.....	120 00	1,100 00	.....
390	"	"	8¾	.....	.....	.....	1,100 00	45 00
391	"	Blow and finish	8¾	.....	.....	130 00	1,280 00	.....
392	"	Blow in shop	8¾	.....	.....	120 00	1,025 00	250 00
393	"	"	8¾	.....	.....	120 00	1,087 00	.....
394	"	"	8¾	.....	.....	125 00	1,125 00	.....
402	Salem	Gaffer	8¾	.....	.....	110 00	1,000 00	110 00
410	"	Blow and finish	8¾	.....	.....	120 00	1,150 00	300 00
411	"	"	8¾	.....	.....	120 00	1,150 00	.....
413	"	Gaffer	8¾	.....	.....	130 00	1,315 00	100 00
414	"	Blow in shop	8¾	.....	.....	120 00	1,150 00	.....
415	"	Blow and finish	8¾	.....	.....	125 00	1,200 00	.....
416	"	"	8¾	.....	.....	110 00	1,050 00	.....
417	"	"	8¾	.....	.....	110 00	1,058 00	.....
418	"	"	8¾	.....	.....	100 00	900 00	.....
419	"	"	8¾	.....	.....	.....	900 00	.....
420	Glassboro	Blow in shop	9	.....	.....	115 00	1,150 00	.....
433	Woodbury		9	4 00	25 00	100 00	1,200 00	.....
432	Williamstown	Blow and finish	8½	4 50	.....	110 00	900 00	.....
431	"	"	8¾	.....	.....	127 64	1,276 42	60 00
424	Glassboro	Blow in shop	9	.....	.....	75 00	750 00	.....
425	"	Gaffer	....	.....	.....	115 00	1,100 00	.....
426	"	"	9	.....	.....	90 00	850 00	.....
428	Millville	"	9	.....	.....	100 00	1,000 00	.....
471	"	Blow in shop	9	.....	.....	125 00	1,200 00	.....
472	"	Blow and finish	9	.....	30 00	120 00	1,000 00	.....
473	"	Blow in shop	9	.....	30 00	125 00	1,200 00	.....
474	"	"	9	5 40	.....	125 00	1,150 00	.....
475	"	Gaffer	9	5 20	.....	125 00	1,100 00	300 00

TABLE No. 1.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL-GLASS BLOWERS (Green Glass.)

Blowers do not Work During July and August. These months are not Included in time Reported Lost.

		Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
Number in family.	Number working for wages.	Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the present year.	Have you run in debt during the year?
4	1	2	.....	.....	.....	$1,000 00	.....	.....	.....	.....	.....	.....	Yes	Yes	No
10	3	17	12	.....	5	1,200 00	.....	$500 00	$200 00	$300 00	$40 00	$100 00	Yes	Yes	No
4	1	.....	9	.....	12	.....	$100 20	.....	.....	.....	.....	.....	...	...	.....
3	1	.....	.....	.....	4	962 70	169 20	250 00	150 00	90 00	35 00	268 50	Yes	Yes	No
3	1	3	2	.....	1	872 00	132 00	104 00	260 00	260 00	78 00	56 00	No	No	Yes
4	1	49	16	26	7	600 00	120 00	200 00	100 00	125 00	30 00	25 00	Yes	Yes	No
4	1	17	1	8	2	550 00	108 00	150 00	80 00	100 00	35 00	25 00	Yes	Yes	No
5	1	.....	9	.....	.....	600 00	100 00	200 00	100 00	135 00	40 00	25 00	Yes	Yes	No
5	2	.....	2	.....	.....	800 00	.....	.....	.....	.....	.....	.....	Yes	Yes	No
6	3	5	.....	.....	5	1,000 00	132 00	400 00	150 00	200 00	40 00	75 00	Yes	Yes	No
5	1	25	.....	10	15	1,100 00	132 00	400 00	168 00	200 00	45 00	155 00	No	No	.....
5	3	....	10	.....	.....	868 00	132 00	.....	.....	.....	.....	.....	Yes	...	*Yes
6	1	15	.....	.....	15	1,100 00	112 00	200 00	100 00	300 00	50 00	†328 00	Yes	Yes	.....
4	1	25	12	13	.....	800 00	120 00	200 00	100 00	180 00	50 00	150 00	Yes	Yes	.....
3	....	18	6	12	.....	600 00	.....	200 00	100 00	150 00	50 00	100 00	Yes	Yes	.....
6	2	12	.....	12	.....	720 00	.....	200 00	100 00	250 00	50 00	120 00	Yes	Yes	No
2	....	20	7	13	.....	500 00	.....	150 00	50 00	150 00	50 00	100 00	Yes	Yes	.....
....	2	32	20	12	.....	1,000 00	120 00	200 00	100 00	280 00	50 00	150 00	No	No	.....
4	2	25	12	13	.....	700 00	108 00	200 00	100 00	150 00	50 00	100 00	No	...	.....
....	....	104	4	100	.....	350 00	.....	.....	.....	100 00	.....	.....	Yes	No	.....
4	....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	...	.....
....	....	.....	12	.....	.....	500 00	150 00	.....	.....	.....	.....	.....	Yes	Yes	.....
6	....	29	4	25	.....	1,100 00	162 00	228 00	100 00	300 00	50 00	150 00	Yes	Yes	.....
5	....	28	3	25	.....	900 00	150 00	250 00	150 00	250 00	40 00	60 00	Yes	Yes	.....
8	2	25	.....	25	.....	900 00	150 00	250 00	150 00	250 00	40 00	60 00	Yes	Yes	.....
5	....	25	.....	.....	.....	800 00	150 00	200 00	100 00	150 00	50 00	150 00	Yes	Yes	.....
....	2	25	.....	.....	.....	1,000 00	162 00	238 00	150 00	300 00	50 00	100 00	Yes	Yes	.....
6	....	28	.....	28	.....	1,087 00	144 00	200 00	100 00	256 00	50 00	337 00	Yes	No	.....
....	....	35	10	25	.....	.....	.....	.....	.....	100 00	.....	.....	No	Yes	.....
6	2	10	.....	.....	10	800 00	100 00	150 00	100 00	200 00	50 00	100 00	No	Yes	.....
4	2	25	.....	25	.....	700 00	120 00	200 00	100 00	180 00	40 00	60 00	Yes	Yes	.....
6	....	25	.....	25	.....	850 00	125 00	175 00	80 00	200 00	45 00	175 00	Yes	Yes	.....
5	2	10	.....	.....	10	1,000 00	108 00	200 00	100 00	300 00	45 00	247 00	Yes	Yes	.....
5	....	20	10	.....	10	900 00	108 00	200 00	100 00	300 00	45 00	147 00	Yes	Yes	.....
4	....	15	.....	13	2	700 00	.....	200 00	100 00	200 00	45 00	155 00	....	....	.....
....	....	30	10	12	8	800 00	120 00	200 00	80 00	200 00	45 00	155 00	Yes	Yes	.....
5	....	25	1	11	13	700 00	108 00	150 00	92 00	200 00	40 00	110 00	Yes	Yes	.....
6	....	20	7	13	.....	800 00	120 00	200 00	80 00	200 00	45 00	55 00	Yes	Yes	.....
6	....	12	2	10	.....	800 00	108 00	200 00	75 00	222 00	45 00	155 00	Yes	Yes	.....
5	....	.....	.....	.....	.....	800 00	.....	250 00	100 00	250 00	50 00	150 00	....	....	.....
7	....	30	.....	.....	.....	900 00	150 00	.....	.....	.....	.....	.....	....	....	.....
....	....	50	.....	.....	.....	700 00	.....	.....	.....	.....	.....	.....	....	Yes	Yes
7	2	8	.....	.....	.....	700 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	.....	.....	.....	.....	600 00	.....	200 00	100 00	150 00	45 00	55 00	Yes	Yes	.....
3	....	15	2	13	.....	600 00	.....	150 00	80 00	120 00	50 00	200 00	....	....	.....
....	....	18	6	12	.....	600 00	.....	‡250 00	.....	100 00	.....	250 00	Yes	Yes	.....
6	....	.....	.....	.....	.....	1,000 00	120 00	200 00	100 00	280 00	50 00	250 00	No	No	No
5	....	15	.....	.....	15	1,000 00	170 00	230 00	160 00	250 00	40 00	150 00	Yes	Yes	.....
4	....	50	30	.....	20	800 00	.....	250 00	150 00	300 00	40 00	60 00	Yes	Yes	.....
5	....	12	.....	.....	12	1,100 00	144 00	250 00	200 00	360 00	40 00	100 00	No	Yes	.....
....	....	34	10	.....	24	500 00	.....	250 00	.....	100 00	.....	150 00	Yes	Yes	.....
6	3	24	10	.....	14	1,400 00	100 00	300 00	200 00	400 00	40 00	300 00	No	No	.....

* $1,000—Built a house. † Sickness and death in family. ‡ Board.

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

BOTTLE AND VIAL-GLASS BLOWERS (Green Glass.)

Blowers do not Work During July and August. These Months are not Included in Time Reported Lost.

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Annual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
476	Millville	Gaffer	9	$5 00		$120 00	$1,200 00	$200 00
477	"	Blow in shop	9	5 45	$30 00	125 00	1,200 00	.....
478	"	"	9	5 00	30 00	125 00	1,100 00	.....
480	"	Gaffer	9	5 00	30 00	120 00	1,200 00	300 00
482	"	"	9	5 50	33 00	.....	1,237 50	.....
483	"	"	9	5 20	.....	.....	1,201 21	.....
484	Bridgeton	Blower	8½	3 40	.....	.....	600 00	140 00
405	Salem	"	8¾	.....	.....	125 00	1,200 00	.....

GLASS BLOWERS (Flint.)

293	Millville		10	$4 00	.....	$100 00	$975 00	.....
292	"		9	.....	.....	110 00	1,050 00	.....
288	"		9	.....	.....	120 00	1,000 00	.....
279	"		9	.....	$28 00	100 00	950 00	.....
282	"		8	.....	30 00	.....	1,250 00	.....
283	"		....	.....	.....	125 00	1,112 00	.....
284	"		....	.....	30 00	125 00	1,100 00	.....

WINDOW-GLASS BLOWERS—FLATTENERS AND CUTTERS.*

322	Woodbury	Blower	10	.....	.....	$110 00	$950 00	.....
329	Bridgeton	"	10	.....	.....	95 00	†450 00	.....
338	Malaga	"	10	.....	.....	90 00	†400 00	$100 00
344	Glassboro	"	10	.....	.....	90 00	†450 00	200 00
347	Winslow	"	10	.....	.....	98 00	†475 00	200 00
350	Quinton	"	10	.....	.....	120 00	†600 00	.....
351	"	"	10	.....	.....	96 00	†450 00	200 00
358	Millville	"	10	.....	.....	100 00	†500 00	.....
359	"	"	10	.....	.....	100 00	†450 00	75 00
325	Woodbury	Flattener	12	.....	.....	*88 00	700 00	300 00
331	Bridgeton	"	12	.....	.....	100 00	†500 00	200 00
335	Malaga	"	12	.....	.....	95 00	†425 00	250 00
346	Winslow	"	12	.....	.....	95 00	†475 00	.....
348	Quinton	"	12	.....	.....	110 00	†500 00	.....
360	Millville	"	12	.....	.....	100 00	†500 00	.....
340	Glassboro	"	12	.....	.....	90 00	†450 00	.....
357	Millville	Cutter	12	.....	.....	85 00	†900 00	.....
341	Glassboro	"	10	.....	.....	90 00	†450 00	.....
337	Malaga	"	11	.....	.....	85 00	†425 00	.....
330	Bridgeton	"	10	.....	.....	87 00	†435 00	.....
324	Woodbury	"	11	.....	.....	89 00	700 00	.....

*All of these workmen, except those at Woodbury, were out on a strike. The Woodbury factory was in blast for eight and a half, the others only five months. †During the strike, which lasted four months, received aid from Union (from $120 to $200.) This is not included in income as stated above.

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

BOTTLE AND VIAL-GLASS BLOWERS (Green Glass.)

Blowers do not Work During July and August. These Months are not Included in Time Reported Lost.

		Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
Number in family.	Number working for wages.	Total.	From sickness.	From inability to obtain work	Other causes.	Total cost.	Rent.	Groceries.	Meat and provisions	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
8	2	.....	.....	.....	.....	$1,000 00	.....	$250 00	$200 00	$300 00	$40 00	$210 00	Yes	Yes	.....
6	....	.....	.....	.....	12	1,000 00	$144 00	256 00	200 00	250 00	40 00	110 00	Yes	Yes	.....
5	....	30	10	.....	20	900 00	120 00	200 00	150 00	350 00	40 00	140 00	Yes	Yes	.....
8	3	5	.....	.....	5	1,100 00	120 00	250 00	175 00	325 00	30 00	200 00	No	Yes	.....
4	....	25	10	.....	15	480 00	.....	100 00	50 00	150 00	30 00	.....	Yes	Yes	.....
6	....	21	.....	16	5	960 00	.....	200 00	150 00	300 00	40 00	170 00	Yes	Yes	.....
11	2	.....	7	12	.....	740 00	120 00	200 00	120 00	200 00	30 00	70 00	No	No	.....
....	....	20	.....	10	8	1,000 00	120 00	200 00	100 00	300 00	50 00	230 00	Yes	Yes	.....

GLASS BLOWERS (Flint.)

6	....	.....	.....	.....	6	$975 00	$144 00	$260 00	$100 00	$256 00	$40 00	$175 00	No	No	.....
5	....	20	10	.....	10	800 00	.....	200 00	100 00	300 00	50 00	150 00	Yes	Yes	.....
5	....	50	20	20	10	1,000 00	150 00	200 00	100 00	300 00	50 00	200 00	No	No	.....
6	....	.....	.....	.....	8	950 00	144 00	200 00	100 00	200 00	40 00	266 00	No	No	.....
5	....	.....	.....	.....	.....	800 00	168 00	.....	.....	.....	50 00	.....	Yes	Yes	.....
6	....	.....	.....	.....	.....	800 00	.....	200 00	100 00	300 00	50 00	250 00	Yes	Yes	.....
6	....	25	10	10	5	900 00	144 00	200 00	100 00	256 00	50 00	150 00	Yes	Yes	.....

WINDOW-GLASS BLOWERS—FLATTENERS AND CUTTERS.

6	....	.....	5	.....	.....	$800 00	$150 00	$200 00	$100 00	$200 00	$50 00	$100 00	No	Yes	.....
4	....	135	5	.....	.....	650 00	144 00	156 00	60 00	200 00	40 00	50 00	No	No	No
7	2	140	.....	.....	.....	700 00	100 00	200 00	101 00	200 00	45 00	55 00	No	No	No
7	2	125	.....	125	.....	700 00	120 00	150 00	100 00	200 00	50 00	80 00	No	No	No
6	2	130	5	125	.....	700 00	120 00	200 00	100 00	180 00	40 00	60 00	Yes	No	No
8	....	125	.....	125	.....	800 00	120 00	200 00	100 00	280 00	45 00	55 00	No	No	No
8	2	140	10	125	5	800 00	100 00	200 00	100 00	250 00	50 00	100 00	No	No	No
6	....	144	2	.....	.....	600 00	100 00	150 00	75 00	200 00	40 00	35 00	No	No	No
8	2	144	2	125	17	700 00	100 00	200 00	100 00	160 00	40 00	100 00	No	No	No
7	3	.....	5	.....	.....	800 00	144 00	156 00	100 00	250 00	50 00	100 00	Yes	Yes	.....
6	2	.....	.....	.....	.....	800 00	156 00	144 00	100 00	200 00	50 00	150 00	Yes	No	.....
6	2	135	5	130	.....	700 00	100 00	200 00	100 00	200 00	50 00	50 00	No	No	No
....	....	125	.....	125	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
6	....	138	8	125	5	700 00	.....	.....	.....	.....	.....	.....	No	No	No
4	....	125	.....	125	.....	500 00	.....	150 00	100 00	150 00	40 00	60 00	Yes	Yes	.....
5	....	125	.....	125	.....	600 00	100 00	200 00	100 00	150 00	40 00	10 00	No	No	No
3	....	30	.....	30	.....	600 00	96 00	150 00	75 00	150 00	50 00	128 00	Yes	Yes	.....
....	....	125	.....	125	.....	600 00	120 00	180 00	100 00	160 00	40 00	50 00	No	No	No
5	....	125	5	130	.....	600 00	120 00	210 00	80 00	125 00	45 00	30 00	No	No	No
2	....	125	.....	125	.....	400 00	120 00	100 00	40 00	60 00	40 00	40 00	Yes	....	.....
5	....	.....	.....	.....	.....	600 00	144 00	140 00	56 00	160 00	40 00	60 00	Yes	Yes	.....

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

MISCELLANEOUS WORKMEN (Window-Glass Factories.) (a)

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
328	Woodbury	Gatherer	10	.....	.....	$58 00	$475 00	.....
332	Bridgeton	"	10	.....	.....	55 00	*275 00	$100 00
336	Malaga	"	10	.....	.....	58 00	*250 00	.....
342	Glassboro	"	10	.....	.....	55 00	*275 00	300 00
349	Quinton	"	10	.....	.....	60 00	*275 00	.....
355	Millville	"	10	.....	.....	.....	620 00	200 00
352	Bridgeton	Master shearer	15	.....	.....	100 00	*500 00	200 00
334	Malaga	"	15	.....	.....	95 00	*450 00	225 00
326	Woodbury	"	15	.....	.....	99 00	750 00	100 00
356	Millville	Help pot maker	10	.....	.....	34 00	375 00	50 00
345	Winslow	Shearer	15	.....	.....	30 00	180 00	350 00
328	Woodbury	"	10	.....	.....	40 00	325 00	300 00
327	"	Flattener's helper	12	.....	.....	44 00	375 00	.....
333	Malaga	Laborer	10	.....	.....	34 00	204 00	300 00
354	Millville	Lear tender	12	.....	.....	43 00	432 00	122 00

MISCELLANEOUS WORKMEN IN GLASS FACTORIES (Green Glass.)†

436	Millville	Lamp worker	10	.....	$15 00	.....	$625 00	.....
435	"	"	10	.....	18 00	.....	800 00	.....
534	Bridgeton	Plate-glass worker	10	$1 50	9 00	.....	400 00	.....
383	Millville	Stopper grinder	10	.....	.....	$100 00	900 00	.....
402	"	" flint	10	.....	16 00	.....	800 00	$150 00
401	"	" "	.....	.....	18 00	.....	900 00	.....
291	"	Lear tender	10	.....	.....	47 00	450 00	.....
367	Clayton	Laborer	10	.....	.....	30 00	350 00	300 00
278	Millville	Shearer	10	.....	.....	40 00	400 00	250 00
371	"	"	12	.....	.....	45 00	428 00	150 00
386	Woodbury	"	11	.....	.....	45 00	400 00	300 00
408	Salem	"	12	.....	.....	45 00	400 00	200 00
421	Millville	"	12	.....	.....	45 00	425 00	175 00
479	"	"	12	1 60	.....	.....	400 00	200 00
372	Clayton	Master shearer	15	.....	.....	75 00	700 00	130 00
387	Woodbury	"	14	.....	.....	75 00	675 00	150 00
409	Salem	"	15	.....	.....	75 00	700 00	.....
321	Millville	Mould maker	10	2 00	.....	.....	626 00	100 00
430	Williamstown	"	10	.....	.....	60 00	650 00	.....
281	Millville	Packer	10	.....	.....	45 00	440 00	.....
285	"	"	10	.....	.....	45 00	400 00	100 00
294	"	"	10	.....	.....	50 00	475 00	150 00
370	Clayton	"	10	.....	.....	40 00	400 00	.....
385	Woodbury	"	10	.....	.....	40 00	350 00	350 00
407	Salem	"	10	.....	.....	40 00	375 00	200 00
425	Millville	"	9	.....	.....	60 00	600 00	.....
362	"	Pot maker	10	.....	.....	60 00	300 00	350 00

(a) The Woodbury factory was in blast eight and a half, the others, five months.
* During the strike, which lasted four months, received aid from Union, (from $120 to $200.) This is not included in income as stated above. † Skilled and partly skilled. ‡ Board.

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

MISCELLANEOUS WORKMEN (Window-Glass Factories.)

Number in family.	Number working for wages.	Days Lost During the Year, not including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	Other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year	Have you run in debt during the past year?
2	....	.....	5	.....	.....	$400 00	$120 00	$100 00	$50 00	$80 00	$30 00	$20 00	Yes	Yes	.....
....	....	135	5	130	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
....	....	135	10	125	.....	400 00	.....	‡250 00	.....	150 00	.....	50 00	No	No	.....
7	2	125	.....	125	.....	600 00	120 00	180 00	100 00	120 00	40 00	40 00	No	No	No
....	....	135	5	125	5	.....	.....	.....	.....	150 00	.....	.....	No	No	No
7	2	130	.....	.....	.....	800 00	144 00	200 00	100 00	156 00	50 00	150 00	No	No	No
7	2	138	.....	.....	.....	800 00	144 00	200 00	100 00	156 00	50 00	150 00	No	No	No
7	2	135	5	130	.....	675 00	100 00	200 00	100 00	200 00	40 00	35 00	No	No	No
5	2	.....	8	.....	.....	700 00	120 00	180 00	100 00	200 00	45 00	55 00	Yes	Yes	.....
3	....	25	5	20	.....	400 00	.....	100 00	50 00	150 00	50 00	50 00	Yes	No	.....
6	2	150	.....	150	.....	600 00	120 00	150 00	100 00	100 00	40 00	90 00	No	No	Yes
6	2	.....	10	.....	.....	625 00	120 00	130 00	100 00	150 00	40 00	35 00	No	No	No
....	....	.....	.....	.....	.....	.....	.....	‡225 00	.....	75 00	.....	75 00	No	No	.....
6	3	156	6	150	.....	500 00	100 00	150 00	75 00	100 00	50 00	25 00	No	No	No
7	2	50	.....	.....	.....	416 00	72 00	260 00	15 00	150 00	46 00	.....	No	No	.....

MISCELLANEOUS WORKMEN IN GLASS FACTORIES (Green Glass.)

....	....	50	.....	45	5	$500 00	$120 00	$100 00	$50 00	$100 00	$40 00	$90 00	Yes	Yes	.....
4	....	40	.....	40	.....	800 00	120 00	200 00	100 00	200 00	40 00	120 00	No	No	.....
3	....	3	.....	.....	.....	300 00	72 00	.....	80 00	40 00	30 00	15 00	Yes	Yes	No
4	....	75	.....	75	.....	900 00	100 00	200 00	100 00	300 00	50 00	150 00	No	No	.....
7	2	12	6	.....	6	800 00	144 00	175 00	100 00	200 00	47 00	144 00	Yes	Yes	.....
....	....	12	12	.....	.....	900 00	150 00	200 00	100 00	200 00	50 00	200 00	No	No	.....
5	....	10	.....	.....	10	450 00	100 00	100 00	60 00	100 00	40 00	50 00	No	No	.....
8	3	6	.....	.....	6	650 00	132 00	168 00	100 00	160 00	50 00	50 00	No	No	Yes
6	3	52	.....	52	.....	600 00	100 00	125 00	75 00	160 00	40 00	100 00	Yes	Yes	.....
6	2	62	10	52	.....	600 00	120 00	180 00	100 00	160 00	40 00	100 00	No	No	.....
7	3	83	3	28	.....	700 00	150 00	200 00	100 00	150 00	40 00	60 00	No	No	.....
6	3	72	8	64	.....	600 00	108 00	150 00	50 00	200 00	42 00	50 00	No	No	.....
	3	.....	16	16	.....	.....	109 00	300 00	.....	.....	.....	.....	No	No	No
6	2	62	.....	62	.....	600 00	96 00	125 00	75 00	200 00	34 00	70 00	Yes	No	.....
6	2	36	10	26	.....	700 00	120 00	180 00	100 00	150 00	50 00	100 00	Yes	Yes	.....
7	2	75	.....	.....	.....	700 00	150 00	150 00	100 00	200 00	40 00	60 00	Yes	Yes	.....
6	....	20	7	13	.....	700 00	108 00	150 00	80 00	150 00	45 00	166 00	No	No	.....
6	2	9	.....	.....	.....	642 00	96 00	.....	25 00	100 00	30 00	30 00	....	....	.....
3	....	35	.....	.....	.....	500 00	120 00	125 00	80 00	75 00	40 00	60 00	Yes	Yes	.....
4	....	.....	5	.....	.....	440 00	100 00	100 00	60 00	100 00	40 00	50 00	No	No	.....
3	2	72	25	.....	5	500 00	100 00	100 00	50 00	170 00	40 00	40 00	No	No	.....
5	2	64	12	.....	.....	600 00	168 00	200 00	100 00	150 00	42 00	50 00	Yes	Yes	.....
2	....	20	8	.....	12	300 00	.....	80 00	40 00	60 00	40 00	80 00	Yes	Yes	.....
8	2	73	6	67	.....	700 00	150 00	200 00	100 00	150 00	40 00	60 00	No	No	.....
6	2	64	6	58	.....	575 00	100 00	150 00	50 00	150 00	50 00	75 00	No	No	.....
8	....	52	.....	52	.....	500 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
4	....	125	.....	125	.....	600 00	120 00	150 00	80 00	150 00	40 00	60 00	Yes	Yes	.....

‡ Board.

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

MISCELLANEOUS WORKMEN IN GLASS FACTORIES (Green Glass.)*

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
368	Clayton	Pot maker	10	.....	.....	$60 00	$700 00	$130 00
384	Woodbury	"	10	.....	.....	75 00	850 00	.....
538	Bridgeton	"	10	.....	.....	.....	500 00	.....
365	Millville	Box maker	10	.....	.....	56 00	600 00	.....
364	"	"	10	.....	.....	50 00	250 00	.....
361	"	Mason	10	.....	.....	75 00	750 00	200 00
263	"	Master shearer	14	.....	.....	75 00	700 00	.....
552	Williamstown	Packer	10	.....	.....	38 50	411 18	.....

SILK WEAVERS.

21	Paterson	Power loom weaver	10½	$1 44	.....	.....	$330 00	.....
22	"	" handkerchief	10½	1 66	.....	.....	400 00	.....
23	"	" "	10½	1 80	.....	.....	475 00	$150 00
24	"	" "	10½	1 87	.....	.....	450 00	100 00
25	"	" "	10½	.....	$13 60	.....	450 00	150 00
26	"	" "	10½	1 80	.....	.....	425 00	.....
28	"	" "	10½	1 63	.....	.....	400 00	400 00
31	"	" "	10½	1 66	.....	.....	400 00	.....
32	"	" "	10½	.....	10 80	.....	450 00	300 00
41	"	" "	10½	1 80	.....	.....	310 00	.....
42	"	" dress goods	10½	1 60	.....	.....	400 00	.....
45	"	" handkerchief	10	.....	13 25	.....	625 00	.....
46	"	Hand loom, "	10	2 00	12 00	.....	432 00	.....
48	"	" dress goods	10	.....	10 40	.....	374 00	.....
49	"	" "	10	.....	13 00	.....	416 00	.....
51	"	" matting	10	1 80	.....	.....	473 00	.....
52	"	" handkerchief	10	.....	10 80	.....	324 00	.....
53	"	Power loom, dress goods	10	1 68	.....	.....	410 00	250 00
54	"	" grogran	10	1 47	.....	.....	367 50	250 00
55	"	Neck-ties	10	.....	14 00	.....	600 00	.....
56	"	Power loom, dress goods	10	1 96	11 76	.....	517 44	200 00
57	"	" "	10	1 60	.....	.....	384 00	.....
58	"	" "	10	1 40	.....	.....	322 00	.....
59	"	" "	10	1 80	.....	.....	425 00	.....
60	"	" "	10	2 20	.....	.....	528 00	250 00
61	"	" handkerchief	10	1 50	.....	.....	375 00	375 00
181	"	" dress goods	10	1 80	.....	.....	448 00	200 00
182	"	Hand loom, handkerchief	10	.....	12 00	.....	480 00	200 00
183	"	Power loom, dress goods	10	2 10	.....	.....	500 00	300 00
184	"	"	10	1 60	.....	.....	400 00	400 00
185	"	Hand loom	10	.....	12 00	.....	500 00	500 00
188	"	Power loom	10	1 92	.....	.....	475 00	.....
189	"	"	10	1 80	.....	.....	475 00	300 00
211	"	"	10	1 80	.....	.....	450 00	300 00
201	"	Ribbon weaver	10	.....	18 00	.....	600 00	.....
222	"	"	10	.....	18 00	.....	550 00	200 00
203	"	"	10	.....	20 00	.....	625 00	200 00

* Skilled and partly skilled.

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

MISCELLANEOUS WORKMEN IN GLASS FACTORIES (Green Glass.)

Number in family.	Number working for wages.	Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
....	2	10	10	.....	.....	$800 00	$120 00	$180 00	$100 00	$200 00	$50 00	$150 00	Yes	No	.....
5	....	35	5	30	.....	700 00	150 00	200 00	100 00	150 00	50 00	50 00	Yes	Yes	.....
4	2	.....	.....	.....	.....	500 00	96 00	.....	.....	.....	.....	.....	No	No	.....
5	....	25	.....	25	.....	500 00	.....	150 00	75 00	200 00	30 00	45 00	Yes	Yes	.....
3	....	125	.....	125	.....	400 00	144 00	100 00	50 00	56 00	30 00	20 00	Yes	No	Yes
9	2	50	.....	50	.....	600 00	120 00	150 00	100 00	180 00	40 00	10 00	Yes	Yes	.....
....	....	20	20	.....	.....	800 00	100 00	200 00	100 00	200 00	50 00	150 00	No	No	Yes
5	....	18	8	.....	10	.....	66 00	.....	.....	.....	.....	.....	No	Yes	.....

SILK WEAVERS.

....	....	75	.....	75	.....	†$234 00	.....	.....	.....	$25 00	.....	.....	Yes	Yes	.....
....	....	74	.....	74	.....	†234 00	.....	.....	.....	.....	.....	.....	....	....	.....
6	2	48	.....	48	.....	500 00	$144 00	$100 00	$90 00	200 00	$25 00	$140 00	Yes	Yes	.....
7	3	63	13	50	.....	500 00	150 00	100 00	100 00	150 00	25 00	25 00	....	No	.....
8	3	90	10	80	.....	600 00	156 00	100 00	80 00	200 00	25 00	.....	No	No	Yes
3	....	70	.....	70	.....	400 00	120 00	80 00	60 00	60 00	20 00	60 00	No	No	.....
8	4	63	.....	63	.....	700 00	156 00	100 00	75 00	244 00	25 00	100 00	No	No	.....
2	1	65	.....	65	.....	350 00	100 00	75 00	50 00	75 00	20 00	30 00	Yes	Yes	.....
8	3	50	.....	50	.....	725 00	150 00	100 00	90 00	200 00	25 00	150 00	No	No	.....
....	....	85	10	75	.....	†234 00	.....	.....	.....	50 00	.....	25 00	No	No	.....
....	....	63	.....	63	.....	†234 00	.....	.....	.....	50 00	.....	66 00	Yes	Yes	.....
....	....	50	25	25	.....	.....	‡	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	96	.....	96	.....	.....	‡	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	96	.....	96	.....	.....	‡	.....	.....	.....	.....	.....	No	No	.....
....	....	100	.....	100	.....	.....	‡	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	50	.....	50	.....	.....	‡	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	132	.....	132	.....	†234 00	.....	.....	.....	.....	.....	.....	No	No	.....
7	3	63	.....	63	.....	600 00	150 00	125 00	75 00	200 00	25 00	25 00	Yes	Yes	.....
6	3	63	.....	63	.....	500 00	132 00	100 00	68 00	150 00	20 00	30 00	No	No	.....
7	....	63	.....	63	.....	600 00	150 00	100 00	75 00	150 00	25 00	75 00	No	No	No
8	4	96	12	84	.....	650 00	156 00	144 00	100 00	200 00	25 00	25 00	No	No	No
....	....	73	.....	73	.....	†234 00	.....	.....	.....	75 00	.....	50 00	No	....	.....
....	....	83	10	60	13	.....	.....	.....	.....	.....	.....	.....	....	....	.....
....	....	73	.....	50	23	.....	.....	.....	.....	.....	.....	.....	....	....	.....
8	4	73	.....	73	.....	700 00	150 00	125 00	100 00	200 00	25 00	100 00	Yes	Yes	.....
8	4	63	.....	63	.....	700 00	150 00	150 00	100 00	200 00	25 00	75 00	Yes	Yes	.....
6	2	63	10	50	3	600 00	144 00	154 00	100 00	125 00	30 00	45 00	Yes	Yes	.....
7	2	60	.....	56	4	650 00	156 00	144 00	100 00	150 00	30 00	70 00	Yes	Yes	.....
7	3	73	10	60	3	700 00	156 00	175 00	125 00	200 00	30 00	116 00	Yes	Yes	.....
8	3	63	.....	60	3	800 00	156 00	200 00	150 00	200 00	30 00	72 00	No	No	.....
9	4	63	.....	60	3	900 00	175 00	200 00	150 00	225 00	40 00	160 00	Yes	Yes	.....
4	....	65	.....	60	5	475 00	120 00	130 00	80 00	120 00	25 00	100 00	No	No	.....
5	3	70	10	57	3	700 00	150 00	150 00	100 00	200 00	30 00	70 00	Yes	Yes	.....
....	2	63	.....	60	1	700 00	120 00	125 00	75 00	250 00	30 00	100 00	Yes	Yes	.....
5	....	80	.....	75	5	600 00	120 00	150 00	100 00	180 00	25 00	25 00	No	No	.....
6	2	85	.....	80	5	700 00	150 00	150 00	100 00	150 00	40 00	160 00	Yes	Yes	.....
6	2	90	6	80	4	825 00	160 00	150 00	100 00	240 00	40 00	135 00	Yes	No	.....

† Board. ‡ Single.

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

SILK WEAVERS.

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
204	Paterson	Ribbon weaver	10	.....	$19 50	.....	$575 00	$300 00
205	"	"	10	.....	24 00	.....	800 00	.....
206	"	"	10	.....	14 00	.....	500 00	200 00
207	"	"	10	.....	15 00	.....	500 00	400 00
208	"	"	10	.....	16 00	.....	550 00	.....
209	"	"	10	.....	24 00	.....	450 00	400 00
210	"	"	10	.....	22 50	.....	850 00	500 00
213	"	"	10	.....	15 00	.....	440 00	300 00
485	Hoboken	Dress goods	10	$3 00	.....	.....	600 00	150 00
486	Union Hill	Grogran	10	1 40	8 40	.....	336 00	.....
487	Hoboken	.....	10	1 35	.....	.....	320 00	.....
489	Union Hill	.....	10	.....	10 00	.....	510 00	.....
491	"	Weaver (female)	10	.....	8 40	.....	432 00	.....
493	"	"	10½	.....	10 00	.....	480 00	.....
494	"	"	10½	.....	10 00	.....	440 00	.....
495	"	"	....	.....	8 00	.....	368 00	.....
496	Jersey City	"	10	.....	9 00	.....	432 00	.....
497	Hoboken	Satin and serge	10	.....	7 50	.....	360 00	.....
492	"	.....	10	.....	8 00	.....	400 00	.....
500	"	.....	10	.....	9 00	.....	364 00	.....

MISCELLANEOUS OPERATIVES IN SILK MILLS.

43	Paterson	Warper	10	$2 00	.....	.....	$336 00	.....
47	"	Loom fixer	10	.....	$15 00	.....	780 00	.....
71	"	Doubler (female)	10	.....	5 50	.....	250 00	.....
86	"	"	10	.....	5 50	.....	249 00	.....
87	"	"	10	.....	5 50	.....	254 50	.....
88	"	Warper	10	.....	12 00	.....	500 00	$100 00
180	"	Winder (female)	10	.....	5 50	.....	275 00	.....
181	"	"	10	.....	5 50	.....	275 00	.....
186	"	Warper	10	.....	10 00	.....	450 00	200 00
187	"	"	10	.....	10 00	.....	400 00	.....
190	"	Finisher (female)	10	.....	5 50	.....	240 00	.....
191	"	"	10	.....	7 50	.....	330 00	.....
192	"	Winder (female)	10	.....	5 50	.....	340 00	.....
50	"	Loom boss	10	.....	18 00	.....	882 00	200 00

COTTON MILL OPERATIVES.

462	Gloucester City	Weaver (male)	10	.....	$6 40	.....	$320 00	$300 00
458	"	"	10	.....	7 25	.....	350 00	.....
317	Millville	"	10	.....	6 00	.....	250 00	.....
469	Gloucester City	"	10	.....	7 00	.....	325 00	300 00
465	"	Weaver (female)	10	.....	8 60	.....	350 00	.....
461	"	"	10	.....	6 25	.....	300 00	.....
456	"	"	10	.....	8 00	.....	375 00	.....
455	"	"	10	.....	6 30	.....	300 00	.....
320	Millville	"	10	.....	4 80	.....	225 00	.....
319	"	"	10	.....	5 60	.....	200 06	.....
318	"	"	10	.....	5 40	.....	240 00	.....
467	Gloucester City	Warper	10	.....	10 00	.....	480 00	300 00

* Board.

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

SILK WEAVERS.

		Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
Number in family.	Number working for wages.	Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the year?
6	3	90	.....	85	5	$800 00	$156 00	$175 00	$144 00	$200 00	$44 00	$100 00	Yes	Yes	.....
4	....	95	.....	90	5	800 00	156 00	175 00	144 00	225 00	30 00	70 00	No	No	.....
5	2	90	10	75	5	700 00	144 00	156 00	100 00	200 00	30 00	70 00	No	No	.....
7	4	80	.....	75	5	900 00	156 00	200 00	144 00	250 00	40 00	110 00	No	No	.....
4	....	100	10	90	.....	550 00	144 00	125 00	90 00	150 00	30 00	11 00	No	No	.....
8	3	150	75	70	5	1,000 00	156 00	200 00	150 00	250 00	44 00	200 00	Yes	No	Yes
8	3	90	.....	90	.....	1,000 00	156 00	200 00	150 00	244 00	40 00	210 00	Yes	Yes	.....
8	3	113	13	90	10	600 00	150 00	150 00	100 00	200 00	30 00	60 00	No	No	.....
2	2	102	12	90	.....	725 00	96 00	200 00	180 00	80 00	20 00	149 00	No	Yes	No
....	....	48	.....	48	.....	436 80	.....	.....	.....	.....	.....	.....	....	....	.....
3	....	90	10	.....	.....	346 00	72 00	118 00	128 00	56 00	38 00	.....	Yes	No	Yes
2	....	.....	.....	.....	.....	500 00	.....	175 00	150 00	50 00	25 00	100 00	No	No	No
....	....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	No
4	....	24	10	.....	.....	480 00	48 00	200 00	60 00	50 00	30 00	72 00	No	No	No
....	....	45	2	.....	4	435 00	.....	.....	.....	.....	.....	.....	No	No	No
....	....	36	18	18	.....	368 00	.....	*235 00	.....	40 00	.....	93 00	No	No	No
....	....	30	5	12	13	432 00	.....	.....	.....	100 00	.....	72 00	No	No	No
....	....	78	5	.....	6	455 00	.....	.....	.....	.....	.....	.....	No	No	Yes
....	....	12	2	10	.....	330 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	69	.....	.....	.....	.....	.....	.....	.....	50 00	60 00	.....	Yes	No	Yes

MISCELLANEOUS OPERATIVES IN SILK MILLS.

....	....	150	.....	150	.....	$300 00	.....	*$224 00	.....	.....	.....	$66 00	No	Yes	.....
....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	30	.....	.....	.....	250 00	.....	*175 00	.....	$75 00	.....	.....	No	No	.....
....	....	36	6	30	.....	.....	.....	*175 00	.....	74 00	.....	.....	....	....	.....
....	....	30	.....	30	.....	254 50	.....	.....	.....	.....	.....	.....	No	No	.....
5	2	60	.....	60	.....	600 00	$150 00	125 00	$75 00	200 00	$25 00	25 00	Yes	Yes	.....
....	....	42	.....	40	2	.....	.....	.....	.....	.....	.....	.....	....	....	.....
....	....	42	.....	40	2	.....	.....	.....	.....	.....	.....	.....	....	....	.....
5	2	63	10	43	10	650 00	150 00	150 00	100 00	200 00	30 00	20 00	Yes	Yes	.....
3	....	65	20	40	5	400 00	120 00	100 00	80 00	100 00	25 00	25 00	Yes	No	Yes
....	....	40	.....	37	3	240 00	.....	*150 00	.....	75 00	.....	15 00	No	No	.....
....	....	45	10	30	5	330 00	.....	*182 00	.....	100 00	.....	30 00	No	No	.....
....	....	40	.....	35	5	340 00	.....	*200 00	.....	100 00	.....	40 00	No	No	.....
6	2	20	.....	20	.....	600 00	144 00	133 00	100 00	123 00	25 00	75 00	Yes	No	Yes

COTTON MILL OPERATIVES.

7	3	30	.....	25	5	$600 00	$144 00	$156 00	$60 00	$150 00	$40 00	$50 00	No	No	.....
4	....	35	10	25	.....	500 00	144 00	100 00	56 00	100 00	40 00	60 00	Yes	Yes	.....
....	....	40	15	25	.....	.....	.....	.....	.....	50 00	.....	.....	....	....	.....
7	2	30	.....	25	5	600 00	120 00	100 00	60 00	200 00	40 00	60 00	No	No	.....
....	....	60	30	25	5	.....	.....	.....	.....	.....	.....	.....	....	....	.....
....	....	40	10	30	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
....	....	42	20	22	.....	.....	*175 00	.....	.....	100 00	.....	50 00	....	....	.....
....	....	38	8	30	.....	.....	*175 00	.....	.....	75 00	.....	50 00	No	No	.....
....	....	30	.....	25	5	.....	.....	.....	.....	60 00	.....	.....	No	No	.....
....	....	75	25	25	25	.....	.....	.....	.....	50 00	.....	.....	No	No	.....
....	....	.....	10	25	10	.....	.....	.....	.....	60 00	.....	.....	No	No	.....
7	3	30	5	24	.....	680 00	144 00	125 00	75 00	156 00	75 00	140 00	No	No	.....

* Board.

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

COTTON MILL OPERATIVES.

Office number	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
315	Millville	Spinner	10	.....	$12 00	.....	$575 00	$200 00
316	"	Card grinder	10	.....	7 00	.....	330 00	.....
457	Gloucester City	Loom fixer	10	.....	9 00	.....	440 00	.....
215	Millville	"	10	.....	10 00	.....	500 00	.....
481	"	"	10	.....	10 25	.....	522 27	350 00
468	Gloucester City	Fireman	12	.....	9 00	.....	450 00	150 00

WOOLEN MILL OPERATIVES.

441	Camden	Weaver	10	$1 69	.....	.....	$400 00	$200 00
442	"	"	10	1 50	.....	.....	400 00	.....
443	"	"	10	1 40	.....	.....	400 00	.....
444	"	"	10	1 68	.....	.....	300 00	500 00
445	"	"	10	1 44	.....	.....	400 00	400 00
446	"	"	10	1 26	.....	.....	350 00	.....
447	"	"	10	.....	.....	.....	340 00	300 00
437	"	Wool sorter	....	2 00	.....	.....	600 00	.....

CARPET FACTORY EMPLOYES.

6	Little Falls	Designer	9	$2 50	.....	.....	$500 00	.....
9	"	Lapp weaver	9	2 25	.....	.....	450 00	$100 00
10	"	"	9	2 25	.....	.....	500 00	50 00
11	"	Carpet weaver	9	2 00	.....	.....	450 00	.....
12	"	"	9	2 00	.....	.....	500 00	200 00
13	"	Lapp weaver	9	2 50	.....	.....	600 00	.....
14	"	Carpet weaver	9	2 25	.....	.....	550 00	.....

SHIRT MAKERS (Females.)

81	Paterson	Machine operator (put in bosoms.)	10	$1 00	.....	.....	$270 00	.....
89	"	" (shirt making.)	12	.....	$7 50	.....	375 00	.....
151	"	Custom work	11	.....	6 00	.....	300 00	.....
152	"	Neck bands	10	90	5 00	.....	230 00	.....
153	"	Joiner	10	88	5 00	.....	240 00	.....
154	"	Custom work	10	.....	6 00	.....	288 00	.....
155	"	"	10	.....	6 00	.....	300 00	.....
156	"	Put in bosoms	10	75	4 50	.....	225 00	.....
157	"	Hemming	10	70	4 00	.....	200 00	.....
158	"	Starcher	10	.....	6 00	.....	300 00	.....
159	"	Ironer	10	.....	7 00	.....	330 00	.....
160	"	Joiner	10	.....	7 00	.....	340 00	.....
161	"	Neck bands	10	.....	7 00	.....	330 00	.....
162	"	Back work	10	.....	8 00	.....	375 00	.....
163	"	Put in bosoms	10	1 20	7 00	.....	340 00	.....
164	"	Hemming	10	1 40	8 00	.....	375 00	.....
169	"	Ironer (male.)	10	.....	8 00	.....	375 00	$200 00

* Board.

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

COTTON MILL OPERATIVES.

		Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
Number in family.	Number working for wages.	Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
8	3	35	5	25	5	$600 00	$84 00	$116 00	$60 00	$200 00	$40 00	$100 00	No	Yes	.....
....	....	30	5	25	.....	.....	.....	.....	.....	75 00	.....	.....	No	No	.....
4	....	30	5	25	.....	400 00	120 00	75 00	50 00	50 00	30 00	65 00	No	No	.....
3	....	28	.....	16	12	284 50	48 00	94 00	50 00	37 50	25 00	30 00	Yes	Yes	.....
3	2	.....	.....	.....	6	427 00	.....	188 00	100 00	75 00	35 00	25 00	Yes	Yes	.....
5	2	12	.....	.....	.....	500 00	120 00	100 00	60 00	80 00	40 00	100 00	Yes	Yes	.....

WOOLEN MILL OPERATORS.

7	2	40	10	30	.....	$600 00	$144 00	$156 00	$100 00	$200 00	$40 00	$60 00	Yes	No	Yes
4	....	38	.....	30	8	400 00	100 00	80 00	50 00	70 00	35 00	65 00	No	No	.....
....	....	25	.....	25	.....	.....	*200 00	.....	.....	75 00	.....	.....	Yes	Yes	.....
8	3	112	75	30	7	800 00	150 00	200 00	100 00	200 00	40 00	110 00	Yes	No	.....
8	3	40	15	25	.....	800 00	144 00	200 00	100 00	200 00	40 00	116 00	No	No	.....
....	....	35	5	30	.....	350 00	96 00	75 00	50 00	50 00	24 00	60 00	No	No	.....
8	3	22	2	12	4	600 00	120 00	130 00	60 00	150 00	40 00	100 00	No	No	.....
5	....	12	.....	.....	12	600 00	100 00	150 00	75 00	200 00	40 00	35 00	No	No	.....

CARPET FACTORY EMPLOYES.

3	....	48	48	.....	.....	$500 00	$60 00	.....	.....	.....	.....	$104 00	No	No	No
6	2	76	36	.....	40	525 00	132 00	$125 00	$100 00	$100 00	$20 00	50 00	Yes	Yes	.....
5	2	50	6	30	14	450 00	120 00	75 00	80 00	80 00	20 00	75 00	Yes	Yes	.....
4	....	50	10	30	10	450 00	120 00	.....	.....	75 00	20 00	.....	No	No	.....
6	2	40	.....	30	10	600 00	144 00	.....	.....	.....	30 00	.....	Yes	Yes	.....
5	....	30	.....	.....	.....	560 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
6	....	40	.....	.....	10	500 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....

SHIRT MAKERS (Females.)

....	....	12	.....	.....	12	$270 00	.....	.....	.....	.....	.....	.....	No	No	.....
....	....	12	.....	.....	12	375 00	.....	.....	.....	$50 00	.....	.....	No	No	.....
4	....	12	.....	.....	12	300 00	$60 00	$100 00	$50 00	50 00	$25 00	$15 00	No	No	.....
....	....	30	10	20	.....	230 00	.....	*150 00	.....	70 00	.....	.....	No	No	.....
....	....	20	.....	15	5	240 00	.....	*182 00	.....	68 00	.....	.....	No	No	.....
....	....	24	.....	18	6	288 00	.....	*200 00	.....	88 00	.....	.....	No	No	.....
....	....	12	.....	.....	12	300 00	.....	*182 00	.....	118 00	.....	.....	No	No	.....
....	....	25	6	12	7	225 00	.....	.....	.....	.....	.....	.....	No	No	.....
....	....	12	.....	.....	.....	200 00	.....	*150 00	.....	50 00	.....	.....	No	No	.....
....	....	12	.....	.....	12	300 00	.....	*175 00	.....	125 00	.....	25 00	No	No	.....
....	....	40	.....	25	15	330 00	.....	*150 00	.....	75 00	.....	25 00	Yes	Yes	.....
....	....	20	.....	15	5	.....	.....	*150 00	.....	80 00	.....	10 00	No	No	.....
....	....	30	10	15	5	330 00	.....	*182 00	.....	48 00	.....	.....	No	No	.....
....	....	28	12	16	.....	350 00	.....	*200 00	.....	100 00	.....	50 00	Yes	Yes	.....
....	....	18	.....	18	.....	344 00	.....	*275 00	.....	60 00	.....	9 00	Yes	No	.....
....	....	30	12	12	6	350 00	.....	*282 00	.....	68 00	.....	.....	....	....	.....
5	2	30	.....	25	5	525 00	120 00	*180 00	80 00	100 00	25 00	20 00	No	No	.....

* Board.

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

ROLLING MILL EMPLOYES (Skilled.)

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
64	Paterson	Heater	10					$432 00
72	"	Roller	11		$19 00		$900 00	
75	"	Catcher	12		10 39		500 00	
76	"	Roller	12		19 00		950 00	200 00
90	"	Catcher	12		9 45		472 50	200 00
91	"	Roller	12		42 00		1,500 00	
92	"	"	12		20 00		900 00	400 00
93	"	"	12		29 00		1,160 00	
94	"	"	12		35 00		965 00	
95	"	Heater	12		35 00		1,300 00	
96	"	"	10		32 00		1,350 00	
101	"	"	10		35 00		1,300 00	300 00
125	Dover	"	12		18 00		700 00	
126	"	Rougher	12		12 00		450 00	
168	"	Roller	12		18 00		800 00	

IRON MOULDERS.

2	Paterson	Machine moulding	10	$2 25			$600 00	
29	"	Moulder	10	2 25			550 00	
30	"	"	10	2 25			450 00	$100 00
108	Phillipsburg	Pipe moulder	10	2 25			600 00	200 00
109	"	" "	10	2 25			600 00	
395	Millville	Moulder	10		$16 00		800 00	200 00
396	"	"	10		15 00		700 00	
404	"	Pipe moulder	10		16 00		800 00	
459	Gloucester City		10		13 50		675 00	
548	Jersey City	General castings	10		19 50			
540	"	Machinery castings	10		36 00			

PUDDLERS.

66	Paterson	Puddler	12		$20 00		$1,000 00	
67	"	"	12		24 00		1,100 00	
73	"	"	12		24 00		1,000 00	
74	"	"	12		22 68		1,000 00	
99	"	"	12				1,050 00	
100	"	"	12				1,100 00	
165	Dover	"	12		24 00		900 00	$200 00
166	"	"	12		24 00		850 00	
167	"	"	12		23 00		875 00	291 00

MACHINISTS.

4	Paterson	Fitter	10	$2 00			$500 00	$200 00
5	"	Lathe	10	2 25			600 00	
8	"	Millwright	10	2 25			550 00	
33	"	Turning	10	2 00			475 00	

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

ROLLING MILL EMPLOYES (Skilled.)

Number in family.	Number working for wages.	Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
5	2	41	.....	.....	.....	$1,000 00	$168 00	$200 00	$100 00	$300 00	$50 00	$182 00	Yes	Yes	.....
....	....	20	.....	.....	20	800 00	144 00	150 00	100 00	256 00	25 00	.....	Yes	Yes	.....
5	....	15	.....	.....	.....	500 00	120 00	100 00	80 00	150 00	25 00	25 00	No	No	.....
6	2	11	.....	.....	.....	900 00	168 00	200 00	132 00	250 00	25 00	125 00	Yes	Yes	.....
5	2	11	6	.....	6	600 00	125 00	125 00	75 00	200 00	25 00	50 00	Yes	Yes	.....
3	....	75	10	.....	.....	600 00	144 00	.....	.....	200 00	25 00	.....	....	Yes	.....
8	3	28	.....	6	22	1,000 00	156 00	200 00	140 00	300 00	40 00	160 00	No	Yes	.....
2	....	72	12	.....	.....	800 00	120 00	150 00	100 00	255 00	25 00	150 00	Yes	Yes	.....
5	....	80	.....	.....	.....	900 00	144 00	156 00	75 00	350 00	25 00	250 00	Yes	Yes	.....
6	....	63	.....	.....	.....	1,100 00	168 00	200 00	150 00	275 00	25 00	272 00	Yes	Yes	.....
8	....	63	.....	.....	.....	1,200 00	175 00	250 00	125 00	350 00	40 00	260 00	No	Yes	.....
8	....	60	.....	.....	.....	1,200 00	168 00	300 00	200 00	332 00	40 00	160 00	Yes	Yes	.....
....	....	90	.....	80	10	700 00	84 00	.....	.....	.....	.....	.....	No	No	.....
....	....	90	.....	85	5	450 00	72 00	125 00	80 00	120 00	28 00	25 00	No	No	.....
....	....	40	.....	40	.....	800 00	84 00	175 00	150 00	261 00	30 00	100 00	No	No	.....

IRON MOULDERS.

4	....	.....	.....	.....	30	.....	$144 00	$150 00	$150 00	$140 00	$20 00	$100 00	Yes	No	.....
....	....	75	.....	75	.....	$500 00	120 00	80 00	70 00	100 00	25 00	100 00	Yes	Yes	.....
5	2	100	25	75	.....	500 00	120 00	100 00	80 00	100 00	25 00	75 00	Yes	No	Yes
8	2	25	.....	25	.....	800 00	150 00	150 00	100 00	200 00	30 00	70 00	No	No	.....
7	....	25	6	15	4	600 00	120 00	.....	.....	.....	30 00	.....	No	No	.....
8	2	12	.....	12	.....	800 00	150 00	200 00	100 00	300 00	50 00	200 00	Yes	Yes	.....
....	....	25	10	12	3	700 00	140 00	160 00	100 00	200 00	40 00	60 00	No	No	.....
4	....	12	.....	.....	.....	600 00	.....	175 00	75 00	150 00	45 00	150 00	....	....	.....
5	....	15	.....	15	.....	600 00	144 00	124 00	70 00	136 00	30 00	100 00	Yes	Yes	.....
4	....	3	.....	.....	.....	780 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
7	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	Yes	.....

PUDDLERS.

5	....	10	.....	10	.....	$700 00	$144 00	$156 00	$100 00	$200 00	$25 00	$75 00	Yes	Yes	.....
6	....	15	.....	.....	15	900 00	168 00	200 00	100 00	300 00	32 00	100 00	Yes	Yes	.....
6	....	10	.....	.....	.....	800 00	150 00	200 00	150 00	200 00	25 00	75 00	Yes	Yes	.....
5	....	18	.....	.....	.....	800 00	150 00	200 00	150 00	200 00	25 00	75 00	Yes	Yes	.....
5	....	15	.....	6	9	900 00	150 00	150 00	100 00	300 00	40 00	160 00	No	Yes	.....
6	....	50	25	.....	25	1,000 00	150 00	200 00	150 00	300 00	40 00	160 00	Yes	Yes	.....
8	2	30	.....	30	.....	1,000 00	120 00	180 00	150 00	350 00	40 00	200 00	Yes	Yes	.....
6	....	40	.....	35	5	850 00	96 00	204 00	150 00	250 00	30 00	120 00	No	No	.....
7	2	40	.....	35	5	1,000 00	96 00	229 00	175 00	300 00	50 00	150 00	Yes	Yes	.....

MACHINISTS.

6	2	50	10	.....	40	$500 00	$120 00	$112 00	$100 00	$200 00	$25 00	$150 00	Yes	No	Yes
5	....	.....	.....	.....	.....	.....	132 00	95 00	75 00	150 00	25 00	150 00	Yes	No	No
2	....	.....	.....	.....	50	463 00	108 00	80 00	80 00	75 00	20 00	100 00	No	Yes	No
6	....	60	10	50	.....	475 00	120 00	100 00	80 00	75 00	20 00	80 00	....	....	.....

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

MACHINISTS.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
34	Paterson	Finishing	10	$2 50			$500 00	
35	"	Turning	10	2 00			450 00	$150 00
36	"	Finisher	10	2 00			500 00	
37	"	Turner	10	1 90			500 00	
38	"	Finisher	10	2 25			500 00	
78	"	Filer and fitter	10	2 10			627 90	
79	"	"	10½	2 00			600 00	
80	"	"	10½	2 00			600 00	
82	"	Finisher	10	2 25			550 00	400 00
83	"	"	10	2 25			675 00	
84	"	Erecting	10	2 25			600 00	200 00
85	"	Turning	10	2 25			675 00	
102	Phillipsburg	Machinist	10	2 00			550 00	
103	"	"	10	2 00			500 00	100 00
104	"	"	10	2 00			550 00	
105	"	"	10	2 25			450 00	
106	"	"	10	2 25			500 00	
107	"	"	10	2 00			500 00	
148	Paterson	"	10	2 30				
313	Millville	Factory work	10	2 50			700 00	300 00
403	"	"	10	3 50			1,000 00	
448	Camden	Machinist	10	2 50			700 00	200 00
466	Gloucester City	"	10	2 25			650 00	
470	"	"	10	2 25			650 00	200 00
541	Jersey City	Turning and planing	10	3 40			1,100 00	150 00
544	"	General work	10	3 00			918 00	
545	"	Lathe	10	3 00				
553	Millville	Mould making	10	2 75			783 82	
556	Paterson	Driller	10	1 50			425 00	
554	New Brunswick	Machinist and engineer	14				360 00	432 00
568	Bloomfield	Machinist	10	2 50			700 00	200 00
573	Newark	Water motor	10	2 00			450 00	
587	Elizabeth	Machinist	10	2 50			690 00	

MINERS OF IRON ORE.

127	Rockaway	Miner	8	$1 25			$370 00	$100 00
129	Dover	"	8	1 25			350 00	200 00
130	"	"	8	1 25			325 00	100 00
131	"	"	8	1 25			325 00	100 00
132	"	"	8	1 25			375 00	
133	"	"	8	1 25			340 00	
134	"	Blasting	8	1 25			320 00	
135	Rockaway	Drilling	8	1 25			375 00	
136	"	Blasting	8	1 25			350 00	100 00
137	"	Mining	8	1 25			370 00	200 00
138	"	"	8	1 25			325 00	
139	"	Drilling	8	1 25			325 00	300 00
143	"	Miner	8	1 25			300 00	
144	Dover	"	8	1 25			340 00	300 00
145	"	"	8	1 25			350 00	200 00
146	"	"	8	1 25			350 00	
147	"	"	8	1 25			350 00	
170	Hibernia Mines	"	8	1 50			440 00	
171	"	"	8	1 25			375 00	
172	"	"	8	1 25			380 00	

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

MACHINISTS—*Continued.*

Number in family.	Number working for wages.	Days lost during the year, not including legal holidays.				Cost of living for self and family during year.							Accumulation of savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the present year.	Have you run in debt during the year?
6	....	100	20	50	30	$500 00	$150 00	$100 00	$75 00	$100 00	$25 00	$50 00	Yes	No	.....
7	3	75	15	60	.....	500 00	150 00	100 00	75 00	100 00	25 00	25 00	No	Yes	.....
....	....	50	.....	50	.....	500 00	120 00	80 00	75 00	150 00	25 00	50 00	No	No	.....
3	....	40	.....	40	.....	400 00	120 00	75 00	50 00	80 00	25 00	50 00	Yes	Yes	.....
4	....	60	10	50	.....	500 00	150 00	100 00	50 00	100 00	25 00	75 00	No	No	.....
5	....	.....	2	.....	2	.....	108 00	.....	.....	75 00	.....	108 00	Yes	No	Yes
3	....	8	.....	.....	.....	.....	96 00	.....	.....	.....	.....	.....	....	....	.....
....	....	.....	.....	.....	.....	.....	96 00	.....	.....	.....	.....	.....	No	No	.....
7	3	60	.....	60	.....	900 00	156 00	200 00	150 00	260 00	40 00	100 00	Yes	Yes	.....
5	....	12	.....	12	.....	675 00	150 00	150 00	100 00	150 00	25 00	75 00	No	No	.....
7	2	47	7	30	10	800 00	150 00	150 00	100 00	250 00	25 00	125 00	No	No	.....
4	....	12	.....	.....	12	600 00	120 00	100 00	80 00	150 00	25 00	125 00	No	Yes	.....
5	....	30	10	20	.....	500 00	120 00	100 00	80 00	100 00	25 00	75 00	No	Yes	.....
6	2	62	12	40	10	600 00	144 00	150 00	75 00	156 00	25 00	50 00	No	No	.....
....	....	35	10	25	.....	550 00	120 00	.....	.....	.....	30 00	.....	No	No	.....
6	....	85	40	40	5	500 00	120 00	.....	.....	.....	30 00	.....	No	No	Yes
....	....	60	.....	60	.....	400 00	.....	*225 00	.....	150 00	.....	.....	Yes	Yes	.....
....	....	60	.....	60	.....	450 00	.....	*250 00	.....	100 00	.....	100 00	No	Yes	.....
7	2	7	7	.....	.....	624 00	60 00	.....	.....	.....	.....	.....	No	No	.....
8	3	25	.....	25	.....	1,000 00	120 00	200 00	100 00	260 00	50 00	250 00	No	No	Yes
3	....	.....	.....	.....	.....	500 00	.....	100 00	50 00	150 00	50 00	150 00	Yes	Yes	.....
8	2	35	10	20	5	900 00	180 00	200 00	120 00	250 00	50 00	100 00	No	No	.....
7	....	20	5	15	.....	700 00	144 00	156 00	80 00	200 00	40 00	100 00	No	No	Yes
6	2	25	.....	20	5	740 00	150 00	150 00	100 00	200 00	40 00	100 00	No	No	.....
11	2	2	2	.....	2	.....	.....	.....	.....	.....	.....	95 00	No	No	Yes
4	....	6	.....	.....	.....	.....	216 00	.....	.....	.....	.....	.....	....	....	.....
....	....	.....	.....	.....	.....	.....	.....	*312 00	.....	25 00	.....	.....	Yes	Yes	.....
4	....	22	7	9	6	698 00	108 00	260 00	100 00	150 00	30 00	50 00	Yes	Yes	.....
3	....	11	11	.....	.....	425 00	90 00	.....	.....	.....	.....	.....	No	No	Yes
11	3	78	78	.....	.....	.....	96 00	120 00	300 00	.....	.....	.....	Yes	No	Yes
9	3	30	.....	.....	.....	900 00	.....	.....	.....	.....	.....	.....	Yes	No	No
5	....	78	.....	.....	.....	500 00	100 00	.....	.....	.....	.....	.....	No	No	Yes
6	....	8	.....	.....	.....	528 00	70 00	.....	.....	.....	.....	.....	No	No	No

MINERS OF IRON ORE.

4	2	10	10	.....	.....	$500 00	.....	$150 00	$100 00	$200 00	$30 00	$70 00	Yes	Yes	Yes
6	2	10	.....	.....	10	500 00	.....	150 00	100 00	200 00	30 00	70 00	Yes	Yes	.....
5	2	60	10	40	10	450 00	.....	125 00	100 00	150 00	25 00	50 00	Yes	No	Yes
6	2	60	.....	40	20	460 00	.....	150 00	100 00	160 00	30 00	20 00	Yes	No	Yes
....	....	10	.....	.....	.....	360 00	.....	225 00	.....	50 00	.....	25 00	Yes	Yes	.....
6	....	40	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	No	No	No
5	....	65	25	40	.....	400 00	$90 00	75 00	60 00	50 00	25 00	100 00	Yes	No	Yes
....	....	70	20	50	.....	400 00	.....	100 00	75 00	175 00	25 00	25 00	Yes	No	Yes
5	2	30	10	.....	20	450 00	.....	100 00	75 00	125 00	25 00	125 00	No	No	.....
6	2	11	6	.....	.....	500 00	.....	140 00	105 00	180 00	25 00	50 00	Yes	....	.....
....	....	45	.....	40	5	325 00	.....	105 00	75 00	104 00	25 00	16 00	Yes	No	.....
7	3	60	40	.....	20	625 00	.....	150 00	105 00	205 00	30 00	115 00	Yes	No	.....
....	....	90	20	50	20	300 00	.....	.....	.....	70 00	.....	30 00	No	No	No
7	3	35	.....	30	5	600 00	.....	145 00	100 00	250 00	30 00	75 00	Yes	....	.....
6	2	20	10	.....	10	500 00	.....	148 00	100 00	125 00	25 00	94 00	No	No	No
....	....	30	25	.....	5	334 00	.....	.....	.....	50 00	.....	.....	Yes	Yes	.....
4	....	30	.....	30	.....	330 00	.....	100 00	50 00	100 00	25 00	55 00	No	No	No
....	....	6	.....	.....	6	440 00	.....	150 00	100 00	175 00	25 00	50 00	Yes	No	Yes
4	....	12	5	.....	7	375 00	.....	100 00	80 00	120 00	25 00	50 00	No	No	.....
6	....	10	5	.....	5	380 00	.....	120 00	80 00	100 00	25 00	55 00	No	No	.....

* Board.

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

MINERS OF IRON ORE—*Continued.*

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
173	Hibernia Mines	Miner	8	$1 25			$380 00	$300 00
174	Mount Hope	"	8	1 25			375 00	
175	"	"	8	1 25			385 00	300 00
176	"	"	8	1 25			390 00	
177	Chester	"	8	1 25			350 00	200 00
178	"	"	8	1 25			360 00	
179	McCanesville	"	8	1 25			350 00	300 00
255	Port Oram	"	8	1 25			360 00	360 00

BLACKSMITHS.

39	Paterson	Locomotive work	10		$14 00		$600 00	$100 00
128	Rockaway	Rolling mill	10		15 00		700 00	
140	Dover	General work	11		18 00		900 00	
212	Paterson	Locomotive work	10		15 00		600 00	
277	Millville	Blacksmith	10		15 00		690 00	
339	Glassboro		10		12 50		400 00	200 00
363	Millville	Glass-house work	10		12 50		250 00	200 00
369	Clayton	"	10		15 00		700 00	
406	Salem	"	10		15 00		600 00	
525	Orange	Horseshoeing	10		12 00			
537	Bridgeton		10		15 00		750 00	12 00
228	Newark	Making horseshoes	10		16 00			
123	Hackettstown	Carriage work	10		15 00		700 00	
124	"	"	10		15 00		700 00	300 00
569	Newark	Iron railings	10		15 00		760 00	

SHOEMAKERS.

295	Burlington	Laster	10		$16 50		$500 00	$200 00
296	"	Cutter	10		12 00		400 00	
297	"	"	10		13 00		425 00	
298	"	Burnisher	10		12 00		450 00	
299	"	Finisher	10		12 00		450 00	
300	"	"	10		13 00		500 00	100 00
301	"	Heeler	10		17 00		400 00	200 00
302	"	"	10		16 00		550 00	100 00
303	"	Lasting	10		14 00		500 00	
309	"	Heeler	10		13 20		450 00	200 00
310	"	Cutter	10		14 40		440 00	
429	Williamstown	Custom work					600 00	
502	Newark	Laster	10		9 00			
503	"	"	10		12 00		500 00	
547	"	"	10				511 00	
555	Camden	"	9		14 50		800 00	
558	"	Lasting	10		8 66		450 00	26 00
560	"	Heeler by hand	8		15 00		600 00	
577	"	Lasting	8		19 44		500 00	1,500 00
304	Burlington	Shoe operator (female)	10		6 00		220 00	
305	"	" fitter "	10		6 00		225 00	
306	"	" " "	10		6 50		235 00	
307	"	" operator "	10		7 50		225 00	
308	"	" fitter "	10		8 00		250 00	
311	"	" " "	10		6 50		225 00	

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

MINERS OF IRON ORE—*Continued.*

Number in family.	Number working for wages.	Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
7	3	9	4	.....	5	$600 00	.....	$200 00	$100 00	$200 00	$25 00	$75 00	Yes	Yes	.....
5	....	12	4	.....	8	375 00	.....	100 00	75 00	100 00	30 00	70 00	No	No	.....
6	2	8	3	.....	5	600 00	.....	150 00	100 00	200 00	25 00	125 00	Yes	Yes	.....
6	....	.....	.....	.....	1	390 00	.....	140 00	60 00	130 00	30 00	30 00	No	No	.....
5	2	30	10	15	5	500 00	.....	150 00	100 00	150 00	30 00	60 00	Yes	Yes	.....
6	....	35	10	20	5	360 00	.....	100 00	75 00	100 00	25 00	60 00	No	No	.....
6	2	30	8	20	2	600 00	.....	150 00	100 00	200 00	30 00	120 00	Yes	Yes	.....
5	2	.....	12	.....	.....	720 00	.....	.....	.....	.....	.....	.....	No	No	Yes

BLACKSMITHS.

5	....	50	.....	50	.....	$500 00	$150 00	$100 00	$75 00	$100 00	$25 00	$50 00	Yes	Yes	.....
....	....	30	.....	25	5	700 00	120 00	100 00	85 00	200 00	40 00	160 00	Yes	No	.....
7	....	12	.....	.....	12	700 00	84 00	.....	.....	.....	.....	.....	Yes	Yes	.....
5	....	40	.....	40	.....	600 00	120 00	100 00	60 00	150 00	30 00	120 00	No	No	.....
5	....	15	5	.....	10	600 00	*150 00	100 00	60 00	200 00	40 00	50 00	Yes	Yes	.....
5	2	100	.....	100	.....	600 00	100 00	200 00	60 00	150 00	40 00	50 00	No	No	.....
6	2	125	.....	125	.....	600 00	120 00	150 00	80 00	175 00	40 00	35 00	Yes	No	Yes
6	....	10	.....	.....	.....	700 00	120 00	180 00	100 00	200 00	40 00	60 00	No	No	.....
5	....	.....	.....	.....	.....	600 00	100 00	150 00	80 00	120 00	50 00	100 00	No	No	.....
....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
4	....	12	3	.....	5	650 00	120 00	162 00	91 00	70 00	50 00	32 00	Yes	Yes	.....
....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
6	....	25	10	.....	15	700 00	144 00	150 00	100 00	200 00	30 00	76 00	No	No	.....
7	2	20	5	.....	15	800 00	150 00	150 00	100 00	250 00	30 00	120 00	Yes	Yes	.....
4	....	3	.....	.....	.....	608 00	132 00	.....	.....	.....	30 00	.....	No	No	.....

SHOEMAKERS.

7	2	125	8	115	2	$700 00	$144 00	$156 00	$60 00	$250 00	$40 00	$50 00	Yes	No	.....
2	1	110	5	100	5	400 00	120 00	100 00	60 00	50 00	25 00	25 00	Yes	No	.....
3	....	130	10	100	10	450 00	132 00	125 00	60 00	80 00	27 00	26 00	Yes	No	Yes
....	....	120	.....	120	.....	450 00	.....	†200 00	.....	75 00	.....	.....	Yes	Yes	.....
3	....	110	.....	110	.....	450 00	120 00	100 00	50 00	100 00	30 00	50 00	Yes	No	.....
....	2	110	.....	110	.....	600 00	120 00	125 00	60 00	175 00	40 00	60 00	No	No	.....
8	2	150	.....	150	.....	700 00	150 00	150 00	100 00	200 00	50 00	50 00	Yes	No	Yes
7	2	132	10	120	2	700 00	150 00	200 00	50 00	200 00	50 00	50 00	Yes	No	Yes
....	....	125	.....	125	.....	600 00	144 00	156 00	80 00	150 00	40 00	30 00	No	No	Yes
7	2	130	15	100	15	600 00	132 00	168 00	90 00	120 00	40 00	50 00	Yes	Yes	.....
6	....	120	.....	112	8	584 00	144 00	175 00	75 00	100 00	40 00	50 00	Yes	No	Yes
4	....	.....	36	.....	.....	550 00	.....	.....	.....	.....	.....	.....	Yes	....	.....
8	2	30	.....	.....	.....	475 00	96 00	.....	.....	.....	.....	.....	No	No	Yes
8	....	90	.....	90	.....	625 00	84 00	260 00	120 00	50 00	35 00	15 00	No	No	Yes
9	....	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	Yes
3	....	.....	.....	.....	.....	800 00	108 00	.....	.....	.....	30 00	.....	No	No	No
4	....	23	3	18	12	476 00	96 00	210 00	62 00	80 00	18 00	10 00	No	No	Yes
5	....	.....	.....	.....	.....	.....	156 00	312 00	.....	.....	30 00	.....	No	Yes	.....
9	3	100	.....	.....	.....	1,250 00	432 00	400 00	100 00	200 00	28 00	100 00	Yes	No	Yes
....	....	120	.....	115	5	220 00	.....	.....	.....	40 00	.....	.....	No	No	.....
....	....	118	.....	118	.....	225 00	.....	.....	.....	65 00	.....	.....	....	....	.....
....	....	120	10	110	.....	335 00	.....	.....	.....	50 00	.....	.....	....	....	.....
....	....	130	20	110	.....	225 00	.....	.....	.....	60 00	.....	.....	No	No	.....
....	....	122	10	108	.....	250 00	.....	.....	.....	60 00	.....	.....	No	No	.....
....	....	120	5	115	.....	225 00	.....	.....	.....	.....	.....	.....	....	....	.....

* Dues in building association. † Board.

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

HAT MAKERS.

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
249	Newark	Making	10	.....	.....	.....	$150 00	.....
248	"	Sizing	10	$1 83	$11 00	$49 00	330 00	$75 00
245	"	Maker	8	2 00	12 00	48 00	384 00	.....
239	"	Brush hatting	10	.....	.....	.....	572 00	.....
238	Orange	Making	....	2 00	12 00	48 00	400 00	200 00
237	"	Sizing	....	1 44	.....	.....	.....	.....
236	"	Making	....	2 00	12 00	35 00	250 00	.....
235	Newark	Pouncer	10	2 00	12 00	48 00	400 00	.....
233	"	Making	10	1 75	.....	.....	350 00	.....
230	"	"	9	2 00	.....	.....	450 00	200 00
229	"	"	6	.....	9 00	.....	.....	.....
226	"	Hardener	10	3 00	18 00	.....	628 00	266 00
225	Watsessing	Making	10	2 00	12 00	48 00	350 00	.....
224	"	Sizing and pouncing	10	1 80	11 00	40 00	250 00	.....
223	Orange	Making	10	2 00	.....	.....	400 00	.....
221	Newark	"	10	2 00	.....	.....	350 00	.....
220	"	"	10	.....	.....	.....	475 00	.....
219	"	Sizing	10	1 50	.....	.....	.....	.....
521	"	Blocking, shaping	9	1 25	7 50	28 00	300 00	.....
515	"	Sizing	10	2 00	.....	.....	400 00	.....
516	Millburn	Making	10	1 75	.....	.....	150 00	19 00
517	Bloomfield	Sizing or blocking	10	2 00	.....	.....	474 00	274 00
518	Newark	Maker	9	1 50	.....	.....	431 00	320 00
519	"	"	10	3 00	.....	.....	500 00	.....
522	"	Brushing	10	2 25	10 00	.....	440 00	.....
520	"	Sizing, shaping	9½	1 50	9 00	36 00	425 00	.....
258	"	Flinger and packer	....	.....	.....	.....	323 00	323 00

HAT FINISHERS.

512	Newark	Finishing	10	$2 50	$15 00	.....	$500 00	.....
251	"	"	10	1 50	11 00	$45 00	750 00	$203 00
250	"	"	10	1 80	.....	36 00	288 00	90 00
246	"	"	8-12	2 00	12 00	60 00	500 00	.....
244	"	"	10	2 00	12 00	.....	.....	150 00
242	"	"	10	2 25	13 50	60 00	620 00	.....
241	Watsessing	"	8-12	1 50	9 00	45 00	451 00	614 00
240	Newark	"	10	.....	.....	.....	706 00	.....
232	"	"	8	3 00	.....	.....	550 00	208 00
231	"	"	9	2 00	.....	.....	500 00	168 00
227	"	"	10	.....	.....	.....	404 00	.....
272	"	"	10	1 85	.....	.....	158 00	728 00
218	"	"	9	3 00	.....	.....	400 00	.....
217	"	"	9	.....	.....	.....	400 00	.....
531	Orange	"	10	1 50	.....	.....	475 00	.....
530	"	"	9	.....	11 00	.....	575 00	.....
506	Newark	"	10	2 60	.....	.....	550 00	.....
507	"	"	....	3 00	18 00	.....	.....	.....
508	"	"	10	2 60	16 00	.....	500 00	.....
509	"	"	10	2 60	16 00	.....	530 00	.....
513	"	"	10	2 50	15 00	60 00	480 00	.....

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

HAT MAKERS.

Number in family.	Number working for wages.	Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	Other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
....	....	270	.....	270	.....	.....	.....	.....	.....	.....	.....	.....	No	No	Yes
5	2	151	.....	.....	.....	$504 00	$66 00	$100 00	$150 00	$20 00	$18 00	$150 00	No	No	Yes
4	1	120	.....	120	.....	520 00	84 00	312 12	100 00	20 00	.....	4 00	....	....	Yes
7	1	100	.....	100	.....	592 00	96 00	210 00	150 00	60 00	36 00	40 00	Yes	No	Yes
5	2	104	.....	104	.....	.....	60 00	.....	.....	.....	.....	.....	No	No	Yes
6	3	104	.....	104	.....	.....	72 00	.....	.....	100 00	.....	100 00	Yes	No	No
7	2	120	20	.....	.....	300 00	72 00	150 00	100 00	12 00	15 00	10 00	No	No	Yes
5	1	104	.....	104	.....	600 00	180 00	.....	.....	.....	10 00	.....	No	No	Yes
7	1	150	.....	.....	.....	.....	84 00	.....	.....	.....	.....	.....	No	No	Yes
6	3	60	40	.....	.....	650 00	96 00	250 00	125 00	100 00	25 00	50 00	....	....	.....
9	1	78	.....	.....	.....	.....	96 00	.....	.....	.....	.....	.....	....	....	Yes
6	3	100	.....	.....	.....	.....	84 00	.....	.....	.....	.....	.....	Yes	No	Yes
3	1	170	.....	170	.....	.....	60 00	.....	.....	.....	.....	.....	Yes	No	Yes
5	1	170	.....	170	.....	.....	60 00	.....	.....	.....	.....	.....	Yes	No	Yes
6	1	100	.....	.....	.....	.....	66 00	.....	.....	.....	.....	.....	No	No	Yes
....	....	150	.....	150	.....	*	.....	.....	.....	.....	.....	.....	....	....	.....
3	1	100	4	.....	.....	.....	72 00	.....	.....	.....	.....	.....	....	....	Yes
7	4	70	.....	.....	.....	.....	114 00	.....	.....	.....	.....	.....	No	No	Yes
4	1	36	.....	.....	.....	370 00	96 00	.....	.....	40 00	24 00	16 00	Yes	No	Yes
3	1	120	.....	.....	.....	225 00	50 00	.....	.....	25 00	.....	.....	Yes	Yes	.....
4	1	130	10	120	.....	150 00	.....	.....	.....	19 00	18 00	.....	No	No	Yes
6	4	68	.....	68	.....	728 00	96 00	.....	558 00	100 00	40 00	30 00	Yes	No	Yes
9	2	2	.....	.....	.....	780 00	144 00	.....	.....	70 00	36 00	20 00	....	....	.....
....	....	104	.....	52	.....	.....	.....	.....	.....	60 00	.....	.....	No	No	.....
2	1	95	5	90	.....	500 00	.....	320 00	150 00	100 00	30 00	40 00	Yes	No	Yes
7	1	21	21	.....	.....	600 00	126 00	.....	.....	80 00	20 00	28 00	No	No	Yes
2	2	78	.....	.....	.....	312 00	.....	.....	.....	.....	.....	.....	Yes	....	.....

HAT FINISHERS.

....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	No	.....
4	2	60	.....	.....	.....	$750 00	$120 00	$212 00	$51 00	$50 00	$30 00	$53 00	No	No	No?
5	2	130	.....	130	.....	500 00	120 00	.....	.....	.....	17 00	30 00	....	....	Yes
4	1	63	.....	50	.....	500 00	72 00	200 00	100 00	75 00	22 00	6 00	....	....	.....
9	2	182	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	No	Yes
5	1	60	.....	.....	.....	620 00	84 00	240 00	91 00	95 00	25 50	84 50	Yes	No	No
6	5	13	9	.....	.....	1,000 00	96 00	500 00	250 00	200 00	50 00	.....	....	Yes	.....
3	1	.....	8	.....	.....	520 00	.....	.....	.....	.....	27 00	.....	Yes	No	No
8	3	90	4	.....	.....	700 00	60 00	200 50	80 00	40 00	.....	.....	No	No	Yes
6	3	78	4	.....	8	700 00	60 00	260 00	80 00	44 00	.....	4 00	Yes	No	Yes
2	1	.....	.....	.....	.....	300 00	78 00	182 00	130 00	50 00	27 00	10 00	Yes	No	Yes
7	4	197	.....	197	.....	.....	96 00	.....	.....	.....	.....	.....	Yes	No	Yes
6	1	150	.....	150	.....	400 00	78 00	.....	.....	10 50	27 00	.....	No	No	Yes
4	1	150	.....	.....	.....	400 00	96 00	.....	.....	25 00	27 00	.....	No	No	Yes
....	....	150	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
4	1	30	.....	.....	.....	575 00	.....	.....	.....	.....	.....	.....	Yes	No	No
4	1	104	.....	.....	.....	550 00	.....	.....	.....	.....	.....	.....	No	No	No
6	1	130	.....	.....	.....	.....	96 00	.....	.....	12 00	.....	.....	No	No	Yes
....	2	104	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
....	1	104	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	No	.....
2	....	120	.....	.....	.....	.....	156 00	.....	.....	.....	.....	.....	....	....	.....

* Board—$5 per week.

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

CARPENTERS.

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
101	Phillipsburg	House carpenter	10	$2 50			$600 00	
111	"	"	10	2 50			500 00	
112	"	"	10	2 50			600 00	$100 00
113	"	"	10	2 25			600 00	
114	"	House repairing	10	2 25			625 00	200 00
193	Paterson	House carpenter	10	2 50			625 00	200 00
194	"	"	10	2 50			600 00	
195	"	House repairing	10	2 25			600 00	400 00
196	"	General work	10	2 25			600 00	
197	"	General job work	10	2 50			650 00	
290	Millville	Glass-factory work	10	2 50			750 00	
312	"	House carpenter	10	2 50			650 00	
438	Camden	In woolen mill	10	3 00			850 00	400 00
460	Gloucester	Carpenter	10	2 50				
550	Jersey City	Carpenter and joiner	10	2 75				
555	Newark	Carpenter	10	2 25			631 96	376 00
557	Trenton	Carpenter—sash and blind	10	2 75			660 00	
535	Bridgeton	"		1 35				100 00
574	Elizabethport	R. R. car shops	10	2 10			525 00	
570	Newark	Wood-work for machinery	8½	2 12			740 00	

SHIP CARPENTERS.

398	Millville	Ship joiner		$2 75			$600 00	$150 00
399	"	Ship carpenter		2 50				
400	"	"		2 50			700 00	150 00
437	Camden	"		3 00			800 00	
440	"	"		3 00			825 00	
450	"	"		3 00			900 00	
451	"	"		3 00			850 00	
452	"	"		3 00			850 00	300 00
453	"	"		3 00			800 00	
454	"	"	10	3 00			850 00	
549	Jersey City	Shipwright, joiner, caulker	10	4 00				

LABORERS.

7	Paterson	Laborer	10	$1 15			$325 00	$200 00
40	"	In locomotive works	10		$8 50		325 00	200 00
68	"	In rolling mill	10	1 20			350 00	300 00
70	"	"	10	1 20			360 00	200 00
117	Phillipsburg	Ordinary	10	1 20			300 00	300 00
118	"	In iron works	10	1 20			325 00	200 00
198	Paterson	In locomotive works	10	1 15			325 00	300 00
199	"	Ordinary	10	1 00			300 00	250 00
262	Camden	In woolen mill	10		7 50		375 00	300 00
280	Millville	In glass factory	10			$37 00	400 00	150 00
289	"	"	10			37 00	400 00	150 00
314	"	In cotton mill	10		7 50		375 00	200 00
353	"	In window-glass factory	10			34 70	200 00	200 00
397	"	In ship yard	10		9 00		400 00	200 00
463	Gloucester City	In cotton factory	10		7 50		350 00	

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

CARPENTERS.

Number in family.	Number working for wages.	Days Lost During the year, not including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the year?
6	....	80	.....	80	.....	$600 00	$144 00	$100 00	$75 00	$156 00	$30 00	$95 00	No	No	.....
8	....	100	40	50	10	600 00	144 00	.....	.....	.....	40 00	.....	Yes	No	Yes
7	2	63	.....	50	13	700 00	144 00	122 00	78 00	200 00	40 00	116 00	No	No	.....
....	....	25	.....	25	.....	700 00	150 00	100 00	75 00	150 00	25 00	200 00	Yes	No	Yes
....	2	.....	.....	.....	.....	800 00	150 00	.....	.....	.....	40 00	.....	No	....	.....
7	2	63	.....	60	3	800 00	156 00	150 00	100 00	200 00	30 00	172 00	Yes	....	.....
5	....	75	10	60	5	600 00	144 00	156 00	100 00	125 00	25 00	50 00	No	No	.....
6	2	30	20	.....	10	900 00	156 00	144 00	100 00	250 00	40 00	210 00	Yes	Yes	.....
5	....	40	30	.....	10	600 00	150 00	150 00	100 00	150 00	25 00	25 00	No	No	.....
5	....	40	30	.....	10	650 00	150 00	150 00	100 00	175 00	25 00	50 00	No	No	.....
5	....	12	.....	.....	12	600 00	*160 00	100 00	60 00	140 00	40 00	.....	Yes	Yes	.....
4	....	50	20	25	5	650 00	†50 00	150 00	60 00	200 00	40 00	100 00	Yes	No	.....
8	3	30	.....	25	5	1,250 00	240 00	220 00	120 00	360 00	40 00	250 00	No	No	.....
6	....	20	.....	20	.....	725 00	144 00	156 00	75 00	225 00	40 00	115 00	No	No	.....
6	....	5	.....	.....	.....	.....	168 00	.....	.....	.....	.....	.....	No	No	.....
5	3	28	10	12	6	900 00	103 00	.....	.....	.....	50 00	.....	Yes	No	.....
6	....	38	.....	.....	.....	575 00	120 00	100 00	75 00	100 00	30 00	50 00	No	No	.....
6	2	21	.....	18	.....	400 00	96 00	60 00	175 00	50 00	20 00	.....	No	No	.....
3	....	36	10	26	.....	525 00	96 00	.....	.....	.....	.....	.....	No	No	Yes
3	....	16	12	.....	4	520 00	.....	.....	.....	.....	.....	.....	Yes	No	.....

SHIP CARPENTERS.

6	2	50	10	30	10	$700 00	$150 00	$200 00	$100 00	$175 00	$40 00	$35 00	Yes	Yes	.....
5	....	40	15	25	.....	650 00	132 00	200 00	68 00	150 00	50 00	50 00	No	No	.....
6	2	.....	.....	25	.....	800 00	144 00	200 00	100 00	156 00	50 00	150 00	Yes	Yes	.....
6	....	50	.....	40	10	800 00	180 00	200 00	100 00	220 00	40 00	60 00	No	No	.....
6	....	40	.....	40	.....	825 00	180 00	200 00	100 00	220 00	50 00	75 00	No	No	.....
7	....	12	12	.....	.....	800 00	180 00	150 00	100 00	220 00	50 00	100 00	Yes	Yes	.....
6	....	35	10	25	.....	800 00	180 00	150 00	100 00	220 00	50 00	100 00	Yes	Yes	.....
9	2	37	.....	30	7	1,000 00	240 00	250 00	150 00	260 00	40 00	60 00	Yes	Yes	.....
6	....	40	10	30	.....	800 00	168 00	150 00	80 00	270 00	42 00	100 00	No	No	.....
6	....	30	.....	25	5	800 00	150 00	150 00	100 00	200 00	40 00	160 00	No	....	.....
4	....	.....	.....	.....	.....	1,000 00	150 00	.....	.....	.....	.....	.....	....	....	.....

LABORERS.

6	2	10	.....	.....	.....	$525 00	$100 00	.....	.....	.....	$20 00	.....	No	No	.....
....	3	30	.....	30	.....	500 00	150 00	$125 00	$75 00	$100 00	20 00	$30 00	Yes	Yes	.....
6	2	9	6	.....	3	650 00	144 00	125 00	100 00	181 00	25 00	75 00	No	No	.....
5	2	12	5	.....	8	560 00	120 00	100 00	80 00	150 00	25 00	85 00	No	No	.....
6	2	60	.....	60	.....	600 00	120 00	.....	.....	.....	30 00	.....	No	No	.....
6	2	25	.....	25	.....	500 00	120 00	100 00	80 00	100 00	25 00	75 00	No	No	.....
6	3	25	.....	20	5	625 00	144 00	156 00	100 00	150 00	30 00	45 00	No	No	.....
6	2	12	.....	12	.....	550 00	120 00	100 00	80 00	150 00	30 00	70 00	No	No	.....
8	2	10	.....	.....	10	675 00	120 00	150 00	100 00	260 00	40 00	210 00	No	No	.....
6	2	25	.....	25	.....	500 00	100 00	125 00	50 00	160 00	40 00	25 00	No	No	.....
6	2	30	.....	25	5	550 00	100 00	100 00	60 00	150 00	40 00	50 00	No	No	.....
7	3	25	.....	25	.....	600 00	96 00	125 00	75 00	200 00	44 00	60 00	....	....	.....
6	2	150	.....	150	.....	500 00	120 00	100 00	50 00	180 00	40 00	10 00	Yes	No	Yes
7	3	35	10	25	.....	600 00	132 00	175 00	100 00	175 00	40 00	40 00	No	No	Yes
3	....	35	5	30	.....	400 00	96 00	80 00	50 00	70 00	34 00	70 00	Yes	No	Yes

* Building association dues. † Interest.

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

LABORERS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Weekly.	Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
464	Gloucester City	In cotton factory	10	.....	$7 50	.....	$350 00	$400 00
514	Bloomfield	General work	10½	.....	.....	.....	394 92	.....
526	Orange	Hostler H. R. R. Co	14	.....	10 50	.....	.....	.....
527	"	"	15	.....	10 50	.....	546 00	.....
528	"	In hat manufactory	10	$1 25	7 50	.....	350 00	.....
434	Millburn	Lime burner	10	.....	7 50	.....	.....	.....
564	Camden	For gas fitter and plumber	10	.....	9 00	.....	432 00	192 00
260	Newark	In saw works	10	.....	9 00	.....	400 00	.....

CIGAR-MAKERS.

69	Paterson	Cigar making	9	$2 70	.....	.....	$650 00	.....
149	"	"	9	3 00	.....	.....	.....	.....
150	"	Mould workman	9	2 70	.....	.....	.....	.....
257	Newark	Cigar maker—foreman	9	1 50	.....	.....	306 00	.....
524	Jersey City	Cigar maker	10	1 83	.....	.....	563 00	.....
505	Trenton	"	10	1 41	.....	.....	442 00	.....
492	Jersey City	"	9	2 25	.....	.....	675 00	.....
543	"	Cigar packer	....	7 50	.....	.....	1,500 00	.....

JEWELERS.

252	Newark	Engraver	10	$3 10	.....	.....	$743 00	.....
559	"	Jeweler	10	2 50	.....	.....	720 00	.....
558	"	Chain maker	10	3 00	.....	.....	765 00	$200 00
560	"	"	10	2 50	.....	.....	580 00	.....
581	"	"	10	2 50	.....	.....	580 00	.....
582	"	"	10	2 00	.....	.....	475 00	.....
583	"	Ring maker	10	.....	$16 00	.....	700 00	.....
584	"	Bracelets	10	3 00	.....	.....	780 00	.....

MISCELLANEOUS WORKMEN.

576	Elizabethport	Stove moulder	10	$1 75	.....	.....	$300 00	.....
572	Newark	Paper boxes	....	1 75	.....	.....	.....	$50 00
575	"	Stone cutter	9	3 50	.....	.....	780 00	.....
565	"	Free-stone cutter	8½	.....	$20 50	.....	697 04	.....
564	"	Stone cutter	9	3 50	.....	.....	700 00	.....
562	"	"	9	3 50	.....	.....	.....	.....
561	"	"	9	3 50	.....	.....	700 00	.....
234	"	Japanner—finisher	10	.....	12 00	.....	475 00	.....
243	"	"	10	.....	11 00	.....	.....	.....
571	"	Engineer	12	.....	15 00	.....	765 00	.....
214	Paterson	"	10	2 25	.....	.....	675 00	.....
276	Millville	"	10	.....	.....	.....	550 00	.....
141	Dover	"	....	2 25	.....	.....	600 00	.....
142	"	"	10	2 00	.....	.....	600 00	.....
253	Bloomfield	R. R. ticket ag't and telegraph operator	14½	.....	.....	.....	600 00	.....

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

LABORERS—*Continued.*

Number in family.	Number working for wages.	Days Lost During the Year, not including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the present year.	Have you run in debt during the year?
....	3	30	.....	24	6	$750 00	$145 00	$156 00	$80 00	$220 00	$40 00	$110 00	No	No	.....
5	....	25	.....	25	.....	386 00	48 00	51 00	52 00	52 00	30 00	13 00	....	....	.....
5	....	.....	.....	.....	.....	.....	84 00	.....	.....	.....	.....	.....	....	....	.....
3	2	.....	26	.....	.....	650 00	.....	.....	.....	.....	.....	.....	No	No	Yes
5	3	.....	.....	.....	.....	.....	72 00	.....	.....	.....	.....	.....	....	....	.....
3	....	.....	.....	.....	.....	.....	72 00	.....	.....	100 00	30 00	.....	Yes	Yes	.....
7	3	.....	.....	.....	.....	576 00	108 00	.....	.....	.....	.....	.....	No	No	.....
....	....	10	.....	.....	.....	312 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....

CIGAR-MAKERS.

3	....	72	.....	.....	.....	$700 00	.....	.....	.....	.....	.....	.....	....	....	Yes
4	....	.....	.....	.....	.....	.....	$100 20	.....	.....	.....	.....	.....	No	No	No
4	....	.....	.....	.....	.....	.....	84 00	$208 00	$104 00	.....	$36 40	.....	Yes	Yes	No
2	....	14	.....	.....	.....	300 00	90 00	.....	.....	$30 00	16 00	.....	Yes	No	No
2	....	20	.....	.....	.....	.....	100 00	75 00	175 00	75 00	50 00	$100 00	No	No	No
....	....	.....	.....	.....	.....	244 40	.....	.....	.....	50 00	.....	17 50	No	No	No
....	....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	Yes	No
2	....	60	.....	.....	.....	1,200 00	.....	.....	.....	.....	.....	.....	....	....	.....

JEWELERS.

4	....	65	8	51	6	$800 00	$108 00	$200 00	$200 00	$125 00	$50 00	$110 00	Yes	No	*Yes
5	....	42	.....	.....	.....	720 00	73 00	280 00	160 00	.....	25 00	100 00	No	No	Yes
6	2	66	.....	66	.....	765 00	.....	.....	.....	.....	.....	.....	No	No	Yes
4	....	78	.....	78	.....	580 00	114 00	.....	.....	25 00	.....	.....	No	No	Yes
5	....	78	.....	78	.....	580 00	96 00	.....	.....	.....	.....	.....	No	No	No
6	....	52	.....	52	.....	.....	78 00	.....	.....	.....	.....	.....	No	No	No
3	....	60	.....	.....	.....	700 00	.....	.....	.....	.....	.....	.....	Yes	No	No
9	....	36	.....	.....	.....	780 00	.....	.....	.....	.....	.....	.....	Yes	No	Yes

MISCELLANEOUS WORKMEN.

....	....	.....	.....	.....	.....	$300 00	.....	.....	.....	.....	.....	.....	....	....	.....
5	2	.....	.....	.....	.....	.....	$168 80	$156 00	$96 00	$60 00	$30 00	.....	No	No	Yes
1	....	84	.....	84	.....	500 00	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	97	.....	.....	.....	659 04	120 00	163 00	180 00	30 00	23 50	87 04	No	Yes	.....
....	....	84	6	.....	.....	750 00	.....	.....	.....	.....	.....	.....	No	No	Yes
....	....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	....	Yes	.....
2	....	84	.....	.....	.....	700 00	144 00	260 00	156 00	.....	.....	.....	No	No	Yes
7	....	50½	8	17½	25	496 00	84 00	260 00	104 00	30 00	14 00	4 00	No	No	Yes
3	....	52	.....	.....	.....	.....	96 00	.....	.....	30 00	25 00	60 00	No	No	Yes
4	....	6	.....	.....	.....	765 00	.....	.....	.....	.....	.....	.....	Yes	No	.....
4	....	12	.....	.....	.....	600 00	120 00	100 00	60 00	150 00	30 00	120 00	Yes	Yes	.....
....	....	25	.....	25	.....	550 00	100 00	100 00	60 00	100 00	40 00	50 00	No	No	.....
6	....	45	.....	25	20	600 00	84 00	150 00	100 00	200 00	30 00	20 00	Yes	No	Yes
6	....	.....	.....	.....	12	600 00	96 00	154 00	100 00	175 00	30 00	95 00	No	No	.....
....	....	15	.....	.....	15	600 00	.....	†252 00	.....	.....	.....	348 00	No	No	.....

* By sickness and death. † Board.

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

MISCELLANEOUS WORKMEN.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Number of hours employed daily.	Earnings. Daily.	Earnings. Weekly.	Earnings. Monthly.	Actual income from July 1st, 1882, to July 1st, 1883.	Earnings of all others in family.
539	Jersey City Heights	Overseer in knitting mill	....	$2 00	.....	.....	$550 00	$1,500 00
536	Millville	Assistant superintendent	10	.....	$18 00	.....	.....	.....
19	Paterson	Overseer in flax spinning mill	10	.....	18 00	.....	850 00	200 00
216	Newark	Superintendent	18	.....	30 00	.....	1,500 00	.....
259	"	Tinsmith	10	2 50	.....	.....	725 00	.....
247	Watsessing	Porous plasters	9½	.....	5 00	.....	210 00	.....
3	Paterson	Painter	10	2 50	.....	.....	375 00	375 00
546	Jersey City	House painter	10	3 00	.....	.....	702 00	.....
17	Paterson	Wood turner	10	.....	9 00	.....	400 00	50 00
16	"	Bobbin maker	10	2 00	.....	.....	550 00	50 00
11	"	"	10	2 00	.....	.....	500 00	150 00
44	"	Card pattern maker	10	.....	15 00	.....	780 00	250 00
1	"	Pattern maker	10	.....	15 00	.....	700 00	.....
115	Phillipsburg	Boiler maker	10	2 50	.....	.....	700 00	.....
116	"	"	10	2 25	.....	.....	600 00	.....
65	Paterson	File cutter	10	.....	13 50	.....	600 00	300 00
529	Newark	" hardening	10	.....	13 00	.....	624 19	.....
533	Woodside	" cutter	10	.....	8 75	.....	400 00	.....
532	"	" "	10	.....	9 00	.....	420 00	.....
523	Belleville	" maker	10	.....	10 00	.....	490 00	.....
261	Newark	Saws, stiffening department	10	.....	15 00	.....	750 00	.....
122	Hackettstown	Carriage trimmer	10	.....	10 00	.....	500 00	.....
121	"	" body maker	10	.....	12 00	.....	550 00	.....
120	"	" painter	10	.....	10 00	.....	450 00	.....
119	"	" painter	10	.....	9 00	.....	400 00	.....
422	Millville	Dyer	12	.....	8 50	.....	.....	.....
200	Paterson	Hod carrier	10	2 50	.....	.....	600 00	100 00
551	Greenville	Weigher	....	2 50	.....	.....	270 00	.....
427	Millville	Harness maker	10	.....	9 00	.....	468 00	.....
488	Union Hill	Tailor	12	.....	8 00	.....	410 00	1,376 00
500	Newark	Pearl button maker	10	.....	10 50	.....	504 00	.....
366	Millville	Designer	....	.....	18 00	.....	681 00	.....
27	Paterson	Dress maker (female)	16	.....	5 00	.....	250 00	.....
18	"	" "	15	.....	4 00	.....	150 00	.....
20	"	Flax spinner "	....	.....	4 00	.....	200 00	.....
511	Newark	Hardware trimming, bag frames	10	.....	12 00	.....	.....	.....
256	"	Trunk maker, lining	10	.....	18 00	.....	1,077 89	.....
501	"	Bag maker	10	.....	12 00	.....	624 00	.....
559	New Brunswick	Dipper in brass and copper	10	.....	8 00	.....	.....	.....
254	Paterson	Newspaper reporter	....	.....	.....	.....	1,500 00	200 00
287	"	Compositor	10	.....	16 80	.....	850 00	.....
563	Newark	Paper carrier	....	.....	6 00	.....	300 00	.....
586	Elizabeth	Fireman	12	.....	15 75	.....	630 00	.....
585	"	Stove mounter	10	.....	15 00	.....	717 50	.....
580	Trenton	Turner in pottery	10	.....	.....	.....	365 71	.....
578	"	Plate maker in pottery	10	.....	.....	.....	680 00	.....
542	Jersey City	Potter	10	.....	15 00	.....	.....	.....

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

MISCELLANEOUS WORKMEN.—*Continued.*

Number in family.	Number working for wages.	Days Lost During the Year, not Including Legal Holidays.				Cost of Living for Self and Family During Year.							Accumulation of Savings.		
		Total.	From sickness.	From inability to obtain work.	From other causes.	Total cost.	Rent.	Groceries.	Meat and provisions.	Clothing.	Fuel.	Sundries.	In former years.	During the past year.	Have you run in debt during the past year?
4	4	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Yes	Yes	.....
....	....	.....	.....	.....	.....	$1,000 00	$150 00	.....	.....	.....	$40 00	$100 00	No	No	.....
7	3	12	2	.....	10	700 00	120 00	$100 00	$100 00	$200 00	25 00	175 00	....	....	.....
4	....	.....	.....	.....	.....	400 00	150 00	.....	.....	200 00	50 00	.....	Yes	Yes	.....
5	....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	Yes	.....
....	....	60	.....	.....	.....	200 00	.....	.....	.....	.....	50 00	.....	....	....	.....
3	2	.....	.....	.....	.....	750 00	156 00	132 00	133 00	200 00	20 00	100 00	No	No	Yes
4	....	70	12	40	18	.....	.....	.....	.....	.....	.....	.....	Yes	No	.....
5	....	20	7	6	7	450 00	84 00	75 00	75 00	80 00	20 00	100 00	No	No	.....
5	....	20	.....	6	14	400 00	96 00	80 00	75 00	100 00	20 00	100 00	Yes	Yes	.....
3	2	42	30	6	6	600 00	72 00	110 00	110 00	100 00	25 00	150 00	Yes	Yes	.....
7	3	.....	.....	.....	.....	600 00	150 00	100 00	75 00	200 00	25 00	50 00	Yes	Yes	.....
6	....	12	12	.....	.....	707 00	132 00	100 00	100 00	200 00	35 00	150 00	No	No	.....
6	....	25	.....	.....	.....	700 00	120 00	100 00	80 00	170 00	30 00	100 00	No	No	.....
6	....	30	.....	20	10	600 00	120 00	100 00	80 00	150 00	30 00	170 00	No	No	.....
....	5	30	10	.....	20	600 00	150 00	100 00	75 00	200 00	25 00	50 00	Yes	Yes	.....
2	....	16	.....	.....	.....	.....	96 00	.....	.....	.....	.....	.....	....	....	.....
....	....	30	.....	.....	.....	390 00	.....	*260 00	.....	60 00	.....	70 00	No	Yes	.....
....	....	35	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....
6	....	20	10	.....	10	552 00	60 00	251 00	156 00	50 00	30 00	.....	No	No	Yes
3	....	.....	.....	.....	.....	800 00	144 00	250 00	75 00	200 00	20 00	120 00	No	No	Yes
6	....	60	10	45	5	500 00	144 00	.....	.....	.....	.....	.....	No	No	.....
5	....	63	10	50	3	500 00	144 00	.....	.....	.....	.....	.....	Yes	Yes	.....
4	....	40	.....	30	10	500 00	120 00	.....	.....	.....	30 00	.....	Yes	No	Yes
....	....	35	.....	30	5	400 00	.....	*225 00	.....	100 00	.....	75 00	No	No	.....
4	....	3	2	.....	.....	.....	132 00	.....	.....	.....	.....	.....	Yes	Yes	.....
6	2	75	.....	75	.....	700 00	120 00	180 00	140 00	160 00	40 00	60 00	No	No	.....
3	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	....	.....
4	....	.....	.....	.....	.....	468 00	150 00	.....	.....	.....	.....	.....	No	No	Yes
6	4	.....	.....	.....	.....	1,376 00	.....	400 00	400 00	300 00	27 00	228 00	No	No	.....
5	....	100	15	.....	.....	.....	84 00	.....	.....	.....	.....	.....	Yes	No	Yes
3	....	43	2	.....	.....	360 00	.....	.....	.....	83 00	40 00	78 00	Yes	Yes	.....
....	....	50	12	.....	.....	250 00	.....	.....	.....	50 00	.....	.....	No	No	.....
....	....	100	20	60	20	150 00	.....	.....	.....	.....	.....	.....	No	No	.....
....	....	12	.....	.....	12	200 00	.....	.....	.....	.....	.....	.....	No	No	.....
....	....	130	.....	.....	.....	.....	.....	.....	.....	40 00	.....	.....	No	No	Yes
6	....	18	.....	.....	.....	1,027 37	132 00	.....	.....	.....	.....	.....	No	No	.....
....	....	.....	.....	.....	.....	575 00	84 00	250 00	250 00	35 00	15 00	1 80	....	Yes	.....
....	....	.....	.....	.....	.....	.....	60 00	.....	.....	.....	.....	.....	Yes	No	Yes
6	3	.....	.....	.....	.....	3,000 00	.....	100 00	100 00	10 00	.....	2,790 00	....	....	Yes
....	....	.....	.....	.....	.....	750 00	.....	.....	.....	.....	.....	.....	No	No	.....
....	....	.....	.....	.....	.....	300 00	.....	.....	.....	.....	.....	.....	No	No	.....
3	....	60	13	47	.....	600 00	110 00	104 00	308 00	40 00	34 00	14 00	No	No	Yes
....	....	25	.....	25	.....	680 08	90 00	212 68	218 40	60 00	30 00	63 00	No	No	.....
2	....	.....	.....	.....	.....	406 32	96 00	90 27	100 08	59 00	34 30	26 17	Yes	No	Yes
4	....	120	30	90	.....	326 00	100 00	.....	.....	.....	38 00	.....	Yes	Yes	.....
4	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	No	No	.....

* Board.

TABLE No. 2.—ESTABLISHMENTS.

GLASS—(Bottle and Vial.)

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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 per week.*	Lowest wages paid per week.*	Average wages paid per week.*	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Months in blast.	Remarks.
313	Bridgeton..... Green glass.	.....	67	....	....	....	....	....	....	....	....	.....	.....	.....	.....	....	No...	10	Apprentices' wages average (for 5 years) $40 per month. Pot makers and blacksmiths worked all the year; the rest, only 10 months, which is considered full time in glass factories. The price for blowing is the same in all the factories in the state, and is governed by the Glass Blowers' League. The difference in annual earnings is principally due to difference in skill and to the amount of glass to work, which varies.
		Blowers.....	....	20	....	....	....	9	20	....	3	$35 00	$28 00	$30 00	$1,100	8½			
		Tending boys.....	....	....	....	20	....	....	....	20	....	5 00	2 40	3 00	120	8½			
		Master shearer.....	....	1	....	....	....	....	....	1	....	18 00	.....	18 00	750	16			
		Shearers.....	....	2	....	....	....	....	....	2	....	10 00	8 00	9 00	300	12			
		Engineers.....	....	2	....	....	....	....	....	2	....	.....	.....	12 00	600	12			
		Packers.....	....	4	....	....	....	....	....	4	....	10 00	7 00	7 50	300	10			
		Lear tender.....	....	1	....	....	....	....	....	1	....	.....	.....	7 50	300	8½			
		Pot maker.....	....	1	....	....	....	....	....	1	....	.....	20 00	.....	1,000	10			
		Blacksmith.....	....	1	....	....	....	....	....	1	....	.....	20 00	.....	1,000	10			
		Laborers.....	....	5	....	....	....	....	....	5	....	.....	.....	6 00	300	10			
		Stopper grinders.....	....	1	....	....	....	....	1	....	....	.....	.....	18 00	750	10			
		Superintendent.....	....	1	....	....	....	....	....	....	....	.....	.....	.....	800				
314	Bridgeton..... Green glass.	.....	57	....	....	20	....	6	15	34	3	.....	.....	.....	.....	....	No...	10	
		Blowers.....	....	15	....	....	....	6	....	....	....	36 00	28 00	30 00	1,100	8½			
		Tending boys.....	....	15	....	20	....	....	....	....	....	5 00	2 40	3 00	120	8½			
		Master shearer.....	....	1	....	....	....	....	....	....	....	18 00	18 00	18 00	700	15			
		Shearer.....	....	2	....	....	....	....	....	....	....	10 00	8 00	9 00	360	12			
		Engineers.....	....	2	....	....	....	....	....	....	....	12 00	12 00	12 00	600	12			
		Packers.....	....	3	....	....	....	....	....	....	....	10 00	7 00	7 50	300	10			
		Laborers.....	....	3	....	....	....	....	....	....	....	.....	.....	6 00	300	10			
		Pot makers.....	....	1	....	....	....	....	....	....	....	.....	.....	20 00	500				
		Lear tender.....	....	1	....	....	....	....	....	....	....	.....	.....	7 50	250	9			
		Blacksmith.....	....	1	....	....	....	....	....	....	....	.....	.....	20 00	500	10			
		Superintendent.....	....	1	....	....	....	....	....	....	....	.....	.....	.....	800				
		Box maker.....	....	1															
311	Millville..... Green glass.	.....	477	....	....	....	....	....	....	....	....	.....	.....	.....	.....	....	No...	10	
		Blowers.....	....	94	....	....	....	26	....	....	3	38 00	27 00	30 00	1,200				
		Tending boys.....	....	....	....	165	....	....	....	....	....	8 00	2 82	4 20	168				
		Master shearers.....	....	5	....	....	....	....	....	....	....	.....	.....	.....	750				
		Shearers.....	....	10	....	....	....	....	....	....	....	10 00	8 00	9 00	360				
		Pot makers.....	....	2	....	....	....	....	....	....	....	.....	.....	.....	900				
		Packers.....	....	16	....	....	....	....	....	....	....	12 50	10 00	10 00	400				
		Lear tenders.....	....	3	....	....	....	....	....	....	....	.....	.....	10 38	425				
		Mould workers.....	....	12	....	....	....	....	....	....	....	18 00	12 00	15 00	750				
		Blacksmiths.....	....	2	....	....	....	....	....	....	....	18 00	12 00	15 00	750				

		Engineers		2										12 00	600						
		Superintendents		3								30 00	15 00	20 00	1,000						
		Clerks		12								15 00	10 00	12 00	600						
		Laborers		90										8 52	400						
		Box makers		4								18 00	12 00	15 00	600						
		Masons		3										15 00	700						
		Bookkeepers		2										25 00	1,200						
		Carpenters		2										15 00	700						
259	Bridgeton		51																		
	Green glass.	Blowers		12				4			3	120 00	90 00	110 00	1,075						Wages are given for the month.
		Tending boys				15						25 00	11 00	14 00	150						
		Packers		2								40 00	35 00	37 50	425						
		Master shearer		1										80 00	900						
		Shearers		2								50 00	45 00	47 50	425						
		Box makers		1										50 00	575						
		Laborers		6										30 00	360						
		Mill hands		2										35 00	400						
		Blacksmiths		1										60 00	720						
		Engineers		2										50 00	600						
258	Salem		29														No...	10			Wages are given for the month.
	Green glass.	Bottle blowers		4								110 00	90 00	100 00	1,000						
		Tending boys										20 00	10 00	15 00	150						
		Packers										40 00	34 00	37 00	370						
		Master shearer												80 00	800						
		Helpers												35 00	350						
		Laborers												30 00	300						
285	Camden		47														No...	5			Wages are given for the month.
	Green glass.	Blowers		12				4			3	110 00	80 00	90 00	600						
		Shearers										50 00	40 00	45 00	315						
		Master shearer												90 00	560						
		Blacksmiths												60 00	420						
		Engineers												50 00	350						
		Overseer												100 00	700						
		Bookkeeper												75 00	515						
		Laborers												33 00	231						
312	Bridgeton		135														No...	9½			Average blast, about 9½ months ; 7 days' strike.
	Green glass.	Blowers		36				16				125 00	90 00	90 00	855	8½					Wages are given for the month.
		Foundry boys				50						25 00	11 00	15 00	128	8½					
		Master shearer		2								72 00	72 00	72 00	675	14					
		Shearers		4								40 00	30 00	35 00	400	12					
		Engineers		2										50 00	600	12					
		Packers		8										32 00	300	10					
		Pot makers		1										60 00	650	10					
		Blacksmith		1										60 00	650	10					
		Laborers		10										25 00	275	10					
		Superintendent		1											700						
		Clerks		3										35 00	420	12					
		Box makers		2										45 00	412						
281	Winslow		78						23								No...	10			Wages are given for the month.
	Green glass.	Blowers		15				8			3	125 00	90 00	100 00	1,000	8					
		Master shearer		1										90 00		15					
		Shearers		2								†50 00	40 00	45 00	450	10					
283	Tansboro		70															9½			Wages are given for the month.
	Green glass.	Blowers		14				12			3	120 00	80 00	100 00	950	8½					
		Master shearer		1										80 00	800	15					
		Shearers		2								†60 00	40 00	45 00	450	10					
		Engineers		2										50 00	500	12					

* Wages given for the week unless otherwise stated under "Remarks." † Night workmen (15 hours.)

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

GLASS (Bottle and Vial)—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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 per month.	Lowest wages paid per month.	Average wages paid per month.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Months in blast.	Remarks.
283	Tansboro	Laborers	....	8	....	....	....	....	....	....	....	.....	.....	$30 00	$350	10			
	Green glass.	Blacksmith	....	1	....	....	....	....	....	....	....	.....	.....	60 00	700	10			
235	Woodbury	.....	78	....	....	....	....	....	....	....	....	.....	.....	.....	.....	....	No...	10	
	Green glass.	Blowers	....	30	....	....	....	4	....	....	....	$130 00	$110 00	120 00	1,080	8½			
		Master shearer	....	1	....	....	....	....	....	....	....	.....	.....	100 00	900	15			
		Shearers	....	2	....	....	....	....	....	....	....	40 00	50 00	45 00	400	12			
		Packers	....	3	....	....	....	....	....	....	....	.....	.....	40 00	320	10			
		Box maker	....	1	....	....	....	....	....	....	....	.....	.....	50 00	450	10			
		Pot maker	....	1	....	....	....	....	....	....	....	.....	.....	75 00	850	10			
		Engineers	....	2	....	....	....	....	....	....	....	.....	.....	50 00	600	12			
		Laborers	....	6	....	....	....	....	....	....	....	.....	.....	33 00	400	10			
		Blacksmith	....	1	....	....	....	....	....	....	....	.....	.....	60 00	700	10			
284	Williamstown	.....	182	....	....	....	....	....	....	....	....	.....	.....	.....	.....	....	No...	9½	
		Blowers	....	36	....	....	....	30	....	....	3	130 00	80 00	100 00	950	8½			
		Tending boys	....	....	....	70	....	....	....	....	....	18 00	12 00	14 00	133	8½			
		Shearers	....	4	....	....	....	....	....	....	....	.....	.....	45 00	450	12			
		Master shearers	....	2	....	....	....	....	....	....	....	.....	.....	80 00	800	14			
		Box makers	....	3	....	....	....	....	....	....	....	.....	.....	50 00	500	10			
		Packers	....	8	....	....	....	....	....	....	....	40 00	35 00	38 00	360	10			
		Blacksmith	....	1	....	....	....	....	....	....	....	.....	.....	60 00	690	10			
		Engineers	....	2	....	....	....	....	....	....	....	.....	.....	50 00	550	12			
		Overseer	....	1	....	....	....	....	....	....	....	.....	.....	.....	800				
		Clerks	....	6	....	....	....	....	....	....	....	.....	.....	48 00	575	12			
		Bookkeeper	....	1	....	....	....	....	....	....	....	.....	.....	.....	1,000				
		Laborers	....	8	....	....	....	....	....	....	....	.....	.....	30 00	350	10			
288	Glassboro	.....	255	....	....	....	....	....	....	....	....	.....	.....	.....	.....	....	No...	10	
	Green glass.	Blowers	....	75	....	....	....	35	....	....	3	130 00	100 00	112 00	1,100	8½			
		Tending boys	....	....	....	75	....	....	....	....	....	.....	.....	15 00	150	8½			
		Master shearers	....	3	....	....	....	....	....	....	....	100 00	80 00	87 00	880	15			
		Box makers	....	3	....	....	....	....	....	....	....	.....	.....	60 00	600				
		Packers	....	12	....	....	....	....	....	....	....	.....	.....	40 00	400				
		Shearers	....	6	....	....	....	....	....	....	....	50 00	45 00	48 00	480				
		Pot maker	....	1	....	....	....	....	....	....	....	.....	.....	80 00	900	10			
		Blacksmiths	....	2	....	....	....	....	....	....	....	.....	.....	50 00	600	10			
		Engineers	....	2	....	....	....	....	....	....	....	.....	.....	50 00	600	12			
		Clerks	....	6	....	....	....	....	....	....	....	.....	.....	50 00	600				

		Laborers		20										30 00	350					
		Masons		2										60 00	720					
		Carpenter		1										60 00	720					
		Bookkeeper		1											1,200					
269	South Jersey green glass factories.—Total.		2175					291	665	3								10		
		Blowers		477								130 00	85 00	110 00	1,100	8¼				
		Tending boys				705						24 00	10 00	14 00	140	8¼				
		Master shearers		25											750	15				
		Shearers		52								*50 00	40 00	45 00	450	10				
		Pot makers		13											800	10				
		Blacksmiths		16											700	10				
		Managers		11											1,100	12				
		Engineers		27											600	12				
		Clerks		51											500	10				
		Laborers		258											350	10				
		Box makers		20								60 00	45 00	50 00	500	10				
		Masons		17											600	10				
		Carpenters		6											600	10				
		Bookkeepers		12											1,000					
		Packers		95								50 00	35 00	42 00	420	10				

GLASS (Window.)

280	Millville		102						46									5	Five months' strike. Blowers, gatherers, flatteners and cutters belong to an association. Wages the same at all factories east of Alleghenies. During the strike (September to February) the members received from the association $6 to $10 weekly, according to size of family.
	Window glass factories.	Blowers		16								130 00	90 00	100 00	500	10	†Yes		
		Gatherers		16								84 50	58 00	65 00	325	10	†Yes		
		Flatteners		4								130 00	90 00	100 00	500	11	†Yes		
		Flattener's helpers		6										44 00	220	11			
		Cutters		8								90 00	75 00	85 00	425	11	†Yes		
		Master shearers		2										100 00	500	15			
		Shearers		6								*50 00	40 00	46 00	230	10‡			
		Second hands		16								50 00	40 00	45 00	225	11			
		Roller boys		2										20 00	100	11			
		Engineers		2								60 00	44 00	52 00	260	12			
		Box makers		3								50 00	40 00	45 00	225	10			
		Blacksmith		1										50 00	250	10			
		Laborers		20										34 00	170	10			
272	Camden, Cumberland, Salem and Gloucester Cos. Window glass factories.	Total, 5 firms	460																
275	Malaga		33														No...	7	This factory was run by Belgian blowers during strike which was for 10 per cent. advance. Belgians worked at last year's prices, but they did not prove satisfactory. They have all been displaced by union men.
	Window glass factories.	Blowers		3								80 00	50 00	60 00	400	10			
		Gatherers		3								52 00	32 00	38 00	250	10			
		Cutters		4								60 00	40 00	50 00	350	10			
		Flattener		1								80 00	50 00	60 00	400	12			
		Flattener's helpers		2										44 00	300	12			
		Second hands		6										44 00	300	12			
		Master shearer		1										60 00	400	15			
		Shearers		3								*50 00	40 00	46 00	325	10			
		Roller boy		1										20 00	140	8			
		Box maker		1										40 00	280	10			
		Laborers		8										34 00	238	10		8½	
273	Woodbury		102						46										Gatherers learn to blow.
	Window glass factories.	Blowers		16								110 00	80 00	85 00	700				
		Gatherers		16								71 00	52 00	54 00	425				
		Cutters		8								90 00	85 00	88 00	725				
		Flatteners		4								110 00	80 00	85 00	700				
		Flattener's helpers		6										44 00	352				

* Night workers. † Increased 10 per cent. ‡ Work 10 to 15 hours per day.

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

GLASS (Window)—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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 per week.	Lowest wages paid per week.	Average wages paid per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Months in blast.	Remarks.
273	Woodbury	Second hands	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	$45 00	$360	.....	.....	.....	Wages are given for the month.
	Window glass factories.	Master shearers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	85 00	700				
		Shearers	.....	6	.....	.....	.....	.....	.....	.....	.....	*$50 00	$40 00	46 00	708				
		Roller boys	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	20 00	160				
		Engineers	.....	2	.....	.....	.....	.....	.....	.....	.....	50 00	40 00	45 00	360				
		Box makers	.....	3	.....	.....	.....	.....	.....	.....	.....	50 00	40 00	45 00	360				
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	50 00	400				
		Laborers	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	30 00	250				
278	Bridgeton		102	.....	.....	.....	.....	.....	46	.....	.....	.....	.....	.....	.....	.....	.....	8½	Wages are given for the month.
	Window glass factories.	Blowers	.....	16	.....	.....	.....	.....	.....	.....	.....	125 00	90 00	95 00	800				
		Gatherers	.....	16	.....	.....	.....	.....	.....	.....	.....	80 00	50 00	60 00	500				
		Flatteners	.....	4	.....	.....	.....	.....	.....	.....	.....	125 00	90 00	95 00	800				
		Flattener's helpers	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	44 00	350				
		Second hands	.....	16	.....	.....	.....	.....	.....	.....	.....	50 00	40 00	46 00	370				
		Cutters	.....	8	.....	.....	.....	.....	.....	.....	.....	100 00	90 00	96 00	832				
		Master shearers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	95 00	800				
		Shearers	.....	6	.....	.....	.....	.....	.....	.....	.....	*50 00	40 00	46 00	832				
		Engineers	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	50 00	425				
		Box makers	.....	3	.....	.....	.....	.....	.....	.....	.....	50 00	40 00	45 00	350				
		Blacksmith	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	50 00	425				
		Laborers	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	30 00	250				
		Roller boys	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	20 00	170				
271	Malaga		51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	†Yes	4½	Wages are given for the month.
	Window glass factories.	Blowers	.....	8	.....	.....	.....	.....	.....	.....	.....	120 00	85 00	90 00	400				
		Gatherers	.....	8	.....	.....	.....	.....	.....	.....	.....	78 00	55 00	58 00	250				
		Cutters	.....	4	.....	.....	.....	.....	.....	.....	.....	75 00	80 00	90 00	400				
		Flatteners	.....	2	.....	.....	.....	.....	.....	.....	.....	120 00	85 00	90 00	400				
		Flattener's helpers	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	44 00	300				
		Second hands	.....	8	.....	.....	.....	.....	.....	.....	.....	50 00	40 00	45 00	305				
		Master shearer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	90 00	400				
		Shearers	.....	3	.....	.....	.....	.....	.....	.....	.....	*50 00	40 00	45 00	300				
		Roller boy	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	20 00	90				
		Engineer	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	50 00	225				
		Box makers	.....	2	.....	.....	.....	.....	.....	.....	.....	50 00	40 00	45 00	305				
		Laborers	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	34 00	150				

270	South Jersey window glass factories.—Recapitulation.		1,060															†Yes	5	Wages are given for the month.
		Blowers		171									130 00	80 00	95 00	475				
		Gatherers		171									84 00	47 00	60 00	300				
		Cutters		84									100 00	85 00	90 00	495				
		Flatteners		40									130 00	80 00	95 00	495				
		Flattener's helpers		60										44 00	44 00	220				
		Second hands		171									50 00	40 00	45 00	225				
		Master shearers		20									130 00	80 00	95 00	495				
		Shearers		61									50 00	40 00	46 00	230				
		Engineers		20											52 00	260				
		Box makers		30									50 00	40 00	45 00	225				
		Blacksmiths		10											50 00	250				
		Laborers		202											32 00	160				
		Roller boys		20											20 00	100				

GLASS (Flint.)

309	Millville. Flint glass.		852														No	10	Ran 10 months, which is full time.
		Blowers		139				58			3	‡130 00	‡70 00	‡100 00	1,000	9			Wooden-mould blowers get $4 per day.
		Tending boys				400						6 60	3 74	4 00	160	9			Shearers work 30 days per month.
		Shearers		16										18 62	800	12			
		Packers		20								15 00	12 00	13 00	520	10			
		Batch makers		4										16 00	640	10			
		Pot makers		3								20 00	13 00	18 00	700	10			
		Blacksmiths		8								20 00	15 00	16 00	640	10			
		Mill hands		3										10 08	400	10			
		Mould makers		27				6				24 00	12 00	16 00	800	10		12	Work the whole year.
		Stopper grinders		25		10						24 00	18 00	20 00	900	10			
		Lamp makers		47	14							18 00	12 00	15 00	650	10			
		Glass cutters		22								16 00	14 00	15 00	750	10		12	" "
		Engravers		17				3						20 00	1,000	12		12	" "
		Laborers		60										8 50	425	10		12	" "
		Engineers		2										12 00	600	10		12	" "
		Carpenters		3										15 00	700	10		12	" "
		Box makers		11										15 00	600	10			
		Superintendents		3								30 00	20 00	25 00	1,200			12	" "
		Clerks		16								15 00	10 00	12 00	600	10		12	" "
		Book-keepers		2											1,200	10			
		Women			40										140	10			
267	Glassboro. Flint glass.		93														No	10	Ran 10 months.
		Blowers		20				10			3	‡100 00	‡80 00	‡90 00	900				
		Tending boys				40						6 00	3 00	3 50	150				
		Shearers		2										18 00	700				Work 30 days per month.
		Packers		3								12 00	8 00	10 00	400				
		Batch makers		2										12 00	480				
		Pot maker		1										15 00	750				Work the whole year.
		Blacksmith		1										15 00	600				
		Mill hand		1										7 50	300				
		Laborers		10										7 50	300				
		Carpenter		1										15 00	600				
		Box maker		1										12 00	480				
		Manager		1										25 00	1,000				
363	Jersey City. Flint glass.		80	50		30			45	35		18 00	9 00	13 00		10	No		
268	Bridgeton. Rough and plate glass.		25														No	12	In 12 months only lost 6 days.
		Master shearer		1										75 00	900	15			Wages are given for month.
		Shearers		3								60 00	45 00	50 00	600	10–15			
		Cutter		1										60 00	672	10			
		Laborers		20										30 00	360	10			

* Night shearer. † Increased 10 per cent. ‡ Per month.

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

GLASS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per week.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
136	Newark		5															*8	†Yes		Lost time amounted to 1 week out of every 4. Slack business
	Coach lamps.	Cutters		3				3	$12 00	$9 00	$11 25	$450									
		Polishers		2				2	5 00	3 00	4 00	160									
193	Newark		32	18	14			32	25 00	9 00	15 00	775				$260	$3 75	*10	†Yes		
	Watch crowns.																				

SILK.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per week.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
12	Paterson		996					667										$60			Ribbon weavers lose 10 or 12 days putting in a new warp, every time their warps run out; so, if they work all the year, they only make about three-quarters time, which explains discrepancy between weekly and yearly earnings.
		Weaving—																			
		Ribbon		70			70		$24 00	$12 00	$18 00	$575								80	
		Broad silk		129	30		129		15 00	8 00	11 00	400	$13 00	$7 00	$10 00	$350				90	
		Warping—																			
		Broad silk		8	10						10 00	450			10 00	450				30	
		Ribbon		4							12 00	560								30	
		Quilling			30								4 00	3 00	3 75	170				30	
		Winding—																			
		Soft silk			170										5 50	250				30	
		Hard silk			170										5 50	250				30	
		Doubling—																			
		Soft silk			15										5 50	250				30	
		Hard silk			100										5 50	250				30	
		Finishing			15								10 00	7 00	8 50	400				30	
		Spinning room				100		100	5 00	2 00	2 50	120					$2 50			30	
		Dyeing		20					‡20 00		9 00	420									
		Overseers		25					40 00	25 00	30 00	1500									
13	Paterson		633				125	508													Introduction of a new warp, the "horizontal," increased wages
		Weaving—																			
		Hand loom		30					15 00	11 00	12 00	450						60		96	
		Power loom		75	20				13 50	8 00	11 00	400	12 00	8 00	10 00	375				48	
		Quilling			20								4 00	3 00	3 50	200				24	
		Warping		16							12 00	500								24	

		Winding			250										5 50	250				24	
		Doubling			100										5 50	250				24	
		Finishing			12								10 00	7 00	8 00	350				24	
		Spinning				75			5 00	2 75	3 00	130								24	
		Overseers		15					40 00	15 00	25 00	900									
		Dyeing		20					10 00	8 00	9 00	400								24	
14	Paterson		636															§60			Hard and soft silk workers are included under warpers, winders and doublers.
		Weaving—																			
		Hand loom			30				15 00	11 00	12 00	450								90	
		Power loom		75	25				13 00	9 00	11 00	425	12 00	9 00	10 00	375				48	
		Quilling			20								4 00	3 00	3 50	200				24	
		Warping		8	8						10 00	450			10 00	450				24	
		Winding			250										5 20	250				24	
		Doubling			100										5 20	250				24	
		Finishing			12									10 00	7 50	350				24	
		Dyeing		18							9 00	400								24	
		Overseers		15					40 00	15 00	25 00	900									
		Spinning				75			5 00	2 75	3 00	250								24	
39	Morris county		244				100											60	No		Weavers lost from 50 to 75 days; others, about 10 per cent.
		Weavers		30	70				15 00	7 50	10 00	475	10 00	6 00	8 50	400					
		Quilling			10								5 00	3 00	4 00	250					
		Warping		7	3				12 00	9 00	10 00	450									
		Winding			20										5 50	225					
		Finishing			6										7 50	350					
		Dyeing		10							8 50	400									
		Spinning				40					3 00	250									
		Doublers			40										5 50	250					
		Overseers		8								850									
		Throwster department	160								11 00				8 00		4 50				
15	Paterson		786				280	496													Formerly, only one person ran a single loom; now, several run two power looms. Hard and soft silk workers are included under warpers, winders and doublers.
		Weaving—																			
		Hand loom		80					15 00	11 00	12 00	450								96	
		Power loom		120					13 00	9 00	11 00	425								90	
		Ribbon loom		50					24 00	12 00	18 00	575								75	
		Dress-goods loom		15	15				12 00	9 00	11 00	400	12 00	9 00	10 00	375				30	
		Quilling			20								4 00	3 00	3 50	200				30	
		Warping		20							10 00	450								30	
		Winding			275										5 50	250				30	
		Finishing			18								10 00	7 00	7 50	350				30	
		Dyeing		30					10 00	8 00	9 00	400								30	
		Overseers		18					40 00	25 00	15 00	900									
		Spinning				100			5 00	3 00	2 75	250								30	
		Doubling			125										5 50	250				30	
16 to 24	Paterson, 38 firms		7842				2559	5039													
		Weaving—																			
		Hand loom		479																	
		Power loom		1325	265																
		Ribbon loom		490																	
		Quilling			178																
		Warping		143	37																
		Winding			2395																
		Finishing			151																
		Dyeing		256																	
		Overseers		186																	
		Spinning				840															
		Doubling			980																

* Per day. † 10 per cent. increase. ‡ Boss dyer, $20 weekly; no lost time. § On Saturdays, 7½; other days, 10½.

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

SILK—*Continued.*

Office number	Location.	Subdivision of Trade	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per week.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
317	Hudson County.... Dress silks.	.....	150	75	30	35	6	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60	No		
		Weaving.....	.....	75	....	25	..	....	....	*$2 50	*$1 50	$12 00										
		Winding.....	.....	....	20	....	..	....	....	.....	.....	.....	.....	$9 00	$6 00	$8 00	.....	$6 00				
		Spooling.....	.....	....	....	....	10															
		Doubling.....	.....	....	....	15																
		Cleaning.....	.....	....	....	....	6															
316	Hudson County.... Dress silks.	.....	235																			
		Weavers.....	.....	62	63	....	..	....	....	15 00	9 00	12 00										
		Winders.....	.....	....	24	....	..	....	....	.....	.....	.....	.....	9 00								
		Spoolers.....	.....	....	....	....	12	....	....	.....	.....	.....	.....	6 00								
		Cleaners.....	.....	....	12	....	..	....	....	.....	.....	.....	.....	15 00								
362	Jersey City..... Silk ribbons.	.....	150	35	50	....	65	125	25	25 00	15 00	20 00	.....	12 00	6 00	9 00	.....	5 00	60	.....	.....	More than two thirds are women and girls, the latter predominating. Winding and spooling is done by girls; wages, $5 to $6 per week. Spinners average $9; expert hands running up to $12. Weavers, generally men, average $20.
25	Paterson.....	.....	330	....	....	....	..	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60	.....	.....	Ran nearly full time. Lost time only in exceptional cases.
		Finishers.....	.....	125	....	....	..	....	....	12 00	9 00	11 00	$500									
		Dyers.....	.....	80	....	....	..	....	....	15 00	10 00	12 00	600									
		Machine workers.....	.....	70	....	....	..	....	....	12 00	9 00	11 00	500									
		Budlers.....	....	30	....	....	..	....	....	12 00	9 00	11 00	500									
		Helpers.....	.....	30	....	....	..	....	....	10 00	7 00	8 00	375									
		Boss dyer.....	.....	4	....	....	..	....	....	30 00	20 00	25 00	1,200									
26	Paterson..... Several firms—Throwsters, Soft silk winders, Braiders, &c.	.....	1500																			
		Men and boys	.....	250	....	300	..	....	....	10 00	5 00	7 50	300									
		Women.....	.....	....	950	....	..	....	....	9 00	4 50	6 00	275									
		Bosses.....	.....	....	....	....	..	....	....	30 00	15 00	20 00										

27	Paterson		3000	400	2000	600	..	....	....	10 00	7 00	8 00	350	9 00	4 00	5 00	250	3 00	60	.....	.....	Wages reduced in a few individual cases. 10 per cent. of time lost.
	13 firms—Throwsters, Soft silk winders, Braiders, &c.																					
40	Morris County		300	50	200	50	..	....	....	12 00	7 00	8 00	375	9 00	4 00	5 50	275	2 25–2 75	60	No	.....	Ran nearly full time.
	Throwsters, Soft silk winders, Braiders, &c.																					
29	Paterson		15058	....	....	....	..	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	Wages of weavers have been largely reduced within the past 5 years, and, on account of lost time, the wages during the past year have been much lower than formerly, except in case of ribbon weavers. Hand-loom weavers have received about 30- per cent. less in wages, power loom 20 per cent., and nearly all 10 per ct. less.
	Silk mills—Summary.	Weavers—																				
		Hand loom	.....	....	....	....	..	....	....	.....	.....	.....	450									
		Power loom	.....	....	....	....	..	....	....	.....	.....	.....	425									
		" dress goods	.....	....	....	....	..	....	....	.....	.....	.....	400									
		Ribbon loom	.....	....	....	....	..	....	....	.....	.....	.....	575									
		Other employes—																				
		Men	.....	....	....	....	..	....	....	.....	.....	.....	300–400									
		Women	.....	....	....	....	..	....	....	.....	.....	.....	250–350									
		Boys	.....	....	....	....	..	....	....	.....	.....	.....	200–250									
		Overseers	.....	....	....	....	..	....	....	.....	.....	.....	900									

COTTON AND WOOL.

302	Mays Landing		212	89	81	52	10	....	....	.....	.....	.....	.....	.....	.....	.....	.....	$2 50	*10	No	.....	Ran nearly full time.
	Cotton mill. 1500 spindles.	Weavers	.....	28	8	....	..	....	....	$7 00	$5 00	$6 00	$300	$6 00	$4 00	$5 00	$250					
		Weaver boss	.....	1	..	....	..	....	....	.....	.....	20 00	1,000									
		Loom fixer	.....	1	....	....	..	....	....	.....	.....	10 00	500									
		Carding	.....	10	20	3	..	....	....	8 00	4 00	5 00	250	5 00	3 00	4 00	200					
		Card boss	.....	1	....	....	..	....	....	.....	.....	20 00	1,000									
		Card grinder	.....	1	....	....	..	....	....	.....	.....	8 00	400									
		Card stripper	.....	2	....	....	..	....	....	7 00	5 00	6 00	300									
		Card tender	.....	12	....	....	..	....	....	5 00	3 00	4 00	200									
		Card picker	.....	1	....	....	..	....	....	.....	.....	7 00	350									
		Speed tender	.....	....	10	....	..	....	....	.....	.....	5 00	250									
		Spinning	.....	....	10	40	10	....	....	.....	.....	.....	.....	6 00	4 00	5 00	250					
		Boss	.....	....	....	....	..	....	....	.....	.....	20 00	500									
		Spinners	.....	10	....	....	..	....	....	.....	.....	12 00	600									
		Doffers and backers	.....	....	9	9	..	....	....	.....	.....	.....	.....	4 00	2 00	3 00	150					
		Frame tenders	.....	....	20	....	..	....	....	.....	.....	.....	.....	6 00	4 00	5 00	250					
		Warpers	.....	1	4	....	..	....	....	8 00	6 00	7 00	350	7 00	5 00	6 00	300					
		Watchmen	.....	2	....	....	..	....	....	.....	.....	9 00	450									
		Machinists	.....	10	....	....	..	....	..	.....	.....	12 00	600									
		Laborers	.....	8	....	....	..	....	....	.....	.....	7 00	350									
		Overseers	.....	1	....	....	..	....	....	.....	.....	30 00	1,500									
303	Gloucester City		381																			
	Cotton mill. 1700 spindles. Gingham works.	Weavers	.....	20	180	....	..	....	....	8 00	5 00	6 00	300	7 00	4 00	5 00	250					
		Spinning room—																				
		Speeders	.....	....	12	....	..	....	....	.....	.....	.....	.....	6 00	4 00	5 50	275					

* Per day.

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

COTTON AND WOOL—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
303	Gloucester City....	.....	381																			
	Cotton mill.	Spinning room—																				
	1,700 spindles.	Spinners.....	....	....	10	30	25	....	....	$10 00	$6 00	$8 00	$400	$7 00	$4 00	$5 00	$250					
	Gingham works.	Frame tenders.....	....	....	20	....	....	....	....	.....	.....	.....	.....	5 00	4 00	3 00	150					
		Others.....	....	....	2	8	10	....	....	.....	.....	.....	.....	.....	.....	4 00	200					
		Carding room—																				
		Strippers.....	....	2	....	....	....	....	....	8 00	5 00	6 00	300									
		Card grinders.....	....	1	....	....	....	....	....	.....	.....	8 00	400									
		Pickers.....	....	2	....	....	....	....	....	8 00	6 00	7 00	350									
		Card tenders.....	....	8	16	12	....	....	....	7 00	4 00	5 00	250	4 00	2 00	3 00	150					
		Warpers.....	....	1	5	....	....	....	....	10 00	4 00	5 00	500	.....	.....	6 00	300					
		Watchmen.....	....	2	....	....	....	....	....	.....	.....	9 00	350									
		Engineer.....	....	1	....	....	....	....	....	.....	.....	11 00	550									
		Firemen.....	....	1	....	....	....	....	....	.....	.....	10 00	500									
		Carpenters.....	....	2	....	....	....	....	....	.....	.....	13 50	675									
		Machinists.....	....	5	....	....	....	....	....	.....	.....	12 00	600									
		Laborers.....	....	8	....	....	....	....	....	.....	.....	7 00	350									
50	Lambertville.....	.....	174	103	22	10	39															
	Cotton. Spinning	Speeders.....	....	87	1	10	....	....	....	9 00	12 00	11 00	500	8 00	5 00	6 00	275	$3 50	11	No...	30	
	Co.	*Drawing-frame tenders..*	....	....	*1*	....	*10*	....	....	*9 00*	*12 00*	*11 00*	*500*	*4 00*	*3 50*	3 75	250					
		Slubbers.....	....	1	....	....	....	....	....	.....	.....	.....	.....	.....	.....	3 50	175					
		Others.....	....	15	20	....	29	....	....	9 00	10 00	8 00	350	6 00	3 50	4 00	200					
307	Millville.....	.....	689	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	2 to 3	*60	.....		
	Cotton mill.	Weavers.....	....	40	190	....	....	....	....	8 00	4 00	6 50	300	.....	.....	5 00	230				†25	
	30,000 spindles.	Weaver boss.....	....	1	....	....	....	....	....	.....	.....	30 00	1,200									
		Loom fixer.....	....	3																		
		Carders.....	....	20	40	6	....	....	....	7 00	4 00	5 00	240	5 00	2 50	3 00	140					
		Card bosses.....	....	2	....	....	....	....	....	25 00	12 00	18 00	900									
		Card grinders.....	....	2	....	....	....	....	....	10 00	6 00	7 00	340									
		Card strippers.....	....	4	....	....	....	....	....	6 00	4 00	3 75	175									
		Card tenders.....	....	25	....	....	....	....	....	8 00	6 00	5 50	250									
		Pickers.....	....	2	....	....	....	....	....	.....	.....	6 00	280									
		Speed tenders.....	....	....	28	....	....	....	....	.....	.....	.....	.....				300					
		Spinners.....	....	20	20	80	20	....	....	.....	.....	12 00	580	7 00	4 00	4 50	250					
		Boss spinners.....	....	1	....	....	....	....	....	.....	.....	.....	1,000									

		Second boss	....	1	....	....	....	....	....	.....	.....	.....	700									
		Doffers	....	1	....	1	20	....	....	.....	.....	.....	.....	.....	.....	2 00	90					
		Backers	....	1	....	16	....	....	....	.....	.....	3 00	140									
		Frame tenders	....	1	40	....	....	....	....	.....	.....	.....	.....	4 00	2 00	3 00	140					
		Others	40	....	....	....	....	....	....	4 00	2 00	3 00	.....	4 00	2 00	3 00	140					
		Warpers	....	1	10	....	....	....	....	.....	.....	15 00	.....	.....	.....	6 00	185					
		Watchmen	....	2	....	....	....	....	....	12 00	10 00	11 00	550									
		Machinists	....	40	....	....	....	....	....	15 00	12 00	13 50	650									
		Laborers	....	18	....	....	....	....	....	.....	.....	7 50	375									
		Overseers	....	3	....	....	....	....	....	.....	.....	.....	1,500									
304	Gloucester City....	.....	795	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	2 to 3	10	No...	†12	
	Cotton mill.	Weavers	....	80	240	....	....	....	....	9 00	5 00	7 50	350	7 00	11 00	5 50	275					
	45,000 spindles.	Spinning room	....	25	35	100	75	....	....	8 00	5 00	6 00	300	6 00	3 50	4 00	200					
		Warpers	....	1	18	....	....	....	....	8 00	5 00	6 00	300	6 00	4 00	4 00	200					
		Carding room	....	35	60	....	....	....	..	8 00	5 00	6 00	300	6 00	3 75	4 00	200					
		Card grinders	....	4	....	....	....	....	....	.....	.....	7 50	325									
		Card strippers	....	4	....	....	....	....	....	7 50	5 00	6 00	300									
		Pickers	....	4	....	....	....	....	....	.....	.....	7 50	325									
		Overseers	....	10	....	....	....	....	....	30 00	20 00	25 00	1,000									
		Second bosses	....	10	....	....	....	....	....	12 00	10 00	11 00	550									
		Drawing-frame tenders	....	25	25	....	....	....	....	.....	.....	5 00	250	4 00	2 00	2 50	175					
		Watchmen	....	2	....	....	....	....	....	.....	.....	8 00	400									
		Engineers	....	4	....	....	....	....	....	.....	.....	12 00	600									
		Firemen	....	4	....	....	....	....	....	.....	.....	10 00	500									
		Blacksmiths	....	3	....	....	....	....	....	.....	.....	15 00	750									
		Carpenters	....	2	....	....	....	....	....	.....	.....	13 00	650									
		Laborers	....	25	....	....	....	....	....	.....	.....	7 50	375									
		Machinists	....	30	....	....	....	....	....	.....	.....	12 00	600									
232	Passaic	.....	153	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	1 50-2 00	*60	No...	12	
	Cotton and	Weavers	....	25	50	....	....	....	....	8 00	6 00	7 00	350	.....	.....	.....	300					
	woolen mill.	Carders	....	4	....	....	....	....	....	6 00	4 00	5 00	250									
	Shoddy.	Spinners	....	1	....	8	....	....	....	§2 50	‡1 25	2 00	100									
		Piecers	....	....	....	....	8	....	....	.....	.....	.....	.....	3 50	1 75	2 50	125					
		Pickers	....	8	....	....	....	....	....	.....	.....	6 00	300									
		Dyers	....	10	....	....	....	....	....	.....	.....	6 00	300									
		Finishers	....	8	....	10	....	....	....	6 00	5 00	5 50	250									
		Doublers	....	....	....	....	4	....	....													
		Overseers	....	4	....	....	....	....	....	20 00	12 00	15 00	750									
		Others	....	2	4	3	4	....	....	8 00	5 00	6 00	300	5 00	3 00	4 00	200					
231	Passaic	.....	130																			
	Cotton and	Weavers	....	20	40	....	....	....	....	9 00	5 00	7 00	350	7 00	4 00	6 00	300					
	woolen mill.	Carders	....	4	....	4	....	....	....	8 00	4 00	5 00	250									
	Shoddy.	Spinners	....	....	....	8	6	....	....	3 00	2 00	2 50	125	2 50	1 50	2 00	100					
		Piecers	....	....	....	....	6	....	....	.....	.....	.....	.....	2 50	1 50	2 00	100					
		Pickers	....	6	....	....	....	....	....	6 00	5 00	5 50	275									
		Dyers	....	7	....	....	....	....	....	8 00	6 00	7 00	350									
		Finishers	....	8	....	10	....	....	....	§8 00	‡3 00	4 00	200									
		Others	....	3	1	2	3	....	....	§12 00	‡2 00	5 00	250	8 00	1 50	4 00	200					
		Overseers	....	3	....	....	....	....	....	20 00	12 00	18 00	900									
233	Passaic	.....	250	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	1 50-2 00	10	No...	20	
	Woolen mill.	Weavers	....	25	....	....	....	....	....	.....	.....	.....	300									
	Broadcloth, shoddy, &c.	Dyers	....	20	....	....	....	....	....	8 00	5 00	6 00	300									
		Carders	....	8	....	....	....	....	....	.....	.....	5 00	250									
		Spinners	....	....	....	12	....	....	....	.....	.....	2 00	100									
		Pickers	....	30	....	....	....	....	....	.....	.....	6 00	300									

* Per week. † About an average. ‡ Boys. § Men.

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

COTTON AND WOOL—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
233	Passaic.																					
	Woolen mill.	Finishers	....	25	....	12	....	....	....	$8 00	$5 00	$6 00	$300	$5 00	$3 00	$3 50	$150					
	Broadcloth, shoddy, &c.	Overseer	....	6	....	....	....	....	....	.....	.....	15 00	750									
		Shoddy department	....	20	30	12	15	....	....	.....	.....	6 00	300	.....	.....	3 50	150					
	(Continued.)	Others	....	35	....	....	....	....	....	.....	.....	6 00	300									
234	Passaic		450	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	$2 00	10	No...	25	
	Woolen mills.	Weavers	....	120	50	....	....	....	....	10 00	7 00	8 00	375	9 00	6 00	7 50	350					
	Cloth and blankets.	Spinners	....	....	....	42	....	....	....	.....	.....	2 00	100									
		Carders	....	16	....	20	....	....	....	.....	.....	5 00	250									
		Pickers	....	20	....	....	....	....	....	7 00	5 00	5 50	260									
		Dyers	....	12	....	....	....	....	....	9 00	6 00	7 00	350									
		Mule piecers	....	....	20	....	20	....	....	.....	.....	.....	.....	8 00	3 00	4 00	200					
		Wool sorter	....	6	....	....	....	....	....	10 00	8 00	10 00	500									
		Finishers	....	....	50	20	36															
		Others	....	20	....	....	....	....	....	.....	.....	12 00	600									
369	Essex County		148	*102	....	....	46	....	....	.....	.....	10 00	.....	.....	.....	.....	.....	3 75	10½	No		
	Woolen mills. Cassimere goods.																					
47	Somerset County		636	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No...	.....	Run only 10 hours daily. Usual time is 11. Business was slack.
	Woolen mills (2.)	Weavers	....	120	130	....	....	....	....	10 00	7 00	8 00	450									
		Card strippers	....	25	....	....	....	....	....	6 00	3 00	4 00	200									
		Card feeders	....	....	....	20	....	....	....	5 00	2 50	3 00	175									
		Card tenders	....	20	....	6	....	....	....	5 00	2 50	3 50	175									
		Spinners	....	26	....	14	....	....	....	18 00	15 00	13 00	900									
		Fullers	....	30	....	....	....	....	....	.....	.....	7 00	350									
		Gig room	....	38	....	....	....	....	....	.....	.....	7 00	350									
		Finishing room	....	40	16	10	....	....	....	.....	.....	.....	.....	7 00	5 00	6 00	275					
		Dyers	....	33	....	....	....	....	....	15 00	10 00	13 00	550									
		Pickers	....	18	....	....	....	....	....	.....	.....	7 00	350									
		Dryers	....	2	....	....	....	....	....	.....	.....	7 00	350									
		Wool sorters	....	20	....	....	....	....	....	.....	.....	15 00	750									
		Engineers	....	4	....	....	....	....	....	.....	.....	11 00	550									
		Machinists	....	12	....	....	....	....	....	15 00	12 00	13 50	700									
		Carpenters	....	6	....	....	....	....	....	15 00	12 00	13 00	700									
		Laborers	....	18	....	....	....	....	....	.....	.....	7 00	325									
48	Somerset County		230																			
	Woolen mills.	Weavers	....	42	56	....	....	....	....	9 00	6 00	8 00	400	8 00	5 00	5 50	300					

		Carders		16		8						6 00	300					1 50				
		Spinners		7		10				10 00	7 00	8 00	800					4 50				
		Fullers		10		2						7 00	350				300					
		Giggers		18						7 00	6 00	6 75	325									
		Finishers		17		2							300				200					
		Dyers		8						20 00	15 00		900									
		Pickers		7		2				6 00	5 00		300					2 50				
		Overseers		4									900									
		Machinists		5								12 00	550									
		Carpenters		3									900									
		Laborers		5								7 00	325									
308	Bridgeton		157					97	60								300	2 50–3 00	†60	No...	‡30	
	Woolen mills.	Weavers		45	52					8 00	5 00	6 50	325									
		Spinners		2								5 00	240									
		Self-acting mule				6						2 50	115									
		Card tenders		8						5 00	4 00	4 50	200									
		Card feeders				4						2 50	115									
		Card strippers		2								5 00	240									
		Card grinders		2								5 00	240									
		Pickers		2								6 00	275									
		Dyers		8						18 00	12 00	15 00	730									
		Sorters		6								15 00	730									
		Overseers		4						20 00												
		Repairers		3						12 00	10 00	11 00	500									
		Others		3	10							7 00	325	5 00	3 30	4 00	180					
291	Camden		132															3 00	10	No...	15	Ran full time—perhaps 15 days lost.
	Woolen mills.	Weavers		25	75					9 00	7 00	8 00	400	7 00	5 00	6 00	300					
		Jack spinners		8						12 00	10 00	11 00	550									
		Cloth finishers		21						8 00	7 00	7 50	350									
		Carders		10						6 00	4 00	5 00	250									
		Card strippers		2								5 00	250									
		Card grinders		2								6 00	300									
		Pickers		5						7 00	5 00	6 00	300									
		Loom boss		10								20 00	1,000									
		Dyers		10						12 00	9 00	10 00	500									
		Wool sorters		6						15 00	10 00	12 00	600									
		Bosses								20 00	18 00	18 50	950									
		Others			10	13	7							5 00	3 00	4 00	200					
		Machinists		4						15 00	12 00	13 50	675									
		Carpenters		4								15 00	750									
		Laborers										7 50	375									
290	Camden		45															3 00	10	No...	20	
	Worsted mills.	Mule spinners		2						10 00	9 00	9 50	475									
		Wool pickers		1								9 00	450									
		General work		3	15	8	10			8 00	7 00	6 00	300	6 00	4 00	5 00	250					
		Engineer		1								12 00	600									
		Fireman		1								9 00	450									
		Laborers		3								7 50	375									
230	Passaic		65																			
	Bleachery.	Finishers		10						10 00	7 00	8 00	400									
		Dyers		15						10 00	7 00	8 00	400									
		Folders		8						12 00	8 00	10 00	500									
		Packers		8						10 00	7 00	9 00	450									
		Bleachers		3								8 00	400									
		Sewers		1	2					8 00	6 00	7 00	350	6 00	5 00	4 00	200					
		Dyers		1		2				9 00	§3 50	6 00	300									
		Bosses		3						20 00	15 00	18 00	900									

* Men and boys. † Per week. ‡ For repairs.

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

COTTON AND WOOL.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
230	Passaic Bleachery.	Others	....	6	....	....	....	....	....	....	....	$8 00	$6 00	$6 50	$325									
		Machinists	....	6	....	....	....	....	....	....	....	15 00	12 00	13 50	675									
305	Millville Bleachery.		148	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	$3 50	10	No	....	Ran on full time.
		Dyers	....	30	....	....	....	....	....	....	....	12 00	8 00	10 00	500									
		Finishers	....	25	....	....	....	....	....	....	....	....	....	8 00	400									
		Bleachers	....	8	....	....	....	....	....	....	....	*14 00	....	*8 00	350									
		Folders and packers	....	35	....	....	....	....	....	....	....	12 00	8 00	10 00	500									
		Sewers	....	2	2	....	....	....	....	....	....	....	....	....	350	....	....	....	$300					
		Boss sewers	....	2	....	....	....	....	....	....	....	....	....	14 00	700									
		Dryers	....	2	2	2	....	....	....	....	....	....	....	9 00	450									
		Engineers	....	2	....	....	....	....	....	....	....	....	....	12 00	600									
		Firemen	....	2	....	....	....	....	....	....	....	....	....	10 00	500									
		Machinists	....	12	....	....	....	....	....	....	....	....	....	12 00	600									
		Carpenters	....	10	....	....	....	....	....	....	....	....	....	15 00	700									
		Laborers	....	12	....	....	....	....	....	....	....	....	....	7 30	375									
35	Passaic Print works.		119	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	10	No	§30	
		Calico printers	....	5	....	....	....	....	....	....	....	25 00	....	25 00	1,100									
		Back tenders	....	5	....	....	....	....	....	....	....	7 50	....	7 50	350									
		Engravers	....	4	1	....	....	....	....	....	....	24 00	....	20 00	900									
		Sketchers	....	2	....	....	....	....	....	....	....	24 00	18 00	20 00	900	....	....	$6 00	275					
		Color mixers	....	16	....	....	....	....	....	....	....	10 00	10 00	10 00	450									
		Folders	....	4	21	....	....	....	....	....	....	12 00	10 00	11 50	375	$6 00	$5 00	5 50	250					
		Dyers	....	36	....	....	....	....	....	....	....	9 00	7 00	8 00	400									
		Boss dyers	....	2	....	....	....	....	....	....	....	†25 00	12 00	18 00	875									
		Laborers	....	25	....	....	....	....	....	....	....	....	....	7 50	375									
33	Passaic Print works.		182																					
		Calico printers	....	8	....	....	....	....	....	....	....	....	....	25 00	1,100	....	....	....	....	....	10	No	§30	
		Back tenders	....	8	....	....	....	....	....	....	....	....	....	7 00	340									
		Engravers	....	7	....	....	....	....	....	....	....	....	....	25 00	1,100									
		Sketchers	....	2	3	....	....	....	....	....	....	....	....	25 00	1,100	....	....	5 00	240					
		Color mixers	....	22	....	....	....	....	....	....	....	....	....	10 00	475									
		Folders	....	6	30	....	....	....	....	....	....	....	....	12 00	550	....	....	5 00						
		Dyers	....	54	....	....	....	....	....	....	....	....	....	8 00	375									
		Boss dyers	....	2	....	....	....	....	....	....	....	†30 00	12 00	18 00	950									
		Laborers	....	40	....	....	....	....	....	....	....	....	....	7 00										

34	Passaic Print works.		405																					
		Calico printers		15									25 00											
		Back tenders		15									7 50											
		Engravers		13							24 00	20 00	22 00											
		Sketchers		4	6						24 00	20 00	22 00				5 00	225						
		Color mixers		50							12 00	18 00	10 00											
		Folders		20	80								10 00				5 00	225						
		Dyers		100							10 00	7 00	8 50											
		Boss dyers		2							†30 00	13 00	17 00											
		Laborers		100									7 00	340										
185	Newark Cotton buff for polishing purposes.		3	2	1					3		15 00	8 00			4 00	4 00					10		14
172	Newark Spool cotton.		20	4	16				15	5		18 00	6 00	12 00		7 00	3 00	5 00				10	No	
353	Jersey City Knit goods.		150	71	143				150			30 00	12 00	22 00		15 00	6 00	8 00				10	No	26
181	Newark Corset and waist manufactory.		75	4	68	3			60	15		20 00	10 00	14 00	728	10 00	4 00	6 00	300	3 00–8 00	8-9	‡Yes		
332	Jersey City Custom shirts.		15	3	12	1	1	1	8	4		18 00	6 00	10 50		11 00	3 00	6 00				8	No		Largest factory in Jersey City, and gives average wages. About 200 girls work at shirt making in Jersey City, many for New York employers.
30	Paterson Shirt factory.		148						123	25	6											10	No	30	No one person makes a whole, but only part of a shirt. Custom work is paid at $6 per week. Three other firms in Paterson employ about 300 hands each, at same wages. Many work at home. Total number of shirt makers in Paterson, about 1300.
		Hemming			20											8 00	4 00	6 00	275					
		Body making			25											9 00	5 00	7 00	325					
		Backs			18											8 00	4 00	6 00	275					
		Neck bands			15											8 50	4 00	6 50	300					
		Buttoning			20											7 00	4 00	5 00	225					
		Joining			25											7 00	4 00	5 50	250					
		Starching			10											8 00	6 00	7 00	325					
		Ironing			8													15 00	780					
		Others		2	4							9 00	8 00	7 00	325	7 00	2 00	4 00	175					
		Forelady			1													10 00	500					
116	Newark Tailoring.		57																			10	No	
		Basting			18				18															12
		Coat finishers			6					6						10 00	4 00	6 00	240					60
		Fellers			12				2	10						5 00	4 00	4 50	175					60
		Button-hole makers			5				5															50
		Operators			6					6						8 00	7 00	8 00	320					60
		Pressmen		10						10		22 00	10 00	15 00	720									12
145	Newark Tailoring.		40	8	32					40		12 00	8 00	10 00		8 00	2 00	6 00				10	‖Yes	
209	Newark Tailoring.		22	7	15							13 00	11 00	12 00	624	8 00	4 00					10		
121	Newark Clothing.		18																				No	
		Salesmen		10				3		10		30 00	12-00	18 00	936							12		
		Cutters		7				1		8		25 00	15 00	18 00	936							10		

* Boss. † First boss; no lost time. ‡ When doing better work they receive better pay. § For repairs. ‖ Increased.

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

COTTON AND WOOL—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
2	Passaic county....		51																9		12	
	Carpet factory.	Weaving		27				27						$600								
		Druggets		12				12						575								
		Lap robes		9	1			10						550								
		Designers		2					2		$15 00			600								

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
31	Paterson		547																‡12			The mills do not run on Saturday night, but only 11 days in 2 weeks. Although running full time, day and night, the roller furnaces frequently get out of order, and time is lost in repairing, thus making average time of running about 42 weeks.
	Iron rolling mill.	Heaters		9							$35 00	$25 00	$30 00	$1,350								
		Helpers		18							12 00	8 00	10 00	450								
		Rollers		5							28 00	25 00	33 00	1,500								
		Roughers		6							13 00	11 00	12 00	600								
		Catchers		5							12 00	8 00	10 00	450								
		Hookers		17							11 00	8 00	10 00	450								
		Straighteners		12		4					11 00	8 00	10 00	450								
		Pilers		12							11 00	8 00	10 00	450								
		Drag-outs		4							11 00	8 00	10 00	450								
		Firemen		3									20 00	1,000								
		Puddlers									30 00	25 00	28 00	1,000								
		Helpers											9 00	450								
		Laborers		200									7 00	350								
		Bridge workmen		150							15 00	12 00	13 00	750								
		Machinists		14									12 00	600								
		Blacksmiths		7									18 00	900								
		Helpers		7									9 00	450								
		Engineers		6									13 50									
		Rivet machine		4									12 00	600								
66	Phillipsburg (Warren county.) Iron rolling mill.		148																			See No. 31 for wages, &c., in rolling mill.
36	Rockaway (Morris county.) Iron rolling mill.		42							*7									‡12			
		Rollers		2							30 00	22 00	25 00	1,000								
		Helpers		2							10 00	7 00	8 50	400								

		Roughers		4							12 00	9 00	10 00	475								
		Catchers		4							10 00	7 00	8 50	400								
		Drag-outs		2							10 00	7 00	8 50	400								
		Firemen		2									9 00	425								
		Engineers		2									12 00	550								
		Laborers		10									8 50	375								
		Puddlers		7							30 00	20 00	25 00	1,000								
		Helpers		7							10 00	8 00	8 50	425								
37	Dover		231							†6							4 50		‡12			Wages varied a little.
	Iron works.	Heaters		6							30 00	25 00	27 00	1,100								
		Helpers		6							10 00	7 00	8 50	400								
		Rollers		4							25 00	20 00	22 00	950								
		Roughers		6							12 00	8 00	10 50	475								
		Catchers		3							9 00	8 00	8 50	350								
		Muck rollers		10							30 00	22 00	25 00	1,000								
		Puddlers		16							28 00	23 00	25 00	950								
		Helpers		16			5						8 00	325								
		Laborers		75									7 30	325								
		Blacksmiths		3							15 00	11 00	12 00	600								
		Firemen		3									12 00	600								
		Machinists		3									12 00	550								
		Carpenters		2									12 00	550								
		Rivet works		40							20 00		18 00	900								
		Foundrymen		25																		
		Moulders											13 50	600								
37½	Trenton		374																			Wages are according to demand for labor. When work is slack, they are reduced as low as possible, without any regard for employes. Wire drawers were reduced twice during the year—screw wire 25 and others 20 per cent.
	Iron works. Mill No. 1.	Foremen		10																		
		Puddlers		2										600						§20	25	
		Helpers		2							10 50			400						20	25	
		Roughers		6							15 00			700						25	25	
		Rollers		2							20 00			750						32	25	
		Heaters		6							19 50			725						30	25	
		Helpers		6							10 00			400						20	25	
		Engineers		12							12 00			625					11	22	5	
		Machinists		6							13 50			650					10	22½	9	
		Blacksmiths		3							12 00			600					10	20	12	
		Carpenters		5							12 00			600					10	20	14	
		Shinglers		2							22 00			800						22½	25	
		Charcoal sinkers		26							15 00			700						25	25	
		Wire drawers		65							20 00	4 00	9 00	450					10	22½	20	
		Bundlers		3							9 00			450					10	20	42	
		Firemen		10							9 00			450					11	20		
		Roll turners		2							18 00	9 00		700					10	30	18	
		Laborers		200							7 50	5 45	6 05	310					9	20	40	
	Mill No. 2		30																			
		Heaters		3									19 50	725						35	25	
		Helpers		3									9 00	420						20	25	
		Roughers		6									21 00	1,006						35½	25	
		Hookers-in				18															25	
61	Phillipsburg (Warren county.) Furnace for pig iron.		138																	No...		Ran 2 sets, day and night.
		Engineers		2									12 00	550								
		Firemen		2									10 00	475								
		Blacksmiths		6							15 00	13 00	12 00	575								
		Helpers		6							10 00	8 00	9 00	475								
		Fillers		30							11 00	9 00	10 00	475								
		Casters		12							15 00	12 00	13 00	700								
		Laborers		80									7 50	325								

* In each team, day and night. † In each of 3 teams, day and night, besides laborers. ‡ For both day and night gangs, meals included. § Per cent. decrease for all.

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

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of apprentices.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
69	Stanhope		116																			One-third of time lost.
	(Sussex county.) Furnace for pig iron.	Engineers		4								$15 00	$600									
		Firemen		4								10 00	400									
		Blacksmiths		16						$15 00	$12 00	13 50	500									
		Casters		40						12 00	10 00	11 00	400									
		Fillers		26						12 00	10 00	11 00	400									
		Tappers		6						12 00	10 00	11 00	400									
		Laborers		20								7 00	300									
62	Phillipsburg		227															$5 to 7	10		25	
	Foundry and machine shop.	Moulders		66						15 00	12 00	13 00	725									
		Core makers		18		20				12 00	9 00	10 00	475									
		Machinists		12						15 00	11 00	12 00	575									
		Helpers		4						9 00	7 00	8 00	375									
		Carpenters		2								15 00	725									
		Pattern makers		5								15 00	725									
		Blacksmiths		6								15 00	725									
		Laborers		100								8 00	375									
43	Rockaway		69															3 to 5	10		25	
	Foundry and machine shop.	Foundry moulders		12			2					15 00	725									
		" laborers		8								7 00	325									
		Machinists		30			2					15 00	725									
		Blacksmiths		7			1					15 00	725									
		Pattern makers		5								15 00	725									
		Engineer		1								11 00	525									
		Fireman		1								9 00	430									
226	Burlington		200																10-12		30	
	Foundry.	Moulders		40						18 00	14 00	15 00	700									
		Core makers		35						18 00	14 00	15 00	700									
		Laborers		100								7 00	325									
		Boys		25						5 00	2 50	3 50	75									
188	Salem		70																10-12	No	20	
	Foundry.	Moulders		20						16 00	12 00	14 00	675									
		Helpers		30						9 00	7 00	8 00	375									
		Laborers		10								7 00	300									
		Others		10						10 00	6 00	7 50	325									

301	Camden Foundry.		30																			
		Moulders		10						15 00	12 00	14 00	700									
		Others		20						10 00	7 50	8 00	400									
306	Millville Foundry.		122																	No		
		Moulders		20						18 00	15 00	16 00	800						8			
		Core makers		20						18 00	15 00	16 00	800						8			
		Cupola men		4								13 00	650						10			
		Helpers		51						9 00	8 50	8 75	440						8			
		Blacksmith		1								16 00	800						10			
		Carpenters		6								15 00	750						10			
		Laborers		20								8 00	400						10			
182	New Brunswick Foundry.		17																		18	
		Moulders		8				3	5	15 00	13 50	14 10	†750						8½			
		Helpers		6			2			7 20		7 20							10			
		Pattern fitter		1						15 00									10			
55	Lambertville Iron works.		156																10	No	25	Car-axle makers only work by piece; but there is no regularity about their work.
		Machinists		30						15 00	13 00	14 00	675									
		Car-axle makers		25						18 00	12 00	16 00	750									
		Foundry moulders		15								13 50	650									
		Blacksmiths		18						18 00	12 00	15 00	750									
		Helpers		10								9 00	425									
		Wood workers		10						15 00	12 00	13 00	625									
		Engineers		4								13 50	650									
		Firemen		4								11 00	525									
		Laborers		40								7 00	325									
112	Newark Foundry.	Moulders		7	5		2			15 00	14 00	14 50	775						10	Yes		Wages increased 10 per cent.
11	Paterson Miscellaneous iron works—several firms.		1197																10		30	
		Machinists		60								*2 00	550								25	
		Foundry		12								*2 25	575								40	
		Machine shop		30								*2 00	500								30	
		Foundry		30								*2 25	550								30	
		Machine shop		75								*2 00	500								40	
		Foundry		60								*2 20	525								40	
		Machinists		20								*2 00	500								40	
		Several shops		500								*2 00	500								30	
		Boiler works		100								*1 75	550								25	
		File works		100	60	25		100				18 00	700	$10 00	$7 00	$9 00	$400	5 00			25	Piece workers average $20 per week.
		Stationary engineers		135								*2 25	550								40	
		Laborers		75								*1 15	300								20	
326	Jersey City Iron works.		100	100						18 00	4 to 7								10			
319	Jersey City Iron foundry and castings.		32	32				32		13 52	9 00	11 00									20	Sash weights and lamp posts are the specialty. No great skill required. Wages increased 10 per cent.
318	Jersey City Iron and brass foundry.		75	70			5	7	68	18 00	9 00	15 00						5 00	10	No	5	Iron castings are paid by the piece. Brass and composition castings are made by day. Piece work averages from $3 to $2.50 per day. Work very regular.
64	Lambertville Brass and iron works.		8	8						15 00	11 00	12 00	575									
114	Newark Brass moulders.		6	3			1			18 00	12 00	15 00	750					3 50	10	No		No time lost, but trade very dull.

* Per day. † Time workers.

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

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of boys.	Number of apprentices.	Number of piece workers.	Number of time workers.	When working in teams, the number in a team.	Highest wages paid per week.	Lowest wages paid per week.	Average wages paid per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
341	Jersey City		350	325	25	....	8	50	38	.....	.....	.....	.....	$5 00	10	No	.....	Machinists work by the day; steel makers work in teams, under foremen who are paid for producing a certain quantity of steel, and pay their own men.
	Steel manufactory.	Cast steel	....	....	....	....	....	....	....	.....	.....	$18 00	$700					
		Machinists	....	8	....	....	....	....	....	$25 00	$12 00	20 00						
359	Jersey City		85	....	....	....	30	55	....	48 00	9 00	15 00	.....	.....	10	No	10	
	Steel manufactory.																	
358	Jersey City		79	....	....	....	....	....	....	.....	.....	.....	.....	.....	10	No	.....	Very little time lost—less than 5 per cent. It is one of the largest concerns in the United States, and wages are equal to any other. Those of laborers, who assist the moulders, are a little higher. The usual average is $9.
	Foundry and machinery.	Machinists	....	25	....	1	....	26	....	18 00	13 50	15 00	.....	2 50				
		Laborers	....	25	....	....	....	25	....	12 00	9 00	10 00						
		Moulders	....	25	....	3	....	28	....	18 00	15 00	16 00	.....	5 00				
38	Dover		88	....	....	....	....	....	....	.....	.....	.....	.....	.....	....	.....	20	
	Machine and iron works.	Machinists	....	35	....	....	....	....	....	18 00	12 00	15 00	725					
		Blacksmiths	....	10	....	....	....	....	....	18 00	12 00	15 00	725					
		Pattern makers	....	8	....	....	....	....	....	.....	.....	15 00	725					
		Engineers	....	2	....	....	....	....	....	12 00	10 00	11 00	525					
		Firemen	....	2	....	....	....	....	....	.....	.....	7 50	350					
		Moulders	....	12	....	....	....	....	....	.....	.....	15 00	725					
		Laborers	....	10	....	....	....	....	....	.....	.....	7 50	325					
184	Newark		159	....	....	....	....	....	....	.....	.....	.....	.....	.....	....	.....	.....	Wages slightly increased—from 5 to 10 per cent.
	Machine and iron works.	Draughtsmen	....	3	....	....	....	3	....	50 00	15 00	27 00	1,300	.....	....	Yes		
		Pattern makers	....	8	....	....	....	11	....	22 50	18 00	13 00	676					
		Machinists	....	65	....	8	....	73	....	21 00	13 50	16 00	800					
		Blacksmiths	....	3	....	....	....	3	....	24 00	18 00	20 00	1,000					
		Helpers	....	3	....	....	....	3	....	12 00	9 00	10 00	500					
		Moulders	....	18	....	4	....	22	....	21 00	10 00	18 00	900					

		Laborers	....	41	....	....	....	41	....	11 00	9 00	9 50	494				
		Teamsters	....	3	....	....	....	3	....	16 00	9 00	12 00	600				
338	Jersey City		60	60	....	....	4	50	....	25 00	9 00	18 00	.....	.....	10	.....	.....	Moulders are paid 1 cent an inch of car wheel; when not on this work, they are paid by day—$2.75 to $3. Small car wheels are paid higher, at which men can make $4 daily.
	Machinery — car wheels.																
58	Lambertville		71	....	....	....	....	71	....	.....	.....	.....	.....	.....	10	No	12 Only paid monthly, with 10 to 12 days' pay behind.
	R. R. machine repairing.	Car wheel makers	....	12	....	....	....	....	....	13 00	10 00	12 00					
		Machinists	....	22	....	....	....	....	....	15 00	12 00	13 50					
		Helpers	....	15	....	....	....	....	....	10 00	8 00	9 00					
		Engineers	....	2	....	....	....	....	....	.....	.....	12 00					
		Firemen	....	2	....	....	....	....	....	.....	.....	9 00					
		Laborers	....	18	....	....	....	....	....	.....	.....	7 50					
3	Paterson		837	....	....	....	83	....	....	.....	.....	.....	.....	.....	10	†Yes	..... Piece work is all done by contractors—i. e., about two-thirds of all the work. They pay their own men. It is a very bad system for workmen. See page 34, 5th annual report. The men averaged about 250 days of work — no stoppage; but in slack times, men are laid off.
	Locomotive works.	Erecting	....	160	....	....	....	....	....	15 00	11 00	12 00	500				
		Turning	....	65	....	....	....	....	....	15 00	12 00	12 00	500				
		Blacksmithing	....	122	....	....	....	....	....	18 00	10 00	13 00	550				
		Finishing	....	155	....	....	....	....	....	15 00	11 00	12 00	500				
		Boiler shop	....	210	....	....	....	....	....	18 00	10 00	13 50	600				
		Foundry	....	25	....	....	....	....	....	15 00	11 00	13 50	550				
		Laborers	....	100	....	....	....	....	....	*1 15	.....	*1 15	325				
4	Paterson		1674	....	....	....	200	....	....	16 00	11 00	14 50	550	.....	10	†Yes	..... See No. 3.
	Locomotive works.	Erecting	....	....	....	....	....	....	....	16 00	10 00	13 00	500				
		Turning	....	....	....	....	....	....	....	18 00	10 00	13 50	525				
		Blacksmithing	....	....	....	....	....	....	....	18 00	11 00	13 00	500				
		Finishing	....	....	....	....	....	....	....	18 00	12 00	14 00	600				
		Boiler making	....	....	....	....	....	....	....	14 00	11 00	12 00	500				
		Foundry	....	....	....	....	....	....	....	*1 15	.....	*1 15	325				
		Laborers															
5	Paterson		895	....	....	....	88	....	....	.....	.....	.....	.....	.....	10	.....	..... Men averaged about 220 days of work. See No. 3.
	Locomotive works.	Erecting	....	170	....	....	....	....	....	13 00	10 00	11 40	450				
		Turning	....	70	....	....	....	....	....	13 00	10 00	11 40	450				
		Blacksmithing	....	130	....	....	....	....	....	15 00	11 00	13 50	500				
		Finishing	....	160	....	....	....	....	....	13 50	11 50	12 00	500				
		Boiler making	....	225	....	....	....	....	....	13 50	11 50	12 00	500				
		Foundry	....	30	....	....	....	....	....	13 00	10 50	11 00	450				
		Laborers	....	110	....	....	....	....	....	*1 15	.....	*1 15	325				
5½	Elizabeth		683														
	R. R. machine shop.	Carpenters	....	75	....	....	....	....	....	15 00	9 00	10 00					
		Painters	....	40	....	....	....	....	....	14 00	8 00	10 00					
		Tinners	....	14	....	....	....	....	....	13 00	7 50	9 00					
		Boiler makers	....	32	....	....	....	....	....	15 00	10 00	12 50					
		Machine hands	....	10	....	....	....	....	....	14 50	10 00						
		Machinists	....	100	....	....	....	....	....	15 00	11 40	12 00					
		Laborers	....	200	....	....	....	....	....	9 00	6 00	7 50					
		Upholsterers	....	10	....	....	....	....	....	12 00	9 00	9 50					

* Per day. † Increased.

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

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
5½	Elizabeth																	
	R. R. machine shops—(Continued.)	Blacksmiths		50						$15 00	$10 00	$10 50						
		Helpers		50						9 00	7 20	7 75						
		Pattern makers		2						18 00	15 00	16 50						
41½	Bloomfield		4											$5 00	10	No	30	
	Machinery.	Pattern makers		1				1				15 00	$700					
		Blacksmiths		1				1				16 50	750					
		Machinists		2				2				15 00	700					
195	Newark		24	16		7	1	23		18 00	15 00	16 50	800	3 00–7 50	10	No		
	Machinery.	Pattern shop		2		1				16 50								
		Machine shop		10		6												
		Blacksmith shop		1						16 50								
		Helper		1						6 00								
		Engineer		1						15 00								
		Clerk		1						16 50								
		Superintendent		1						24 00								
80	Hackettstown		11					11						3 00	10	No	50	
	Machinery.	Moulders		2								12 00	550					
		Machinists		2		1						12 00	550					
		Wood workers		1		1						12 00	550					
		Laborers		4								7 50	325					
1	Paterson		155					155						3 00	10			
	Machinery.	Moulders		8						*2 50	2 00	2 25	600					
		Millwrights		8						*3 00	2 25	2 50	700					
		Pattern makers		7						*3 00	2 25	2 50	700					
		Fitters		40						*3 00	2 25	2 50	700					
		Lathe makers		22						*2 50	1 75	2 00	550					
		Laborers		60						*1 15	1 15	1 15	350					
108	Newark		11											4 50	10	No		
	Machinery.	Machinists		7		2		9		20 00	15 00	18 00	900					
		Pattern makers		2				2		18 00	18 00	18 00	900					
41	Dover		56															
	Machinery.	Skilled mechanics		12		4				18 00	12 00	15 00	750		10	No		
		Partly skilled mechanics		15						12 00	9 00	10 00	500					
		Not skilled mechanics		25								7 50	350					

260	Camden		17															
	Machinery—	Machinists		10		2				18 00	12 00	14 00	700					
	Presses.	Laborers		5								7 50	350					
292	Camden	Machinists	20	20						16 00	12 00	14 00	700		10	No	15	
300	Machinery.	"	15	15						15 00	12 00	12 50	675		10	No	20	
328	Jersey City		70	70		3		70		22 50	9 00	15 00			10	No		
	Machinery.																	
187	Newark	Machinists	15	9		6		15		21 00	9 00	13 66	659	3 to 9	10		11	
188	Machinery.	"	6	5		1				16 50	12 00	14 65	747		10			
191			25	25		4		25		21 60	10 00	13 00			10			
8	Paterson		112												10			
	Machinery.	Millwrights		26								*1 90	500				50	
		Machinists		34								*1 75	450				40	
		Carpenters		30								*1 90	500				60	
		Others		20								*1 15	325				25	
12½	Newark		3	3				3		15 00	9 00	12 33			10			
	Machinist.																	
13½	Newark		12	10		2				15 00	9 00	9 75			10			
	Mechanics' tools.																	
261	Camden	Blacksmiths	26	26						18 00	15 00	16 00	800					
	Tools.	Machinists	22	22						15 00	12 00	13 50	650					
186	Newark		36															
	Tool works.	Blacksmiths		8			8			27 00	12 00	15 00	720		8		50	
		Blacksmiths' helpers		8			8			18 00	8 00	10 00	480		8		50	
		Temperers		2				2		12 00	8 00	10 00	480		10		20	
		Grinders		7			7			15 00	6 00	10 00	400		9		70	
		Polishers		4			4			10 00	6 00	8 00	400		10		50	
		Packers, &c		3	4			7		15 00	3 00	6 00	300		10		20	
122	Newark		10	8				10		15 00	6 00	9 00	520		10		14	
	Tool works.																	
367	Newark		120											3 to 7	10	No		
	File works.	Forging		12		2	4	8	2	16 00	8 00	13 00	620				20	
		Grinding		12				12	2	15 00	7 00	12 00	575				20	
		Cutting		84		14	66	18		16 00	5 00	13 00	620				20	
		Hardening		12				12		13 00	3 00	10 00	500					
139	Newark		33											3 50	10			
	File and rasp	Forging		3			2	1		12 00	8 00	10 00						
	works.	Grinding		2			2			18 00	15 00	16 50						
		Cutting		20		7	17	3		15 00	9 00	12 00						
		Hardening		1				1		15 00	12 00	13 50						
110	Newark		40	35		5	25	10		18 00	10 00	14 00	700	4 00	10	No		
	File and rasp	Cutters.																
	works.	Grinders.																
325	Jersey City		40	40		3		40		18 00	12 00	15 00			10	No		Wages increased 20 per cent. during previous year.
	Tinware, roofing and sheet iron.																	
331	Jersey City		50	44		6		50		25 00	*1 50	*2 25	675		10	No	6	
	Coppersmith.																	
352	Jersey City		300	250		50	150	150		20 00	2 50	10 00			10	†Yes	100	
	Cooperage.																	
357	Jersey City		175			8		175						6 00–7 50	10			
	Boiler making.	Boiler makers		85						77 00	9 00	16 50						
		Machinists		30						30 00	15 00	18 00						
		Blacksmiths		60						25 00	18 00	20 00						
335	Jersey City		30	30				30		24 00	9 00	18 00			10	No	10	
	Boilers and iron tanks.																	

* Per day. † Increased ½ per cent.

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

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
354	Jersey City		18	15	..	..	..	3	..	18	.....	$18 00	$15 00	$16 00	$600	.....	.....	.....	.....	$4 50	10	No	10	
	Boiler making.																							
63	Phillipsburg		52																					
	Boiler making.	Skilled	....	25	..	..	..	..	..	..	.....	16 00	14 00	15 00	725	.....	.....	.....	.....	.....	10	No	20	
		Not skilled	....	15	..	12	..	..	..	..	.....	8 00	7 00	.....	325									
320	Jersey City		100	75	..	25	..	..	50	50	.....	25 00	9 00	16 00	.....	.....	.....	.....	.....	5 00	10	No	.....	The men are paid alike, and all work together.
	Spikes and rolling mill.																							
131	Newark		16	..	..	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10			
	Iron railing.	Forgers	....	2	..	..	..	..	..	..	.....	18 00	9 00	15 00	750									
		Finishers	....	6	..	..	..	..	..	..	.....	.....	.....	21 00	1,100									
		Helpers	....	8	..	..	..	..	..	..	.....	.....	.....	.....	450									
128	Newark		12	..	..	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10			
	Iron railing.	Forging	....	8	..	..	..	..	..	..	.....	16 00	7 00	11 00	550									
		Moulding	....	4	..	..	..	..	..	..	.....	15 00	7 00	12 00	600									
57	Lambertville	Turners	....	..	..	..	..	..	..	..	.....	15 00	10 00	12 50	600									
	Spoke factory.	Finishers	....	..	..	..	..	..	..	..	.....	15 00	10 00	12 50	600									
		Wheel makers	....	..	..	..	..	..	..	..	.....	13 00	10 00	11 50	550									
		Helpers	....	..	..	..	..	..	..	..	.....	.....	.....	9 00	425	.....	.....	.....	.....	.....	10	No	25	
		Laborers	....	..	..	..	..	..	..	..	.....	.....	.....	7 50	350									
		Engineers	....	..	..	..	..	..	..	..	.....	.....	.....	12 00	575									
		Firemen	....	..	..	..	..	..	..	..	.....	.....	.....	8 50	400									
6	Paterson		17	..	..	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	30	
	Bobbin factory.	Finishers	....	7	..	..	..	..	..	..	.....	13 50	.....	.....	600									
		Roughers	....	5	..	..	..	..	..	..	.....	9 00	.....	.....	425									
		Sanders	....	..	..	6	..	..	..	..	.....	3 50	.....	.....	225									
7	Paterson		40	..	..	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	For wages, &c., see No. 6.
	Bobbin factory.																							

BOOTS AND SHOES.

257	Burlington		64					50		6 to 10									$3 00	10	Yes		Wages reduced 10 per cent. In busy seasons they advance a little; decrease again in slack times. The busy seasons are from September 1st to December 1st, and during spring. Seventeen weeks were lost in strike.
	Ladies' and infants' shoes.	McKay machine		1									$10 00	$400									
		Goodyear machine		1									10 00	400									
		Finishing		6							$18 00	$12 00	14 00	500									
		Burnishing		4							18 00	12 00	14 00	500									
		Heeling		4							18 00	12 00	14 00	500									
		Lasting		6							18 00	12 00	14 00	500									
		Cutting		4							16 00	12 00	13 00	450									
		Operating			3										$8 00	$5 00	$6 00	$230					
		Fitting			30										8 00	5 00	6 00	230					
		Children					5								4 00	2 00	3 00	115					
254	Burlington		43	18	22		3														Yes	130	See No. 257.
	Ladies' and infants' shoes.																						
255	Burlington		42	18	20		4														Yes	120	See No. 257.
	Ladies' and infants' shoes.																						
256	Burlington		47					40	7	6 to 8									3 00	10	Yes	130	See No. 257.
	Ladies' and infants' shoes.	McKay machine		1							10 00		10 00	400									
		Goodyear machine		1							10 00		10 00	400									
		Finishing		4							18 00	12 00	15 00	500									
		Burnishing		3							18 00	12 00	15 00	500									
		Heeling		3							18 00	12 00	15 00	500									
		Lasting		4							18 00	12 00	15 00	500									
		Cutting		2							15 00	11 00	12 00	500									
		Operating			2										8 00	6 00	7 00	250					
		Fitting			22										8 00	5 00	6 00	250					
		Children					3								4 00	3 00	2 00	110					
250	Burlington		41					36		6 to 8									2 50	10	Yes	125	See No. 257.
	Infants' shoes.	McKay machine		1									12 00	480									
		Finishing		5							18 00	14 00	15 00	525									
		Burnishing		3							18 00	14 00	15 00	525									
		Heeling		3							18 00	14 00	15 00	525									
		Lasting		5							18 00	14 00	15 00	525									
		Cutting		3							16 00	12 00	13 00	525									
		Operating			2										8 00	5 00	7 00	200					
		Fitting			20										8 00	5 00	7 00	200					
		Children					2								4 00	3 00	2 00	75					
243	Burlington		15					10		6									2 50	10	Yes	135	See No. 257.
	Women's shoes.	Finishing		2							16 00	12 00	13 00	475									
		Burnishing		1							16 00	12 00	13 00	475									
		Heeling		1							16 00	12 00	13 00	475									
		Lasting		1							16 00	12 00	13 00	475									
		Cutting		1							14 00	11 00	12 00	425									
		McKay machine		1									10 00	350									
		Operating			1										9 00	6 00	7 00	250					
		Fitting			5										8 00	5 00	6 00	210					
		Children					2								4 00	2 00	2 50	100					
253	Burlington		51					40		6 to 10									2 50	10	Yes	128	See No. 257.
	Infants' shoes.	McKay machine		1									10 00	375									
		Goodyear machine		1									10 00	375									
		Finishing		5							16 00	12 00	13 50	450									
		Burnishing		3							16 00	12 00	13 50	450									
		Heeling		3							16 00	12 00	13 50	450									
		Lasting		5							16 00	12 00	13 50	450									

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

BOOTS AND SHOES—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of piece workers.	When working in teams, the number in a team.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
253	Burlington	Cutting	....	3	..	..	..	..	.....	$15 00	$12 00	$13 00	$400									
	Infants' shoes. (Continued.)	Operating	....	..	3	..	..	..	.....	.....	.....	.....	.....	$8 00	$6 00	$6 50	$200					
		Fitting	....	..	23	..	..	..	.....	.....	.....	.....	.....	8 00	5 00	6 00	175					
		Children	....	..	..	..	4	..	.....	.....	.....	.....	.....	3 00	2 00	2 50	100					
242	Burlington	.....	28	..	..	..	..	20	6	.....	.....	.....	.....	.....	.....	.....	.....	$2 50	10	Yes	140	See No. 257.
	Infants' shoes.	McKay machine	....	1	..	..	..	..	.....	.....	.....	10 00	380									
		Goodyear machine	....	1	..	..	..	..	.....	.....	.....	10 00	380									
		Finishing	....	4	..	..	..	..	.....	16 00	12 00	13 00	460									
		Heeling	....	2	..	..	..	..	.....	16 00	12 00	13 00	460									
		Lasting	....	2	..	..	..	..	.....	16 00	12 00	13 00	460									
		Cutting	....	2	..	..	..	..	.....	15 00	12 00	12 50	425									
		Operating	....	..	1	..	..	..	.....	.....	.....	.....	.....	8 00	6 00	7 00	250					
		Fitting	....	..	10	..	..	..	.....	.....	.....	.....	.....	8 00	5 00	6 00	225					
		Burnishing	....	2	..	..	..	..	.....	16 00	12 00	13 00	460									
		Children	....	..	..	..	3	..	.....	.....	.....	.....	.....	4 00	2 00	2 50	100					
244	Burlington	.....	73	34	31	2	5	52	4 to 6 3 to 4	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	Yes	130	See No. 257.
	Infants' shoes—3 establishments.																					
265	Camden	.....	76	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	25	
	Misses' and infants' shoes.	McKay machine	....	1	..	..	..	..	.....	12 60	9 00	10 00	475									
		Goodyear machine	....	1	..	..	..	..	.....	12 00	9 00	10 00	475									
		Heeling	....	7																		
		Lasting	....	10	..	..	..	..	.....	15 00	10 00	12 00	575									
		Trimming	....	4	..	..	..	..	.....	15 00	10 00	12 00	575									
		Burnishing	....	7	..	..	..	..	.....	15 00	10 00	12 00	575									
		Finishing	....	10	..	..	..	..	.....	15 00	10 00	12 00	575									
		Cutting	....	6	..	..	..	..	.....	.....	.....	.....	600									
		Fitting	....	..	30	..	..	..	.....	.....	.....	.....	.....	7 00	4 00	6 00	275					
266	Camden	.....	62	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	20	
	Misses' and infants' shoes.	McKay machine	....	1	..	..	..	..	.....	.....	.....	10 00	500									
		Goodyear machine	....	1	..	..	..	..	.....	.....	.....	10 00	500									
		Lasting	....	8	..	..	..	..	.....	12 00	10 00	10 50	500									
		Heeling	....	5	..	..	..	..	.....	15 00	10 00	12 00	575									
		Trimming	....	3	..	..	..	..	.....	13 50	11 00	12 00	600									
		Burnishing	....	5	..	..	..	..	.....	15 00	11 00	12 00	600									

		Finishing		8						15 00	11 00	12 00	600										
		Fitting			26									7 00	5 00	6 00	300						
		Cutting		5																			
264	Camden		26																10	No	30		
	Infants' shoes.	Lasting		4						12 00	10 00	11 00	525										
		Heeling		3						12 00	10 00	11 00	525										
		Trimming		1						12 00	10 00	11 00	525										
		Burnishing		2						12 00	10 00	11 00	525										
		Finishing		3						12 00	10 00	11 00	525										
		Cutting		2						15 00	12 00	13 50	600										
		Fitting			11									7 00	5 00	6 00	275						
263	Camden		23																10	No	25		
	Infants' shoes.	Lasting		3						15 00	10 00	12 00	600										
		Heeling		2								12 00	600										
		Trimming		1								12 00	600										
		Burnishing		2						15 00	10 00	12 00	600										
		Finishing		3						15 00	10 00	12 00	600										
		Cutting		2									600										
		Fitting			9									7 00	4 50	5 00	250						
262	Camden		38	23	15														10	No	20		
	Infants' shoes.	Cutters																					
		Others																					
236	Vineland		36															2 00-4 00	10	No	25		
		McKay machine		1								11 50	550										
		Stock fitting		2								8 00	360										
		Lasting		1						12 00	13 00	11 00	560										
		Heeling		1						14 00	12 00	13 00	600										
		Burnishing			1											4 50	310						
		Edge trimming		1								13 00	600										
		Edge setting		1								13 00	600										
		Beating out		1								8 50	400										
		Fitting		1	20									8 00	6 00	7 00	350						
		Cutting		1								10 75	525										
		Children				1	4																
237	Vineland		98															2 50-4 00	10	No	25	50 to 60 pairs daily, are made. Very little piece work. Strike of 7 days included in lost time.	
		McKay machine		1								12 00	550										
		Stock fitting		6						10 00	8 00	9 00	410										
		Lasting		9								12 00	550										
		Heeling		1								13 00	600										
		Burnishing			2									6 00	4 00	5 00	220						
		Edge trimming		4						15 00	12 00	14 00	650										
		Edge setting		3						15 00	12 00	14 00	650										
		Beating out		1								9 00	425										
		Fitting			52									10 00	6 00	7 00	310						
		Cutting		9						18 00	10 00	12 00	550										
		Children				2	8																
		Tacking machine										10 00	450										
238	Vineland		93															2 50-4 00	10	No	20	48 to 70 pairs are made daily. Mostly time work. 6 days' strike included under lost time.	
	Ladies' & misses' shoes.	McKay machine		1						12 00		12 00	550										
		Stock fitting		6						10 00	7 00	8 50	400										
		Lasting		8						13 00	10 00	12 00	550										
		Heeling		1								13 00	600										
		Burnishing			2									5 00	4 00	4 50	200						
		Edge trimming		3						15 00	12 00	13 50	650										
		Edge setting		3						15 00	12 00	13 50	650										
		Beating out		1								8 50	400										
		Fitting			48									8 00	5 00	6 50	300						

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

BOOTS AND SHOES—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
238	Vineland ..... Ladies' and misses' shoes. (Continued.)	Cutting.....	....	7	....	..	..	..	..	..	$12 00	$10 00	$11 00	$500									
		Children.....	....	....	....	3	9																
239	Vineland	.....	51	....	....	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	25	Six days' strike.
		McKay machine.....	....	1	....	..	..	..	..	..	.....	.....	12 00	550									
		Stock fitting.....	....	3	....	..	..	..	..	..	9 00	7 00	8 50	400									
		Lasting.....	....	4	....	..	..	..	..	..	13 00	11 00	11 50	550									
		Burnishing.....	....	....	1	..	..	..	..	..	.....	.....	.....	.....	$5 00	$4 00	$4 50	$200					
		Edge trimming.....	....	1	....	..	..	..	..	..	15 00	12 00	13 50	650									
		Edge setting.....	....	1	....	..	..	..	..	..	15 00	12 00	13 50	650									
		Beating out.....	....	1	....	..	..	..	..	..	.....	.....	8 00	360									
		Fitting.....	....	....	25	..	..	..	..	..	.....	.....	.....	.....	9 00	6 00	7 00	310					
		Cutting.....	....	4	....	..	..	..	..	..	.....	.....	10 50	500									
		Children.....	....	....	....	1	2	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	$2 to 4				
		Tacking machine.....	....	1	....	..	..	..	..	..	.....	.....	8 50	400									
		Others.....	....	....	5	..	..	..	..	..	.....	.....	.....	.....	6 00	4 00	5 00	210					
70	Newton.....	.....	270	....	....	..	..	..	..	..	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	30	Not much piece work.
		Engineers.....	....	1	....	..	..	..	..	..	.....	.....	15 00	700									
		Box making.....	....	7	....	..	..	..	..	..	.....	.....	12 00	575									
		Packing.....	....	12	7	..	..	..	..	..	.....	.....	9 00	440	.....	.....	6 00	280					
		Fitting.....	....	....	100	..	..	..	..	..	.....	.....	.....	.....	.....	.....	6 50	320					
		Bottoming.....	....	40	45	..	..	..	..	..	20 00	.....	18 00	850	.....	.....	6 00	300					
		Cutting.....	....	26	....	..	..	6	..	..	.....	.....	18 00	850	.....	.....	.....	.....	6 00				
		Sole-leather room.....	....	12	10	..	..	..	..	..	15 00	13 00	12 00	575	.....	.....	6 00						
		Fireman.....	....	1	....	..	..	..	..	..	.....	.....	10 00	480									
		Turning.....	....	9	....	..	..	..	..	..	.....	.....	6 00	290									
178	Newark	.....	11	7	3	1	..	..	8	2	14 00	8 00	10 50	525	5 50	3 00	4 00	200	3 00	10	No		
		Cutter.....	....	1																			
		Stock fitter.....	....	1																			
		Laster.....	....	1																			
		Heeler.....	....	1																			
		Trimmer.....	....	1																			
		Burnisher.....	....	1																			
		Finisher.....	....	1																			
		Operators.....	....	....	3																		

MINING IRON ORE.

83	Port Oram..... Morris County.	.....	183	....	....	....	....	....	....	....	....	$325	....	....	....	....	....	*8	‡25	50	Boys paid same wages as men. Nearly all who work in these mines live in the company's houses, for which no rent is charged. At Port Oram the mining companies have no stores.
		Miners.....	....	90																	
		Capers.....	....	18																	
		Muckers.....	....	18	....	....	....	....	....	....	†$1 25										
		Landers.....	....	18																	
		Engineers.....	....	9	....	....	....	....	....	....	†1 50										
		Outside men and others...	....	30	....	....	....	....	....	....	†1 25										
84	Port Oram..... Morris County.	.....	156	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*8	‡25	§0	Nearly all the miners live in company's houses. No rent.
		Miners.....	....	84																	
		Capers.....	....	12																	
		Muckers.....	....	12	....	....	....	....	....	....	†1 25	375									
		Landers.....	....	12																	
		Engineers.....	....	6	....	....	....	....	....	....	†1 50	450									
		Outside men and others...	....	30	....	....	....	....	....	....	†1 25	375									
82	Port Oram..... Morris County.	.....	150	150	....	....	....	....	....	....	†1 25	325	....	....	....	....	....	*8	....	50	See No. 83.
85	Mine Hill..... Morris County.	.....	73	73	....	....	....	....	....	....	....	....	....	....	....	....	....	*8	‡25	§0	For wages, &c., see No. 84. Truck system. See No. 87.
86	Mine Hill..... Morris County.	.....	196	196	....	....	....	....	....	....	....	....	....	....	....	....	....	*8	‡25	....	For wages, &c., see No. 84. Truck system. See No. 87. No house rent. See No. 83.
88	Mine Hill..... Morris County.	.....	45	45																	
87	Mine Hill..... Morris County.	.....	85	85	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	For wages, &c., see No. 84. Companies have a store and, though wages are nominally paid monthly, the truck system virtually exists here.
89	Rockaway Twp.... Morris County—3 mines.	.....	291	....	....	....	....	....	....	....	....	....	....	....	....	....	....	¶10	‡25	§0	No piece work. Steam drill used. No rent. See No. 83. Truck system. See No. 87.
		Boring.....	....	25																	
		Blasting.....	....	60																	
		Landing.....	....	60																	
		Hoisting.....	....	60	....	....	....	....	....	....	†1 50	425									
		Timbering.....	....	60																	
		Outside men.....	....	20																	
		Engineers.....	....	6	....	....	....	....	....	....	†1 75	450									
90	Rockaway Twp.... Morris County—3 mines.	.....	346	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*8	‡25	....	No rent. See No. 83. Truck system. See No. 87.
		Engineers.....	....	6	....	....	....	....	....	....	†1 75										
		Others.....	....	340	....	....	....	....	....	....	†1 25	375									
92	Rockaway Twp.... Morris County.	.....	286	....	....	....	....	....	....	....	....	375	....	....	....	....	....	†8	‡25	§0	Truck system. See No. 87. No rent. See No. 83. See also No. 82.
		Miners and others.....	....	280	....	....	....	....	....	....	7 50										
		Engineers.....	....	6	....	....	....	....	....	....	10 00										

* 3 shifts a day (24 hours); 8 hours per shift. The hands are divided into shifts. † Per day. ‡ Cents per day. § No days lost on account of stoppage of work. ¶ 10 hours a shift, 2 shifts a day.

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

MINING IRON ORE—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
91	Rockaway Twp.		218										$375						8	*25	†0	No piece work. Truck system. No rent.
	Morris County.	Drilling, &c.		215								$7 50										
		Engineers		3								10 00										
104	Port Oram		129																8	*25	†0	
	Morris County.	Miners, &c.		126								7 50	375									
		Engineers		3								8 00	400									
98	Morris County		78																8	*25	†0	No house rent. Truck system.
		Miners, &c.		75								7 50	375									
		Engineers		3								9 00	425									
100	Morris County		61																8	*25	45	No piece work. No rent.
		Miners, &c.		55								7 50	325									
		Engineers		6								9 00	375									
96	Randolph Twp.		27																8	*25	45	
	Morris County.	Miners, &c.		24								7 50	325									
		Engineers		3								9 00	375									
95	Morris County		18																8	*25	40	No rent. Truck system.
		Miners, &c.		15								7 50	325									
		Engineers		3								9 00	375									
97	Chester Township.		63																8	*25	40	No piece work. No rent. Truck system
	Morris County.	Miners, &c.		60								7 50	330									
		Engineers		3								9 00										
94	Morris County		153																8	*25		Very little lost time. No rent. Truck system.
		Drilling, &c.		150								7 50	350									
		Engineers		3								9 00	425									
93	Morris County		178																8	*25	20	No rent. Truck system.
		Miners, &c.		175								7 50	350									
		Engineers		3								9 00										
105	Morris County. Recapitulation.		3300									‡9 00	350						8	*25		Mining contractors make from $500 to $1,500 yearly. Truck system exists in nearly all the localities.

* Cents per day. † No days lost on account of stoppage of work. ‡ When they work 10 hours per day.

HATS.

167	Newark		73															$6 00			
		Sizing	20	20		1		20		$15 00	$12 00	$13 00									90
		Stiffening	1	1				1				25 00									
		Coloring	1	1				1				12 00									
		Blocking	2	2				2		18 00		15 00									90
		Finishing	25	25		3	8	17		20 00	12 00	16 00									60
		Trimming	20		20		20							$15 00	$10 00	$12 00					
		Curling	3	3				3		30 00	20 00	25 00									
		Packing	1	1				1		13 00		13 00									
142	Essex County		116																10	No	
		Makers	40	38		2	40			25 00	10 00	12 00									
		Blockers	3	3			3		3	30 00	20 00	25 00									
		Pouncers	5	3		2	3	2	2	30 00	12 00	15 00									
		Finishers	40	37		3	40		2	30 00	12 00	12 00									
		Trimmers	20				20		2	18 00	5 00										
		Flangers	2	1		1	2		2	30 00	20 00										
		Packers	3	3			3		3	30 00	18 00										
		Dyers	3	3				3	2	12 00	10 00										
142½	Orange City		82	61	15	6	79	1		30 00	8 00	12 00	$600	11 00	5 00	7 00	$250	3 00	10	*Yes	30
222	Orange City		100	80	20	5	94	6	2	25 00	12 00	18 00	600	15 00	6 00	9 00	250		10		
149	Newark,		110	75	25	5	100	10		15 00	10 00	10 00	520	9 00	4 00	6 50	250		9	†Yes	100
150	Newark		35	18	12	3	30	5		35 00	10 00	18 00		10 00	5 00	7 50			10	No	‡¼
154	Newark		325	200	100	15	275	50		28 00	8 00	15 00		12 00	5 00	6 00		4 00	8⅛	§Yes	50
107	Essex County		10	8	2		2	8		12 00	5 00	7 50	375	6 00	5 00	5 00	250	5 00	10	No	
156	Hat forming mills.		70	55	15			70		18 00	7 50	9 00	500	6 00	5 00	4 00	200		10	No	
162	Essex County		25	19	6		4	21		25 00	10 00	12 00		5 00		4 00			10	No	
	Hat body factory.																				
159	Orange City		214																10		60
	Fur hat factory.	Finishing department.		65		6	59			24 00	10 00	14 00	650								
		Sizing "		65		3	62	7		20 00	7 00	12 00	600								
		Pouncing "		11		3	8			18 00	7 00	12 00	550								
		Packing "		3			3			28 00	10 00	15 00	700								
		Flanging "		4			4			26 00	10 00	13 00	650								
		Coloring "		3				3		12 00	10 00	9 00	450								
		Shaving "		4			4			18 00	9 00	9 00	450								
		Stiffening "		1						16 00	16 00	16 00	675								
		Blocking "		4					2	24 00	10 00	15 00	600								
		Trimming "			50		49	1		12 00				13 00	3 00	6 00	200				
		Engineer		1						15 00	15 00	15 00	720								
		General help		3				3		11 00	9 50	10 00	450								
		Boys (help)																4 00			
180	Orange		189	139	50															10	
		Makers		25		2	25			18 00		9 00									
		Colorers		3						12 00		12 00									
		Blockers		4				2		30 00		18 00									
		Pouncers		10		2		3		20 00		12 00									
		Finishers		63		4				30 00		14 00									
		Trimmers			40		40							15 00		4 00					
		Binders			8		3							20 00		12 00					
		Leather makers			5									15 00		6 00					
		Flangers		4						30 00											
		Coners		6								‖2 50									
		Heardeners		2								‖2 50									

* Increased 1-14. † Decreased. ‡ ¼ of time. § Increased. ‖ Per day.

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

HATS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
180	Orange. (Continued)	Feeders	....	....	2	4	....	....	....	.....	.....	$0 50-*1 00									
		Weekly hands	....	22	....	13	....	....	....	$18 00	$3 50										
211	Newark		89	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	....	†Yes		
		Sizing	40	39	....	1	40	....	....	30 00	10 00	15 00	$750								
		Finishing	25	22	....	3	23	....	....	20 00	10 00	15 00	750								
		Curling	4	....	....	....	4	....	....	30 00	10 00	20 00	1,000								
		Pouncing	5	....	....	....	5	....	....	18 00	10 00	12 00	500								
		Trimming	15	....	15	....	15	....	....	.....	.....	.....	.....	$9 00	$5 00	$7 00	$350				
218	Newark. Brush hat factory.		56	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	10	‡Yes	125	
		Makers	....	20	....	8	23	....	....	35 00	12 00	15 00									
		Finishers	....	10	....	2	12	....	....	35 00	15 00										
		Trimmers	....	....	10	....	10	....	....	.....	.....	.....	.....	12 00	4 00	8 00					
		Weekly hands	....	6	....	....	....	6	....	12 00	9 00										
366	Newark. Felt hats.		75	50	4	8	60	3	18	.....	9 00	15 00	.....	8 00	.....	.....	.....	10	No		

CARRIAGES.

71	Hackettstown. Carriage factory.		22	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	10	§Yes	.....	Only work by piece, on special contract. Body maker, with helper, can make 3 bodies per week. Trimmer, with helper, 2 tops weekly.
		Body makers	....	6	....	....	....	....	....	$15 00	$9 00	$10 00	$450								
		Trimmers	....	4	....	....	....	....	....	15 00	10 00	11 00	500								
		Finishers	....	2	....	....	....	....	....	12 00	9 00	10 00	450								
		Gear makers	....	1	....	....	....	....	....	15 00	9 00	12 00	550								
		Painters	....	4	....	2	....	....	....	12 00	9 00	10 00	450								
		Silver platers	....	1	....	....	....	....	....	.....	.....	12 00	550								
		Blacksmiths	....	2	....	....	....	....	....	18 00	15 00	16 00	800								
		Helpers	....	2	....	....	....	....	....	.....	.....	9 00	450								
72	Hackettstown. 3 firms.		38	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	See No. 71.
73	Hackettstown. Carriage factory.		17	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	....	§Yes	.....	Generally work by the week. Very few get more than $9.

		Body makers		4						12 00	10 00	9 00	430								Body makers produce 1½, with helper, 3 bodies per week; trimmers, 1 top, with helper, 2 tops.
		Trimmers		3		2				12 00	11 00	10 00	480								
		Finishers		2						12 00	10 00	9 00	430								
		Gear makers		1						13 00	10 00	9 00	430								
		Painters		2								9 00	430								
		Silver platers		1								11 00	540								
		Blacksmiths		1						18 00	15 00	16 00	800								
		Helpers		1								9 00	430								
76	Hackettstown		9															10	‖Yes	40	See No. 71. All these factories were in operation the whole year, but part of hands were idle during some time.
	Carriage factory.	Body makers		2						15 00	12 00	13 00	600								
		Trimmers		1								12 00	550								
		Painters		1								10 00	475								
		Helpers		3								9 00	440								
		Blacksmiths		1								15 00	725								
		Helpers		1								9 00	440								
75	Hackettstown		11															10	No	50	Body makers get $5 a body, and produce 3½ a week, with helpers; trimmers, with helpers, 2 tops.
	Carriage factory.	Body makers		2						12 00	10 00	11 00	525								
		Trimmers		2								9 00	430								
		Painters		2						12 00		9 00	430								
		Helpers				3						6 00	275								
		Blacksmiths		1								12 00	575								
		Helpers		1								9 00	440								
155	Newark		11																†Yes		
	Carriage factory.	Blacksmiths		5				5		18 00	10 00							10			
		Wheelwrights		2				2		18 00	11 00							12			
		Horseshoers		2				2		16 00	14 00							10			
		Painters		2																	
74	Hackettstown		9															10	§Yes	40	See No. 71.
	Carriage factory.	Body maker and helper		1		1					3 00	12 00	550								
		Trimmer		1								15 00	750								
		Helper		1								9 00	400								
		Painter		1								12 00	550								
		Helper		1								8 00	475								
		Blacksmith		2						15 00	12 00	13 50	700								
		Helper		1								9 00	425								
212	Newark		17	15			10	7		14 00	9 00	10 00	480								
	Wagon hubs.																				

ORGANS.

65	Warren county		536															10	No	10	Factory only makes organs; over 1500 yearly. Ran full time.
		Clerical department		60						$12 00	$7 00	$10 00	$500								
		Bookkeepers		4						25 00	12 00	18 00	900								
		Case makers		100						18 00	15 00	16 00	800								
		Action makers		75						20 00	17 00	18 00	900								
		Fly finishers		61						22 00	18 00	20 00	1,000								
		Tuners		60						24 00	18 00	20 00	1,000								
		Box makers		10						16 00	14 00	15 00	750								
		Varnish finishers		10								12 00	600								
		Laborers		100								7 50	350								
68	Warren county		96															10	No	12	About 110 organs are made monthly.
	2 factories.	Case makers		20		3				18 00	15 00	16 00	800								
		Action makers		16						18 00	12 00	14 00	700								

* Per day. † Increased. ‡ Reduced 5 per cent. § Reduced 10 per cent. ‖ Reduced.

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

ORGANS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of apprentices.	Number of time workers.	When working in teams, the number in a team.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
68	Warren County.... 2 factories. (Continued.)	Fly and varnish finishers..	....	20	....	2	....	....	$21 00	$15 00	$17 00	$850									
		Tuners.....	....	12	....	....	....	....	18 00	12 00	13 00	750									
		Box makers.....	....	3	....	....	....	....	.....	.....	12 00	600									
		Laborers.....	....	15	....	....	....	....	.....	.....	7 50	350									
		Others.....	....	....	7	....	....	....	.....	.....	.....	.....	.....	.....	$5 00	$250					
163	Essex County.....	.....	153	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	13	
		Cabinet makers or wood workers	....	119	....	....	....	....	18 00	9 00											
		Metal workers and machinists.....	....	5	....	....	....	....	18 00	6 00											
		Tuners.....	....	11	....	....	....	....	18 00	12 00											
		Clerks.....	....	4	....	....	....	....	40 00	6 50											
		Laborers and team drivers	....	14	....	....	....	....	12 00	6 60											

BAKERS.

111	Newark	.....	100	....	....	....	100	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11			
		Bread makers.....	....	13	....	2	....	....	$18 00	$9 00	$12 00	$624	.....	.....	.....	.....	$6 00	....	*10		
		Cracker makers.....	....	20	....	5	....	....	16 00	8 00	10 00	520	.....	.....	.....	.....	5 00	....	*5		
		Cake and pie makers.....	....	25	....	5	....	....	15 00	8 00	10 00	520	.....	.....	.....	.....	5 00	....	*5		
		Helpers.....	....	25	....	5	....	....	9 00	6 00	7 50	390	.....	.....	.....	.....	4 50	....	*5		
214	Newark	.....	16	16	....	....	16	5	16 00	10 00	13 00	675	.....	.....	.....	.....	.....	12	No		
213	Newark	.....	26	26	....	....	....	....	20 00	10 00	15 00	.....	.....	.....	.....	.....	.....	13			

SHIP BUILDING.

299	Camden		101															10	No	30	The number of caulkers is not regular; sometimes there will be 40, and sometimes only 5; they change to the different yards when needed. Some of these laborers are partly skilled and get a higher rate of wages. Common laborers get $1.25 daily.
		Ship carpenters		60					$18 00		$18 00	$800									
		Caulkers		15					18 00		18 00	800									
		Fasteners		10					15 00	$8 00	10 00	500									
		Joiners		8					15 00	12 00	13 50	625									
		Laborers		8					12 00	8 00	9 00	400									
295	Camden, 3 firms.		169	169																	For wages, &c., see 299. Ship carpenters and caulkers all get the same wages in Camden, where they have a trades organization.
296	Camden		67															10	No	45	
		Ship carpenters		40					18 00		18 00	750									
		Caulkers		10					18 00		18 00	750									
		Fasteners		6					12 00	8 00	9 00	400									
		Joiners		5					15 00	12 00	13 00	600									
		Laborers		5					9 00	7 50	8 00	375									
294	Camden		49															10	No	20	
		Ship carpenters		10					18 00		18 00	850									
		Caulkers		2					18 00		18 00	850									
		Fasteners		1					10 00	8 00	9 00	350									
		Machinists		9		1			18 00	12 00	15 00	725									
		Blacksmiths		8		1			18 00	13 00	16 00	800									
		Laborers		17							8 00	400									
293	Camden		195															10	No	20	
		Ship carpenters		50					18 00		18 00	850									
		Machinists		40					16 00	12 00	13 00	650									
		Blacksmiths		35					18 00	15 00	16 00	800									
		Rivet drivers		25					16 00	14 00	15 00	750									
		Laborers		45							7 50	375									
241	Millville		18															10	No	25	
		Ship carpenters		12					15 00		15 00	700									
		Ship joiners		2					15 00	12 00	13 50	625									
		Laborers		4					9 00	8 50	8 00	375									

* Per cent. increase.

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

PAPER.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
51	Lambertville		52	..	....	..	..	..	....	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	No	20	Two sets of hands—day and night. No piece work.
	Paper mill.	Engineer	....	2	....	..	..	..	....	....	.....	.....	$13 50	$650									
		Fireman	....	2	....	..	..	..	....	....	.....	.....	11 00	525									
		Laborers	....	6	....	..	..	..	....	....	.....	.....	7 00	325									
		Others partly skilled	....	42	6	..	..	..	....	....	$10 00	$8 00	9 00	425	$6 00	$4 00	$5 00	$250					
52	Lambertville		62	....	....	..	..	..	....	62	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	No	15	See No. 51.
	Paper mill.	Skilled	....	10	....	..	..	..	....	....	12 00	11 00	11 50	550									
		Partly skilled	....	*46*	*6*	..	..	..	....	....	*8 00*	*10 00*	*9 00*	425	*6 00*	4 00	5 00	240					
53	Lambertville		33	....	....	..	..	..	....	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	No	18	See No. 51.
	Paper mill.	Engineers	....	2	....	..	..	..	....	....	.....	.....	11 00	525									
		Carpenter	....	1	....	..	..	..	....	....	.....	.....	15 00	700									
		Firemen	....	2	....	..	..	..	....	....	.....	.....	10 00	475									
		Laborers	....	3	....	..	..	..	....	....	.....	.....	7 00	325									
		Partly skilled hands	....	18	7	..	..	..	....	....	8 00	10 00	9 00	425	7 00	5 00	6 00	275					
60	Warren County		104	....	....	..	..	..	....	104	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	No	20	See No. 51.
	Paper mill.	Engineers	....	2	....	..	..	..	....	....	.....	.....	12 00	575									
		Firemen	....	2	....	..	..	..	....	....	.....	.....	9 00	425									
		Partly skilled hands	....	40	....	..	..	..	....	....	11 00	9 00	10 00	475									
		Unskilled hands	....	30	10	..	..	..	....	....	9 00	8 00	7 50	350									
		Laborers	....	20	....	..	..	..	....	....	.....	.....	7 00	325									
41	Boonton		10	8	....	2	..	..	....	10	12 00	7 00	9 00	350	.....	.....	.....	.....	$4 00	10	No		
	Paper mill.																						
346	Jersey City		43	34	3	..	..	..	....	43	12 00	7 50	10 00	500	.....	.....	4 50	.....	5 00	10	No	.....	Very little skilled help is employed.
	Manila and tissue paper.																						
54	Paterson		9	....	....	..	..	..	....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	12	
	Tissue paper.	Engineers	....	2	....	..	..	..	....	....	.....	.....	9 00	450									
		Machinist	....	1	....	..	..	..	....	....	.....	.....	9 00	450									
		Finishers	....	2	....	..	..	..	....	....	.....	.....	9 00	450									
		Stock cutters	....	1	....	..	..	..	....	....	.....	.....	7 50	375	.....	.....	5 00	250					
		Box makers	....	....	....	..	3	..															
194	Newark		150	15	135	..	..	..	....	20	18 00	7 50	12 00	600	10 00	5 00	7 00	350	.....	10	*Yes	2	10,000 boxes made daily.
	Paper boxes.																						

* Increased.

LEATHER.

177	Newark		76																10				
	Tannery.	Tanners		24									$10 00										
		Curriers		6									16 00										
		Splitters		6									40 00										
		Tackers		5		3							8 00										
		Softeners		2									16 00										
		Japanners		24									11 00										
		Grainers		5									14 00										
		Patchers		1									10 00										
164	Newark		51																10				
	Tannery.	Tanners		20				2															
		Curriers		16				2	14	2	$20 00	$9 00	12 00	$600									
		Japanners		15					15														
224	Newark Tannery.		35	35					20	15	50 00	9 00	15 00	650					10				
196	Newark Tannery.		50	50							15 00	6 00	10 00	500					10	No			About two-thirds of men work by piece and hire their own help.
144	Newark Tannery.		68	68							18 00	4 00	10 00	520					10				No piece work.
137	Newark Patent leather.		30								12 00	9 00	10 50						10	No			
219	Newark Patent leather.		274	273	1			6	138	136	40 00	9 00	11 87						10	No			

BREWERIES.

153	Newark Brewery.		30	30						30	$35 00	$9 00	$12 50	$650					12	No			
170	Newark Brewery.		22	22						22	22 00	10 00	16 00						11	No			
174	Newark Brewery.		36	36						36	18 00	10 00	15 00	750					12	No			
176	Newark Brewery.		71	71						71	75 00	12 50	15 00	780					11				
220	Newark Soda water.		13	13						13	12 00	8 00	10 00	520					10	No			

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

JEWELRY.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
365	Newark.....	Foremen	3	3	....	....	....	....	....	3	....	$50 00	$35 00	.....	$2,200	.....	.....	.....	.....	.....	....	.....	18	The number of hands varies constantly. Nothing is stable about the trade now. Wages vary from month to month. Some men have been idle from 7 to 11 months. For the first 6 months, most of the chain makers worked by week and in teams, then singly and by piece or weight. The trade is in such a condition at present, that the men are obliged to take any price for work.
		Jewelers.....	85	10	....	15	....	....	45	40	9	25 00	9 00	.....	650	.....	.....	.....	.....	.....	....	.....	90	
		Bracelet makers ..	6	6	....	....	....	....	4	2	....	.....	15 00	.....	900									
		Ring makers	8	6	....	2	....	2	4	4	....	21 00	.....	.....	700									
		Stone setters.....	6	6	....	....	....	....	4	2	....	18 00	.....	.....	900									
		Finishers.....	4	4	....	....	....	....	....	4	....	21 00	15 00	.....	750	.....	.....	.....	.....	.....	....	.....	60	
		Chain makers.....	70	25	....	25	20	....	....	37	*31	21 00	9 00	.....	600	.....	.....	.....	.....	.....	....	†Yes		
		Spring ring makers	2	2	....	....	....	....	2	....	....	.....	.....	.....	700	.....	.....	.....	.....	.....	....	.....	90	
		Swivel makers	1	1	....	....	....	....	1	....	....	.....	.....	.....	1,000	.....	.....	.....	.....	.....	....	.....	90	
		Engravers.....	41	21	....	20	....	....	....	41	....	20 00	10 00	.....	630	.....	.....	.....	.....	.....	....	‡Yes		
		Polishers	28	4	....	....	24	....	....	28	....	22 00	12 00	.....	750									
		Enamelers.....	3	1	....	1	1	....	....	3	3	21 00	.....	.....	900	.....	.....	.....	.....	.....	....	.....	36	
		Colorers.....	4	1	....	1	2	....	....	4	4	35 00	2 50	.....	.....									
		Melters.....	1	1	....	....	....	....	..	1	....	21 00	.....	.....	1,000									
		Tool makers.....	3	3	....	....	....	....	....	3	....	25 00	18 00	.....	750	.....	.....	.....	.....	.....	....	.....	60	
		Engineer	1	1	....	....	....	....	....	1	....	18 00	.....	.....	.....									
		Laborers	2	2	....	....	....	....	..	2	....	12 00	9 00	.....	550									
		Clerk	1	1	....	....	....	....	....	1	....	9 00	.....	.....	475									
366	Newark.....	Locket maker.....	1	1	....	....	....	....	1	....	....	12 00	.....	....	500	.....	.....	.....	.....	.....	....	.....	.....	Considered a badly-ventilated shop. As many boys as possible employed, and worked for all they are worth. No system of instructing them in the trade. Employment is pretty steady, average time lost being only 4 or 6 weeks. Wages were reduced 10 per cent.
		Ring makers.....	11	5	....	6	....	....	....	....	....	14 00	10 00	.....	550									
		Stone setter.....	1	1	....	....	....	....	....	....	....	22 00	.....	.....	1,000									
		Polishers	3	....	....	2	1	....	....	....	....	6 00	3 00	.....	200									

367	Newark.....	.....	30	....	....	....	....	1	....	....	....	.....	.....	.....	600	.....	.....	.....	.....	.....	....	No	60	Well ventilated and kept in good condition. Employment pretty steady, and employers seem to do as well with hands as trade will allow.
		Jewelers.....	17	15	....	1	1	....	....	17	....	25 00	10 00											
		Bracelet makers..	8	8	....	....	....	....	....	8	....	18 00	10 00											
		Stone setter.....	1	1	....	....	....	....	....	1	....	22 00												
		Finisher.....	1	1	....	....	....	....	....	1	....	18 00												
		Engravers.....	3	3	....	....	....	....	....	3	....	18 00	15 00											
		Polishers.....	3	2	....	....	1	....	....	3	....	18 00	12 00											
		Colorer.....	1	1	....	....	....	....	....	1	....	18 00												
		Melter.....	1	1	....	....	....	....	....	1	....	18 00												
		Tool makers.....	2	2	....	....	....	....	....	2	....	24 00												
368	Newark.....	Ring makers.....	4	3	....	1	....	....	....	4	....	16 00	12 00	.....	500	.....	.....	.....	.....	.....	....	.....	.....	Shop well ventilated. Wages reduced 12 per cent.
		Stone setter.....	1	1	....	....	....	....	1	....	....	.....	.....	18 00										
		Polisher.....	1	....	....	....	1	....	....	....	....	6 00	.....	.....	200									

TRUNKS, BAGS, AND SATCHELS.

126	Newark... .. Satchels and traveling bags.	.....	48	34	....	....	....	....	20	28	....	$20 00	$6 00	$13 00	$675	.....	.....	.....	.....	$4 00	10	No		
361	Newark..... Trunks, bags, and satchels.	.....	400	250	20	....	....	....	300	100	5	25 00	6 00	15 00	600	$15 00	$5 00	$7 00	$350	3 50	10	§Yes	2	
223	Newark..... Bags and satchels.	.....	10	....	1	....	....	1	....	10														
		Cutters.....	....	8	....	....	....	....	....	....	....	* 12	.....	.....	600									
		Sewing machine operators.....	....	1	1	....	....	....	....	....	....	12	6 00	9 00	450	.....	.....	6 00	300	2 00	10	‖Yes		
		Mechanics.....	....	5	....	....	....	....	....	....	....	12	10 00	11 00	500									
		Laborers.....	....	1	....	....	....	....	....	....	....	8	6 00	7 00	300									
119	Newark..... Trunk pockets and covering.	.....	7	5	....	1	....	....	1	6	....	14	8 00	10 00	.....	.....	.....	.....	.....	4 25	10	‖Yes	12	

TOBACCO.

183	Newark..... Cigar makers' Union, 138.	.....	302	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	§Yes	30	
		Cigar makers.....	200	195	5	....	....	20	180	20	....	$13 00	$7 00	$9 00	$600	$10 00	$6 00	$7 00	$500	$5 00				
		Rollers.....	30	5	25	....	....	....	30	....	....	12 00	6 00	10 00	600	6 00	2 00	4 00	300					
		Bunch breakers...	....	....	....	10	....	....	....	10	....	5 00	.....	4 00	350	.....	.....	.....	300					
		Strippers.....	50	....	....	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	2 50				
		Packers.....	12	....	....	....	....	2	10	2	....	18 00	9 00	12 00	400	12 00	5 00	8 00	400					
329	Jersey City.. Cigar making.	.....	23	20	....	....	....	....	20	....	....	24 00	10 00	16 00	.....	.....	.....	.....	.....	.....	9½	§Yes		
		Strippers.....	....	....	....	3	....	....	....	3	....	.....	.....	.....	.....	.....	.....	.....	.....	3 to 4				
330	Jersey City.. Cigar making.	.....	10	8	....	1	1	....	10	....	....	.....	.....	7 00	.....	.....	.....	.....	.....	5 00	8	§Yes		
215	Newark..... Cigar making.	.....	6	5	....	....	....	1	3	2	....	.....	.....	.....	500	.....	.....	.....	.....	2 00	8	§Yes		

* 6 men, 25 boys. † Increased 25 per cent. ‡ Reduced 12 per cent. § Increased. ‖ Increased 10 per cent.

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

TOBACCO.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
32	Paterson ..... Cigar making.	.....	42	32	....	..	5	37	....	....	*$3 25	$1 75	$2 00	$500	.....	.....	.....	.....	.....	9	.....	50	In Passaic, there are 4 firms; cigar makers get $3 less per 1000. Reason is, because workmen are not organized.
351	Jersey City ..... Plug, snuff, &c.	.....	3500	1000	2500	..	..	2625	875	2to6	30 00	9 00	12 50	.....	$15 00	$4 00	$7 00	.....	.....	10			
118	Newark ..... Cigars.	.....	4	4	....	..	..	....	....	....	15 00	.....	.....	.....	.....	.....	.....	.....	.....	10			

HORSE-CAR RAILROADS.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
355	Hoboken and Jersey City	.....	181	....	....	..	..	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	No	.....	Conductors and drivers are paid by the hour, and if they work full time receive wages as stated. This is said to be one of the *best regulated lines* in the United States.
		Conductors	....	56	....	..	..	....	56	....	$12 50	.....	$10 00										
		Drivers	....	75	....	..	..	....	75	....	12 50	.....	12 00										
		Stablemen	....	50	....	..	..	....	50	....	10 50	.....	9 00										
345	Jersey City	.....	221	....	....	..	..	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	These wages are paid if men lose no time. Conductors and drivers are changed frequently, and it is difficult to make averages of their earnings. The market is overstocked, but the company retains its men as long as possible.
		Conductors	....	54	....	.	..	....	54	....	14 00	13 00											
		Drivers	....	72	....	..	.	....	72	....	15 75	14 00											
		Stablemen, horse-shoers, timekeepers and carpenters	....	75	....	..	..	....	75	....	17 50	9 00											
		Trackmen	....	20	....	..	..	....	20	....	15 75	9 00											

*Per day.

166	Newark and Bloomfield	Blacksmiths	....	124	....	..	..	....	....	....	15 00	10 50	.....	.....	.....	.....	.....	.....	.....	10			
		Drivers and conductors	....	....	....	..	..	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14			
221	Newark and South Orange	.....	57	....	....	..	..	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	Steady employment.
		Blacksmiths	....	2	....	..	..	....	....	....	14 00	.....	.....	.....	.....	.....	.....	.....	.....	10			
		Track boss	....	1	....	..	..	....	....	....	15 00	.....	.....	.....	.....	.....	.....	.....	.....	10			
		Conductors	....	16	....	..	..	....	....	....	12 00	.....	.....	.....	.....	.....	.....	.....	.....	13			
		Drivers	....	16	....	..	..	....	....	....	12 00	.....	.....	.....	.....	.....	.....	.....	.....	13			
		Stablemen	....	10	....	..	..	....	....	....	10 50	.....	.....	.....	.....	.....	.....	.....	.....	12			
		Trackmen	....	4	....	..	..	....	....	....	10 50	.....	.....	.....	.....	.....	.....	.....	.....	10			
		Night watchmen	....	2	....	..	..	....	....	....	11 20	.....	.....	.....	.....	.....	.....	.....	.....	10			
		Physician	....	1	....	..	..	....	....	....	.....	.....	.....	400									
		Lamp cleaner	....	1	....	..	..	....	....	....	11 20	.....	.....	.....	.....	.....	.....	.....	.....	10			
		Tow boys	....	....	....	15	..	....	....	....	5 00	.....	.....	.....	.....	.....	.....	.....	.....	6			
		Carpenters	....	2	....	..	..	....	....	....	15 00	.....	.....	.....	.....	.....	.....	.....	.....	10			
		Painters	....	2	....	..	..	....	....	....	15 00	.....	.....	.....	.....	.....	.....	.....	.....	10			

BUTTONS.

201	Newark Pearl buttons.	.....	250	200	60	..	20	....	250	....	$13 50	$6 00	$10 50	$500	$7 00	$2 25	$4 50	$200	$1 50–7 00	10	*Yes		
315	Newark Pearl buttons.	Summer	60	40	20	..	..	....	60	....	18 00	10 00	12 00	.....	7 00	3 00	5 00	.....	.....	10	†Yes	10	
		Winter	40	32	8	..	..	....	40	....	15 00	8 00	10 00	.....	6 00	2 75	4 50	.....	.....	9	‡Yes	15	
198	Newark Pearl buttons.	.....	17	....	....	..	..	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	30	
		Cutters	....	2	....	..	..	....	....	....	15 00	.....	15 00	675									
		Turners	....	8	....	..	..	....	....	....	16 00	12 00	14 00	630									
		Backers	....	....	....	..	4	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	8 00				
		Finishers	....	....	3	..	..	....	....	....	.....	.....	.....	.....	7 00	5 00	6 00	270					
130	Newark Pearl buttons.	.....	6	....	....	..	..	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	75	
		Cutters	....	2	....	..	..	....	2	....	12 00	12 00	12 00	480									
		Backers and turners	....	2	....	..	..	....	2	....	12 00	9 50	10 75	365									
		Polisher and driller	....	1	....	..	1	....	....	....	4 00	.....	4 00										
175	Newark Ivory buttons.	.....	40	15	25	..	..	35	5	....	18 00	7 50	.....	.....	7 00	3 50	.....	.....	5 00	10	.....	14	

SADDLERY HARDWARE.

141	Newark Saddlery hardware.	.....	370	300	40	..	..	200	170	....	$20 00	$9 00	$12 00	$600	$12 00	$3 00	$6 00	$300	$3 00	10	No		
148	Newark Saddlery hardware.	.....	47	30	....	..	..	22	25	....	18 00	9 50	13 00	.....	.....	.....	.....	.....	3 50	10			
160	Newark Saddlery hardware.	.....	5	2	....	..	..	....	4	....	12 00	.....	10 00	.....	.....	.....	.....	.....	.....	10	.....	30	
192	Newark Saddles and coach pads.	.....	19	16	3	..	4	6	13	....	20 00	8 00	11 00	550	5 00	5 00	5 00	225	4 00	10			

* Decreased 20 per cent. † Increased 15 per cent. ‡ Decreased 10 per cent.

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

RUBBER.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of apprentices.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
56	Hunterdon Co.		125																			
	Rubber works.	Skilled workmen		13								$12 00	$575									
		Partly skilled workmen		100	60					$10 00	$8 00	9 00	425			$6 00	$275					
		Ordinary workmen		12						8 00	6 00	7 00	325									
49	Morris County		633																10		30	
	Hard rubber.	Stock department		140						18 00	8 00	12 00	550									
		Moulding department			50											4 75	225					
		Turning		50								12 00	550									
		Grinding		35						15 00	7 50	9 00	425									
		Cutting		45	20					12 00	10 00	11 00	525			6 00	275					
		Sawing		30								11 00	525									
		Rubbing		75								12 00	575									
		Polishing		42	70							12 00	575			5 00	225					
		Packing		10	30							10 00	475			5 00	230					
		Paper boxes		4	20							9 00	425			6 00	275					
		Carpenters		5						15 00	12 00	14 00	675									
		Blacksmiths		3						15 00	13 00	13 50	650									
		Machinists		4								12 00	575									
		Laborers										7 00	325									
347	Jersey City		30	26		4			30	15 00	9 00	11 00						$4 50	10	No		
	Car springs, belting and hose.																					
143	Newark		40	15	25				40	21 00	10 00	14 00	700	$10 00	$5 00	7 00	350		10	No		
	Stationery goods.																					

PAINTING AND PAPER HANGING.

324	Jersey City		12	12					12	$19 50	$18 00	$16 50	$600						10	No	100	This is the average for the 200 painters in county.
	Sign and house painting, kalsomining.																					

203	Newark		11																		
	Frescoing, painting and paper hanging.	Frescoing and painting	....	8	....	....	....	....	8	15 00	$12 00	13 00	600	.....	.....	.....	.....	.....	10	No	36
		Paper hanging	....	3	....	....	....	3	....	20 00	.....	14 00	.....	.....	.....	.....	.....	.....	9	.....	90
117	Newark		10	8	....	2	2	4	6	40 00	2 00	10 00	500	.....	.....	.....	.....	$4 00	10	No	
	Frescoing, painting and paper hanging.																				

PRINTING AND PUBLISHING.

336	Jersey City		80																		
	Newspaper, &c.	Newspaper hands	....	44	....	....	....	18	30	$35 00	$10 00	$18 00	$430	.....	.....	.....	.....	$4 00	10		
		Job and book hands	....	26	....	10	....	9	27	25 00	9 00	15 00	375	.....	.....	.....	.....	4 00	10		
138	Newark		20	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	
	Printing and book binding.	Type setting	....	3	....	....	....	....	3	15 00	15 00	15 00	750								
		Pressmen	....	3	....	....	3	....	6	15 00	12 00	13 50	675	.....	.....	.....	.....	3 83			
		Book foreman	....	1	....	....	....	....	1	15 00	.....	15 00	750								
		" finisher	....	1	....	....	....	....	1	.....	.....	18 00	850								
		" folders	....	....	8	....	....	4	4	.....	.....	.....	.....	$6 00	$2 00	$3 60					
		Helper	....	1	....	....	....	....	1	.....	.....	6 00									
99½	Trenton		45	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	
	Printing and publishing.	Compositors	....	32	....	....	3	2	33	14 00	2 50										
		Pressmen	....	4	....	....	3	....	7	14 00	3 00										
		Stereotypers	....	3	....	....	....	....	3	16 50	10 00										
287	Paterson		4	3	....	....	....	3	1	17 00	15 00	16 00	800	.....	.....	.....	.....	.....	10		
	Newspaper.																				
228	Passaic		30	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	20
	Job printing.	Men	....	15	....	....	5	....	....	15 00	10 00	12 00	500	.....	.....	.....	.....	3 00			
		Women	....	6	....	....	4	....	....	.....	.....	.....	.....	7 00	4 00	5 00	$250	2 50			
140	Newark		35	21	7	....	7	3	32	25 00	8 00	14 00	700	7 00	4 00	6 00	300	2 to 6	9½-10	No	
	Book binding.																				

ENGRAVING.

106	Newark		12	8	....	....	4	....	....	$20 00	.....	$15 00	$750	.....	.....	.....	.....	$2 50	10	Yes	12
	Engraving and die sinking.																				
133	Newark		20	....	....	....	....	....	20												
	Engraving and die sinking.	Die washers	....	9	....	....	3	....	....	28 00	$15 00	22 00	1,100	.....	.....	.....	.....	5 00	10	No	
		Cleaner	....	1	....	....	....	....	....	20 00	15 00	19 00	900								
		Machine engravers	....	3	....	....	....	....	....	24 00	18 00	21 00	1,050								
		Helpers	....	4	....	....	....	....	....	.....	.....	9 00	450								
240	Burlington		40	....	....	....	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	12
	Engraving labels.	Skilled	....	10	....	....	....	....	....	25 00	12 00	18 00	900								
		Not skilled	....	20	10	....	....	....	....	10 00	8 00	9 00	450	.....	.....	$5 00	$250				
147	Essex County		190	127	10	13	40	....	....	46 00	10 00	18 00	.....	$6 00	$5 00	.....	.....	.....	10	*5-10	6
	Engraving labels.																				

* Per cent. increa

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

ENGRAVING—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1883, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
134	Newark..... Engraving rolls for printing oil cloth, &c.	.....	14	12	....	..	.. .	2	..	..	....	$28 00	$12 00	$23 00	.....	.....	.....	.....	.....	$3 50	10	No		

BUILDING.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1883, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
365	Jersey City..... Dock and bridge building.	.....	30	30	....	..	....	2	..	30	8	$21 00	$10 50	$13 50	$450	.....	.....	.....	.....	.....	10	*Yes	80	
321	Jersey City..... Mason & builder.	.....	20	20	....	..	....	2	..	22	....	.....	.....	.....	.....	.....	.....	.....	.....	$9 00	10	No	50	
		Brick layers.....	..	....	....	..	....	..	..	..	....	21 00	.....	20 00										
		Hod carriers	....	....	....	..	....	..	..	..	....	.....	.....	15 00										
208	Newark..... Mason & builder.	.....	47	47	....	3	....	2	..	47	....	21 00	18 00	14 00	.....	.....	.....	.....	.....	.....	10	No	104	
368	Newark..... Stone work.	.....	75	75	....	..	....	2	..	75	....	21 00	9 00	16 50	8 40	.....	.....	.....	.....	.....	10	No	60	
169	Orange..... Carpentry.	.....	71	62	....	..	....	6	..	71	....	22 50	15 00	16 50	8 00	.....	.....	.....	.....	5 00	10	No		

SASHES AND BLINDS.

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	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.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1883, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
343	Jersey City..... Sash, door, and blind factory.	.....	10	10	....	..	....	..	..	10	....	$18 00	$12 00	$15 00	.....	.....	.....	.....	.....	.....	10	No	.....	Wages the same since 1873.
217	Newark..... Sash, door, and blind factory.	.....	26	18	....	..	....	6	...	13	....	20 00	.....	16 50	.....	.....	.....	.....	.....	.....	10	†Yes	3	
146	Newark..... Sash, door, and blind factory.	.....	4	2	....	..	....	2	..	4	....	12 00	.....	12 00	$500	.....	.....	.....	.....	$5 00	10	No		

120	Newark..... Planing mills.	.....	13	13	....	..	....	..	..	13	....	18 00	5 00	13 00	.....	.....	.....	.....	.....	.....	10	No		
190	Newark..... Trunk, box, and planing mill.	.....	46																					
		Trunk boxes.....	....	24	....	..	....	1	25	..	....	23 00	7 00	.....	.....	.....	.....	.....	.....	.....	5-9			
		Planing mill.....	....	10	....	..	....	6	..	16	....	18 00	5 00	.....	.....	.....	.....	.....	.....	.....	10			
		Drivers.....	....	5	....	..	....	..	..	5	....	11 00	8 00	.....	.....	.....	.....	.....	.....	.....	10			

MISCELLANEOUS INDUSTRIES.

197	Newark..... Wood turners.	.....	7	6	....	..	....	1	..	7	....	$11 00	$9 00	$10 00	$480	.....	.....	.....	.....	.....	10	No	12	
199	Newark..... Wood turners.	.....	4																					
		Turners.....	....	1	....	..	....	2	..	3	....	12 00	.....	.....	.....	.....	.....	.....	.....	$5 00	10	.....	12	
		Cabinet maker.....	....	1	....	..	....	..	..	..	....	18 00												
349	Jersey City..... Furniture and upholstery.	.....	44	40	4	..	....	..	6	38	....	30 00	10 00	20 00	.....	$16 00	$12 00	$14 00	.....	.....	10	No	.....	No time lost. Women only work by piece, sewing carpets, &c.; average from $12 to $16 per week, and sometimes, by overwork, $20.
339	Jersey City..... Box factory.	.....	110	85	....	25	....	..	50	60	....	15 00	9 00	12 00	.....	.....	.....	.....	.....	2 50–5 00	10	No		
9	Paterson..... Flax spinning works.	.....	599	125	310	4	160	..	..	..	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No		
		Spinners.....	....	2	105	..	....	..	..	..	....	6 00	.....	6 00	275	5 00	4 00	4 50	$225					
		Preparers.....	....	1	40	..	....	..	..	..	....	18 00	.....	.....	.....	.....	.....	4 00	200					
		Carders.....	....	3	25	.	....	..	..	..	....	18 00	.....	6 00	275	4 00	3 50	3 75	175					
		Flax dressers.....	....	75	....	4	....	..	..	..	....	18 00	.....	10 00	550	4 00	.....	.....	175					
		Reelers.....	....	1	105	..	....	..	..	..	....	15 00	.....	.....	750	4 00	3 00	3 50	200					
		Dyers.....	....	41	....	..	....	..	..	..	....	18 00	.....	7 50	300									
		Doffers.....	....	1	....	..	160	..	..	..	....	15 00	.....	.....	750	.....	.....	2 50	150					
		Spoolers.....	....	1	35	..	....	..	..	..	....	15 00	.....	.....	750	4 00	3 00	3 25	175					
59	Hunterdon county. Flax, jute, and hemp.	.....	90	25	30	..	35	..	..	..	....	12 00	9 00	10 50	500	6 00	4 00	5 50	250	1 50	....	No	20	
129	Newark..... Fur cutting.	.....	10	6	1	3	....	..	..	10	....	9 00	7 00	8 00	400	6 00	6 00	6 00	300	4 50	10	‡Yes		
135	Newark..... Fur cutting.	.....	5	2	....	..	....	3	..	5	....	.....	.....	10 00	500	.....	.....	.....	.....	3 25	10	No		
44	Morris County..... Powder.....	.....	40	15	....	24	....	..	..	..	....	.....	.....	15 00	550	.....	.....	.....	.....	1 50–75				
45	Morris county..... Dynamite.	.....	30	....	....	..	....	..	..	..	....	.....	.....	.....	.....	.....	.....	.....	.....	3 00	10	No	25	
		Partly skilled.....	....	10	....	..	....	..	..	..	....	.....	.....	12 00	600	.....	.....	.....	.....	.....				
		Ordinary.....	....	15	....	..	....	..	..	..	....	.....	.....	10 50	525	.....	.....	.....	.....	.....				
		Foreman.....	....	1	....	..	....	..	..	..	....	.....	.....	18 00	900	.....	.....	.....	.....	.....				
344	Jersey City..... Oil and tallow.	.....	36	35	....	1	....	..	..	36	....	20 00	9 00	15 00	.....	.....	.....	.....	.....	5 00	10	§Yes	.....	Labor only requires practice; not much skill.
342	Jersey City..... Castor oil.	.....	30	28	....	2	....	..	..	30	....	20 00	10 00	16 00	.....	.....	.....	.....	.....	7 00	10	No		
348	Jersey City.. ..... Freight handlers.	.....	250	250	....	..	....	..	..	..	....	10 00	4 00	8 00	.....	.....	.....	.....	.....	.....	4–13		.....	Are paid 17 cents per hour — only when working.

*Increased 12½ per cent. † Increased. ‡ Increased 4 per cent. Increased 5 per cent.

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

MISCELLANEOUS INDUSTRIES—*Continued.*

Office number.	Location.	Subdivision of Trade.	Whole number of hands.	Number of men.	Number of women.	Number of boys.	Number of girls.	Number of apprentices.	Number of piece workers.	Number of time workers.	Highest wages paid to men per week.	Lowest wages paid to men per week.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Highest wages paid to women per week.	Lowest wages paid to women per week.	Average wages paid to women per week.	Average annual earnings of women from July 1st, 1882, to July 1st, 1883.	Wages paid to boys and girls per week.	Number of hours worked per day.	Have wages been increased or reduced during the year? How much?	Number of days lost during the year, not including legal holidays.	Remarks.
168	Newark		30	....	....	..	....	1	..	....	$20 50	$9 00	.....	$900	.....	.....	.....	.....	$5 00	9			
	Stone cutting.																						
322	Jersey City		25	20	....	5	....	5	..	25	20 00	15 00	$18 00	.....	.....	.....	.....	.....	5 00	10	No	14	
	Plumbing and gas fitting.																						
125	Newark	Smelters	3	2	....	..	....	1	..	3	.....	.....	12 00	600	.....	.....	.....	.....	5 00	10	No		
	Gold and silver refining.																						
364	Jersey City		300	60	100	65	75	..	..	30	25 00	10 00	18 00	.....	$12 00	$6 00	$8 00	.....	3 to 6	10	No	.....	Work is not regular.
	Fireworks.																						
334	Jersey City		40	20	....	20	....	..	..	40	12 00	9 00	10 00	.....	.....	.....	.....	.....	3 to 5	10	No	.....	Half of the work is done by boys. The labor is not of a very high order.
	Oakum.																						
200	Newark		12	....	....	..	....	..	..	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10			
	Skates.	Grinders	....	1	....	..	....	..	1														
		Polishers	....	4	....	..	....	..	3	1	12 00												
		Vise hands	....	7	....	..	....	..	2	5	12 00	8 00	10 00	500									
225	Newark		4	2	....	..	....	..	2	2	12 00	10 00	11 00	570	.....	.....	.....	.....	3 00	10			
	Twine and rope.																						
210	Newark		15	15	....	..	....	..	10	....	11 00	6 00	9 00	225	.....	.....	.....	.....	.....	10to12	.....	6mos.	
	Hoops for Indian market.																						
216	Orange		83	....	....	..	....	..	..	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	No	.....	No deduction in wages when an employe is absent for a few days only, or for holidays.
	Manufacturing chemists.	Superintendent	....	1	....	..	....	..	..	1	25 00	.....	.....	1,300									
		Book-keepers	....	2	....	..	....	..	..	2	18 00	.....	.....	950									
		Foremen	....	3	1	..	....	..	..	4	25 00	.....	.....	1,300	30 00	.....	.....	$1,560					
		Carpenters	....	2	....	..	....	..	..	2	18 00	.....	.....	950									
		Machinists	....	2	....	..	....	..	..	2	18 00	.....	.....	950									
		Engineer	....	1	....	..	....	..	..	1	18 00	.....	.....	950									
		Firemen	....	2	....	..	....	..	..	2	10 00	.....	.....	520	.....	.....	.....	.....	.....	.....	.....	30	
		Japanners	....	8	....	..	....	..	8	....	.....	.....	.....	825	.....	.....	.....	.....	.....	.....	.....	40	
		Rollers	....	2	....	..	....	3	..	3	10 00	.....	.....	500	.....	.....	.....	.....	4 00	.....	.....	40	
		Punchers	....	2	....	..	....	2	..	2	.....	.....	.....	.....	.....	.....	.....	.....	5 00	.....	.....	40	
		Printers	....	1	....	..	....	5	..	6	20 00	.....	.....	1,060	.....	.....	.....	.....	6 00	.....	.....	30	
		Carders	....	4	....	..	....	..	..	4	11 00	.....	.....	450	.....	.....	.....	.....	.....	.....	.....	40	
		Bleachers	....	3	....	..	....	..	..	3	12 00	.....	.....	480	.....	.....	.....	.....	.....	.....	.....	30	
		Packers	....	2	1	..	....	..	..	3	10 00	.....	.....	500	7 50	.....	.....	.....	.....	.....	.....	40	

		Laborers	....	3	....	..	....	..	..	3	9 00	.....	.....	450									
		Women	....	....	35	..	....	..	33	2	.....	.....	.....	.....	15 00	4 00	8 00	.....	.....	.....	.....	50	
337	Jersey City	.....	130	130	....	..	....	..	..	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	This work is all done by the piece. Wages vary according to business.
	Butchering.	Killing and dressing	....	....	....	..	....	..	..	....	75 00	.....	20 00										
		Slaughtering	....	....	....	..	....	..	..	....	40 00	.....	18 00										
171	Newark	.....	22	....	....	..	....	..	..	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	No	10	
	Pins, &c.	Pin makers	....	8	....	2	....	..	2	8	16 50	10 00	13 50	600	.....	.....	.....	.....	3 00				
		Hackle makers	....	5	....	7	....	3	..	12	16 50	7 50	12 00	600	.....	.....	.....	.....	3 00				
186	Passaic	.....	50																				
	Whips.	Skilled	....	30	....	..	....	..	..	....	15 00	10 00	12 00	600	.....	.....	.....	.....	.....	10	No	15	
		Not Skilled	....	10	....	..	....	..	..	....	8 00	6 00	7 00	350									
		Women	....	....	10	..	....	..	..	....	.....	.....	.....	.....	5 00	4 00	4 25	212					
189	Newark	.....	118	89	....	29	....	..	..	118	45 00	9 00	15 40	.....	.....	.....	.....	.....	6 18	10	.....	28½	
	Celluloid.																						
165	Newark	.....	100	....	....	..	....	..	..	....	18 00	8 10	9 00	450	.....	.....	.....	.....	.....	10	.....	8	
	Licorice.																						
323	Jersey City	.....	25	25	....	..	....	..	..	25	20 00	9 00	14 00	.....	.....	.....	.....	.....	.....	10	No	15	No deduction in wages for holidays.
	Drug mill.																						
289	Camden	Blacksmiths	....	50	....	..	....	..	..	....	20 00	10 00	15 00	750	.....	.....	.....	.....	.....	10	No	10	The workmen here reported are not included elsewhere.
	Miscellaneous industries.	Carpenters	....	50	....	..	....	..	..	....	18 00	12 00	15 00	700	.....	.....	.....	.....	.....	10	No	40	
		Bricklayers	....	100	....	..	....	..	..	....	18 00	12 00	16 00	750	.....	.....	.....	.....	.....	10	No	40	
		Barbers	....	80	....	..	....	..	..	....	10 00	7 00	8 00	400	.....	.....	.....	.....	.....	10	No	10	
		Hod carriers	....	75	....	.	....	..	..	....	.....	.....	12 00	575	.....	.....	.....	.....	.....	10	No	40	
		Harness makers	....	25	....	..	....	..	..	....	15 00	10 00	12 00	575	.....	.....	.....	.....	.....	10	No	10	
		Galvanizing tin roofing	....	20	....	..	....	..	..	....	18 00	8 00	10 00	500	.....	.....	.....	.....	.....	10	No	15	
		Laborers	....	300	....	..	....	..	..	....	.....	.....	7 50	350	.....	.....	.....	.....	.....	10	No	20	
		Oil cloth	....	100	25	..	....	..	..	....	18 00	8 00	12 00	600	7 00	4 00	5 00	250	.....	10	No	25	
		Plumbers	....	50	....	..	....	..	..	....	18 00	12 00	15 00	700	.....	.....	.....	.....	.....	10	No	20	
		Paper	....	10	....	..	....	..	..	....	15 00	6 00	8 00	400	.....	.....	.....	.....	.....	10	No	10	
		Plasterers	....	50	....	..	....	..	..	....	15 00	10 00	12 00	575	.....	.....	.....	.....	.....	10	No	10	
		Painters	....	100	....	..	....	..	..	....	18 00	12 00	15 00	600	.....	.....	.....	.....	.....	10	No	50	
		Shirts*	....	....	100	..	....	..	..	....	.....	.....	.....	.....	6 00	2 50	3 00	150	.....	10	No	20	
		Silk goods	....	4	10	..	20	..	..	....	12 00	.....	.....	600	5 00	2 00	2 50	150	.....	10	No	10	
		Shoe makers	....	75	....	..	....	..	..	....	15 00	8 00	10 00	500	.....	.....	.....	.....	.....	10	No	25	
		Steel-pen makers	....	30	75	20	100	..	..	....	15 00	7 50	8 00	400	.....	.....	.....	.....	.....	10	No	20	
		Straw goods	....	30	150	..	....	..	..	....	12 00	7 50	8 00	350	7 00	4 00	5 00	200	.....	10	No	50	
		Tailors	....	75	....	..	....	..	..	....	15 00	10 00	12 00	600	.....	.....	.....	.....	.....	10	No	20	
10	Paterson	Bricklayers and plasterers	....	500	....	..	....	..	..	....	.....	.....	18 00	700	.....	.....	.....	.....	.....	.....	.....	75	These workmen are not included under the firms reported elsewhere. Transient workmen, of whom there are a great number in Paterson, are not included under this head. Wages were about the same as during the previous year.
	Miscellaneous industries.	Barbers	....	140	....	..	....	..	..	....	15 00	6 00	12 00	550									
		Bakers	....	130	....	..	....	..	..	....	.....	.....	10 00	400									
		Carpenters	....	450	....	..	....	..	..	....	†2 75	2 00	2 25	550	.....	.....	.....	.....	.....	.....	¶ Yes	25	
		Harness makers	....	30	....	..	....	..	..	....	12 00	10 00	11 50	400	.....	.....	.....	.....	.....	.....	.....	75	
		Hod carriers	....	200	....	..	....	..	.	....	†2 75	2 00	2 50	500	.....	.....	.....	.....	.....	.....	.....	50	
		Laborers	....	1300	....	..	....	..	..	....	.....	.....	†1 15	300									
		Horseshoers	....	100	....	..	....	..	..	....	12 00	7 50	10 00	475									
		Music teachers	....	25	....	..	....	..	..	....	.....	.....	10 00	300									
		Planing mills	....	30	....	..	....	..	..	....	12 00	‡7 50	.....	400									
		Plumbers and gas fitters	....	140	....	..	....	..	..	....	.....	.....	15 00	500	.....	.....	.....	.....	.....	.....	.....	75	
		Painters	....	170	....	..	....	..	..	....	†2 75	.....	.....	450	.....	.....	.....	.....	.....	.....	.....	75	
		Tailors	....	100	....	..	....	..	..	....	†2 50	‡1 25	.....	400	.....	.....	.....	.....	.....	.....	.....	60	
		Carriage factories	....	100	....	..	....	..	..	....	†2 50	§1 50	.....	400	.....	.....	.....	.....	.....	.....	.....	60	
		Calico printing	....	170	....	..	....	..	25	....	‖25 00	10 00	.....	‖800	.....	.....	.....	.....	.....	.....	.....	50	

* Get work from Philadelphia. † Per day. ‡ Not skilled. § Partly skilled. ‖ Piece workers. ¶ Increased 25 cents.

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

POTTERY.

Office number.	Location.	Subdivision of Trade.	Average wages paid to men per week.	Average annual earnings of men from July 1st, 1882, to July 1st, 1883.	Number of hours worked per day.	Remarks.
22½	Trenton.....	Hollow-ware pressers.	$10 38	$579 76	10	These were the average wages paid at one of the principal potteries in Trenton. The figures were taken from the pay rolls. The total amount of wages paid in each branch to those workmen who were employed during the whole year was calculated. The number of actual working days of such hands was fixed with certainty, and the wages paid for steam or help during those days deducted from the gross amount obtained for each branch. From the net amount of wages received, the average as given was calculated. Many of these workmen are among the most rapid operators in Trenton. In every department there is a great variety of work. The men work 10 hours daily (less 2 on Saturday), and are paid by the piece. We believe this to be the most reliable estimate of average wages paid at our potteries ever presented.
		Dish makers.....	16 35	850 20	10	
		Flat pressers.....	12 18	633 36	10	
		Handlers.....	9 13	474 76	10	
		Jiggermen.....	17 10	889 20	10	
		Turners.....	12 19	633 88	10	

Wages Paid in the Manufacture of Glass in Belgium and Holland.

EXTRACTS FROM UNITED STATES CONSULAR REPORTS.

Price of Labor Paid by Window-Glass Manufacturers in Belgium. From Consul at Brussels.

Blowers are paid for each six cylinders measuring 78 inches and weighing 16 ounces each, 1.40 francs. When the cylinder weighs 24 ounces they are paid 50 per cent. more than the above rates, and where they weigh 32 ounces they get 100 per cent. more. The helpers' wages are included in these rates and are paid by the blowers. For instance, a blower who blows 96 cylinders, 32 by 48 inches, weighing 16 ounces, or 64 cylinders weighing 24 ounces, receives sixteen times 1.40 or 22.56 francs, out of which he pays his helper 5 francs. Flatteners receive 150 to 200 francs per month (according to merit), assistants from 40 to 50 francs per month (according to merit); first teasers, 240 francs per month, second teasers, 200 francs per month, third teasers, 170 francs per month; assistants, 100 francs per month, cutters, from 125 to 150 francs per month; smiths, from 100 to 125 francs per month; day laborers, 3 francs per day.

From Consul at Antwerp.

There are from 19 to 21 blowings per month, and the product of a furnace of six pots for that time is from 110,000 to 115,000 square feet, single thick, which is equal to 2,200 to 2,750 boxes.

In regard to the prices of labor, I am informed as follows: The blower is paid according to the size and thickness that he makes, and it is after cutting that the glass is divided into four qualities. The wages of the blowers run from $50 to $100, and for some $150 per month; his assistant receives from $25 to $30; the flattener, $25 to $28, his assistants from $8 to $15; the cutter, $25 to $30; the founder (shearer) $30 to $35, his assistants, $28 to $30; engineers, $20 to $25; day laborers, $18 to $20; blacksmiths, $20 to $25 per month.

Price of Labor Paid by Bottle Manufacturers in Holland. Report of Consul Winter, Rotterdam.

The number of pots in the glass furnace is generally six. Every pot furnishes daily about 1300 pounds of glass, the value of which is estimated at $16; so that every manufacturer makes about $575 worth of bottles per week. Every pot is attended to by three men, viz., the blower and his two assistants. The total number of laborers employed varies from 40 to 50. Every pot is attended to by three men—the blower and his two assistants. The wages of those three together are from 30 to 56 cents per 102 bottles, according to the size of the bottles manufactured. They make about $20 a week, which is divided as follows: For the blower, $14, and his two asssistants, respectively, $4 and $2.

TABLE No. 3.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL BLOWERS. (Green Glass.)

Office number.	Location.	Subdivisions of Trade.	Price Received Per Piece.	What Constitutes a Piece.
264	Millville	Blower	60c, less 10 per cent	1 gross, 1 oz
265	Bridgeton	Gaffer	"	1 gross, 1 oz
269	"	"	10c per doz, less 10 p c	12 oz., 10 oz weight
268	"	Moulding	96c " gross, "	6 " bottles
269	"	Blow and finish	16c " doz, "	22 oz "
270	"	"	10c " " "	10 " "
271	"	Gaffer	75c " gross, "	1 gross
272	"	"	70c " " "	1 "
273	"	"	60c " " "	1 "
274	"	Blow and finish	15c " doz, "	1 doz
275	"	Blow	According to size	
286	Millville	Gaffer	12c per doz, less 10 p c	1 doz 14 oz weight
378	Clayton	"	85 to 90c per gross, less 10 p c	1 gross
374	"	"	64c " "	1 " 2 oz vial
376	"	"	64 to 75c " "	1 " 4 "
377	"	"	70c " "	1 " 2 "
378	"	Blow and finish	14c per doz, "	1 doz qt bottles
379	"	Blow in shop	60c per gross, "	1 gross 1 oz vials
380	"	"	60c " "	1 " "
381	Millville	"	60c " "	1 " ½ "
382	"	"	$1.00 " "	
388	Woodbury	Blow and gaffer	64c " "	1 gross 2 oz
389	"	Blow in shop	8½c per doz, "	1 doz
390	"	"	9½c " "	1 "
391	"	Blow and finish	11½c " "	1 " minerals
392	"	Blow in shop	7½c " "	1 " 6 oz weight
393	"	"	75c per gross, "	1 gross 4 oz weight
394	"	"	75c " "	1 " 4 "
402	Salem	Gaffer	64c " "	1 " 2 oz
410	"	Blow and finish	16c per doz, "	1 doz
411	"	"	14 to 16c " "	1 "
413	"	Gaffer	9¼ to 10c " "	1 " 10 oz weight
114	"	Blow in shop	60c per gross, "	1 oz
415	"	Blow and finish	16 to 18c per doz, "	1 doz 16 to 24 oz weight
416	"	"	11½c " "	1 " 12 "
417	"	"	11½c " "	1 " 12 "
418	"	"	12c " "	1 " 14 "
419	"	"	11 to 12½c " "	1 " 12 to 14 "
420	Glassboro	Blow in shop	60 to 64c " "	1 gross 1 to 2 oz
433	Woodbury		8⅓c " "	1 doz
432	Williamstown	Blow and finish	14 to 16c " "	1 " quart bottles
431	"	"		1 " "
424	Glassboro	Blow in shop	75c, less 10 p c	1 gross
425	"	Gaffer	88c, "	1 " snuff bottles
426	"	"	64c, "	1 "
428	Millville	"	80c, "	1 "
471	"	Blow in shop	64c, "	1 " 2 oz
472	"	Blow and finish	16c, "	1 doz
473	"	Blow in shop	80c, "	1 gr
474	"	"	10c, "	1 doz
475	"	Gaffer	$1.14, "	1 gross
476	"	"	64c, "	1 " 2 oz
477	"	Blow in shop	85c, "	1 " 6 "
478	"	"	65c, "	1 "
480	"	Gaffer	64c, "	1 " 2 oz
482	"	"	74c, "	1 "
483	"	"	$1.05, "	1 "
484	Bridgeton	Blower	85c, "	1 " 4 oz
405	Salem	"	75 to 85c "	1 " 4 and 6 oz

TABLE No. 3.—INDIVIDUAL EMPLOYES.

BOTTLE AND VIAL BLOWERS. (Green Glass.)

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
⅛ of 30 gross per day	40	50	Cold and lung troubles	1
30 gross, 3 men "	30	48	Throat and lung	1
11⅓ gross, 2 men, 1 gatherer	35	50	" "	1
40 doz per day	35	45	Loss of eyesight; rheumatism	1
40 " "	30	48	Throat and lung	1
40 " "	30	48	" "	1
165 " 3 men	30	48	" "	1
250 " 3 "	35	48	" "	1
27 gross, 3 "	30	48	Dyspepsia	1
75 doz, 2 " with gatherer	35	50	"	1
	45	55	" hard times	1
150 doz, 3 men	38	45	Biliousness and dyspepsia	1
20 gross, 3 men	40	55	Dyspepsia	1
29 " 3 "	40	50	"	1
27 " 3 "	35	45	Dropsy	1
18 " work with 2 apprentices	40	45	Dyspepsia	1
66 doz, 2 men and gatherer	45	50	Rheumatism	1
28 gross, 3 men	40	50	Throat	1
27 " 3 "	40	50	"	1
30 " 3 "	30	45		1
18 " 3 "	30	45	Kidney and felon	1
25 " 3 "	54	55		1
200 doz, 3 men	35	45		1
200 " 8 oz weight, 3 men	35	42	Dyspepsia	1
80 " 2 men and gatherer	40	55	"	1
200 " 3 "	40	55		
23 gross, 3 men	40	50	Lung	
280 doz, 3 "	38	45		
20 gross, 1 man, two apprentices	40	50	Heart disease	1
72 doz, 2 men and gatherer	45	60		1
70 to 72 doz, 2 men and gatherer	45	55	Malaria	1
200 doz, 3 men	40	55		1
26 gross, 3 men	40	50		1
60 to 75 doz, 2 men and gatherer	45	55		
80 " 100 " 2 " "	40	50		1
70 " 100 " 2 " "	38	48	Heart disease	1
75 doz, 2 men and gatherer	45	50	Malaria in city	1
80 " 2 " "	45	55	Dyspepsia	1
25 gross, 3 men	40	55		1
	40	55		1
70 doz, 2 men and gatherer.				
80 " 2 " "	40	60		1
20 gross, 3 men	40	50		
210 doz, 3 men	40	55		1
21 gross, 3 men	40	68		
7 to 8 gross, 3 men	40	60	Dyspepsia	1
27 gross, 3 men	35	45	"	1
72 doz, 2 men and gatherer	40	60	" and biliousness	1
21, 3 men	38	43	Lung	1
180 doz, 3 men	30	40	Affection of the throat	1
15 gross, 3 men	35	40	Dyspepsia	1
26 " 3 "	40	45	"	1
21 " 3 "	38	46	Biliousness	1
25 " 3 "	35	45	Throat and lung	1
26 " 3 "	35	45	" "	
25 " 3 "	35	50	Bronchitis and throat	1
16½ gross, 3 men	36	52	Liver complaint	1
	35	45	Dyspepsia	1
21 gross, 3 men	40	50		1

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

GLASS BLOWERS (Flint.)

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
293	Millville	Blow in wooden mould	By the day	
292	"	Gaffer	75c, less 10 per cent	1 gross
288	"	"	85c, "	1 gross, 6 oz
279	"	Blow in shop	64c, "	1 gross
282	"	Draw tubes	By the day	
283	"	Blow in shop	11¾ to 16c, less 10 p c	1 doz, 10½ to 16 oz weight
284	"	Gaffer	60c, less 10 p c	½ to 1 oz

MISCELLANEOUS WORKMEN IN GLASS FACTORIES.

436	Millville	Lamp worker	25c per gross	
435	"	"	25c "	¼ to ½ drachm vials
383	"	Stopper grinder	40c, less 15 p c	1 doz
402	"	"		1 "
430	Williamstown	Mould maker		1 mould
538	Bridgeton	Pot maker	$2	1 pot
365	Millville	Box "	4½c	1 box

WINDOW-GLASS BLOWERS, FLATTENERS AND CUTTERS.

322	Woodbury	Blower	35c to $1.60, 10 per cent added	1 box, 100 feet
329	Bridgeton	"	35c " 1.60, "	"
338	Malaga	"	35c " 1.60, "	"
344	Glassboro	"	35c " 1.60, "	"
347	Winslow	"	35c " 1.60, "	"
350	Quinton	"	35c " 1.60, "	"
351	"	"	35c " 1.60, "	"
358	Millville	"	53c average, "	"
359	"	"	54c " "	"
325	Woodbury	Flattener	¼ the price blower receives.	"
331	Bridgeton	"	¼ " for blowing	"
335	Malaga	"	¼ " "	"
346	Winslow	"	¼ " "	"
348	Quinton	"	¼ " "	"
360	Millville	"	Average 14c "	"
340	Glassboro	"	¼ the price "	"
357	Millville	Cutter	25c net	"
341	Glassboro	"	25c "	"
337	Malaga	"	25c "	"
330	Bridgeton	"	25c "	"
324	Woodbury	"	25c "	"

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

GLASS BLOWERS (Flint.)

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
.....	35	50		
22, 3 men	35	40	.....	1
21, 3 "	35	40	Bilious and lung.....	1
25, 3 "	35	45		
.....	40	45	Throat diseases.....	1
120 to 150, 3 men.....	35	45	Dyspepsia.....	1
29 gross, 3 men.....	35	45	Dyspepsia and lung.....	1

MISCELLANEOUS WORKMEN IN GLASS FACTORIES.

10 gross per day.....	50	60	.....	1
12 "	50	60	.....	1
14 half-gallon acids.....	45	48	Lung diseases.....	1
20 large, 24 small	45	60		
2 per week.....	50	60		
1 per day	....	....	Consumption.....	
50 boxes per day.....	45	55		

WINDOW-GLASS BLOWERS, FLATTENERS AND CUTTERS.

48 boxes per week.....	45	55	.....	1
40 to 48 boxes per week.....	40	50	Strength fails early.....	1
40 to 48 "	43	55	"	1
44 to 46 "	48	55	Early dimness of eyesight.....	1
45 to 48 "	40	50	Strength fails at about 40.....	1
46 boxes per week.....	48	55	.....	1
46 "	40	50		
45 "	50	60		
45 to 48 boxes per week.....	50	60	At 50 eyesight fails, at 60 few are able to blow....	1
Flatten for 4 blowers.....	44	56	Exposed to heat and drafts.....	1
"	50	60	.....	1
"	40	50		
"				
190 boxes per week.....	48	56	Early dimness of eyesight.....	1
184 "	43	50		
180 "	45	58		
15 to 18 boxes per day.....	40	48	.....	1
90 boxes per week.....	....	....	.....	1
14 " day.....	40	50	.....	1
12 to 15 boxes per day	40	50	Lung.....	2
14 boxes per day.....	38	48	Liver trouble.....	1

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

MISCELLANEOUS WORKMEN IN WINDOW-GLASS FACTORIES—*Continued.*

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
328	Woodbury	Gatherer	65 p c of amt drawers receive.	1 box
332	Bridgeton	"	65 " what blowers receive	1 "
336	Malaga	"	Av 54 p c of blowers' wages.	1 "
342	Glassboro	"	65 p c of blowers' wages	1 "
349	Quinton	"	65 " "	1 "
355	Millville	"	3 to 5c.	1 roller
352	Bridgeton	Master shearer	Average of blowers' wages	Melt the glass
334	Malaga	"	" "	" "
326	Woodbury	"	" "	" "

SILK WEAVERS.

204	Paterson	Ribbon weaver	$3.50 per piece	1 cut
206	"	" loom	3.00 "	1 "
207	"	" weaver	3.50 "	1 "
208	"	" "	4.00 "	1 "
209	"	" "	4.00 "	1 "
210	"	" "	4.50 "	1 "
211	"	Power loom weaver	12c	1 yard
113	"	Ribbon weaver	$3.75	1 cut
500	"	Weaving	35 to 36c yard	90 to 95 yards
498	West Hoboken	"	6 to 7c per yard	100 yards gros-grain
497	Jersey City Heights	" satin and serge	$20.00 to $23.00 cut	60 "
496	" "	" "		60 "
495	Union Hill	"	7c per yard	1 yard
494	"	"		
493	Jersey City Heights	"	$7.00 to $11.00	100 yards
491	" "	"	7c	1 yard
490	Union Hill	"	5 to 5½c	1 "
489	Paterson	"	20c	1 "
487	Hoboken	"	$18.00 to $19.00	90 to 96 yards
486	Union Hill	"	7.00	100 yards
485	Hoboken	" dress goods		
205	Paterson	Weaver, ribbon	$4.00	1 cut
203	"	" "	4.25, average	1 " 12 yards
202	"	" "	3.50 to $4.50	1 " 12 "
201	"	" "	3.50 " 4.00	1 " 12 "
189	"	" power loom	18c	1 yard
188	"	" "	12c	1 "
185	"	" handkerchief	$3.00	1 dozen
184	"	" power loom	8c	1 yard
183	"	" "	10c	1 "
182	"	" handkerchief	$4.00	1 dozen
181	"	" power loom	9c	1 yard
77	"	" hand loom	$15.00	50 yards
63	"	" handkerchief	1.25	1 dozen
62	"	" "	1.23	1 "
61	"	" "	1.50	1 "
60	"	" dress goods	10c	1 yard
59	"	" "	18c	1 "
58	"	" "	7c	1 "
57	"	" "	8c	1 "

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

MISCELLANEOUS WORKMEN IN WINDOW-GLASS FACTORIES—*Continued.*

Quantity Produced.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
44 to 48 boxes	40	50		2
42 " 48 "				
44 " 48 "	40	50		
43 " 48 "				
45 " 48 "	45	55		
85 roller "	50	60	Consumption	
8 blowers	40	50	Liver and consumption	1
8 "	75	66		1
8 "	....	....	Dyspepsia.	

SILK WEAVERS.

6 per week	45	60	Liver disease	2
4 "	45	63		
5 "	45	60	Dyspepsia and liver	2
4 "	45	60	Hard work	3
6 "	43	63	Consumption	2
5 "	44	65	Lung affection	2
15 per day	37	57	Bad ventilation	3
4 per week	40	60	Dyspepsia	2
4 yards per day	58	....	Colds.	
22 " 2 looms	50	....		2
4 to 5 yards per day				
5 " 6 "	....	....		2
20 yards per day, 2 looms	50	64		6
21 " 2 "	48			
24 " 2 "	50	65	Fevers	3
20 " 2 "	45	....	Weak eyes.	
35 " 2 "	50	60		2
8 "	50	60		1
8 "	58	....	Colds	3
20 " 2 looms	50	....		2
4 "	....	....	Consumption	4
6 per week	45	62		3
5 "	40	60	Dyspepsia and liver	2
4 to 6 "	45	60		2
3 " 6 "	45	....		3
10 yards per day	45	65	Bad ventilation	2
16 "	45	65		3
4 per week	40	60		2
20 per day	45	65		2
21 " dress goods	40	65		2
3 per week	....	....	Breathing impure air	2
20 yards per day, dress goods	43	60	Dyspepsia and consumption	2
8 "				
15 per week	40	60		4
18 "	40	60		
12 "	38	62	Dimness of eyesight	2
22 per day	40	60	Dyspepsia and bilious	2
10 "	38	65		
20 "				
20 "	42	63		

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

SILK WEAVERS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
56	Paterson	Weaver, dress goods	14c	1 yard
55	"	" neck ties	50c	1 dozen
54	"	" power loom	7c	1 yard
53	"	" " "	12c	1 "
52	"	" handkerchief	$1.35	1 dozen
51	"	" hand loom	60.c	1 "
21	"	Power loom, handkerchief	$1.15	1 "
22	"	" " "	1.33	1 "
23	"	" " "	1.20	1 "
24	"	" " "	1.25	1 "
25	"	" " "	1.36	1 "
26	"	" " "	1.20	1 "
28	"	" " "	1.15	1 "
31	"	" " "	1.33	1 "
32	"	" " "	1.35	1 "
41	"	" " "	1.20	1 "
42	"	" " dress goods	8c	1 yard
45	"	" " handkerchief	$1.32½	1 dozen
46	"	Hand " "	4.00	1 "
48	"	" " weaver	5.70	40 yards
49	"	" " "	5.20	40 "

COTTON MILL OPERATIVES.

462	Gloucester City	Weaver, men	40c	1 cut, 50 yards
458	" "	" "	45c	1 "
317	Millville	" "	16c	1 "
469	Gloucester City	" "	40c to 50c	1 " 50 yards
465	" "	" female	40c	1 " 50 "
461	" "	" gingham, female	50c	1 "
456	" "	" " "	40c	1 "
455	" "	" " "	45c	
320	Millville	" " "	40c	1 cut, twilled muslin
319	"	" " "	20c	1 "
318	"	" " "	18c	1 " plain muslin

WOOLEN MILL OPERATIVES.

441	Camden	Weaver	13c	1 yard
442	"	"	10c	1 "
443	"	"	10c	1 "
444	"	"	12c	1 "
445	"	"	9c	1 "
446	"	"	9c	1 "
447	"	"	9c	1 "

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

SILK WEAVERS—*Continued.*

Quantity Produced.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
14 per day	38	62		2
28 " week	40	65	Malaria in city	2
21 " day	40	65		2
14 " "	40	60		2
8 " week	38	58	Eyesight fails	
3 " day	37	53	Weak eyes	
1⅓ " "	40	65	Loss of eyesight	
1¼ " "	40	60	" "	
1⅓ " "	40	60	Malaria in city	1
1⅓ " "	40	63		1
10 " week	35	60	Loss of eyesight	1
1⅓ " day	35	60	Eyesight becomes dim	1
1 5-12 " "	....	....		9
1¼ " "	45	60		2
8 doz per week	45	65		1
1⅓ " " day	40	60		
20 yards per day	40	60	Lung and bilious	
10 per week	38	55	Eyesight fails	
3 " "	....	....		
80 " "	38	55		
5 " two weeks	36	54	Severe tax on the eyes	

COTTON MILL OPERATORS.

2 cuts per week, each loom	45	60	Bilious	
3 " "	45	65	Close confinement	2
36 to 38 " 5 looms	35	45	Consumption common	
36 to 38 " 6 looms	48	68	Dyspepsia	1
4 cuts per week, each loom (run 6 looms)	36	68		
3½ " " " 4 "	35	45		
2½ " " " 8 "	35	45		
14 "	38	50		
12 " 80 pick to inch, 4 looms	36	44		
28 " 4 looms	35	40	Throat	
30 " 4 "	35	40	Dyspepsia	

WOOLEN MILL OPERATIVES.

13 per day	45	65	Dyspepsia	1
15 "	45	65	Predisposed to consumption	1
14 "	40	66	Consumption	
14 "	40	60	Lung and throat	2
16 "	40	68	Liver and dyspepsia	1
14	40	63	Dyspepsia	2
15	40	60	Throat	1

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

CARPET WEAVERS.

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
9	Little Falls	Lapp weaver	7c	1 yard
10	"	"	7c	1 "
11	"	Carpet weaver	5c	1 "
12	"	"	5c	1 "
13	"	Lapp weaver	7c	1 "
14	"	Carpet weaver	4½c	1 "

SHIRT MAKERS.

81	Paterson, female	Machines put in the bosoms.	1¢c	1 dozen bosoms
89	" "	Shirt maker	12c	1 " body work
151	" "	Custom work, foot machine.	50 to 75c	1 shirt
152	" "	Neckbands	9c	1 dozen
153	" "	Joiner	11c	1 "
154	" "	Custom work, foot machine.		1 shirt
155	" "	" "		1 "
156	" "	Put in bosoms	12½c	1 dozen
157	" "	Hemming	10c	1 "
158	" "	Starcher	By week	
160	" "	Joiner	12c	1 dozen
161	" "	Neckbands	15c	1 "
162	" "	Back work	10c	1 "
163	" "	Put in the bosoms	8c	1 "
164	" "	Hemming	10c	1 "
169	" "	Ironer	By week	

HAT MAKERS.

249	Newark	Making	10, 12, 13c	1 hat
248	"	Sizing	Paid by week	1 "
245	"	Maker	10 to 15c men's, 7 to 8 ladies.	1 "
239	"	Brush hatting	8c sizing, 15 to 25c, brushing.	1 "
238	Orange	Making	10 to 20c	1 "
237	"	Sizing	12 to 18c	1 "
236	"	Making	10c	1 "
235	Newark	Pouncer	20c doz	1 dozen
233	"	Making	8 to 12c	1 hat
230	"	"	10 to 13c, sizing	1 "
229	"	"	7c	1 "
226	"	Hardener	60c to $1.00 per hundred.	
225	"	Making	10 to 12c	1 hat
224	"	Sizing and pouncer	5 to 20c	1 "
223	Orange	Making	10 to 30c	1 "
221	Newark	"	11 to 15c	1 "
220	"	"	Blocking or shaving, 18 to 24c Sizing, $1 to $1.50	1 dozen 1 "
219	"	Sizing	10c	1 hat
521	"	Maker	8 to 16c	1 "
515	Springfield	Sizing	10 to 15c	1 "
516	Millburn	"	10 to 13c	1 "

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

CARPET WEAVERS.

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
30 per day	50	60		2
35 "	55	65		9
40 "	50	65		
45 "	50	60		9
40 "	50	60		1
50	48	60		9

SHIRT MAKERS.

10 dozen in day	....	....	Close application produces physical prostration.	
50 " per week	30	50	Excessive fatigue, many diseases.	
2 shirts per day	40	50		
10 dozen per day	38	48		
8 "	35	45	Bronchitis and consumption.	
3 per day	38	48	Dyspepsia.	
3 "	36	46	Lung and throat.	
6 dozen per day	....	....	Consumption, liver complaints.	
7 "	38	48		
	35	48	Various diseases.	
10 dozen per day	40	50		
8 "	30	40	Consumption.	
12 "	35	40	"	
15 "	35	45	"	
14 "	30	40	General debility.	
	45	68		3

HAT MAKERS.

1 to 2 dozen	....	....	Generally healthy.	
5 to 6 " per day	40	....	None particular	3
18 *men's*, 30 *ladies'*	40	50	Consumption, rheumatism.	
Brush from 10 to 18 per day	....	....		2
1 to 2 dozen per day	40	50	Consumption	2
1 dozen	25	50	Chills, consumption	1
	45	50	Malaria and consumption	4
10 dozen per day	40	45		
1 to 2 dozen	....	....	Rheumatism, consumption	2
15 to 18 hats per day	45	70	Consumption, nervousness	8
	....	....		1
400 per day	50	60	Nervous shakes	2
21 hats	25	45	Consumption	2
15 to 24 hats per day	40	60	Cold and starvation	4
	40	50	Consumption	4
12 to 21 hats	....	....	Rheumatism.	
Blocking or shaving, 18 to 20 dozen per day. Sizing, 1½ to 2 dozen per day	40	55	Pulmonary and rheumatism	4
15 hats per day	45	....	Exhaustion	6
9 to 18 hats per day	54	65	Rheumatism.	
15 to 30 "	....	....		1
12 to 15 "	40	60		1

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

HAT MAKERS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
517	Bloomfield	Blocking and sizing	9c to 10c	1 hat
518	Newark	Maker	8c " 18c	1 "
519	"	Maker	$1.20 to $1.50	1 dozen
522	"	"	Making, 9c to 10c Blocking, 3c Brushing, 18c	1 hat 1 " 1 "
520	"	"	8c to 18c	1 hat
258	"	Packer and Flinger	18c per doz	1 dozen

HATTERS—FINISHERS.

512	Newark	Finishing	$1 to $1.25	1 dozen
251	"	"	15c " 25c	1 hat
250	"	"	9c " 10c	1 "
246	"	"	$1.50	1 dozen
244	"	"	1.00	1 "
242	"	"	15c to 25c	1 hat
241	Watsessing	"	$1.50	1 dozen
240	Newark	"	1.70 to $3.25	1 "
232	"	"	16c	1 hat
231	"	"	$2.00	1 dozen
227	"	"	2.00 to $2.25	1 "
222	"	"	1.50	1 "
218	"	"	1.50	1 "
217	"	"	1.50	1 "
531	"	"	1.50	1 "
530	Orange	"	1.75	1 "
506	Newark	"	1.30 to $1.45	1 "
507	"	"	70c to $1.00	1 "
508	"	"	$1.30 to $1.45	1 "
509	"	"	1.30 " $1.45	1 "
513	"	"	1.00 " $1.25	1 "

SHOEMAKERS.

295	Burlington	Laster, infants' shoes	5c	1 pair
296	"	Cutter, " "	$12 per week	
297	"	" women's "	20c	1 dozen pairs
198	"	Burnishing, infants' shoes	1½c	1 pair
299	"	Finishing, " "	1½c	1 "
300	"	" misses' "	3½c	1 "
301	"	Heeler, ladies' "	4½c	1 "
302	"	" infants' "	1¾c	1 "
303	"	Lasting, " "	1½c	1 "
305	"	Fitter, female	9c	1 "
306	"	" "	8c	1 "
307	"	Operator, ladies' shoes, fem.	5c	1 "
308	"	Fitter, female	9½c	1 "
309	"	Heeler	4c	1 "

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

HAT MAKERS—*Continued.*

Quantity Produced.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
15 to 21 hats per day	55	65	Rheumatism	
18 " 24 "	50	65	"	
2 dozen "	40	50	"	1
			"	
1 to 2 dozen per day	53	64	"	1
	50		Blood poisoning	2

HATTERS—FINISHERS.

2 to 3 dozen per day	40	50		
	40	55	Consumption	1
15 to 18 hats per day	50			2
1 to 3 dozen "	25	45	Hatters' shakes, hunger and cold	1
2 dozen men's "		50		1
1 " per day	40	50	Consumption	3
1 to 3 dozen per day	28	50	General debility	
1 " 2 " "	30	60	Consumption	
8 " 20 hats "				3
1 " 1½ dozen "				3
2 dozen	38	50	Consumption	2
1 to 1½ dozen per day	45	50	Felons, consumption	2
2 dozen per day	27	48	Consumption and shakes	6
2 " "	28	48	" "	2
	35	50	Consumption	
	48	50		
2 dozen per day	40	50	Blood poisoning, nervous debility	3
3 " "	42	50	Shakes and consumption	3
2 " "			Dyspepsia and nervous debility	2
2 " "	40		Blood poisoning and consumption	
2½ " "	35	50	Consumption	4

SHOEMAKERS.

55	42	62	Dyspepsia	1
	40	50		2
12 dozen per day	36	55		2
100 pairs per day	45	60		2
105 "	40	56		
60 "	45	60	Dyspepsia	1
60 "	40	55	Lung troubles	1
150 "	42	55		1
160 "	40	50	Liver complaint	1
12 "	36	43		
14 "	35	45		
25 "	32	40	Throat	
15 "	30	40	Consumption	
55 "	40	50	Throat	1

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

SHOEMAKERS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
310	Burlington	Cutter, ladies' shoes	20c	1 dozen pairs
311	"	Fitter, " (female)	9c	1 pair
502	Newark	Laster	3¾ to 7c	1 "
503	"	Lasting	3¾ for children's 4 to 5½ for misses' 5 " 6½ and 7 for women's.	1 "
547	"	"	5 to 9c per pair	1 "
555	Camden	Shoemaker, ladies' shoes	$4 to $18	1 dozen pairs.
558	"	Lasting	87c, women's fine kid 75c, " pebble 78c, misses' fine kid 66c, " pebble 60c, children's kid 48c, " pebble Extra box toes, 16c	1 "
560	"	Heeler	Women's regular heel, 7c. Misses' " 6c. Children's " 5c. Women's, half French, 12c. " full " 19c.	1 pair
577	"	Lasting	1¼c	1 "

IRON ROLLING MILL EMPLOYES (Skilled.)

64	Paterson	Heater	72c, Phila. sliding scale	1 ton, 2240 pounds
72	"	Roller	39c, "	1 "
75	"	Catcher	21c, "	1 "
76	"	Roller	39c, "	1 "
90	"	Catcher	21c, "	1 "
91	"	Roller	39c, "	1 "
92	"	"	39c, "	1 "
93	"	"	39c, "	1 "
125	Dover	Heater	39c, "	1 "
126	"	Rougher	Philadelphia sliding scale	1 "
168	"	Roller	39c, Phila. sliding scale	1 "

PUDDLERS.

66	Paterson	Puddler	$4.50	1 ton, 2240 pounds
67	"	"	4.50	1 "
73	"	"	4.50	1 "
74	"	"	4.50	1 "
99	"	"	4.50	1 "
100	"	"	4.50	1 "
165	Dover	"	5.00	1 "
166	"	"	5.00	1 "
167	"	"	5.00	1 "

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

SHOEMAKERS—*Continued.*

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
12 dozen per day	40	50	Dyspepsia and biliousness	1
12 pairs "	30	40	Throat and consumption.	
30 to 40 pair per day	35	....		1
40 pairs, average	45	55		
10½ months, 6,898 pairs.				
20 pairs per day, women's kid.				
6 dozen pairs per day, children's pebble	....	....	Dyspepsia	1
	....	....	Bad ventilation	1
Highest ever I made, 216 pairs per day	40	60	Consumption	2

IRON ROLLING MILL EMPLOYES (Skilled.)

9 tons per day	45	60		1
9 "	40	65		2
9 "	45	65		2
9 "	45	65		2
9 "	....	....		2
9 "	40	60		2
9 "	43	68		2
9 "	40	60	Liable to take colds	3
8 "	45	60		
8 "				
8 "	45	65		

PUDDLERS.

1¼, with assistance of helper	38	59		1
8 per week, pay helper ⅓	40	60		
8 "	....	....		2
1¼ per day, with helper	40	60		2
1¼ "	40	65		2
1 "	42	63		2
1¼ "	40	65		2
1¼, I pay helper ⅓ received	40	63		
1¼, "	40	65		

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

IRON MINERS.

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
255	Port Oram	Miner	By contract	1 ton
170	Hibernia Mine	"	"	1 "
171	Morris county	"	"	1 "
172	"	"	"	1 "
173	"	"	$1.25 per day	1 "
174	Mount Hope	"	1.25 "	1 "
175	"	"	1.25 "	1 "
176	"	"	1.25 "	1 "
177	Chester	"	1.25 "	1 "
178	"	"	1.25 "	1 "
179	McConnerville	"	1.25 "	1 "
127	Rockaway	"	1.25 "	1 "
130	Dover	"	1.25 "	1 "
129	"	"	1.25 "	1 "
131	"	Drilling	1.25 "	1 "
132	"	Miner	1.25 "	1 "
133	"	"	1.25 "	1 "
134	"	Blasting	1.25 "	1 "
135	Rockaway	Drilling	1.25 "	1 "
136	"	Blasting	1.25 "	1 "
137	"	Miner	1.25 "	1 "
138	"	"	1.25 "	1 "
139	"	Drilling	1.25 "	1 "
143	Dover	Miner	1.25 "	1 "
142	"	Engineer	2.00 "	
144	"	Miner	1.25 "	1 "
145	"	"	1.25 "	1 "
146	"	"	1.25 "	1 "
147	"	"	1.25 "	1 "

CIGAR MAKERS.

69	Paterson	Cigar maker	$9	1 thousand
149	"	"		1 "
150	"	Mould workman	$9	1 "
257	Newark	Cigar maker, foreman	5 to $12	1 "
524	Greenville	" "	.006 to .011	1 cigar
505	Trenton	" "	$8.50 per week	
492	Jersey City	" "	7 to $9	1 thousand
543	"	" packer	1.50	1 "

JEWELERS.

558	Newark	Chain maker	2c to 8c per pwt., av. 4c	1 chain
560	"	" "	2½c to 6c "	
581	"	" " vest chains	2c to 8c "	1 chain
583	"	Ring "		

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

IRON MINERS.

Quantity Produced.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade,	Number of families residing in the house.
2 men, 3 tons per day	50	60	Asthma and consumption	1
2 " 3 "	45	65	Liable to accidents	3
2 " 3 "	40	60	Liver and lung	3
2 "	38	58		3
2 " 3 tons per day	38	55		3
2 " 3 "	42	62		2
	43	65		2
	40	60		2
According to vein	43	63		2
" "	38	58		2
2 men, 3 to 5 tons	38	64	Bilious diseases are common	2
No regularity	46	66	Bilious	2
Vary	46	63	Sudden colds	2
No regular quantity	45	65	Lung, liver, and throat	2
According to state of mine	46	65	Low wages	2
	45	63		
½ to 3 tons per day	45	65		2
	45	65		2
1 ton, average	40	65	Lung and liver complaints	3
	45	70		2
Not regular	48	70		2
"	45	68	Liable to colds	3
1 ton, ordinary mine	45	68		2
	45	65		
	50	70		2
	47	65		2
According to depth of vein	44	66		2
	46	66		
	45	65		2

CIGAR MAKERS.

250 cigars per day	60	70		2
300 " "	....	....		1
300 " "	....	....	Consumption, nervous debility	
250 " average	45	50		6
	....	....	Consumption, asthma, weakness of eye	3
	50	60		1
250 to 300 per day	40	50	Consumption	1
5,000 per day	65	90		

JEWELERS.

⅛ doz. to 3 doz., according to pattern, per week.	45	55	Consumption	2
		45	Loss of eyesight, consumption	3
6 chains to 3 doz. per week	40	50	" lung trouble	4
4 doz. rings per week, average	45	50	" consumption	2

TABLE No. 3.—INDIVIDUAL EMPLOYES.

MISCELLANEOUS.

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
243	Newark	Japanner, finisher		One hide or split
533	Woodside	File cutter	15c for 12-inch upcut 12c " 12 " overcut 10c " 12 " half round	1 doz (13 files)
532	"	Saw file cutter	3 and 3¼ inch, 16⅔c 4 inch, 18⅔c 4½ " 20c 5 " 21⅔c The above price increased 2½ p c. The net price would be precisely the same as is paid in England.	1 "
121	Hackettstown	Carriage body maker	$5.00 and pay helper	1 body
488	Union Hill	Tailor	2.50	1 coat
27	Paterson	Dress maker	From $3.00 to $25.00	1 dress
256	Newark	Trunk maker, lining	30 to 70c	1 doz
561	"	Traveling bag maker	$1.00, English club 2.50 " R. R. bag	Leather and a cross frame put together.
287	Paterson	Compositor	35c	1000 ems
580	Trenton	Potter, turner	10c 17c 3½c	1 doz footed bowls, 24's 1 " toy tea pots, 1 doz cov. 1 " tea cups
578	"	" plate maker	11c, less $3 per day for help. 12c, " 3 " "	1 " 8 inch flat dish. 1 " 8 " deep dish

TABLE No. 3.—INDIVIDUAL EMPLOYES.

MISCELLANEOUS.

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.	Number of families residing in the house.
144 stoned and brushed	35	45		5
10 doz 12 inch flat upcut 13 " 12 " overcut. 15 " 11 " half round upcut. 10 doz 3 inch, 9 doz 3½ inch. 8½ " 4 " 8 " 4½ " 7 " 4½ " per day.	4	....	Lead colic, consumption.	
3½ bodies per week	40	65		2
4 coats per week	60	75	Dyspepsia	1
	40	50	Close application destroys our health.	
10 to 20 doz per day	....	....		2
12 satchels or English club. 5 English R. R. bags per week	....	....		2
8000 per day	25	50	Consumption	2
25 doz per day	40	50	Asthma, consumption	1
15 " "	....	....	Catarrh, rheumatism.	
70 " "				
55 " "	30	45	Potters' asthma	

TABLE No. 3.—ESTABLISHMENTS.

GLASS.

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
313	Bridgeton	Blowers (green glass)	10 p c less league list price, which is: 1 oz vials, 60c; 14 oz (wt) mineral bottles, 12c; panel bottles, ½c per oz (wt) extra	1 gross under 10 oz (wt); over that, 1 doz
		Stopper grinder (green glass)	12½c, less 15 p c	1 doz
314	"	Blowers (green glass)	10 oz panels, 10½c, less 10 p c	1 "
312	"	" "	(Less 10 p c) 1 oz vials, 60c; 10 oz, cut round and oval, 10c; panels, 10½c; ½c (per oz wt) for every additional oz; quart fruit jars, 9c net.	1 gross for vials under 8 oz; 1 doz for bottles
330	Millville	Lamp workers (flint glass)	25c (¼ drachm) per gross	1 gross
369		Glass cutters "	Stoppering, 12c	1 doz
	Jersey City	Globes and chimneys	$3.00 per 100.	
280	Millville	Blowers (window glass)	$1.60 to 35c, according to quality (with 10 p c added); double-thick glass ¾ more.	1 box, 100 feet
		Gatherers "	65 p c of blowers' prices.	
		Flatteners "	¼ blowers' prices, and flatten for 4 blowers each.	
		Cutters "	25c (with 10 p c added)	1 box, 100 feet
		Master shearers "	⅓ blowers' prices, and shear for 8 blowers each.	

SILK GOODS.

12	Paterson Silk mill.	Weavers	Ribbon, $4.15 (7 inch); varies according to width and fineness	1 cut
			Gros-grain, 7c; necktie, 50c; dress goods, 12c	1 yard
		Finishing	Sometimes 1 to 3c	1 "
13	Paterson Silk mill.	Weavers, hand loom	Handkerchiefs, $5.20, $4, &c.	1 dozen
		" power loom	" $1.15, $1.20, $1.33, $1.40	1 cut of 40 yards
			Prices in all kinds of weaving vary according to width and fineness.	
15	Paterson Silk mill.	Weavers	Handkerchiefs, $4, &c., according to width and fineness	1 dozen
			Neckties, 50c	1 "
			Dress goods, 7 to 12c	1 yard
			Ribbons, $3.50 to $4.50	1 cut, 12x36 inches. Cuts run from 150 to 400 yards in length. The narrower the longer

TABLE No. 3.—ESTABLISHMENTS.

GLASS.

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.
For team of 3 men and 3 boys: 1 oz, 30 gross; minerals, 150 doz daily	35	45	Dyspepsia, throat and lungs. Most workmen take to gafling at 40 or 45, and continue till 60.
25 to 30 doz daily.			
15 gross daily for 3 men and 3 boys	35	45	See No. 313.
Per team: 1 oz, 15 to 30, av 20; 10 oz, 10 to 15 daily. Quart fruit jars, 75 daily per single blower and 2 boys; 2 blowers and 2 boys, 100 to 120 daily	.....	.....	See No. 313.
8 to 12 daily.			
25 daily.			
48 weekly	45	55	In blowing and gathering the eyesight becomes dimmed, on account of the fire. Business also takes considerable strength.
90 to 96 weekly.			

SILK GOODS.

3 to 4 weekly.			
Gros-grain, 21; necktie, 5; dress goods, 14 daily			
60 to 100 daily.			
3 weekly.			
8 to 12 weekly.			
3 weekly.			
5 daily.			
14 to 21 daily.			
3 to 6 weekly; sometimes 6, with helper.			

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

COTTON AND WOOLEN GOODS.

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
302	Mays Landing.... Cotton mill.	Weavers.....	Plain muslin, 21c a single and 42c a double cut.....	1 cut.....
		Spinners.....	Some work by pound; $1.20 per 100.....	100 pounds.
		Speeders.....	9 to 10c per hank.....	1 hank.....
		Frame tenders.....	90c per side.....	1 side.....
303	Gloucester City.... Cotton mill.	Weavers.....	40 to 50c per cut.....	1 cut.....
		Speeders.....	10 to 15c per hank.....	1 hank.....
50	Lambertville..... Cotton mill.	"	10c per hank.....	1 " .....
		Drawing-frame tenders	.....	1 side.....
307	Millville..... Cotton mill.	Weavers.....	16c to 20c.....	1 cut.....
			40c.....	1 cut, twilled, 80 picks per in.
		Speeders	12 to 18c.....	1 hank.
304	Gloucester City.... Cotton mill.	Weavers.....	Plain muslin, 23c..... Printing cloth, 45c..... Gingham, 45c to 50c.....	1 cut, 50 yards.....
		Speeder tenders.....	12c to 16c per hank.....	1 hank.....
		Frame tenders.....	90c per side.....	1 side .....
232	Passaic..... Cotton and woolen mill.	Weavers.....	9c to 12c per yard.....	1 yard.....
233	Passaic..... Woolen mill.	Weavers.....	9c to 10c per yard.....	1 yard, cloth.....
234	Passaic..... Woolen mill.	Weavers.....	10c to 12c per blanket.....	1 yard .....
47	Somerset county.. Woolen mill.	Weavers.....	3c for blankets, 8c and 10½c for cloth.....	1 yard .....
308	Bridgeton..... Woolen mill.	Weavers.....	80c to 90c	1 cut.....
291	Camden..... Woolen mill.	Weavers.....	9c to 13c.....	1 yard.....
		Jack spinner.....	$1.....	100 runs .....
230	Passaic..... Bleachery.	Sewers	20c.....	100 seams.....
305	Millville..... Bleachery.	Sewers	20c.....	100 seams.....
181	Newark..... Corset and waist factory.	Stitching.....	40c to $1.75	1 dozen.....
		Boning	2c " 25c.....	
		Binding.....	4c " 10c.....	
		End tacking.....	4c " 16c.....	
30	Paterson ..... Shirt factory.	Hemming.....	10c " 12c.....	1 dozen shirts.....
		Body making.....	8c " 15c.....	1 " .....
		Backs.....	10c " 12c.....	1 " .....
		Neck bands.....	8c " 10c	1 " .....
		Buttoning.....	5c " 8c.....	1 "
116	Newark..... Tailoring.	Basting.....	41c to $1.25	1 coat.....
		Coat finishers.....	.....	.....
		Fellers.....	18c to 25c.....	1 coat.....
		Button-hole makers.....	3c.....	1 hole.....
		Pressmen	.....	.....
121	Newark..... Clothing.	Cutters	.....	.....
2	Passaic county.... Carpet factory.	Weavers.....	4¼c to 6½c.....	1 yard.....
		Druggets	4c.....	1 " .....
		Lap robes.....	7c.....	1 " .....

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

COTTON AND WOOLEN GOODS.

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.
6 single, 3 double cuts per loom weekly. Weavers tend from 3 to 6 looms each.....	40	50	General debility. Cotton-mill operatives are liable to any disease, on account of the dust inhaled, which has a very unhealthy effect. Women become incapacitated for work 5 years earlier than men, whose age generally is, at such a time, 50.
9 to 10 daily.			
½ to 1½ sides daily.			
2 to 4 per loom weekly. See No. 302.			
8 to 16 daily.			
10 to 15 daily.....	40	50	See No. 302.
1 daily.			
6 to 8 per loom, weekly, each tending from 4 to 8 looms.....	.....	.....	See No. 302.
3 per loom.			
8 to 10 per loom, weekly..... 4 " 5 " " ..... 4 " "	40	50	See No. 302.
50 weekly—7 to 15 daily.			
1 per day.			
12 to 20 daily.....	35-45	50-60	None, unless put to work too young. Malaria is the prevailing complaint. Women decline at 35, men 45, &c. See No. 302.
10 to 14 daily.....	35-45	50-60	Malaria, when overworked.
10 to 18 blankets daily.			
Blankets, 40 to 60 ; cloth, 15 to 30 yards daily.			
6 to 10 weekly.....	40	55	Dyspepsia.
14 to 16 daily.....	35-40	50-60	When children enter the mill too young, they begin to decline early.
125 daily.			
400 to 500 daily.			
500 daily.			
1 to 3 dozen daily. 3 " 20 " 10 " 30 " 5 " 25 "			
*12 " 14 daily.			
14 " 16 "			
12 " 14 "			
15 " 20 "			
14 to 18 weekly.			
12 " 16 "			
4 " 5 daily.			
45 " 55 "			
8 " 12 coats ; 40 to 50 pieces.			
45 garments daily.			
25 to 50 daily.			
25 daily.			
20 "			

* This quantity only produced by those engaged in business for many years.

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

HATS.

Office Number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
167	Newark	Finishing	$1.75	1 dozen.
		Trimming	80c and $1.25	1 "
142	Essex County	Makers	10 to 14c	1 hat
		Blockers	18c	1 dozen
		Pouncers	20 and 24c	1 "
		Finishers	$1.50, $1.75, $1 87½, $2	1 "
		Trimmers	40c	1 "
		Flangers	14c	1 "
		Packers	16c	
142½	Orange City	Makers	$1.20, $1.32, $1.44, $1.56	1 dozen
		Finishers	$1.50, $1.62½, $1.75, $1.87, $2	1 "
		Binders	6c	1 "
		Trimmers	50c	1 "
149	Newark	Finishers	$1.50 to $2	1 "
		Trimmers	50c	2 "
		Sizers	$1.20 to $2	1 "
		Pouncers	25c	1 "
150	Newark	Sizing	8, 9, 10c	1 hat
		Shaving	15, 18c	1 dozen
		Finishing	$1.50, $1.75	1 "
		Curling	75c to $1.50	1 "
		Trimming	56c to $1	1 "
159	Orange City	Finishing	$1.87½, $2, $2.25, $3	12 hats
		Sizing	11, 14, 16, 17, 18c	1 hat
		Pouncing	15, 20, 25, 30c	12 hats
		Packing	15c	12 "
		Flanging	15, 20, 30c	12 "
		Shaving	1½, 2c	1 hat
		Blocking	20, 22c	12 hats
		Trimming	50, 55c	12 "
180	Orange City	Makers	11 to 20c	1 hat
		Blockers	6½ to 13c	12 hats.
		Pouncers	20c	12 "
		Finishers	$2.03 to $3.50	12 "
		Trimmers	60 to 75c	12 "
		Binders	8, 16c	12 "
		Leather makers	8c	12 leathers.
211	Newark	Sizing	Average $1.20	1 dozen.
		Finishing	" 1.75	1 "
		Curling	" 1.50	1 "
		Pouncing	" .45	1 "
		Trimming	" 1.32	1 "
218	Newark	Makers	$1.75 to $2	1 "
		Finishers	$2	1 "
		Trimmers	75c	1 "
366	Newark	Felt-hat factory	$1.25	1 "
162	Essex County	Hat-body factory	45 to 65c	100 bodies

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

HATS.

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.
30 daily.			
60 "			
60 "			
3 "			
4 "			
30 "			
20 "			
1½ to 2½, 1¼ to 2 daily	40-50	50	Hatters' shakes or mercury poisoning.
2 to 3, 1¾ to 2½, 1½ to 2, 1¼ to 2 daily.			
30 daily.			
2 to 3 daily.			
2 daily	50	60	Throat diseases and rheumatism.
2 "			
1½ daily.			
10 "			
2 to 3 dozen daily	60	70	No particular ones.
150 to 200 hats daily.			
Average 2½ dozen daily.			
" 6 "			
" 2½ "			
2 dozen daily.			
1½ "			
12 "			
30 "			
30 "			
9 to 15 "			
40 "			
2 to 3 "			
1½ to 2 "			
	38	50	Hatters' shakes, caused from mercury used in preparing the fur.
2 to 3 daily.			
2 " 3 "			
2 " 3 "			
	45	50	Hatters' shakes.

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

BOOTS AND SHOES.

Office number.	Location.	Subdivisions of Trade.	Price Received Per Piece.	What Constitutes a Piece.
178	Newark	Laster	10, 12, 13c	1 pair
		Heeler	5c	
		Trimmer	5c	
		Burnisher	5½c	
		Finisher	5½c	
		Operator	8 to 15c	
264	Camden	Lasting, heeling, trimming, burnishing, finishing	12 to 22c	1 doz pairs
		Cutting	9 " 20c	1 "
263	"	"	1 " 2c	1 pair
253	Burlington	"	Average, 1 to 2c	1 "
262	Camden	Cutters	9 to 23c	1 doz pairs
		Others	Ladies', 3 to 5c; Infants', 1 " 2c	1 pair
265	"	Heeling, lasting, trimming, burnishing and finishing	2 to 5c	1 "
266	"	Heeling, lasting, trimming, burnishing and finishing	2 " 5c	1 "
257	‡Burlington	Finishing	§Ladies' and misses' 3 to 4c	1 "
		Burnishing	" 3 " 5c	1 "
		Heeling	" 4 " 5c	1 "
		Lasting	" 4½ " 5c	1 "
		Cutting	" 20c	1 doz pairs
		Operating	" 5c	1 pair
		Fitting	" 8 to 10c.	1 "
250	"	Burnishing, heeling, lasting and cutting	Average, 1½c	1 "
		Operating	18 to 20c	1 doz pairs.
243	"	Finishing and burnishing	3½c	1 pair
		Lasting and heeling	4c	1 "
		Cutting	20c	1 doz pairs
		Operating	4½c	1 pair
		Fitting	9c	1 "

* Men. † Women. ‡ Prices, &c., vary greatly, according to quality. § Infants', 1 to 1¾ cents.

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

31	Paterson Iron rolling mill.	Heaters	72c.	One ton (2240 lbs.) See Philadelphia sliding scale (5th An. Rept., p. 31.) The price of iron for most of the year was at 2 3-10 c per lb.
		Helpers, 1st	21c.	
		" 2d	21c.	
		Roughers	28c.	
		Catchers	21c.	
		Rollers	39c.	
		Puddlers and helpers	$4.50	1 ton (2240 lbs)
36	Rockaway Iron rolling mill	Iron rolling mill	Philadelphia sliding scale	1 " "
		Puddlers	$5.00, paying their helpers	1 " "
37	Dover Iron rolling mill.	Iron rolling mill	See 36	1 " "
		Puddlers		
		Rivet makers	$1.50	1 " "

As per Philadelphia sliding scale.

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

BOOTS AND SHOES.

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active service.	Diseases Peculiar to the Trade.
Average, 125 pairs weekly; 25 pairs daily.....	60	65	
10 to 13 doz daily (infants.) 10 " 13 " " 120 " 160 daily (infants.) 150 " 200 " " 10 " 15 doz daily. 100 " 160 pairs "			
Ladies' and misses', 40 to 60; infants', 100 to 150 pairs daily.....	*40 †35	*60 †50	Dyspepsia and liver complaints.
Ladies, &c., 40 to 60; infants', 100 to 150 daily			
45 to 65 daily.....	*40 to *50 †35 to †40	*50 to *60 †40 to †50	Dyspepsia, biliousness, throat and lung diseases.
12 " 15 " 20 " 30 " 10 " 16 "			
140 to 160 (infants') daily.			
40 to 60 (women's) daily.			

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.

Per gang: 9 tons daily for 5½ days. Rollers roll for 2 furnaces, producing 18 tons per gang.			
With helper, 1¼ to 1½ tons daily for 5½ days. Puddlers pay their own helpers one-third of what they get.			
6 to 10 tons daily per gang, average 8.			
1¼ tons daily, with helper.			
See 36.			
2 tons daily.			

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

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.—*Continued.*

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
37½	Trenton Iron works.	Puddlers	$3.50	1 ton (2,000 lbs.)
		Roughers (6)	18c	1 "
		Rollers (2)	21c	1 "
		Heaters (6)	40c	1 "
		Hookers-in	9c	1 "
306	Millville Foundry.	Moulders and core makers	Varies from $1 to $2; they pay rest of gang	1 pipe
318	Jersey City Iron and brass foundry.	Iron castings	1⅛c	1 lb
338	Jersey City Car wheels—machinery.	Moulders	1c	1 inch of car wheel
186	Newark Tool works.	Blacksmiths	15c to 20c	1 dozen tools
		Grinders and polishers	15c " 70c	1 "
139	Newark File and rasp works.		15 per cent. on Sheffield price list on finished work	
367	Newark File works.	Forging	8c	1 dozen, of 13 pieces
		Grinding	9c	1 " "
		Cutting	62c	1 " "
		Hardening	7c	1 " "
182	New Brunswick Iron works.	Moulders	16½c	Oil-stove tank
		Helpers	10c	" top
		Pattern fitter	11c	" bottom

MISCELLANEOUS INDUSTRIES.

365	Newark Jewelry.	Bracelet makers	From $2.50 to $4	1 pair.
		Ring makers	" 25c, upwards	
		Stone setters	" 3c to 20c.	
		Chain makers	" 2½c to 6c	1 dwt.
		Spring-ring makers		8c.
		Swivel maker		12c.
368	Newark Jewelry.	Stone setters	3c for half pearl and turq. 5c " rose diamonds. 15c " diamonds in cramp settings. 25c for diamonds in heavy star settings.	
177	Newark Leather.	Splitters	60c	1 hide or split
164	Newark Leather.	Japanners	30c to 75c	1 hide
224	Newark Leather.	Tanners	75c	1 hide
		Curriers and splitters	$1	1 "
		Japanners	35c to 50c	1 "
137	Newark Patent leather.	Grainers	15c	1 "
		Finishers	30c	1 "
194	Newark Paper box.	Paper box makers	15c to $4	100 boxes.
200	Newark Skates.	Grinders	2c	1 pair
		Polishers	15c	1 "
		Vise hands	10c	1 "

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

IRON WORKS, FOUNDRIES, MACHINE SHOPS, &c.—*Continued.*

Quantity Produced.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.
6 tons weekly, apiece.			
18 tons daily, for 6.			
18 " 2.			
18 " 6.			
20 large and 20 small pipes per gang, daily.....	45	60	Not particularly unhealthy.
Piece workers average from $2.50 to $5 per day.	40-60	50-70	A man's own fault if he gets sick.
.....	40-75	60-75	It is a very healthy business.
....	40	60	Blacksmiths, healthy ; grinders, lung diseases.
40 dozen daily.			
Average 1,600 dozen weekly, for whole factory.	.....	.....	Grinders are liable to consumption at 40 or 50.
23 daily.....			
33 "			
33 "			

MISCELLANEOUS INDUSTRIES.

.....	.....	60	None.
.....	.....	75	None.
40 hides daily.....	50	60	Trade is generally healthy.
120 hides weekly.....			
100 daily.....			
20 "			
25 "			

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

MISCELLANEOUS—*Continued.*

Office number.	Location.	Subdivision of Trade.	Price Received Per Piece.	What Constitutes a Piece.
190	Newark ..... Trunk-box and planing mill.	Trunk-box makers.....	2½ to 54c.....	1 box or tray.....
212	Newark ..... Wagon hubs.	Hub makers.....	2 to 25c	1 hub.....
75	Hackettstown ..... Carriage factory.	Body makers.....	$5.....	1 body.....
83	Port Oram..... Iron ore.	Contractors.....	75c to $5	1 ton.....
84	Port Oram..... Iron ore.	"	$1 to $3.....	1 " .....
348	Jersey City.....	Freight handlers.....	17c per hour when working.	
203	Newark	Paper hanging, &c.....	15 to 18c per roll	1 roll.....
117	"	"	15 " 25c "	1 "
336	Jersey City..... Printing office.	Newspaper compositors.....	35c.....	1,000 ems.....
		Job work.....	35c.....	1,000 " .....
92½	Trenton..... Printing office.	Compositors.....	30c.....	1,000 "
287	Paterson ..... Printing office.	"	35c (in most of offices only 20 to 25c.).....	1,000 " .....
126	Newark ..... Satchel and traveling bags.	Satchel, &c., makers	½c to 35c	1 dozen.....
183	Newark ..... Cigar making.	Cigar makers.....	.....	.....
		Rollers.....	.....	.....
		Bunch breakers	.....	.....
		Strippers.....	.....	.....
		Packers	.....	.....
329	Jersey City..... Cigar making.	Cigar makers.....	$9 to $15*.....	1,000 cigars.....
330	Jersey City..... Cigar making.	"	$7 to $15*	1,000 " .....
215	Newark ..... Cigar making.	"	$8 to $11.....	1,000 " .....
32	Paterson ..... Cigar making.	"	$9 to $16,† according to grade	1,000 " .....
118	Newark ..... Cigar making.	"	$7.....	1,000 " .....
337	Jersey City..... Butchering.	Killing and dressing.....	80c (extra per cent. for not cutting the hides).....	1 beef.....
		Slaughtering	20c.....	1 head.....

* Price regulated by cigar makers' union. † Apprentices $2 less for all grades.

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

MISCELLANEOUS—*Continued.*

Quantity Produced Per Day.	Age at which the workmen begin to decline.	Age at which the workmen become incapacitated for active work.	Diseases Peculiar to the Trade.
1 to 4 dozen daily	.....	.....	None in particular.
496 of 3 to 8 inch; 209 of 8 to 16 inch.			
3½ weekly, with helper.			
Contractors hire their own men, who mine from 1 to 8 tons daily, generally about 2 tons. 1 ton daily per miner is about ordinary mining.			
20 daily	50	60	Painters' colic.
10,000 ems daily 7,000 "	60	.....	Printers' paralysis, to which only dissipated are subject.
Average 8,000 daily. 100 dozen	.....	.....	None. Business has no direct influence on health.
Average 1,200 cigars per man weekly " 2,400 " " 3,000 " " 40 pounds " " 1,000 cigars "	45	50	Cigar makers are a healthy class, i. e., factory hands, who have plenty of air, not tenement-house ones.
1,000 to 1,500 per man weekly	.....	.....	No disease if proper discretion is used. Whiskey and beer are principal causes.
.....	.....	.....	No special diseases, except occasionally lung complaints.
1,000 to 1,500 weekly	40–60	45 up	Lung diseases.
Highest grade, one-sixth daily; lowest grade, one-quarter daily. 2,000 each weekly.			
Make from $20 to $75 weekly " $18 " $40, according to business.	40–50	50	A very healthy business.

PART II.

SUGGESTIONS IN BEHALF OF WORKINGMEN.

CHAPTER 1.—REMARKS AND SUGGESTIONS BY INDIVIDUAL WORKMEN AND OTHERS, RELATING TO THE GENERAL CONDITION OF EMPLOYES IN VARIOUS INDUSTRIAL ESTABLISHMENTS IN THE STATE.

CHAPTER 2.—STRIKES—THEIR CAUSE AND PREVENTION.

CHAPTER 3.—THE WORKINGMEN'S INSTITUTE AT MILLVILLE, N. J.

CHAPTER I.

REMARKS AND SUGGESTIONS BY INDIVIDUAL WORKMEN AND OTHERS, RELATING TO THE GENERAL CONDITION OF EMPLOYES IN VARIOUS INDUSTRIAL ESTABLISHMENTS IN THE STATE.

For the purpose of procuring, for our present report, the desired information concerning our wage-receivers, two sets of blanks were distributed—one intended for individual employes, the other for those in charge of the various industrial establishments. In both cases, in addition to the statistics which have been tabulated in Part I., our object has been to obtain statements showing the general condition of workmen and their families, as far as possible by themselves and in their own language. These and the observations of our agents are reproduced in this chapter. Views respecting the needs of our industrial classes and suggestions for their relief will also be found freely interspersed among these remarks; and while the opinions here given may not, even in the majority of cases, meet with the endorsement of the political economist, they are worthy of the careful attention of all interested in the advancement of the human family.

STATEMENTS BY INDIVIDUAL WORKMEN.

PUDDLERS—"I am in favor of compulsory education as the best means of improving the workingman's condition." "The intelligent are about one-third of our number." "Too little education." "Our social condition is good; families well dressed and children go to school." "Many of us are educating our children well; our families dress well and go to church on Sundays." "Compulsory education, strictly enforced, will serve the working people." "The school-room has much to do in shaping the moral and social condition. We therefore hope for an improvement in this respect in our trade. This is already observable."

SHOE FACTORY EMPLOYES—"Strong drink keeps my fellow workmen very poor in most cases. These are the ones who cannot stand a strike or lockout." "I think if eight hours constituted a day's work we would still have fair wages and it would prove a great advantage to workingmen generally." "The power of capital is against us." "Have not much hope for the improvement of our condition." "Very few with much intelligence." "Strikes are injurious to the workmen." "Everything is very discouraging. Cannot say much for the present, but hope for a better future."

"In this city (Burlington) the working classes, as a general rule, are moral, intelligent, and many of them religious." "The working people of this city are foremost in religious societies." "It is doubtful whether the labor agitator is any benefit to laboring people." "Condition of women very good." "Morals are good among the ladies." "The girls are moral, dress well and keep good company." "Morals of our factory girls are as good as those of ladies who do not work." "Cannot say much for their intelligence."

WORKMEN IN ROLLING MILLS—"Technical education would tend to improve the condition of employes." "Intellectually they are below what they should be." "Very intelligent." "Fully up to the average. Many very intelligent men among us, but a large number addicted to excessive drinking." "Morality good." "Have been very much addicted to drink, but improving." "Poverty is the cause of immorality among workmen. They should practice more economy." "The workmen have natural intelligence, but are deficient in education." "The proprietor (Passaic rolling mills) furnishes a place in which to read and to play innocent games, with all the best papers and magazines. The workmen here are improving." "We have a fine library (furnished by the proprietor), which is well attended by the workmen." "There is plenty of room for improvement." "It is always the case that as men's wages are high they are in that degree high in intelligence, morality and social life. Poverty is degrading."

MACHINISTS—"I am in favor of education, because it will raise us above the level of serfs." "The greatest difficulty in our trade is the indifference, on the part of the men, to organization. There are so many American mechanics who desire to be independent that it is impossible to form a union which would enable us to act together for the furthering of our interests. The men do not seem to realize that there is a labor problem to be solved, or the actual condition they are in. They are satisfied with what they call a fair week's wages ($14 to $16), and so long as they feel that way there is no hope for anything better." "Our workmen (Paterson) are generally ignorant, *i. e.*, illiterate." "The masses (Gloucester City) are not very intellectual." "Churches are the great educators." "The men (Camden county) are progressing intellectually." "A great deal is done here (Millville) for the moral improvement of the working people." "Economy and laying up for a rainy day are necessary for a man to make his way in the world." "Economy is the only hope of the poor man." "The morals of the men here (Phillipsburg) are good, except that some are addicted to drink." "Only a few are intelligent." "We have a great battle to fight with monopolies before we can have our rights." "I find general discontent among the intelligent workmen, and a desire to better the condition of our children, whom we wish to see educated, as we feel the want of an education ourselves. We do not see how this can be done except through compulsory educational laws. The first requisite is to prohibit child labor. We are forced to compete with those who do not care about this matter, having no interest in the future welfare of their children, and to put ours to work also. The only remedy is to stop it in every case." "We have just begun to realize the importance of calling attention to our condition." "We are advancing, intellectually." "Machinists are not wanting either in intelligence or morality." "Not much immorality, except a few cases of drunkenness." "We have more intelligence among our workmen now than ever before." "There is need of improvement." "I am in favor of a child-labor law and desire to see it rigidly en-

forced, notwithstanding the opposition of many vagabonds who put their children, who should be at school, to work in the factories, in order that they themselves may live in idleness. I speak from experience on this point. Then I am also a strong believer in co-operation, conducted on true principles. The profits on my labor are 100 per cent. I do the work, capital takes all the profits."

"I believe my fellow workmen (Jersey City) are overworked and underpaid. Six of us are employed in this shop and their average wages are about $2 per day of ten hours. This is a fair average of the trade generally, owing to the practice among employers of paying one man in a shop what they call high wages to drive or lead the rest, as the case may require. Piece-work is always ruinous, as the workman will generally overwork himself for a big day's pay. This leads the employer to reduce the price, and then the workman is compelled to do the same amount of labor for smaller pay. His wages are thus measured by what he can be forced to do, and not by the value of the work performed. Wage-workers are themselves to blame, in many instances, for their low wages. Many who earn good wages squander it in dissipation, and this fact frequently induces employers to reduce or gauge the pay of the sober and industrious by that of the drunken or indolent. I believe many of the disadvantages of labor could be removed by judicious State interference. Employers should be compelled to furnish reading-rooms and libraries for their employes and to provide for them during sickness from a fund established partly by savings from wages and partly by their (employers') contributions. In cities where there are a number of small shops, both State and municipal authorities should provide schools for the instruction of young mechanics. The reduction of the hours of labor should also be recommended, and the public authorities should set the example in this respect."

"I wish to draw attention to the manner in which men in a brickyard in my neighborhood (Middlesex county) are robbed. The facts, with which I am familiar, as they occurred under my own observation, are these: Men are hired by the month at wages ranging from $15 to $40, very few getting the latter figure. They are required to do a certain amount of work per day, and if they break down in the middle of the month and are unable to work any more, they lose what they have actually earned, getting no pay for the time they have worked. If they are sick they are charged seventy-five cents a day for board, whether they eat or not, the board being of the cheapest kind. To remedy this systematic defrauding, we want a law to give the workman, who is discharged because unable to work through sickness, a right to sue, for wages due, before a justice of the peace, and, on judgment, to collect immediately. There should be no right of appeal from the judgment, as the amount is small, frequently not more than $5 or $10. If a man must wait two weeks before the trial comes off, and pay his board in the meantime, even if he is successful, he is out of pocket nearly the amount of his claim. If now an appeal is taken to a higher court he is unable to follow the case, as it would cost him many times more than his claim. The result is that generally workmen abandon their claims and prefer to suffer imposition."

GLASS BLOWERS (Bottle and Vial)—"The Workingmen's Institute here (Millville) is an evidence of progress." "Glass blowers are the governing power here (Millville), which could not be unless they were intelligent." "Where there is less drinking the improvement is apparent. The working people are morally and intel-

lectually fully up to the average of society." "Their condition is good in this city" (Millville.) "The majority is very low in the intellectual scale here" (Bridgeton.) "Blowers here (Millville) are, to a large extent, moral and religious." "Glassblowers have made great improvement, mentally and morally, within a few years." "Except a few, who drink, the condition of glassblowers is first class." "The intelligence in the trade is with the few." "Night schools have done much for us here." "Our condition as workingmen and women is improving slowly, but, I trust, surely. I favor eight hours for a day's work; co-operation in its full meaning; no convict labor to compete with honest labor; no privileges to any, but justice to all." "If workmen unite together they can have their own way." "Drunkenness lowers the condition of many." "Cannot say much in praise of their intelligence; mostly moral and religious." "Our condition is better than formerly." "Very good." "We should have but eight honrs' work per day." "I think eight hours of work enough." "We work too long per day; no time left for intellectual pursuits."

"There are, in the labor movement in this country, two very distinct and very different elements, viz., the radical and the conservative. The former has been imported largely from Europe, and has Herr Most, Rossa and such men as leaders. To these socialists it makes no difference how the end is reached so it is attained. They would revolutionize and overturn our government, blow up with dynamite, burn, destroy, or anything so that their desires might be accomplished. Under their teaching the social relations of society would be sundered, and families would be gathered into communities, and the endearing relation of parents to their children would be lost in a conglomerated community. These socialists are a great injury to the real labor reform movement in this country. Those who do not understand the vast difference are apt to associate all labor agitators together, and thus the very name of labor agitation becomes to them odious, when, if the real differences were clearly defined in their minds, it would be quite different. The very means which these socialists propose to use to accomplish reform would defeat it. The working people of this country can never be benefited by a revolution brought about through physical force. All history proves to the contrary. Monarchy, despotism and slavery follow in the train of riot, bloodshed and war, and the elevation of the laboring classes cannot be accomplished in this way, or any other than by the power of human reason. The education of the masses is the great means to be used, and by it the barriers in society will be broken down to such an extent that caste will be unknown. Then men will stand upon an equality, or upon merit alone, and discuss and decide upon the differences involved in their mutual interests, and the great problem between capital and labor, between rich and poor, will be solved and settled by moral and intellectual power. It is by the peaceable means of the elective franchise, education and diplomacy, that the conservative element in the labor movement propose to benefit and elevate their fellow workingmen, and not by dynamite, riot and war. They regard such men as Herr Most as dangerous enemies, not only to our free institutions, but also to the true labor interests. But there is no cause of alarm on account of these communists and socialists. They are only a mere handful, comparatively, and for the most part, deluded fanatics, with too much fear of their own personal safety to put in execution their wild and lawless theories."

"Here (Millville) every one is rated upon his merits, without regard to his station in life. Aristocracy is unknown among us, and any one attempting to put on airs,

subjects him or herself to ridicule. The workingmen have their full share in all the offices of the institutions of the city, not because they are workingmen, but because they are qualified by intelligence and ability to fill them. There seems to be a perfect absence of caste, and in society, in the church, and in our municipal affairs, the size of a man's pocket-book or his bank account, is not one of the considerations. Of course in business transactions it must be taken into account, but in affairs where only honesty, intelligence and sound judgment are needed, the working people stand upon an equality, as a rule, with the other citizens of our city. The success of building associations, which are managed almost entirely by laboring men, prove their honesty and ability as well as their intelligence, and the offices of the city, of which they have the majority, show that they are fully capable of the trust committed to their charge."

"While the working people have made great advancement, socially, morally and intellectually, within a few years, there still remains one great barrier in the way of progress, and that is strong drink. Apart from other evils, alcohol, whether in beer or other beverages, stupefies or checks a laudable ambition. Education has done much and will do more for the working people, but mere education will not give them either the social or intellectual *status* which belongs to them. If, when their work is done, they resort to the saloons to drink and spend their evenings, the next generation will be very little in advance of the present. This applies to the masses. A large number of workmen have already placed themselves in the scale of advancement, and are mentally up to those in the professions, and it is these men who are exerting, to a great extent, the political power in this country. If they do not hold the reins, they are the power behind the throne. It is these men who are arousing the public and the workmen themselves to their true condition, and will ultimately work out the great problem of distribution between capital and labor, not by revolution and bloodshed, but by the peaceful, effectual power of the brain. Intelligence is the great power which is to give the workmen the place in society to which his honorable and useful employment entitles him."

WINDOW-GLASS WORKERS—"The Labor Bureau of New Jersey is a good institution, but we should have a national bureau." "The interest of the laboring class demands compulsory education." "There is not much interest in educational matters." "The effort of our leading men for improvement is being appreciated." "There is a great deal being done to improve the condition of workingmen." "Morals are good, except of those who drink." "Organization among us is doing much to improve the intellectual standard." "We have just begun to be interested in these matters." "I am glad to see so much progress being made." "The condition of window-glass workers is deplorable." "When prohibition becomes the law, the first step will have been taken towards the advancement of workmen." "Too many demagogues among the workmen." "Men who lounge in bar-rooms care little for the elevation of themselves or families." "The standard is not very high." "Far ahead of what we used to be." "Always more production than consumption is not encouraging for the wage-worker."

EMPLOYES IN GLASS FACTORIES—"I think the reason that there is not more prosperity among the working class, is because they try too much to ape the rich; then again they love cigars and beer more than they do their families." "Less work and same wages, with an opportunity to open-air exercise and study." "Cost of living

too high; wages should be higher. My experience is that when wages advance, the prices of provisions and fuel advance also. The condition of wage-workers can only be improved by legislation, and it behooves every workman to make a pull, a long pull, a strong pull and a pull all together, to educate public opinion in our favor." "If the laboring man could be depended upon, he could do something." "Night schools have been a great benefit to us." "Do not consider our condition flattering." "Much might be done by compulsory education." "Could hardly be worse."

BLACKSMITHS—"Associations, either benevolent, church or other societies, tend to elevate the people." "We are intelligent in some things." "Workingmen and their families are improving generally, both morally and intellectually." "Those with families are poor." "I regard the condition of workmen as hopeful." "Nothing to boast of." "We are neither educated nor intelligent; these go together." "Society is advancing, but room for great improvement." "Very deficient in education." "Beer drinking is the prevailing vice."

SILK WORKERS—"I want to have eight hours for a day's work and children under fourteen years of age kept out of silk mills." "All laboring men should join the respective unions of their trades. No children should be allowed to work under fourteen years of age. More ventilation in silk mills." "Strict enforcement of the child-labor law, factory inspection and compulsory education are absolutely necessary. A very necessary thing would be an industrial school where the children of the laboring classes could be taught trades, free of charge, as in large cities they cannot afford to serve long apprenticeships." "The child-labor law should be strictly enforced. Compulsory education, and one full hour for meals should be allowed. No overtime work in any silk factory. Factory inspection and better ventilation." "No children should be allowed to work in factories under fourteen years of age." "In favor of trade unions in all trades" "I want the eight-hour law." "The hours of labor are too long for study and improvement." "The rich are getting richer and the poor are getting poorer." "Eight hours should be a legal day's work; it would give more time for study and the improvement of the mind." "Compulsory education is absolutely necessary to protect our country from ignorant voters." "If workingmen were more intelligent they would not be working for the mere pittance they are now receiving." "Morality good, except some drunkenness." "No complaint about the social condition. Men make their own social *status*." "Intelligence is on the increase." "Foreign workmen may be large consumers of other goods, but they do not purchase much silk, while they interfere very much with wages." "There should be no conflict between labor and capital, as their interests are mutual." "The moral standing of ribbon weavers is good, with average intelligence." "About one-half are moral, some religious; the others are addicted to beer drinking." "Very little intelligence." "The great need in this country is the proper training of children." "Our condition, compared with that of workmen in the old country, is very high." "Could not be higher even in the higher classes." "The social, moral and intellectual condition of silk weavers is number one." "Drink prevents advancement." "The silk weavers are intellectual, but lack judgment in regard to organization." "Cannot say much for our moral and intellectual condition." "More improvement would be made if less beer were drunk." "Nature has provided one of the most delightful places in the State for a public park in this city (Paterson.) The authorities should expend a little money to fix it up and appoint policemen to guard

it from intrusion by rowdies. As it is, the latter have possession and others are kept away." "Some are very intelligent, but the mass are ignorant." "A great many religious and should be moral. Intelligence is at a discount." "Not remarkable for intelligence. A few are above the average." "The great mass of workmen are not what they should be in these respects." "Advancing in all these respects." "Ordinary. A few are intelligent; the preponderance, however, is in the other direction." "Weavers read a good deal, but mostly matter of a light character." "The reputation of silk weavers in this city is good. Their intellectual condition is fair." "The silk weavers need more thorough organization." "The silk weavers of this city are remarkable for their morality and intelligence." "The child-labor law will reduce my income next year. It is a good law but will bear hard on some of us." "Great lack of education. Foreign emigration should be checked." "We need workmen's institutes, more libraries and fewer saloons." "To the child-labor law should be added compulsory education." "The moral condition is good. We need intellectual improvement." "Moral and intellectual, reports to the contrary notwithstanding."

WOOLEN MILL OPERATIVES—"The public schools must do the work of education." "Our Sunday-schools have done a great work for our working people." "We have just begun to advance." "Very good." "Nothing to boast of." "Reading pernicious books is injuring the morals of the working people." "Now and then there is one who is intelligent, but ignorance is the rule."

COTTON MILL OPERATIVES—"Our condition, moral and intellectual, is very good." "Good in these respects." "Were it not for drink our condition would be better." "Not much intelligence." "Not much intelligence or education." "Education and intelligence of females low; morals good." "The social condition good." "Great need of reform." "Good, steady men here. No trouble getting steady employment and living comfortably from their earnings."

IRON MOULDERS—"If our men would live well, drink less and keep good hours, they would be much better off. A public library would be a great benefit in Jersey City. Young men have no place to go after working hours except to liquor saloons, which are visited, thus wasting their earnings and ruining their health. If good reading-rooms were provided I think many workmen would avail themselves of the privileges." "Compared with European operatives, we stand high." "The workmen here stand upon a level with others in society." "Our condition would be better if the hours of labor were reduced." "Honesty, industry and sobriety are the characteristics of workmen here" (Millville). "Better wages would improve these conditions." "Some of our men spend too much of their time in beer saloons. There are quite a number very intelligent among us." "We are making great improvement intellectually. Trade organizations are great educators of workingmen."

HATTERS—"Abolish convict contract labor and enforce an eight-hour law." "Abolish contract convict labor in our prisons. Workingmen should take a more active interest in political affairs and see that good men are sent to make the laws." "The State ought to furnish free libraries in the working centres. The contract system in prisons should be abolished, as it is a glaring outrage to both manufacturers and workmen. The State, and not individual contractors, should run the prisons and get the profits." "The abolition of private ownership in land, the incorporation of trades unions, all laws framed by the legislature to come before the people and be

endorsed by them before becoming operative." "Equal to if not better than those in any other mechanical trade, especially in their generosity and liberality to their not so fortunate fellow men." "The strict enforcement of the child-labor law would tend to help us; also the total abolition of convict labor." "No boy is strong enough to work at finishing hats before he is seventeen years of age." "We are sociable and charitable to one another in time of trouble, and have a good share of common education." "We are generally sociable (often too much so), have an acute sense of right and wrong, and, considering the early period of life when many are forced to go to work, fairly educated." "The hatters of Orange gave to the Lowell strikers $1,250, and the balance of the inhabitants gave $4." "The hat trade is spoiled by machinery and convict labor." "Social, moral and intellectual condition very good. If I had to depend upon my wages at my trade for my living, one year after another, without any other income, I would have a poor one." "The social condition is good; the intellectual will compare with that of any other tradesmen." "Enforce an eight-hour law." "The wages at present, considering the amount of work we get, are not sufficient to support ourselves and families." "Any one getting more than six months' work in a year is lucky." "I could get no clothes the last year—groceries and rent took all I made." "I think if we had more work and better pay we could support our families without having our wives work themselves to death."

CARPENTERS—"They are generally sober and industrious, and so are their families." "A study of the situation shows that, at present, the wages of carpenters in this city (Trenton) are not sufficient to support their families and educate their children, without the strictest economy. My wages are somewhat above the ordinary. I receive extra pay as foreman. The average is not more than $2.12 per day. For the past eight months, the carpenters in this city have been constantly employed, but for the next four months, I estimate that at least one-third of them will be out of work. This is, in my judgment, caused by over-production, and results from working too many hours per day. Machinery has been so improved that, in many branches, one man does more in a day than twelve could have done twenty-five years ago. With the advent of machinery, the work-hours were reduced from sunrise to sunset to ten hours per day, and I believe that, with the improvement since made, we must still further reduce the time, if we wish to avoid panics every few years by over-production. We should ask for legislation in this respect, both by the State and National Government. I am satisfied that, with a reduction of the hours of labor would come an increase of wages and a great improvement of the condition of workingmen in general." "The worst enemy of the workingmen is drink, but there is little of it in our shop. We are not allowed to drink during work-hours, and there is, probably, not another shop in town that has less drunkenness." "It is high time for workmen to give more attention to their condition." "The majority are ignorant." "I am in favor of fewer hours for work; the production is too great." "The labor agitators do the workmen more harm than good." "Centralizing the money power is working great mischief to the working people." "The power of the working people in this country should be used at the ballot-box wisely." "Workmen should be taught, more fully, the principles of political economy." "Drinking beer is the greatest drawback to the working classes." "We are on the advance." "The Sunday-schools have done much to teach the workingmen morality."

CIGAR MAKERS—"I know laboring men and some cigar makers who only make

$7 to $7.50 per week, who have families of from four to six children to support." "In regard to the social condition of myself and fellow-workmen, I have only to say that, although having no children to support, it has, nevertheless, been impossible for me to accumulate anything during the past year. The condition of those of my fellow-workmen who have from two to four children to support must be poor indeed; by this I measure their moral and intellectual condition. Our trade is a very unhealthy one. We are compelled to sit many hours every day, in tobacco dust; it ruins the digestion and the lungs and eyes, leading to those diseases stated in this blank, and to an early incapacity to work, with most men and women who follow it. I think the Labor Bureau should recommend the reduction of the hours of labor, as no decrease of wages will result from fewer hours." "Cigar makers, as a trade, are a very intelligent class of workmen." "Our men are very much addicted to drunkenness, and thereby lose a great deal of time."

CARPET WEAVERS—"Higher wages and fewer hours of work would give more opportunities for our elevation." "We need education; too many have only what has been taught in the saloons." "We need more knowledge on these labor topics." "Social condition good, morals fair, and intelligence, with few exceptions, very ordinary." "We lack organization. Less beer and more study." "Organization is needed, to elevate the operatives in this factory."

EMPLOYES IN SHIRT FACTORIES—The child-labor law, if enforced, will greatly benefit the condition of the working classes." "Women should have the same pay, for the some amount of work, as men."

SHIP CARPENTERS—There are many men employed who are not competent mechanics, a great many of whom I have been obliged to employ during busy times, and pay them full wages, from the fact that they belong to the union, while other good mechanics could not receive more wages, as that was the standard price. I think more attention should be given to the education of mechanical skill. Our mechanics, as a class, are satisfied with just enough education or skill to get through with their work, no matter how, so that they get their pay, which appears to be the general aim. A good mechanic always takes care of himself and studies up his business well. They generally get along nicely; but the ordinary workmen spend too much for strong drink, and get the same wages as the better mechanics, through the societies to which they belong. Societies are a good thing, if they would take in none but good workmen, and leave the scallawags out. They do not use proper discrimination in the selection of members." "Organization is doing much for workmen." "Compared with the last generation, our condition is excellent." "Beer drinking is the bane of workingmen." "The reason wages are better than formerly is because of the increased intelligence among workmen."

IRON MINERS—"Six hours of labor daily, a high tariff, no monopoly, send the children to school until fourteen years of age. The greenback system of money would fill the bill of wants." "Workingmen are beginning to think; this will soon produce action." "The only resource we have is the ballot." "Intemperance is the curse of workingmen in this country." "The miners are a moral, industrious, and intelligent people." "The condition of the worker will never be better; capital keeps him down." "Moral condition good; only a few intelligent." "Things must change in society before men who labor can secure social rights." "The intellectual condition is improving." "The most rigid economy should be observed, until he

gets a start in life; then it will be easier." "Very low." "A number of years ago, we had some strikes here (Morris county), but I have almost forgotten about them. In 1867, there was a general strike, in which about five thousand miners and laborers participated. The wages, at the time, were $1.65 per day. Pig iron was worth $40, and good ore from $6 to $10 a ton; and the men struck for $2 a day, and got it. In the summer of 1874, when the panic was upon us, and when over-production was all the cry, the wages were reduced to $1.50, in the Irondale mine. The men protested, and a strike took place, one hundred and fifty men engaging in it; but it was a failure. In 1880, about one hundred and seventy-five men of the Boonton Iron Company struck, because of a reduction in wages. You remember there was a short boom for about two months, iron going up to $40 per ton, and wages to $2 per day. Then wages were cut down again, first to $1.50 and then to $1.25. That was the cause of the strike. All this goes to show the respect capital has for labor—how slowly wages are raised, but how quickly they are cut down. At present, if we cannot have our wages increased, through a higher duty on iron ore, or otherwise, we shall have to go a-begging; but I don't know where to go, as my friends are all poor. At all events, labor should be organized, so as to compel an equitable share of the profits."

JEWELERS—"For the present, social misery. I think the only hope is co-operation, organization of all trades and social revolution." "To do away with the poverty and degradation that seem to be a necessary adjunct of our civilization, we must organize to overthrow the present system, and put in its place another based upon liberty, equality and justice." "The present low condition of labor is owing to the competitive system of production and distribution, and the condition of the industrial class will grow worse until a change is made. We must begin to study the principles of co-operation, and the sooner we begin to produce and distribute co-operatively, the sooner will the laborer realize the results of his toil." "We have here in Newark started a co-operative store, and have formed an organization, the purpose of which is to carry on co-operation to its fullest extent, to create by our distributive store a market for goods which we hope to supply with goods produced in our own co-operative workshops. If we succeed in our plans, I think we will have done a great deal towards solving the labor problem." "Discrimination badly needed in favor of labor." "You will notice in my report of earnings that the number of days lost is large; also that my expenditure has been greater than my income, which has been entirely due to the loss of time, and I have been one of the most fortunate in the shop where I am employed. It often makes me sad when I see the condition of others, especially when I compare their condition with that of many non-producers. The cause of this idleness is due, to a great extent, to the system of boys' labor, the competition of which is so great that, when business is dull, the journeymen are given only such work as these boys cannot do. We should have a law compelling corporations and firms who employ boys at all to teach them their trade thoroughly. The introduction of machinery has also displaced a great amount of skilled labor of late years. I would suggest the enactment of an eight-hour law, making that a legal day's work and enforcing it strictly in all branches of industry. This would give more steady employment to all by taking from the market the surplus labor. It would encourage more regular habits among workmen and tend to improvement, morally and intellectually, give time for the enjoyment of home, and

lead to a better education of children, so that they would grow up to become good, intelligent citizens. A reduction of the hours of labor is in my opinion the only true remedy, at the present time, for existing evils."

TAILOR—"I recommend that eight hours be a legal day's work, and this to be enforced by law throughout the whole country; the child-labor act to become general throughout the country; a national bureau of statistics of labor and industries; free industrial schools for the education of the laboring classes."

DYER—"The hours of labor should be reduced from ten to eight per day."

CARRIAGE MAKER—"The public school system needs improvement so as to give the highest grades of education." "The working people have been raised, socially, by benevolent and other societies." "Temperance societies are reforming the rising generation."

SAW MAKER—"I believe that co-operation must supersede the present wage system, and that both State and Nation should encourage, by every means possible, co-operative industry. As a substitute for the present contract system of employing convicts in prison, I would have an organized system of exchange in all the prisons, charitable and other public institutions, by which what is needed could be supplied by this class of labor. County and city authorities should be compelled to purchase such supplies as they need in the institution under their control. Thus a very large amount of the labor of prisoners might be utilized without interfering with outside honest labor."

FILE MAKER—"Too many children employed in factories. Eight hours should be a day's work." "Machinery has ruined my trade, as it has many others. I believe the best thing is to reduce the hours of labor so as to equalize the increased power of production by machinery." "In my opinion the men in my trade do not get a fair rate of wages. I believe a union would materially aid them to secure a better pay." "I believe cleanliness, pure air, better ventilation in factories essential for workmen. This, with better pay, steadier habits, *less beer, less tobacco*, and reading-rooms connected with large factories, would do great good." "Workingmen's institutes or clubs would be a great benefit."

WOOD TURNER—"A few intelligent; the rest are very little inclined for anything intellectual or moral."

PAINTER—"The men are very intelligent. There are fewer men in our trade that commit crime, in proportion to numbers, than in any other."

STOVE MOUNTER—"Reduce the hours of labor and give more time for self-culture."

FIREMAN—"I have to work seven days in a week, twelve hours per day, and at night every other week, so that I have no time or chance to improve my intellectual condition. The men working with me are no better off, but some of them worse, if possible."

DIPPER IN BRASS AND COPPER—"Have no fault to find with treatment by the employers. We are paid weekly. The only thing to complain of is that wages are too low. As regards moral, social and intellectual standing, we do the best we can, but at present our condition is such that we have no means to spare to enable us to procure the necessary books to read. Poverty is our curse. We are down and will have to remain so until we can unite so as to aid each other."

BAG MAKER—"The workingmen are not intelligent enough to know their duties

or their rights. They cannot understand that they are entitled to the full reward of their labor, or that their duty is to defend their rights."

TRUNK MAKER—"Children should be compelled to go to school until fourteen years of age. The hours of labor should be reduced to eight per day. Over-work should be prohibited. No child should be allowed to go to work, until fifteen years of age, in any factory."

SPINNER (Female)—"The girls are moral but have little opportunity for the improvement of their minds."

DRESS MAKERS (Females)—"Something should be done to give sewing girls a chance to live without working themselves to death." "Women should be instructed in the topics which are interesting the working people at the present time."

TINSMITH—"The men in our trade, as a body, do not take interest enough in the labor movement."

SUPERINTENDENT IN HAT FACTORY—"Hatters, in general, use up all, as they earn it, of $5 or $50 per week."

OVERSEER IN FLAX MILL—"The child-labor law will do much to improve the condition of workmen in this mill."

ENGINEER—"The men who work should have as good social standing as any other class. This, however, is not so at present."

JAPANNER—"Higher wages, better ventilation and shorter hours needed by us."

STONE CUTTER—"There are very few stone cutters who live to be over sixty years of age."

LABORERS—"I think that eight hours a day would be proper for workmen." "All live poorly." "They are poor and work hard." "Laborers have little time to attend to these subjects." "Eight hours a day for labor would give time for study." "Not specially remarkable socially, mentally or morally." "We have not intelligence enough among us to get living wages." "Our condition is gradually getting better." "It is very bad." "An effective eight-hour law would make an improvement in these respects." "I am very hopeful for the future of the workingmen of this country." "Nothing can be done for the laborer while such hordes come here from Europe." "Morally, the working people are above the so-called higher classes." "The laborer has no time to improve, intellectually." "The only hope the laborer has is that his children may do better than he has." "I think our morals are not advancing. More refined but no higher." "We are now throwing aside light reading for that which is more solid." "Laborers must work as long as they can possibly do so. Sawing wood is generally the last work they do."

MISCELLANEOUS OBSERVATIONS.

THE PATERSON SILK INDUSTRY.

The number of hands employed in the silk mills of Paterson has somewhat decreased since the previous year, owing to the failure of a large firm and the general depression in the trade. There are em-

ployed in Paterson about fifteen thousand hands, of whom three thousand two hundred are weavers—hand-loom, power-loom and ribbon weavers. The wages of the weavers have been greatly reduced within the past five years, but not, at least in price, during the past year, although, in consequence of the large amount of lost time, occasioned by the slackness of business, the total amount received in 1882 to 1883 was considerably less than formerly. The loss has been about thirty per cent. to hand-loom weavers, twenty per cent. to power-loom weavers, and to nearly all, ten per cent. Ribbon-loom weavers have done the best, because there was not so much time lost by them as by the rest.

The new "child-labor law" has destroyed the distinction between girls and women, so far, at least, as public information is concerned.

THE SHOE TRADE OF BURLINGTON CITY.

The following extract, from a pamphlet by Robert B. Carter, of Burlington, entitled "A Half Hour in Burlington," will show the extent of the shoe manufacture in that city:

"A heavy trade, formerly at the South, in ladies' boots and shoes of a superior quality, has since been superseded by the manufacture of ladies', misses' and children's shoes, the high finish of which has secured for the makers a very large and steadily-increasing business in all sections of this country, Cuba and Mexico, and not excepting the great shoe mart, Boston. In the aggregate, some four hundred hands are constantly employed, and during the height of the busy seasons, many others in this city and vicinity work at their homes, the various parts being prepared for them. The weekly aggregate product of the fifteen factories is full eighteen thousand pairs of shoes; the grand total for the year, nine hundred and thirty-six thousand pairs. The weekly pay-roll (mostly piece work), averaging, males $10 and females $7, amounts to $2,550. The present market price averaging sixty cents per pair, the sum weekly, of the gross proceeds, is $10,800. Labor account for the year, $132,600. Sales per year, $561,600. To make a pair of infant or misses' shoes, as far as at present possible, mechanically, fifteen different machines, all wonderful and ingenious creations of man's fertile brains, and costing between $250 and $400 each, are required, and ten pairs can be turned out in the same time

as one pair made by hand. Conducted by thoroughly practical and business men, with skilled employes in all departments, and every facility for prosecuting, advantageously, their taade, there cannot be a question as to the enviable rank Burlington shoe manufacturers are destined to hold in the file of the many makers throughout the States."

MORRIS COUNTY MINERS.

The whole number of miners in Morris county iron mines is, probably, three thousand three hundred. Very few boys are employed, and they generally get the same wages as men. The "contractors" are the only ones who work by the piece. They contract to mine the ore, the price varying according to the richness of ore—generally seventy-five cents per ton—and employ their own labor. They make all the way from $500 to $1,500 yearly. The ordinary miner's wages average about $350.

A year ago, it was generally understood that the odious "truck system" was being abolished, but it still exists, in all its hideousness, in nearly all the mining localities in Morris county. To be sure, it is insisted that the men are not restrained from purchasing their necessaries of life where they please, as they are paid in cash monthly. But how much cash will a miner, who works at $1.25 a day, have coming to him at the end of the month, after his store-bill at the company's store has been deducted? The simple truth is, that the Morris county miners, with very few exceptions, are working under the truck system, which always operates as a discount on wages, by making the men pay more for their goods. The miners are now the only workmen in the State upon whom this species of extortion is still practised, and it should cease.

HUDSON COUNTY INDUSTRIES.

Masons and Builders—There have been no strikes among masons within two years. The prices of wages are fixed by their union, and all employers pay them.

Plumbing and Gas Fitting—The average pay of plumbers and gas fitters is from $2.25 to $3 daily. They seem to be a well-satisfied set, except troubled by occasional malaria, caused by working in sewers, cesspools, &c.

Pile Driving, Bridge and Dock Building—There are probably about two hundred workmen employed in this trade, in Jersey City and Hoboken, and average about the same wages. The business is a wet one, and the prevailing diseases are rheumatism and malaria. They are strong and healthy workmen, and seem as well satisfied as laborers generally.

Painters—There are about two hundred painters employed in Hudson county, but they change about so often that a sufficient number cannot be kept together to form a union. They command good wages, but do not like to work too close, for fear of the colic. They are, as a rule, a nomadic class—like to travel and see the country in all its phases. They rarely work over one season in the same place.

Shirts—There are no large shirt establishments in Jersey City, and but very few where over a half dozen girls are employed. It is estimated that there are about two hundred girls in this place who work for New York employers at shirt making.

Printers—There are from three hundred to four hundred printers employed in Jersey City, the better class being paid thirty-five cents per one thousand ems.

Furniture and Upholstery—The employes of one of the largest firms in Jersey City appear to think that they are better paid and treated than workmen in general. The women sew carpets and bedding by the piece, working, when trade is dull, from six to ten hours daily. In busy seasons, they do several hours of extra work and receive extra pay. The men, making and repairing furniture, are paid by the day, and lose no time, if they want to work.

Machinists—Many of the employes in the different machine shops seem to be satisfied with their condition and surroundings, and think that they are as well paid as other branches of labor; but in every establishment visited there appears a spirit of dissatisfaction among a few, and an effort is being made to revive the machinists' union. The average pay of the best mechanics is from $2.50 to $3, instances being rare where they receive more. Masons and bricklayers get $4 per day, but this is because they have but seven or eight months' work. Nevertheless, it requires more skill to make an intricate piece of machinery than to lay a brick, and should be paid accordingly. A first-class machinist should get $4 or $5 per day. The great trouble is the grad-

ing of workmen into various classes, for where a second or third-class workman belongs to a union he demands the same rate of pay as is paid to the best.

Flint Glass—The only firm of the kind in Hudson county—manufacturers of lanterns and lamp chimneys. There are regularly employed eighty men, who work by the piece, one hundred globes or lantern glasses being considered a day's work, for which $3 is paid. Some workmen run up to one hundred and fifty per day, but they cannot follow it up. Their condition is fully equal to those in the other trades. One workman observed that the business was not what it used to be, for a few years ago he was paid double the amount he was glad to receive now.

Silk Ribbons—There is only one concern of the kind in Hudson county. The mills are run by steam and one hundred and fifty hands are regularly employed, two-thirds being women and girls, the latter predominating. The employes appear healthy and contented. Winding and spooling are done by girls, who make from $5 to $6 weekly, rarely the latter. In the spinning department the average wages are $9, expert hands making $12. Weaving, requiring more skill, is done by men, who average $20 weekly.

Box Factory—One of the most extensive concerns in the State. The men have been long in the employ of the firm and belong to the better class. They express themselves well satisfied with pay and employers. They never have had a strike. When anything goes wrong they come together to talk the matter over between themselves and the manager. A mutually satisfactory understanding is always reached.

Manila and Tissue Paper Mill—The help is all ordinary, very little skilled labor being required, and is paid low wages.

Cigar Making—The men are too fond of liquor. The men claim that cigar makers live as long as any other workmen provided they "don't bend their elbow" when at work.

Fireworks—The principal fireworks factory in the State is in Jersey City. Three hundred hands are employed, many of whom are poor women and school children, who work by the piece at odd hours. Their work consists in rolling up pasteboard cases for rockets, &c. They can make from $3 to $10 per week. The regular force consists of men skilled in the business. These prepare powder, chemicals and colors, and receive from $18 to $25 weekly. Others are employed in

making the frame and woodwork, and get from $1.50 to $2.50 daily. Much of the work is also done in private families, where the small children are employed at it. There is also a large number of boys and girls in the factory who load the pasteboard tubes, seal and ornament them for market. The business is very irregular.

Castor Oil Manufactory—The workmen are generally foreigners—Irish, Scotch and German. They save no money and several expressed themselves as satisfied with their wages, but would like a little more "beer money."

Oil and Tallow Factory—The labor does not require much skill—only practice. The men generally want more pay, but admit that their present pay is as much as the business can afford. They love beer, and about every man has an account at the nearest saloon. They save nothing to speak of, but say they do not run in debt.

Oakum Manufactory—Little skill is required and the men are satisfied, for the reason that they could do no better at any other.

Boiler Makers—In the largest concern of this kind in Jersey City the wages have been increased twenty per cent. during the year. The best kind of work is done there and the men are paid liberally and appear better satisfied than elsewhere. There have been no strikes or trouble. If the workmen think more pay is needed they confer with their employers and come to a satisfactory agreement. Boiler makers generally save nothing from their wages, always finding a way to spend all they earn. This is the case, with very few exceptions, with most of the workmen in Jersey City.

Steel Works—There appears to be no dissatisfaction among the steel-workers in Hudson county.

There are no establishments in Jersey City engaged in the making of clothing. There is a large number of clothing firms in the place, but the work is all done in Newark and New York, except such as is given out to families.

Freight Handlers—The freight handlers of Hudson county number altogether about six hundred, and are employed by the railroad companies. Their condition is, at best, miserable. They are compelled to pay exhorbitant rents for the poorest tenements, in which they are forced to live, and, under the monthly pay system, in vogue with these companies, they must buy the necessaries of life on trust, from certain grocers and butchers, who, on this account, charge enormous prices.

They live in mortal dread of sickness and death, and there is scarcely a man among them that does not owe a heavy physician's bill. In many cases, they are unable to obtain medical attendance. The greater portion of the poor-relief appropriation goes to the section where the freight handlers live. They appear to find relief only in the drinking saloons, where a large proportion of their wages is spent. In this respect, they are no exception to a large portion of workmen in Jersey City.

The Pennsylvania Railroad Company employs, on the average, two hundred and fifty men as freight handlers, many of whom are the old strikers of last year, who were compelled to return to work at the old prices—seventeen cents per hour, when at work. The leaders have not been taken back, and are now engaged in other employments. The men are very much dissatisfied, but very cautious in their talk, evidently being afraid of spies. They admit that they made a mistake in striking at the time they did, and that they should have waited until a more favorable occasion, when, railway business being brisk, they think that their demand—an increase of three cents per hour in their pay—would have been granted. They are principally Irishmen. As workmen, they are unfitted for anything but laborers, and, being very clannish, are divided among themselves, having but little faith in their leaders or in their fellow laborers. This the railroad company know, and it is said, encourages.

The 'Longshoremen of Hudson county number about one thousand men, Jersey City and Hoboken being the principal points where they are employed. There is a union in Jersey City, but none in Hoboken. In Jersey City, the men work according to the New York standard of prices, viz., thirty cents per hour for day work and sixty cents for night and Sunday work. The men struck, during the year, in order to obtain sixty cents per hour for holiday work, but they did not succeed. The Red Star line is, at present, the principal steamship company in Jersey City, where about three hundred men are employed along the shore, the Cunard line having removed to New York.

The Hoboken lines are the Bremen, Hamburg and Hull companies. The Bremen line employs, regularly, fifty men, to whom they pay $15 in wages, per week, and twenty-five cents per hour for all over-work, ten hours being a day's work. The Hamburg line employs the same

number of men, and pays like wages. There is also a large number of irregular workmen hanging about the docks waiting for a job, as occasion offers, in which case they receive the same pay per hour as the New York 'longshoremen, which rates are fixed by the union. They belong either to the New York or Jersey City unions.

The 'longshoremen's condition is little better than that of the freight handlers, and like them, are principally Irish. They have the advantage of being paid daily or weekly, and thus are somewhat more independent. Their manner of living is about the same, and not one in a hundred ever saves anything from his wages.

The Lorillard Tobacco Works in Jersey City is probably the largest concern of the kind in the world where tobacco is manufactured in every variety. The factory covers two entire city blocks, and there are also several detached buildings for making boxes, printing and tin work. There are three thousand five hundred hands employed, of whom one thousand are males and two thousand five hundred females. As a rule the operatives belong to the lower class, and there seems to be little attempt on their part to improve mentally, socially or morally. Still, they are bright and active and many of them really intelligent. There are some girls that would shine in any society. Some say that they prefer this to any other business because they can make more money; that they have learned dress making and millinery, but could not do near so well at it; besides, they would be compelled to spend so much more in dress. This class is engaged in weighing out tobacco and putting up packages, for which they are paid by the dozen. It is really marvelous how rapidly they use their fingers and toss aside the bundles of finished goods. One fills the bags or papers, another seals or ties them, while a third puts on the labels and passes them over to the girl who adjusts the stamp. All is done quicker than can be described. Some of these employes make as much as $20 per week, and without overworking, the principal requirement being dexterity in using their fingers. This class lives well, dresses well and appears perfectly happy.

Another class of girls is engaged in sorting and stripping tobacco. These are usually foreigners and quite ignorant outside of their employment. Many are careless and spendthrifty, laying up little or nothing, spending what remains after board and clothes are paid for in ice cream, candy and "in going to circuses," in which they take a

lively interest. The strippers are mostly old women and young girls, most of the latter appearing under fourteen years of age, but they will not admit it. These make from $3.15 to $7 per week, being paid according to the quantity of stems they strip, which are weighed at the close of the day's work.

The men and boys engaged in the preparation of plug tobacco are numbered by the hundred. Even in all the various subdivisions every one has his work to do and scarcely knows what his neighbor is about. The men and boys make good wages, particularly where they attend to their business, the former from $10 to $30, while the boys average over $5 weekly. A foreman is attached to every gang or section of the floor, whose business it is to keep an account of the amount of work performed and see that it is done properly. Every one is required to clean up before leaving for the day, so that the factory looks as neat as it is possible to be.

The sanitary arrangements seem to be as perfect as they can be made. Proper ventilation is had on every floor, while a physician with capable attendants is always near, prepared to act in case of necessity. In connection with the factory is a large dispensary, well furnished.

The principal sickness with the hands is caused by eating unripe fruit and drinking too much ice water. This causes sudden attacks of "gripe," or cholera-morbus. The physician says that if they would only let him select their food there would not be one case of sickness during a month. The average number of accidents and deaths here is not greater than in other business. Even in the snuff department there is an old man who has breathed it for thirty-five years and expresses himself as able to do it as much longer.

Horse Car Companies—The North Hudson Horse Railway Company, which employs more men than any other in Hudson county, is said to be the best regulated line of the kind in the country. Its cars run from Hoboken to Jersey City, Jersey City Heights, Union Hill, Weehawken, West Hoboken, Guttenberg, &c. The employes are mostly Germans; so are the officials and stockholders of the company. Hoboken is emphatically a German settlement, and here the principal stockholders reside. The conductors and drivers are paid by the hour, and if they work full time (eleven hours daily) they make $12.50 per week, but the average wages received are $10 and $12, respectively. Stablemen's work is a little more regular and averages $9 weekly.

The men think it is hard to work so many hours for so little pay. The conductors and drivers are very tired when they get through, and have no time to devote to their families. Still, the condition of the employes of this road, and of the Jersey City and Bergen Horse Railway Company, is far better than that of others employed elsewhere.

The conductors of the Jersey City and Bergen Company are selected with care, and rigid rules in respect to politeness, appearance and language are enforced. The company encourages neatness among the employes, generally. The wages also have been increased, and the hours of work reduced within the past eighteen months. Formerly the day's work was fourteen hours; at present it is about thirteen. The work is not so laborious as tiresome, and the men have short respites between trips. The wages paid weekly, are: Drivers, $14 to $15.75; conductors, $13 to $14; stablemen, &c., $9. The rates paid are higher than those obtained in New York and other cities. This is done in order to get reliable and steady men. The employes are, of course, dissatisfied with their many hours of work and their pay, but they admit that they would be unable to do as well in the employ of any other company.

There is such an abundance of this kind of labor in all our large cities that there is but little chance for any material improvement. New York and Jersey City contain thousands of young men who do not want to work at any laborious trade, but become bartenders or try to get a position on the horse cars. The superintendent of the Jersey City and Bergen Company has on file hundreds of applications for positions. Nearly all of the applicants would rather work on the horse cars at $1.50 a day than to do any kind of manual labor for $3.

The City of Bayonne occupies that part of Hudson county which forms the peninsula south of Greenville (Jersey City), ending at Bergen Point. There is a number of large concerns located on the eastern shore, which fronts on New York Bay. Prominent among these are the Standard Oil Company's works, at which are employed, altogether, about one thousand five hundred men, of whom one thousand two hundred are engaged in Bayonne, and the rest at Black Tom and Communipaw. These men are skilled in the manufacture of oil and seem to be paid as well as the employes of other large corporations. The wages average from $9 for new hands and laborers, to $30 per week. A man's pay is raised as he advances in proficiency. Good workmen

get from $12 to $20 weekly, while others, having advantages of education, get as high as $30. The latter class, consisting of foremen and those having charge of the tanks and machinery, does not number over one hundred. The large proportion of hands receive from $9 to $15 weekly. The work is not difficult or laborious, as a rule, but requires experience and good judgment. The employes are composed of refiners, handlers, pipe-layers and general-utility men. They appear as well off as the majority of workmen in Hudson county—much better than the freight handlers and 'longshoremen of Jersey City and Hoboken. They live better and are generally more intelligent. Two oil refineries are located near these works, employing three hundred and six hundred men, respectively, who receive about the same wages the Standard Oil Company pays their hands.

Here is also located a large manufactory of agricultural implements (Carr & Hobson, proprietors,) at which are employed about two hundred men, of whom wood-workers and machinists number one hundred and fifty, and are paid from $2.50 to $3.00 per day. The rest receive $9 to $10 per week in wages.

The coal docks of the Lehigh Valley Coal Company are also situated here. From six hundred to seven hundred and fifty men are employed. They get from $1.50 to $2.25 per day, save nothing from their wages and are about in the same condition as the freight handlers. About four years ago there was a strike among them which came near being a riot. They demanded higher wages. In time a compromise was effected, since which there has been no disturbance.

PASSAIC ROLLING MILL COMPANY, OF PATERSON.

The Passaic Rolling Mill Company, of Paterson, have, within the past year, built and furnished a fine brick edifice (thirty by sixty feet) for the use of their employes, by whom it is to be used as an industrial school or institute. The following description of the building, and the objects for which it has been erected, is taken from an article in the Paterson *Daily Guardian*, June 14th, 1883:

"Entrance is effected through a wide door, just inside of the gates. A broad stairway leads to the room above. At the head of the stairs begins a wide corridor, extending to the main or assembly room, with a door opening to the left, into a pleasant room for a library, and

another to the right, into the smoking, reading, and general recreation room. Very wide folding doors divide this from the large assembly room, and both can virtually be thrown into one, if desired, as, for instance, on occasion of a large meeting. The stairway and all the rooms throughout are fitted in light, native woods, oiled and varnished, the wainscoting being very narrow and all the work very neatly done. A raised platform stretches all the way across the southern end of the room, and here are a large chair for the presiding officer, several smaller chairs, and suitable tables for officers, &c. There are seventy-five dark chairs, of a new and handsome pattern, in this large room, and more will be furnished. The two rooms together will seat about two hundred persons. The walls above the wainscot are pure white. The ventilation through both side walls and roof is perfect. The rooms are fitted up with neat gas-fixtures, there will be book-cases placed in the library, and the company will furnish the nucleus of a collection, including many useful works; also the leading papers and periodicals on mechanical and other practical subjects.

"The company is prepared to turn over the whole premises complete, to the Passaic Rolling Mill Literary Association, formed among the workmen to receive it, and thereafter, while making no pretence to control the association, will furnish all the gas and coal consumed and a janitor to keep the rooms in good condition, free of charge. The rooms will be open every evening, to a fixed hour, for all employes of the works. This association has been in existence for some time past, and comprises men of more than average intelligence.

"The company has expended about $4000, up to the present time, and will do still more, if the employes now show a disposition to take hold and make the utmost of their advantages. What the movement may eventually result in, it is difficult now to predict. The object of the association, as found in their constitution, is 'first, the moral and intellectual advancement of its members; second, the cultivation of scientific aad other useful knowledge; third, the promotion of harmony and good fellowship.' There are nearly one hundred members, and more are constantly being added."

On June 23d, 1883, the building was formally presented to the association, with appropriate exercises. On this occasion, interesting addresses were made by President Cooke and Treasurer Fayerweather,

of the rolling mill company. Extracts from the *Daily Guardian* are here reproduced, to show the friendly feelings existing between employer and employed.

President Cooke, among other things, observed:

"There is no surer index of the success of any business, and the comfort of the employes, than that unity of feeling and action which causes them to remain together. Permit me to say that, for thirty years, it has been my privilege to take charge of men, and sometimes in large numbers, and I can truthfully say that, during that time, I have never seen so close a union between the employes and employer as has and does exist between us here; and it is that unity which makes our burdens at least lighter to bear. One thing more. To be able to sympathize with our fellows, we must have had the same burden to bear, and you must excuse me if I speak of myself, when I say that none of you, as workmen, have had a burden to bear, so far as your daily toil may be considered, but such as I have borne. For years I stood by the vise, lathe, and planer, or on the foot-board of a locomotive, fulfilling my daily task, and how happy would I have been could I have had a room like this, to which I could have come, after my daily task was done, for social intercourse and improvement. And it is these feelings which have helped me to make at least a fair success in my intercourse with workmen. It is these feelings which have prompted me to enter so heartily into this new enterprise; and as I go back over the road you have come, if I were allowed to judge, I would say you have grown older, and, as far as human eye can judge, you have grown better.

"Now, in closing, let me say that, while we have had our differences of all kinds and natures which come between the employes and employer, at the same time they have always been settled by ourselves after an honest discussion of the differences, and, as we look back, we must admit, with justice to all. And now let me tender to you these rooms for your exclusive use and benefit. We will, from this time, cheerfully take the care of them, providing that which will give you rest and social enjoyment, as well as that which, if you put forth the effort, will improve the mind. What more we may do will depend upon the encouragement you shall give us. Now let me hope and trust that this gathering here to-night, of fathers, mothers, sons, daughters, young men and their intended, and the officers of the com-

pany, may not be lost to us, but may it lead us to have that which the Bible commands to all, charity—the greatest of all, charity."

Mr. Fayerweather said:

"The object that I had most in view was to provide a comfortable and attractive place of resort, where spare time could be pleasantly and profitably spent, where useful knowledge might be acquired by those who, by force of circumstances, do not have sufficient facilities at their own homes. 'Knowledge is power,' but knowledge is not a natural gift; it must be acquired. This can be done by study, by observation, or by association. It, however, is unreasonable to expect men that have reached maturity without the opportunity, or perhaps the inclination, to devote themselves to study, to change their habits enough to become students. Such men can, however, acquire much information by intercourse with those of better opportunities and more extended advantages. By reading what is going on each day, throughout the world, they become better citizens. By posting themselves as to the progress of their own line of business, they become better workmen.

"Another object is this: Every fortnight, a considerable amount of money is paid by us for wages earned. A large, too large, proportion of this finds its way into channels very different than we could wish. You know, of course, that I refer to the saloon-keeper's tills. But this is not the time for a temperance lecture—though I hope this place is appropriate enough—and I don't intend to give one. It is not, perhaps, the members of this association that particularly need it, but I hope your success in this present enterprise will induce those of your associates in the works that do need it, to see how much better it is to spend their evenings here than to devote to the enrichment of others the time and money that belong to their own families; and the money so applied would not only make home quite as attractive as the saloons that this same money goes to embellish, but happier wives, tidier children, and comfort all around."

CHAPTER II.

STRIKES—THEIR CAUSE AND PREVENTION.

The question, how to settle disputes in regard to wages and other differences that arise between employers and employes, so as to avoid strikes and lockouts, is one that should engage the attention of all who have an interest in the future prosperity of our country. So long as the wage-system exists, and the present relation of employer and employe continues, so long as it is the interest of one to have wages reduced and of the other to have them increased, disputes must arise, because no argument will convince a workman that his interest is identical with that of his employer, when he sees him prosperous and growing rich, while he himself is compelled to work for a mere pittance; nor will the time likely come when employers will continue business at a sacrifice of capital, merely because they dislike to enforce a reduction of wages. These disputes between capital and labor, employer and employe, began at a very early period in the history of the world, and along the whole line of human history we observe continuous traces of what is known at present as trade and labor disputes. Strikes, defined by Webster to be a combination to force a reduction or to increase wages, originate in the reluctance of workmen to give their time, industry and skill for less than they think a fair remuneration, and necessary for the decent maintenance of themselves and family. Lockouts are traceable to the indisposition of employers to regulate their profits with due regard to the fair claims of the laborer, and a greedy desire to monopolize and prevent any interference of workmen in the establishment of rules that govern their employments. It would be folly to deny that workmen frequently make unreasonable claims and mistakes in the means employed of asserting them. Nor is it intimated that employers are always governed by a greedy and selfish spirit when they refuse compliance with the demands of their workmen. On the contrary, it is admitted that workmen, as well as employers, while insisting upon justice and fairness to themselves, ought

to consider what is due from one to the other. The origin of strikes may be traced, primarily, to that notion that a workman was bound to labor for an employer upon the terms fixed by law or custom, whether he liked or not. It was assumed that some natural law controlled the price of labor, not to be changed by the workmen, but regulated by the supply and demand, of which the employer alone was the judge. The assumption being that capital employed labor and that the amount available as wages was a definite sum, which writers of political economy designated as a "wages fund," beyond which nothing could be paid, it was asserted that if any class of workmen received a large proportion, the rest must suffer, for the aggregate of this fund was the total of all wages, and its relation to the laboring population determined the average rate of wages. While this monstrous absurdity was insisted upon as settling the wages of workmen, nobody was ever able to determine the amount of this mythical wages fund at any given period or in any particular industry, and hence could never satisfy any reasoning human being whose interest it was to have wages increased. The idea prevailed that the question of wages was a matter over which the workman had no control; his business was to work, and leave the amount of his remuneration to his employer, who was governed in the matter by certain economic harmonies that somehow operated, and equitably distributed to him his share of the product of his labor. This theory of the law of wages was always a very comforting one to employers, who found in it an easy and convenient pretext for keeping wages at the lowest possible rates; but to the workman, who saw no hopes of better things, it appeared very different. While he might not be able to see clearly what did determine his share in production, he revolted against being told that he had no power to better his condition; and the labor movement, for centuries past, may be said to consist in a constant protest by workmen against existing conditions, and by the employers against change. This contest has varied in intensity and methods at different periods, according to circumstances operating at the time of occurrence, and for a long time the whole power of the law was brought to bear in aid of employers to prevent workmen from assuming the aggressive; in fact, until a few years since, all legislation in relation to disputes of this character was adverse to the workman.

To understand this, reference must be made to the history and growth of the wage system in England, and the struggle of workmen

to obtain their present *status*. Although the right of the laborer to contract for his labor was acknowledged in theory after the power to control him by brute force had ceased with the disappearance of the feudal system, centuries elapsed before the laws permitted the workingman to exercise this right without restriction; nor did they permit him to combine for the purpose of advancing wages. As early as 1359, certain statutes of Edward III. were enacted, which not only forbade combination but imposed severe penalties upon any laborer who refused to work for the existing rate. This was the basis of all legislation until 1824, and more or less so until 1867, having been amended at various times to make its provisions more stringent against the wage-worker. During the reign of Elizabeth, justices (who were all land-owners and employers) were authorized, in fact it was made obligatory upon them, to fix the wages at certain periods of each year for all artisans and workmen, and in order that the rates fixed by them might not be changed by reason of supply and demand for labor, especially that one employer might not, in order to secure workmen, offer a higher rate than another, it was stipulated that should any employer tender more wages than those fixed by the justices, he should be fined; while any workman who asked a higher rate was liable to be sent to prison by those same justices. Thus, while the workman was an acknowledged freeman, the law was such that he could not exercise the right to contract his labor to the best advantage. Every effort to secure any increase in wages was met by more stringent laws to prevent him from obtaining any higher rates. For centuries he was bound by those arbitrary laws which hindered his making any material progress, yet, notwithstanding these harsh regulations, workmen were not kept in entire subjection, but gradually and slowly they increased in intelligence and became more and more united, combinations growing stronger and strikes more frequent. They began to protest against the harshness of the laws. Having no legal protection it is not surprising that they resorted to acts of violence in self-defence. Public sentiment was at last aroused by the dangers that threatened society, and in 1867 Parliament instituted an inquiry by a commission, which, after a careful investigation, reported in favor of an entire abrogation of existing laws and recommended such changes as would enable workmen to obtain a legal *status* and secure protection as well as relief from prosecution for acts that were not of themselves criminal. Since

that time a radical change has been made in the laws of England, and the right of workmen to combine and quit work to force an increase of wages is now fully acknowledged by the laws of that country.

Here the tendency has been to follow the customs of the parent country, and, in some of the earlier stages of our history, to adopt similar restrictions by acts of legislation, although such acts did not in this country survive the many other "blue laws" which had their origin in the Puritanical idea that man could only be governed by force and not by reason. In our earlier colonial history the principle of the political liberty of the citizen was generally recognized, and made such class legislation impossible.

But what was far more serious was the theory of the common law, laid down in the decisions of the courts, and upheld, unless expressly abrogated by legislation, to the present day, that combination of workmen to raise wages was a conspiracy and an indictable offence. By what to laymen seems very subtile reasoning, it has been held that journeymen may each singly refuse to work unless they receive an advance of wages, but if they do so by preconcert or in association they may be punished for a conspiracy (see 6 Term Reports 636.) Such was the construction of the common law on this subject, and it has been affirmed by all subsequent legal adjudications. In 1835 it was held by the Court of Errors in New York that the raising of wages and a conspiracy, confederacy or mutual agreement among journeymen for that purpose were matters of public concern, and that even under the New York Revised Statutes, which modified the common law on the subject, defining acts of conspiracy to include the commission of "any act injurious to the public health, to public morals or to *trade* or commerce," such a conspiracy was an indictable offence, and that those who entered into it were guilty of a misdemeanor and punishable accordingly. "A conspiracy of journeymen workmen of any trade or handicraft to raise their wages by entering into combinations to coerce journeymen and master workmen, employed in the same trade or business, to conform to rules established by such combinations for the purpose of regulating the price of labor, and carrying such rates into effect by overt acts, is indictable as a misdemeanor." In that case (14 Wend. 1) it appeared that the coercion consisted only of fines and penalties, which the defendants had imposed upon one of their number for

violating the rules of their association, and their refusal to work for a manufacturer who had employed that person contrary to their wishes.

This continued to be the law in New York until 1870, when the Legislature enacted (ch. 19, Laws 1870,) that the "orderly and peaceable assembling or co-operation of persons employed in any profession, trade or handicraft, for the purpose of securing an advance in the rate of wages or compensation, or for the maintenance of such right," should be permitted, and under it the court (Supreme Court, General Term, 60 How. 174,) held that the case reported in Wendell's reports, just referred to, could no longer be deemed to be the law in New York, "for the persons there indicted seem to have been guilty only of peaceable co-operation for the purpose of maintaining the rate of wages."

In New Jersey, in 1867, the Supreme Court (Chief Justice Beasley and Justices Bedle and Dalrimple) held that it was an indictable conspiracy, under the general principles of the common law, for several employes to combine and notify their employer that, unless he discharges certain persons, they will, in a body, quit his employment. The indictment charged that the defendants, "without having any lawful cause of objection to [certain specified co-laborers], unlawfully did conspire, combine, confederate, and agree together, to quit, leave, and turn out from their said employment, until and unless the said last-mentioned journeymen and workmen should be discharged by said employer; * * * that, in pursuance of such conspiracy, they gave notice of their agreement to their said employers, and required them to discharge the said parties, which being refused, they quitted their said employment and remained away until their demand was complied with." The Chief Justice, in his opinion, affirms the doctrine laid down in several English cases. In one, Rex *v.* Rickerdyke, 1 M. & Rob. 179, the indictment charged that the defendant, with others, conspired to prevent certain hands from working in the colliery; and the evidence showed that the body of the men met and agreed upon a letter addressed to their employer, to the effect that all the workmen would strike in fourteen days, unless the obnoxious men were discharged. It was there held that these workmen had no right to meet and combine for the purpose of dictating to the master whom he should employ, and that this compulsion was clearly illegal. These decisions of the courts have tended to intimidate and discourage combinations of workmen for trade purposes, but the harsh common law

doctrine is being gradually abrogated. In New Jersey, this was not done until 1883, when the Legislature enacted a law for this purpose; and now the right of New Jersey workmen to combine is fully granted by "An act relating to persons combining and encouraging other persons to combine." See Laws 1883, ch. 28.

But not alone the law and the courts, but the public, outside of the workmen themselves, have been in entire accord, in respect to the nature and utility of strikes. In vain did the workmen appeal to the newspapers for a hearing. The press, the pulpit, and the stage all united to condemn them as absolutely wrong and unjustifiable. The public could not be made to understand the reason or justification for their occurrence. Occasionally, some writer would declare that such things might be unavoidable in European countries, but should be confined there, and find no countenance among workmen here. It is curious how all these disinterested advisors should, with one accord, pronounce against the resort to strikes by workmen. The universal advice was, "Workmen, whatever you do, never strike." It mattered not what the provocation was, or how much there might be to condemn in the course pursued by employers; the conclusion was the same—in condemnation of strikes. The opinion advanced was that they were instigated by men too lazy to work themselves, who wished to live off the money contributed by those they duped. Every utterance of the leaders was distorted, to show the wicked intentions of those who engaged in them; every failure was magnified, to prove the utter hopelessness of gaining anything by striking; the lost time was computed in figures, to show the pecuniary damage sustained by workmen while idle. The utmost commiseration was expressed for the dupes (as they styled the mass of workmen), because of the sad condition they had been falsely led into by their wicked leaders. When a strike was successful, it was usual to attribute the result to other causes, for nothing could convince the public mind that anything good could come of striking. The heroic devotion displayed, the self-sacrifice and suffering endured by men and women, in the maintenance of what they considered right, excited no sentiment of admiration outside. The universal verdict was that strikes were wrong every way. The economist taught it, reformers persisted in maintaining it, the law made it criminal, and the public was blindly prejudiced in relation to both the causes and effect of this mode of adjusting wage and other disputes.

Yet, notwithstanding all this denunciation and hostility, strikes have occurred all the same, and in some instances, have become so formidable as to derange business in large sections of the country, for considerable periods of time. These occurrences have tended to create a deeper interest in the public mind, which now, before it condemns, seeks to investigate the causes that produced them; and in the case of the freight handlers' strike of last year, in Jersey City and New York, and of the telegraph operators of the Western Union Company, more recently, public sympathy was largely with the strikers. These are strong indications that, in the future, we shall have a fairer discussion of labor disputes than has ever been given them before, and that they will be judged according to an enlightened public policy, and not by the prejudices of the past. With the principals themselves, the tendency is towards a more rational method of dealing with labor questions than through violence and outrage. There is an increasing disposition on the part of employers to reason with their employes, and in many cases, to leave the matter in dispute to arbitration. Workmen are also beginning to study the markets and prices of commodities their labor produces. In many of the trades unions statistics relating to prices and cost of production are systematically gathered, and thus they are enabled to time their demands with more judgment than formerly. The noticeable change which is gradually taking place in public sentiment in relation to strikes is realized by workmen and employers, and they endeavor to propitiate it in their dealings with each other.

The workingmen's side of the question is meeting with much more public consideration than formerly, and the disposition now is to deal with these troubles in a more practical way.

It matters but little what abstract thinkers may say as to the wisdom of strikes; experience has taught workmen that as individuals they have but little power to enforce a claim for better pay when they feel that they do not receive a fair share of the proceeds of productive industry, or where, as frequently happens, employers attempt to encroach upon long-established privileges without any justifiable reasons, or where a co-employe, such as a foreman, becomes overbearing and domineering, treating the workmen with incivility and acting as a spy upon them in order to stand well in the eyes of the employer, and especially where, through their meddlesomeness, individual workmen

are discharged for having acted as committeemen or representatives before the firm in a matter of dispute. All of these cases have led to controversy between employers and workmen and become causes of strikes. In a large establishment, where there are several subdivisions of labor, the individual workman, in situations like these, is powerless to redress any grievance he may have, because his services are not absolutely necessary to the employer, and his refusal to continue at work would seldom if ever effect any change. Hence the tendency to form a union with his fellow workmen, and the natural opposition to such combinations by employers, who assert that they are always ready to listen to each individual, but not to committees or to a body of workmen. And just here we think lies the main cause of strikes. Workmen do not frequently strike without more or less deliberation, but sometimes, fearing that the employers may, in order to silence any discontent, discharge them singly, they strike in haste, and in some instances without any clear or defined reason for so doing. The very knowledge of their helplessness causes them to commit an act of rashness.

The popular notion is that strikes are the outgrowth of trades unions, but an investigation will show that this is an error, and that many of the most aggravated ones have occurred where the only union was at the moment of the popular outburst. The employes of the railroads in 1877, and the freight handlers in New York and Jersey City in 1882, had no organization previous to their strikes. It is more correct to attribute strikes to the natural and inevitable movement of workmen from a lower to a higher condition. They are the protest of wage-receivers against their present condition, and indicate a desire for better things. They evince a growing intelligence among the working masses. Slaves do not strike; they may revolt against oppression and for personal liberty, but strikes are the result of a more enlightened condition of labor.

Strikes may be classed as aggressive and defensive. An aggressive strike takes place when, for instance, something has occurred, affecting the interest of a number of individuals of one establishment, likely to affect the whole trade, such as when an advance of wages is demanded, or where the workmen resolve to desist from work unless certain rules are complied with, for less hours' work, &c. In such cases more or less communication with each other must take place. The consent of the majority must be secured, the timid have to be encouraged, ways

and means for conducting the strike have to be provided for. Where established unions exist, the matter in dispute is submitted to regularly constituted authority, which generally consists of the most intelligent men, who take the direction either to restrain or control, and frequently the authority thus exercised either prevents a strike from occurring at all or brings about a more speedy settlement. In a strike the difference between workmen organized and unorganized is simply the difference between a disciplined army and a mob.

A defensive strike is one which instead of arising out of an original demand of the workmen, takes the form of a resistance to a threatened reduction of wages, or to some encroachment upon trade privileges affecting the number of apprentices to journeymen, the quality and amount of work to be done, or to the rules of the establishment. It is customary in all kinds of disputes between workmen and employers to attribute the cause of strikes to workmen. Now, statistics of the strikes that have happened show that in a large number of them the employers are the aggressors. To the fact that this is not generally understood, no doubt is to be attributed most of the prejudice that has existed against workmen when strikes have ensued.

Lockouts are entirely different from strikes. Strikes come from the action of the workmen; lockouts originate with the employers, who, alone, are responsible. A lockout, in proportion to its extent, paralyzes business. Strikes are for the purpose of securing better terms for the workmen; lockouts are the attempts of capitalists to monopolize profits and dictate terms, and have been resorted to to punish men for joining a union, or to restrict production, in order to enhance profits. It is the most pitiless of all other methods. It means that work is to be stopped and the establishment shut up. It admits of no compromise, and is a heartless, cold-blooded ultimatum of employers to the employed to come to terms or starve.

Why do workmen strike? To suppose that they do not do so from sincere motives and for causes they deem sufficient to justify the sacrifices which must necessarily ensue, is to presume that they are not capable of reasoning or self-control. Few men are bold enough to advocate strikes at all. Most leaders and thinkers among workmen, especially in trades unions, will be found adverse to strikes; and organizations, which make provisions in their laws to maintain them when they do occur, usually have counter laws which deprecate them.

Workmen have learned by experience, that strikes are a very expensive and inconvenient method of settling a dispute, and not to be undertaken except as a last resort; but, unless they are willing to put themselves entirely at the mercy of employers, they must, in some way, assert their rights; and heretofore, there has been no other way except to fight for them. The idea that the generality of employers can be relied on to offer spontaneously an increase of wages whenever profits are such as to warrant it, has proved a delusion. During an observation of thirty years, covering a period of three general depressions in business, when wages were reduced to the lowest point, we can call to mind but few instances where employers made advances of wages on the recurrence of better times, unless induced by more or less forcible demands on the part of the workmen. In 1863, glassware advanced nearly one hundred per cent. in price, yet no advance of wages took place until, in 1864, the workmen demanded an increase; but even then, the advance was in no way proportionate to the increase of profits of the employers, because the workmen, at the time, were not advised in regard to the true state of the market. And it will generally be found that, on nearly all occasions where wages have been advanced, it was the result of concerted movement among workmen. A case where an employer has become conscience-stricken, in consequence of having made too large a profit, would be a rarity indeed, and a voluntary advance of wages by employers, nearly as exceptional.

Workmen are right in believing that they should have a fair share of the material benefits derived from the constantly accumulating wealth produced by industrial enterprise, and they feel that they will never get this, or ever better their present lot, in the unequal struggle for existence, unless by their own exertions. Therefore, when, after duly considering a grievance, they conclude that a change is demanded by all the facts in their possession, and when they have made their side of the question known to the employer, who refuses to comply, without any explanation, or without giving any reasonable excuse for so refusing, it is unreasonable to suppose that they will quietly, and without protest, forego their demands. If it is acknowledged that a workmen has the right to contract his labor to the best advantage to himself, it must be conceded that he is entitled to know all the circumstances that enter into the bargain; being a partner in production,

he is certainly entitled to be informed concerning the profits arising from his labor. A contract made between two parties, where one is in possession of all the facts, which enable him to act intelligently and to judge correctly as to the probable results, while the other is kept in ignorance of such facts, cannot be regarded as mutual, and is as unfair as a game of chance, where one party plays with loaded dice, while his opponent is ignorant of the fact. The disposition of employers has always been to regard any inquiry by the workmen into their profits as an impertinence, and to treat the question of wages as a matter distinct and separate from their gains. But, unless the workmen are advised of the state of trade and the profits accruing in a business to which they contribute their labor, how are they to know what price to fix for their wages? As the very nature of their employment precludes them from opportunities to secure the requisite information to enable them, at all times, to act intelligently, it is not a matter of surprise that demands should be made and strikes occur, that are not justified by the state of trade. The workmen are guided by the apparent or seeming prosperity of employers. Thus, a contribution to a church fund, an ostentatious display of wealth in the manner of living, or in public charity, which the workmen believe was exacted from their earnings, while they received but a pittance, may often be construed as evidence of prosperity and as a proof of their claim for better remuneration. The justice of a demand does not always insure success. Morally considered, strikes, like wars, depend largely upon success for their justification, and, practically, the result is due to the expediency or wisdom exercised at the time of occurrence. The object sought to be accomplished may be right, but if the condition requisite to success is wanting, the strike will fail. For instance, if any considerable number of the workmen is not favorable to the strike, or if there are many of the number who are too poor to maintain themselves without aid, and no funds have been provided, or if the state of trade is such as to cause a surplus of workmen in the market. These and many other incidents, that are potent factors in determining the result, are not always well considered before a strike is entered upon; but, in well-organized trades, where they have judicious leaders, all these matters are always well weighed beforehand. Even then, strikes sometimes fail; but, as a rule, it will be found that failures are much less disastrous. The greatest misery

caused by strikes will be found to result when these necessary precautions have been neglected. Strikes originate from antagonistic interests in productive industry, and seem to be unavoidable, under our industrial system. They cannot be charged to the faults of individuals, or of any class of persons. The constant tendency of centralization of capital, and to a greater division of labor by inventions and improved methods of production, is gradually but surely impairing the individuality of workmen, and forcing combination to counteract the power of concentrated capital. Individuals may, and do, leave their employments, every day, to better their condition, without exciting any notice, but when a number does so in concert, for the same purpose, it is called a strike. Yet we see no reason why a number of persons should not do in concert what each may do for himself, especially as concentration of capital and subdivision of labor lessen the power of the individual workmen to redress grievances, and they are forced more and more into combination, in order to secure by numbers that which they are unable to accomplish separately. These movements of the industrial classes being the natural outgrowth of the present system of industrial organization, all efforts to suppress them by denunciation or by arbitrary laws, will prove as hopeless in the future as they have been abortive in the past.

How then shall we deal with labor disputes? This problem we believe is being solved by the mutual conferences between employers and employes, and when this mode becomes general we shall have reached the nearest approach to harmony possible under the wage system. During the year, inquiry was made by agents of the bureau of numerous employers concerning the strikes that have occurred in their establishments, and in every instance where this method was practised by employers the reply was that it had proved satisfactory. To the inquiry, Have you had any strikes among your workmen? the reply was uniformly "No. Whenever we have any dissatisfaction among our workmen, if we are not able to meet their demands we call them together and make a fair statement and reason for not complying, and we have always found them to be reasonable and satisfied with our explanation." The main difficulty in establishing this practice lies in the objection of employers to recognize their workmen as a body or by committees appointed by them as representatives. That this is wrong

there can be no question, and employers who refuse such a course should be held responsible for strikes which occur.

Where this mode has not proven satisfactory in the past, the fact may generally be traced to a want of confidence in each other by the parties interested. Unless the workman and employer are each entirely satisfied that the other is acting in good faith, no peaceable result is possible, and this can only come by repeated efforts and by patient striving. The hatters have adopted a system of conference and arbitration that has proven satisfactory in most cases to both the employer and the workman. The rules of the hat finishers' association provide that where a dispute concerning wages, or any other matter of interest, is likely to lead to a strike, the men shall continue at work until after the case has been submitted to the "arbitration committee" and both sides have been heard. In this way many strikes have been avoided.

The bottle and vial blowers have regularly appointed committees at each establishment, who confer with the employers and have the authority to decide any difference that may arise during the blast; and last year, by request of the manufacturers' association, a joint committee, representing the manufacturers and workmen, was established for the purpose of settling the question of wages and such other matters of dispute as might exist. Although no more was done than the holding of a friendly conference, the hope is expressed that it will be the beginning of a system that will render strikes in the future impossible.

With few exceptions the strikes that have occurred in New Jersey have excited nothing more than a local interest, and few records are to be found of them. There are no large bodies of workmen, such as those at the coal mines and the large centres of the iron and other industries in Pennsylvania, where long, protracted strikes have taken place. Most of those that have happened here were confined either to a single establishment or to one city or locality. The strike of the railroad employes in 1877, the freight handlers of Jersey City in 1882, and the window-glass workers of South Jersey in 1883, excited more than ordinary interest because of the peculiar circumstances existing and the issues raised by them. On July 20th, 1877, the conductors, engineers, firemen and brakemen on freight trains employed on the New Jersey Central, Morris and Essex, and Lehigh Valley railroads, joined the

strike of their fellow laborers on the principal lines of railroads extending from New York to the Mississippi River for an advance of ten per cent on their wages. At Phillipsburg, the converging point of these roads and the central point of the strikers in this State, the men, to the number of two hundred and fifty or more, on the morning of the strike, collected around the depots of the companies with a view to influence those who might be disposed to take their places. Excitement ran very high. All freight traffic over the above-named roads was suspended at this point, and in some cases the language of the strikers was of a threatening character, but no actual violence took place, either against non-strikers or the property of the companies. The local authorities were invoked by the officers of the companies, and the sheriff of the county appeared among the strikers and read the riot act. The Central road then being in the hands of a receiver, Judge McKenna issued an order assuming a protectorate over its property and that of the Lehigh and Wilkesbarre Coal Company. In this order he announced that interference with the property of either company would be dealt with for contempt. On application of the railroad officials, Governor Bedle, on the 23d, ordered the militia of this State to proceed to the scene. These soldiers, to the number of one thousand three hundred, were stationed along the track of the roads, when the strike was immediately abandoned by the men. Freight traffic was totally suspended for four and partially interrupted for six days. On the resumption of business none of those known to have been engaged in the strike were taken back, nor have they since been employed by any of these companies, and however much the men are censurable for engaging in such a strike, we think all will concur that the punishment has been severe.

The strike of the freight handlers in Jersey City and New York, employed in the Pennsylvania, Erie, Delaware and Lackawanna roads, began June 18th, 1882, by a demand of the men for an increase of wages from seventeen to twenty cents per hour. At the time of the strike the men were without leaders or any form of organization, in fact a mere mob, swayed by a sudden impulse. But in a few days an organization was effected by a general union of freight handlers, with a local union in Jersey City, composed principally of men from the Erie and Pennsylvania railways, numbering about six hundred. Appeals were then made for pecuniary assistance to other workmen,

and to the general public. This, however, met with indifferent success, and it soon became apparent that the men would be obliged to succumb to necessity. The time chosen was most unfortunate for the strikers, as during the summer months not more than half of the usual force is employed regularly, and hence the stoppage was of far less consequence to the companies than if it had occurred later in the season, when the traffic on the roads is much greater. As it was, however, the companies were badly crippled in the handling of freight, which was done in a very indifferent manner by ignorant and raw Italians and Russian Jews, who had recently landed in the country, and were taken from Castle Garden in the morning in steam barges and returned in the evening in the same way. These men were paid the same wages by the companies that had previously been given to experienced hands—seventeen cents per hour—although it is estimated that by reason of the character of the men, it required, on an average, four of them to do the same amount of work previously accomplished by one. On August 20th the men, after remaining out over two months, were compelled, on account of the want of means to live upon, to return to work at the old wages. One condition required of them by the companies was that they should abandon their union, and many refusing to do this were obliged to seek employment elsewhere. The leaders were positively refused work and have not since been employed in the business.

A great deal of interest was manifested in the result of this strike by workingmen in all parts of the country by reason of its occurring in such close proximity to the great depot for the landing of emigrants in this country, and because it was known that the companies would use them to defeat the strikers. The result proves the hopelessness of a demand for higher wages by American workmen when this class of workers can be used to fill their places.

The strike of the window glass workers in the fall of 1883, which began in September, was a demand for ten per cent. increase in wages, and for a uniform way of crediting the workmen's wages. The blowers are all paid by piece-work and it was claimed that at some of the factories, owing to the method of valuing the work, credit was not properly given them for the quality of the work made. The workmen were thoroughly organized in all parts of the country. The

manufacturers were also united, with the exception of two firms, in resisting the demand.

During this strike the employers sought to introduce foreign workmen, and the firm of Wood & Co., at Malaga, imported a full set of employes from Belgium to take the places of the strikers. But after a fair trial (five months) had been given them, the effort was abandoned, it being proven that their method of working and lack of skill made the Belgian blowers less profitable than the American workmen, and then the balance of the manufacturers yielded to the demand of the strikers. From the workmen's standpoint this was perhaps the best conducted strike ever attempted in this country.

The following table has been compiled from reports received concerning strikes which have taken place in New Jersey. While it is not as complete as could be desired, owing to the difficulty of obtaining correct information, the causes and results of the one hundred and thirty-five strikes reported are generally given. The table shows that sixty-two were caused by a demand for an increase of wages by the workmen, forty-six to resist a reduction of wages, and twenty-seven from other causes. Of those where a demand for an advance of wages was made, forty-two were successful, thirteen failed, and seven were compromised or partially successful. Of those to resist a reduction, eight were successful, twenty-eight failed, and six compromised or were partially successful.

Name of trade.	Location.	Date of strike.	Time on strike.	Cause of strike.	Name of firm or company.	Remarks.
Bricklayers and masons	Newark	July, 1880		For advance of 25 cents per day		
" "	"	March, 1881		" " wages	General	Successful.
" "	"	May, 1882		To sustain strike of laborers	"	Failure.
Bricklayers	Camden	1875	Few days	To fix a rate of wages for the season	On post office building	Successful.
Bag makers	Newark	August, 1880	1 month	25 per cent. advance in wages	Simons Brothers	Sucessful. The strikers also demanded the discharge of a foreman and non-union men, which was not conceded by the firm.
"	"	August, 1881	6 weeks	Advance of 15 per cent. in wages	Simons	Successful.
"	"	March, 1882	16 "	Against non-union men	Boners	Failure.
Box makers	"	April, 1881	6 "	Advance of 10 per cent. in wages	Simons Brothers	Success.
Brewers	"	December, 1881		For reduction of hours per day and double pay for Sunday work	General	Failure.
"	Paterson	July, 1882	But few days	Dispute about foreman	Katz & Bro	"
Bench moulders	Newark	October, 1881	1 week.	10 per cent. advance in wages	De Hart's	Successful.
Boiler makers	Paterson	1872	4 weeks	Advance of 25 per cent. in wages	Rogers' shop	Failure.
"	"	1872	3 "	" " " "	General	" The employers declared a lockout in the shops.
Bakers	Newark	August, 1881		Reduction of hours to 12 per day	"	Successful.
Carpenters	"	March, 1881			John G. Crawford	No details.
" and joiners	East Orange	May, 1882		Advance of wages		"
Cigar makers	Newark	November, 1880	5 days	" "	One shop	Successful.
"	"	April, 1881	4 weeks	" $1 per 1000 cigars	John G. Crawford	Compromised.
"	"	January, 1881	1 week	Against a reduction of 50 cents per 1000 cigars	Joseph Glutiny	Successful.
"	"	May, 1883	14 weeks	Advance of $2 per 1000 cigars	General strike	Successful, except in 2 shops.
"	Paterson	August, 1881	3 "	" wages	"	Successful.
"	"	May, 1883	2 "	" $1 per 1000 cigars and to limit the number of apprentices	"	Successful.
Coal heavers	Bayonne	1879	Several days	Advance of wages	Lehigh Valley Coal Co	Compromised.
Cotton weavers	Paterson	1878	9 months	Against a reduction in wages	Adams' mill	Successful.
" spinners	"	August, 1880	6 weeks	" " "	"	Failure.
" employes	Millville	May, 1882	1 day	For reduction of hours and cash payment	Millville Manufacturing Co.	Successful.
" "	"	Summer, 1869	5 weeks	Against a reduction in wages	" "	Failure.
" "	"	November, 1876	3 days	" " "	" "	Failure.
" "	"	January, 1880	6 weeks	For advance of 10 per cent in wages	" "	Successful.

" "	Gloucester City	1853	2 months	To reduce hours from 14 to 10 per day	Gloucester Manufactur'g Co.	Failure.
Coopers	Jersey City	1882	1 month	For an advance in wages	N. & H. Dollomsel	Failure.
Cabinet makers, desk fact'ry	Newark	April, 1882	1 week	Advance in wages		Successful.
Diamond setters	"	May, 1881		Against a reduction of 27 per cent. in wages	Krementz & Co.	Failure.
Engravers (jewelry)	"	January, 1874	17 weeks	Against a reduction of 30 per cent. in wages	Curtis, Howkins & Dodd	Failure.
Employes in car wheel shop.	Jersey City		2 days	For a larger supply of ice	Jersey City CarWheel Works	Compromised.
Flax, carpet and bagging	Newark	October, 1882		Against a reduction of 5 per cent. in wages		No details.
Freight handlers	Jersey City	June, 1882	10 weeks	Advance of 3 cts. per hour in wages.	Pennsylvania, Erie, Delaware and Lackawanna	Failure.
Glass blowers (bottle & vial.)	General in State.	July, 1858	4 months	Advance of wages and to limit apprentices; to fix a time of commencing and closing the blast—not to work in July and August.	All factories in New Jersey.	Failure.
" "	Bridgeton	July, 1863		For advance in wages	F. & L. Bodine	Failure.
" "		Summer, 1864	1 week	" of 33 per cent. in wages.	All factories in New Jersey.	Successful.
" "		" 1865	1 month	Against a reduction of 24 per cent. in wages	" "	Successful.
" "	Williamstown	Fall, 1867	3 months	Against a reduction of 9 per cent. in wages	Bodine, Thomas & Co	Failure. A general reduction took place in January.
" "		May, 1868	1 day	Advance of 15 per cent. in wages	All factories in New Jersey.	Successful.
" "	Salem	November, 1869	3 months	Against a reduction in wages	Hall, Pancoast & Craven and Holz, Clark & Taylor	Settled against men, by arbitration,
" "	Clayton	1874	2 "	For cash payment of wages	Moore Brothers	Compromised.
" "	"	1879	Few days	To resist a reduction in wages	Moore Bros. and Whitney Bros	Successful.
Employes of bottle and vial factory	Glassboro	1882	2 weeks	For weekly cash payment	Whitney Brothers	Successful.
Glass blowers (bottle & vial.)	Bridgeton	1883	2 "	Apprenticeship	Cohansey Glass Works	Successful.
Glass workers, window glass	General	1870		Against a reduction of wages, 30 per cent	All factories in New Jersey.	Failure.
" "	"	1873		Against a reduction of wages, 20 per cent	" "	Failure.
" "	"	1875	8 months	Against a reduction of wages, 17 per cent	" "	
" "	"	1877		Against a reduction of wages, 20 per cent	except two firms	Failure.
" "	"	1878		Advance of 10 per cent. in wages	All factories in New Jersey.	Failure
" "	"	1879		" "	" "	Successful.
" "	"	1880		" " and cash payments	" "	Successful.
" "	"	1882	5 months	Advance of 10 per cent. in wages	" " except one	Successful.
Harness makers	Newark	April, 1880	2 weeks	For advance of 10 per cent. in wages	General	Successful.
"	"	" 1881		" " " "	Peter Calhoun & Co	"
"	"	June, 1883		" wages	Demarest & Co	Compromised.
Hatters	"	April, 1877		" "	Crossley's	Failure.
"	Orange	January, 1881		" 10 per cent. in wages	General in Orange	Compromised.
"	Newark	June, 1881		" 25c per dozen hats	Meyer and Mercy's.	
" makers and finishers	Orange	1883		Against foreman for instructing convict in New York State Prison contrary to rules of hatters' union	Gardner and Dudley's	Successful.
" finishers	Newark	May, 1882	3 days	For advance in wages	Crossley's	"
" "	"	June, 1882	1 day	" "	Jarvis'	"
" "	"	August, 1882		" "	E. Sealy's	"
" "	"	1883		Demand for prices	Schuman's	Failure.

Name of trade.	Location.	Date of strike.	Time on strike.	Cause of strike.	Name of firm or company.	Remarks.
Hatters, finishers	Newark	1883	2 days	Against a reduction in wages	Crossley's	Successful.
" "	"	1883		" non union men on machine.	"	"
" "	"	1883		" a reduction in wages	Seitz's	Failure.
Iron workers	Camden	1873	1 week	" " "	Starr Iron Works	"
" moulders	Paterson	April, 1881	1 "	For advance of 15 per cent. in wages	General in Paterson	"
'Longshoremen	Jersey City	1882		" double pay on holidays		"
Morocco finishers	Newark	April, 1874	4 months	" advance of 25 per cent. in wages	Nugent & Co	"
Masons	"	March, 1881		Advance in wages	General	Successful.
"	"	April, 1881		" to $3 per day	"	"
Machinists	"	July, 1881		For Saturday half holiday	Several shops	No details.
"	Gloucester City	May, 1848	8 days	To reduce hours from 14 to 10 per day	Gloucester Machine Co	Successful.
Miners (iron ore)	Morris county	1867		Advance from $1.65 to $2 per day	General in mining region	"
" "	"	1874		Against a reduction in wages	Irondale mine	Failure.
" "	"	1880		" " "	Boonton Iron Co	"
Printers	Newark	1874		" " "	Register office	"
"	"	1875		" " "	"	"
"	"	1881	3 days	Advance in wages	Freie Zeitung	Successful.
"	"	1881	3 "	For discharge of foreman	"	"
"	"	1882	Few days	Advance in wages	Advertiser and Journal	Failure.
"	Trenton	1858		Against a reduction in wages	True American office	"
"	"	1869		Advance of 8 per cent. in wages, and increase of pay for overwork.	General	Partially successful. Advance in wages successful; the demand for increased pay for overwork, failure.
Potters (flat pressers)	"	Summer, 1866	3 weeks	Advance in wages	"	Successful.
" (all branches)	"	March, 1869	5 months	Against a reduction in wages	"	Compromised.
" "	"	January, 1877	16 weeks	" 16 per cent. reduction in wages	"	Failure.
Painters	Paterson	March, 1865	1 day	Advance from $3 to $3.50 per day	"	Successful. The custom is to fix the wages in March for the season, but in the fall wages are reduced by the bosses.
"	"	" 1880	2 days	" to summer rate, $2.75	"	Successful.
"	"	" 1882	2 "	" " 2.75	"	"
"	"	" 1883		" " 2.75	"	"
Rubber goods	New Brunswick	1879	7 weeks	" of 10 per cent. in wages	New Jersey Rubber Co	Failure.

Railroad employes	Phillipsburg	July, 1877	6 days	" " wages	Central and Lehigh R. R.	"
Shoemakers	Newark	" 1876	2 months	Against reduction in wages	Tickinor and Bannester	"
" bottomers	"	August, 1880	8 days	Advance of 15 to 20 per cent. on wages	" "	Successful.
" stitchers and pounders	"	" 1880		To resist a reduction in wages		No details.
Shoemakers	"	January, 1883		Against 15 per cent. reduction of wages	Hutton and Bliss	"
"	Burlington	1877	Few weeks	Against a reduction in wages	One shop	Successful.
"	"	1877	" days	" the foreman	"	Foreman discharged
"	"	September, 1882	3 months	Lockout, to compel men to leave their union	General	Failure; men defeated.
"	Riverside	1881		Against non-union men	Pfaw shop	Successful.
"	Hamilton	1880		" a reduction of wages		Failure.
"	Camden	1882	Several months	For advance in wages	Ferris and Anthony's shop	Settled by conference.
Ship carpenters	"	1862		Advance in wages from $2 to $3 per day	General	Successful.
"	"	1868		Advance to $3.50 per day	"	"
"	"	1873		Against a reduction of wages	"	Compromised.
"	"	1877		For advance in wages	"	Successful.
"	"	1883		" " "	"	Failure.
Silver platers	Newark	1877	3 weeks	Against a 15 per cent. reduction in wages	E. Tomkins	Successful in wages, but the leaders were not given work.
Silk weavers (ribbon)	Paterson	November, 1872	13 "	Against a reduction of 20 per cent.	Phœnix mill	Partially successful.
"	"	July, 1876	8 "	" 10 "	Strange's mill	"
"	"	" 1877	13 "	"	General in Paterson	Successful.
"	"	June, 1880	12 "	" of 20 per cent.	Dexter and Lambert	Failure.
"	"	February, 1882	1 week	"	Adams' mill	"
Silk weavers (broad silk)	"	July, 1882	3 weeks	"	Chapin's mill	"
"	"	January, 1883	3 "	" and 2 looms	Hamlin and Booth	"
"	"	April, 1883	5 "	" "	Strange's mill	"
Silk weavers	Newark	March, 1881		Against the superintendent	Newark silk mill	"
"	"	" 1883	14 weeks	" 15 per cent. reduction in wages	"	"
Steel workers	Jersey City	1882		Advance in wages	Adirondack Steel Works	Successful.
Smelters and refiners	Newark	July, 1881		Against a reduction	Balback's	Failure.
Stone cutters (granite)	"	1881		Advance of 50c per day in wages	General	Successful.
"	"	March, 1882	2 months	" " " "	"	Compromised—25 advance.
Trunk makers	"	April, 1880		" 25 per cent. in wages	Farmer & Co	Successful.
"	"	" 1880		" wages	Several shops	"
Trunk liners and ironers	"	" 1881	16 weeks	Against subletting work to foreman	Edgar, Farmer & Co	Failure.
" makers	"	February, 1882	3 "	" a reduction in wages	Headley & Sons	Successful.
" & saddle-bag makers	"	April, 1882		" non-union men	William Boemer	Failure.
" makers	"	May, 1882		Advance in wages	Lister, Stearn & Co	Successful.
Wire weavers	"	June, 1882	6 weeks	Not to quit their union		Failure; union broken up.
"	Bellville	" 1882	6 "	" " "		" "
Zinc workers (furnace men)	Newark	July, 1882	2 months	Against a reduction in wages	New Jersey Zinc Works	Failure.

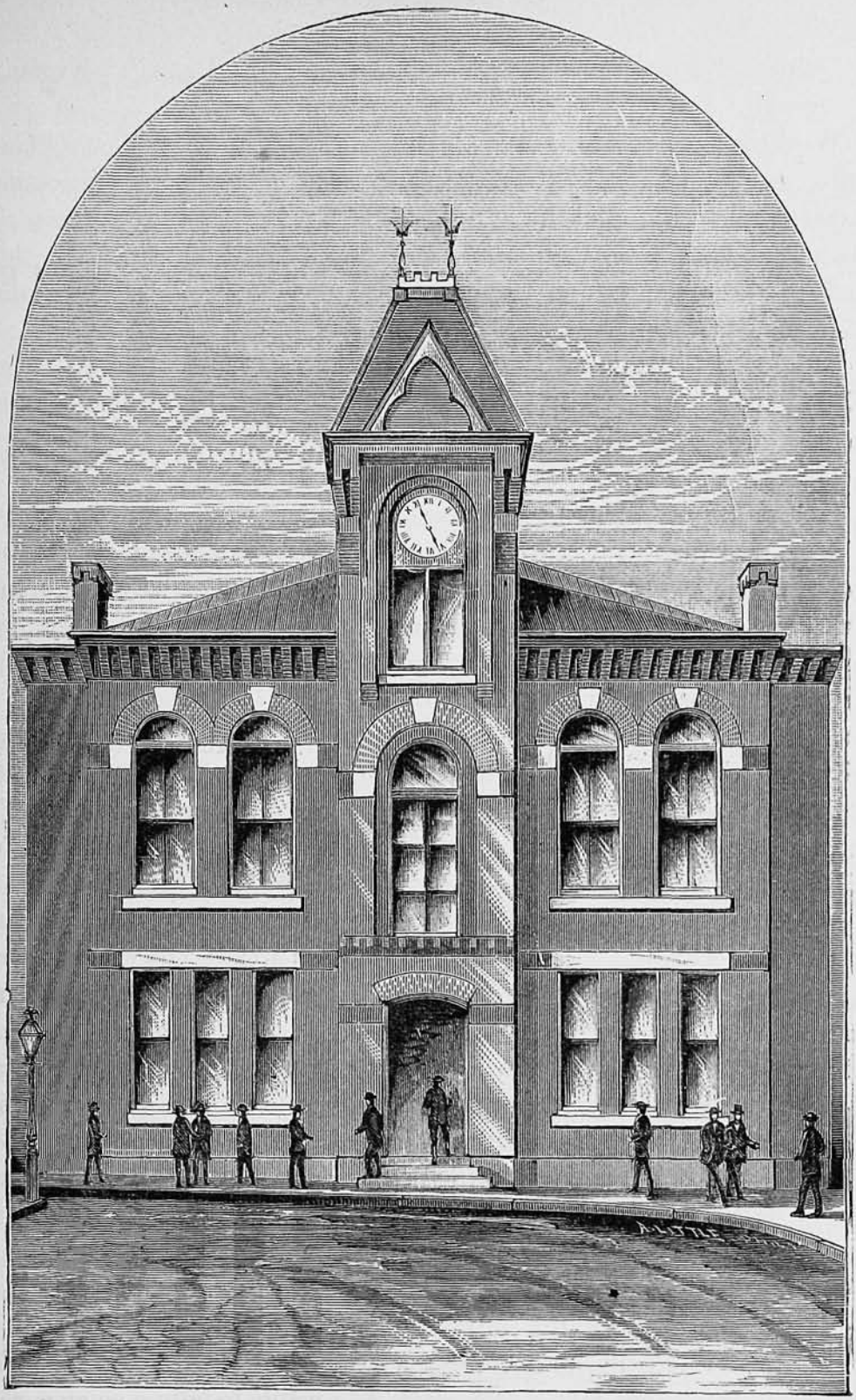
CHAPTER III.

WORKINGMEN'S INSTITUTE AT MILLVILLE.

A year ago we presented an account of this organization. It had had, up to that time, only an experimental life. Its handsome building was not completed and we could only present the plan of its organization. The institute opened its hall with a tea party, organized by the ladies of the town, on February 22d, 1883. As a result they presented to the institute a check for $1000. The other departments of the building were rapidly finished, and on April 1st were in full operation. We append a statement, by an officer, of what has been done in each:

The Conversation Room—This is the chief attraction of the institute. It is a large room, forty by fifty feet, attractively finished, ornamented with fine pictures and maps. It is open to the members every evening from seven till ten o'clock. Smoking, conversation and games of skill are here allowed, and there is no restriction upon the freedom of those who frequent it. The attendance in the spring was over a hundred nightly. In the summer the number was not so large; but the past fall has shown an increased popularity, the average daily attendance being nearly one hundred and fifty. Interesting debates and discussions are held in the room. Musical performances of an informal character, are also given. Familiar lectures are delivered and chess and checker tournaments held. It has proved to be a very attractive room to the young men of the town. During the nine months it has been open there has not occurred a single instance of rowdyism or destruction of property or defacement of the room. It has hardly lost any of the freshness and beauty which it had at the first.

The Library—This is a beautifully-proportioned room, and its furnishings are admirable. Understanding the needs of a working community, its directors have made its reading tables very attractive. We add the list of papers and magazines taken, viz:



FRONT VIEW OF THE CLUB-HOUSE.

Dailies—"New York Herald," "Philadelphia Press," "Evening Telegraph," "Bridgeton and Millville Evening News."

Weeklies—"Frank Leslie's," "Harper's," "Cape May County Gazette," "Union Signal," "Temperance Gazette," "Puck," "Scientific American and Supplement," "Harper's Young People," "Harper's Bazar," "The Nation," "Iron Age," "Science," "American Architect," "Manufacturer and Builder," "Crockery Journal," "Glassware Reporter," "Our Continent."

Monthlies—"Harper's," "The Century," "Wide Awake," "St. Nicholas," "Popular Science Monthly," "Lippincott's," "The Wheelman," "The Electrician."

Quarterly—"The North American."

The library is open to all persons, without charge, and is largely visited by ladies. It is open every afternoon and evening, and has two thousand volumes on its shelves, for the loan of which a small charge is made, and from this source of revenue a sufficient amount is received to pay the librarian's salary. The revenue of the library amounts to $400 per year at present, of which $150 is paid for salaries and $250 for reading matter. A number of standard works are given to the library by citizens of the town. During the past nine months it has loaned two thousand six hundred and eighty-eight volumes, and has had ten thousand one hundred and thirty-four visitors, or about fifty visitors daily.

The Gymnasium—This is a large room, forty by fifty feet, in the basement. Owing to the approach of warm weather it was not furnished with apparatus in the spring. The athletic association of the institute was organized in October and has just set up a very good lot of apparatus. In the meanwhile the room had been used for roller-skating. The athletic association intends to use the large grounds of the institute in the warm weather for field sports, Scottish games, &c.

Baths—About two thousand bath fees have been received since the 1st of April, mostly during the warm weather. The establishment is rented to a barber, at a liberal rental, in addition to attendance upon the bath. The bath-rooms are furnished in the most careful manner, with hot and cold water, mixing faucets and shower attachments. The cost of the baths to members is twelve and a half cents each, to others twenty cents each. An effort was made to allow women the

use of the bath-rooms on two afternoons a week, but failed for lack of patronage.

The Hall—This is a fine room on the second floor. It has five hundred chairs and complete stage furniture, with convenient dressing-rooms, kitchen, &c. In addition to the public meetings of the institute it is occupied by the Women's Christian Temperance Union for their regular Sunday afternoon meetings, and by the Reform Club for their stated meetings. Lectures and concerts have been given by the institute, and the hall has been rented for various entertainments. It is particularly adapted for festivals, fairs, &c., its kitchen accommodations being very complete. It has earned the institute $900, of which about $600 was profit.

Class-Rooms—The institute has four rooms available for class and committee-rooms, although they are occasionally occupied in connection with entertainments. From the rent of these rooms to building associations it derives a considerable revenue. Three arithmetic classes and single classes in reading, writing, bookkeeping, free-hand drawing and German, have been started during the season and are now being carried on. A choral society, numbering one hundred and thirty members, also occupies the hall for its weekly rehearsals.

The large grounds of the institute and their convenient location have induced the base-ball association and the bicycle club of the town to unite with the institute for their improvement and adaptation to the accommodation of these manly sports. It is intended to obtain what additional grounds may be necessary, and then grade and enclose them and erect suitable stands, also to make a fine track and ball-field. This will make the institute the centre of the out-door as well as the in-door recreation of the working people.

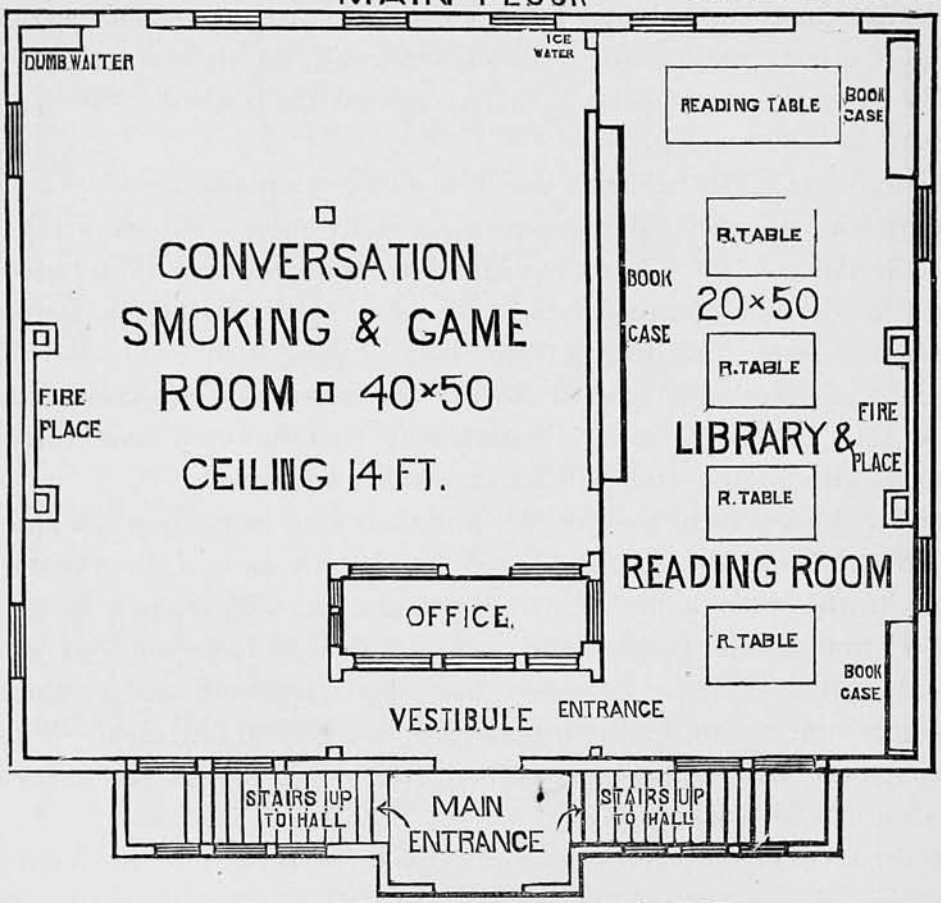
The finances of the institute are in a good condition. It incurred a debt of $2500 for furnishing the building. The proceeds of the tea party, with the excess of revenue over expenses, have in the past ten months reduced the debt to $1100, and the prospect is fair for its entire payment before the end of another year. After this debt is paid the institute will devote its surplus to acquiring the title to the entire property, which has cost $21,000, on which they have paid $1000 and received as a gift from R. Pearsall Smith $5000, leaving a balance of $15,000 to pay before the property will be clear.

We present herewith plans of the floors of the building, from which

MILLVILLE WORKINGMEN'S INSTITUTE

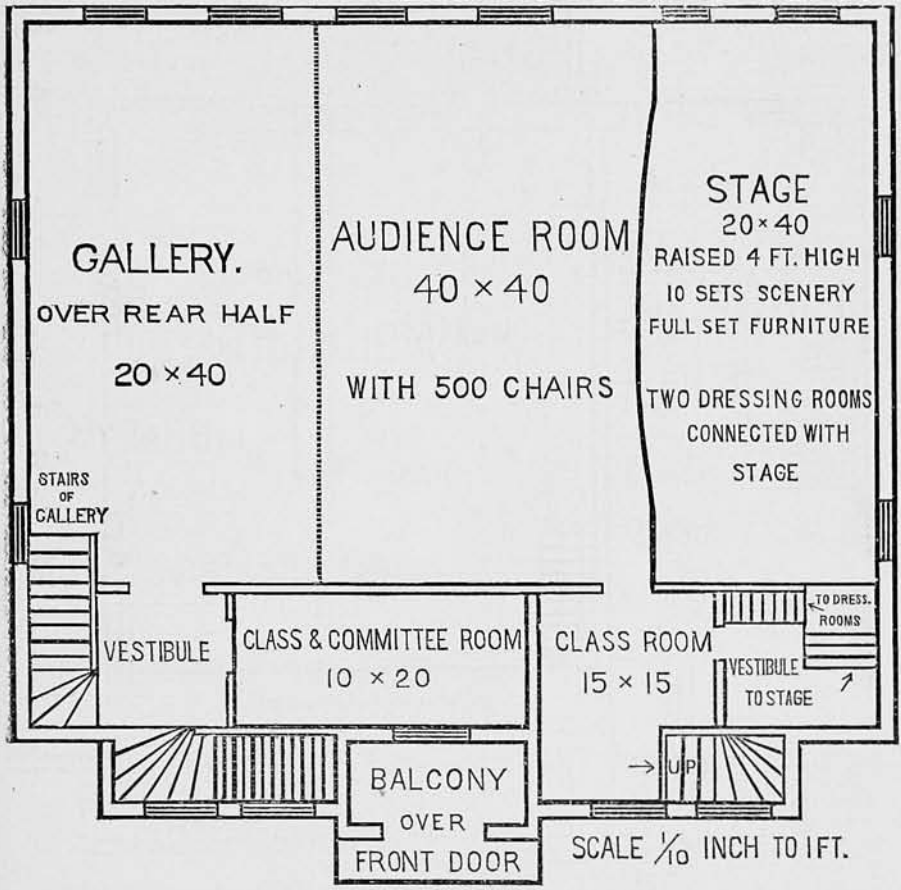
MAIN FLOOR

SCALE 1/16 INCH TO 1 FT.

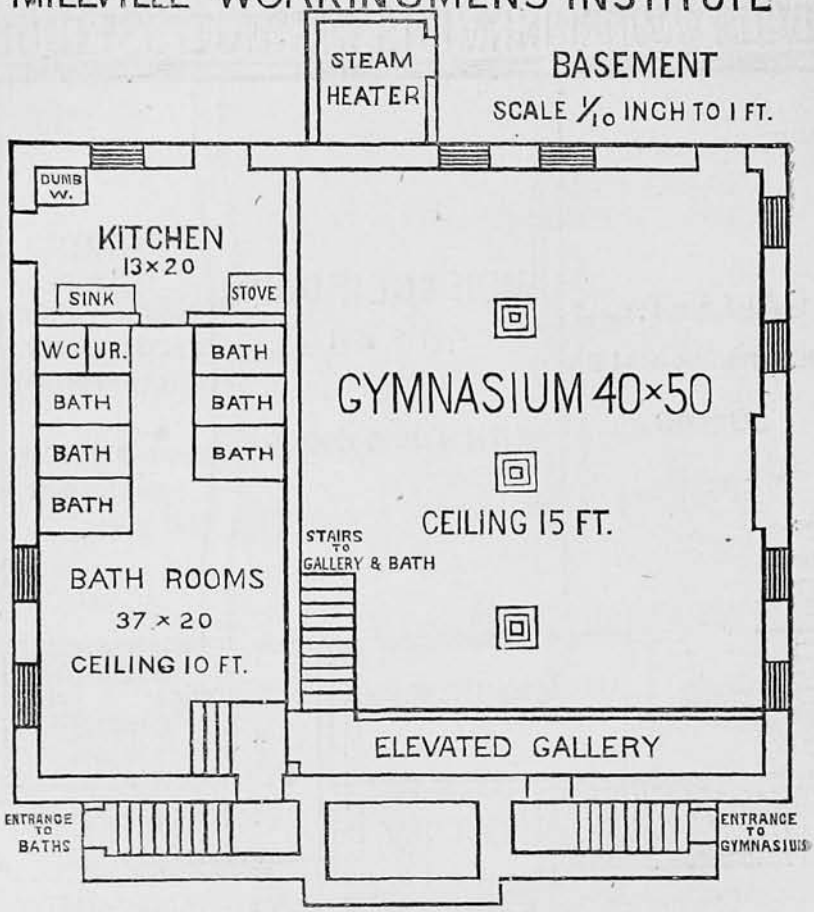


FRONT ON MAIN ST

MILLVILLE WORKINGMEN'S INSTITUTE 3D FLOOR

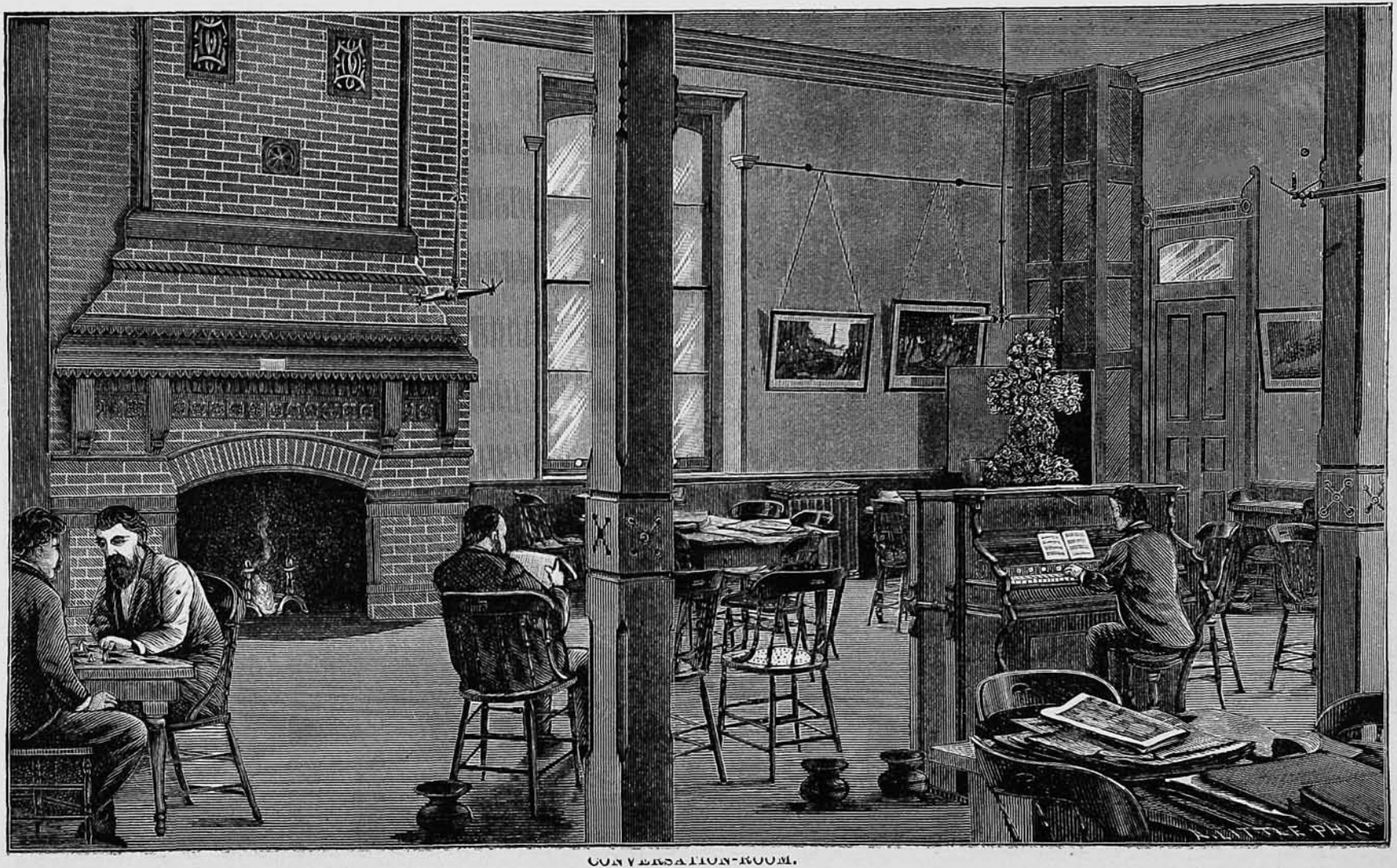


MILLVILLE WORKINGMEN'S INSTITUTE



FRONT ON MAIN ST.

LIBRARY AND READING-ROOM.



CONVERSATION-ROOM.

a clear idea of the departments can be obtained, and also views of the library and conversation-rooms. The plan of the building has shown itself to be a good one by actual use, and we can commend it to any association contemplating the erection of buildings for similar purposes.

In conclusion we can say, after nearly a year of practical experience, that the institute has so far shown a successful history. It has endeavored to be friendly to religion while favoring no particular church; friendly to education but not a school; friendly to recreation but not a mere club. In fact it aims to be an organization devoted to the moral interests of the community, not *for* the people only but *by* them and *of* them. If it continues to be wisely administered it will in a few years become as essential to the community as the church or the school-house.

The purpose of the institute, as expressed in its constitution, is to offer counter attraction to saloons and immoral places of resort by offering the means of physical development, moral culture and mental training, under right direction and on the general principle of entertainment leading up to education. The above review of the year's work will show how these departments have been developed. A nightly attendance in the various rooms of between two hundred and three hundred people, a large proportion of whom have no attractive place to spend their evenings, is evidence that the institute supplies a real need and gives reason to hope that it will prove a powerful factor in the moral life of the manufacturing community to which it belongs.

The extent of the workingmen's clubs and institutes in England is shown by the following summary of the work done by the Workingmen's Club and Institute Union. This union has for its object "to help workingmen to establish and maintain clubs and institutes where they can meet for conversation, business and mental improvement, with the means of recreation and refreshment, without being dependent for these purposes upon the public house; the clubs, at the same time, constituting societies for mutual help of various kinds." Sir Thomas Brassey, M. P., is president. The American workingman would resent the patronage which such a society implies, and therefore no such association could do much good here. The summary shows the work accomplished in England by the union.

Summary of Work Done by the Society.

1. The society, during the twenty years of its existence, has been (more or less) directly instrumental in founding upwards of one thousand clubs and institutes, having about one hundred thousand members.

2. The number of clubs affiliated to the society is upwards of five hundred, having more than seventy-five thousand members; and about thirty new clubs join the society annually.

3. More than fifty per cent. of the clubs are wholly self-supporting.

4. The union has, during the last ten years, lent to its affiiliated clubs upwards of fifty thousand volumes of carefully-selected literature.

5. Members of the council have, during the same period, attended public meetings in all parts of the kingdom for the purpose of explaining the aim and work of such institutions, and of delivering free lectures.

6. On an average, three thousand letters a year are received, and a large number of visitors come to the society's office from all parts of the kingdom for the purpose of obtaining information and help.

7. To encourage manly and healthy forms of recreation, the society has, for many years past, given trophies and prizes for skill in chess, cricket, football, rowing, athletics and swimming, and more recently for choral singing.

8. To encourage intellectual culture, the society grants money prizes for the best essays on questions of practical interest to workmen, and for the best papers in examinations on special periods of history, also for ability in debating.

9. At the commencement of each winter, the services of men of high attainments are sought as honorary lecturers at the London clubs (abont ninety in number), lists of the lecturers and subjects being printed and issued.

PART III.

SPECIFIC STATE INDUSTRIES.

CHAPTER 1.—THE SILK INDUSTRY.

CHAPTER 2.—CLAY AND CLAY PRODUCTS.

CHAPTER 3.—GLASS.

CHAPTER I.

THE SILK INDUSTRY.

The American consul at Lyons, France, Mr. Benjamin F. Peixotto, in his official reports to the State Department, has given the silk industry a great deal of his attention. In one of his reports under date of February 7th, 1883, he gives some very interesting statistics of silk manufactures throughout the world. The value of product in the city of Lyons and contiguous departments is estimated at $80,000,000, $30,000,000 of which are mixed goods, *i. e.*, silk and wool, silk and cotton, &c. Over one hundred and twenty thousand looms (twenty thousand being power looms) are employed in the manufacture of these goods. Austria produces a fine quality of goods valued at $12,000,000, using seventeen thousand looms, of which three thousand are power looms. The average weekly wages of ordinary weavers is given at from $1.15 to $1.30; expert weavers in fine goods, from $4 to $6. Holland, Portugal, Belgium and India produce very small quantities of silk goods.

Russia, once a large consumer of French silks, now produces $16,000,000 in value, which is a majority of the goods needed for her market.

Syria and Asia Minor use twelve thousand looms with a production of $4,000,000.

For China and Japan we give the consul's statement in full.

China—Though official statistics are lacking, the most reliable authorities fix the number of looms at three hundred and fifty thousand, the production of silk stuffs at $60,000,000 to $65,000,000, of which $6,000,000 to $7,000,000 worth are exported. There is no country where silk fabrics are so generally and so largely consumed as in China—no country which produces such varied and brilliant colors and such variety of goods.

The wealthy classes not only dress entirely in silk, but furnish every part of their habitation with this lovely and beautiful textile.

The sobriety and economy of the Chinese are proverbial.

The wages earned are utterly insignificant in comparison with European and American labor. A reeler of silk is happy to gain six cents per diem, a weaver fifteen to twenty-five cents. A thousand years have scarcely wrought any changes. What the introduction of automatic machinery would accomplish no man can tell.

With her wonderful harvest of the raw material, of which scarcely more than ninety thousand bales are exported, the introduction of modern machinery would completely transform this industry, which at present rests in very nearly the same state as in the time of Confucius.

Japan—Here again official statistics are wanting, purposely, perhaps, and even those who have lived long in the country furnish contradictory reports. From the best authorities (personal as well as from commercial reports) I fix the number of looms at two hundred and twenty thousand. The production is almost entirely consumed at home, the export of manufactured silks being still inconsiderable.

In Spain no official statistics are obtainable. It is estimated that there are ten thousand looms employed on silk goods, producing $5,000,000 annually.

In Italy, as elsewhere in Europe, the government has no official statistics. It is estimated that about $12,000,000 of silk goods are manufactured on thirty thousand looms.

Switzerland had over forty thousand looms in operation in 1882, more than four thousand being power looms, producing silk goods amounting to $18,000,000 in value.

Zurich alone exported $4,450,000 worth of silk goods to the United States in 1882, principally plain goods. Basle (in the manufacture of ribbons) has become the great competitor of St. Etienne, and, with the United States, has all but annihilated the once famous capital of the Loire.

England was a large producer of silk goods from 1829 to 1860, the production in 1860 being estimated at $60,000,000, employing one hundred and fifty thousand looms. The production has greatly decreased since 1860, and particularly since the French treaty of commerce in 1880. In 1872 she possessed but sixty-five thousand looms, twelve thousand three hundred and seventy-eight of which were power looms. The production in 1882 (not including ribbons and bindings) is estimated at $25,000,000.

In Germany the manufacture of silk goods was first introduced by French weavers in the sixteenth century. The industry has developed largely within a few years. In 1882 the number of looms employed was estimated at from seventy-five to ninety thousand, producing $45,000,000 worth of goods, not including ribbons, of which about $8,000,000 worth are manufactured. Of the three hundred manufacturers of silk goods in Germany, one hundred and forty are located at Crefeld.

The reference made by Consul Peixotto to the silk industry in the United States and the summary for the world, is given in full below.

The United States—In making this general review of the silk manufactures of the world, I may be permitted to allude even to our own country, though naturally approaching the subject with due deference to the latest statistics furnished to the recent census by the "Silk Association of America." I, however, as a consul of the government of the United States, have to appreciate the general commercial situation without prejudice, and in that true spirit of impartiality which becomes a servant of the whole people, and not of any one particular class.

Twenty-odd years of high protecting duties, averaging fully fifty per cent., and for at least a fourth, if not a third, of our imports as high as sixty per cent., has largely contributed to build up our silk manufactures, whose total annual production (including *all* varieties of goods) may safely be fixed, at present, at from $35,000,000 to $38,000,000. Probably not more than $15,000,000 (if that) come into direct competition with the piece-goods fabrication of Europe.

To our enterprising spirit and recognition of the economical idea in the adoption of mechanical force, as much as to our tariff, are we indebted for the present position of our silk industries. In the near future, it will more than ever be due to the genius of American invention and its application, that the United States will keep what she has already acquired, and become one of the richest silk-producing and silk-manufacturing countries of the globe.

TOTAL PRODUCTION.

The total production of silk goods in the world may be estimated at about $350,000,000. Deducting the manufactures of China and

Japan, whose economical situation is so very different from other countries, there remains $270,000,000 worth of silk manufactures, which may be divided among different countries, taking the maximum as follows:

France	$85,000,000
Germany	45,000,000
United States	35,000,000
Great Britain	25,000,000
Switzerland	18,000,000
Russia	16,000,000
Austria	12,000,000
Italy	12,000,000
Spain	5,000,000
Other countries	17,000,000
Grand total	$270,000,000

I admit that these figures are subject to criticism, but am inclined to think that, while the distribution may not be entirely correct, the total sum is very nearly so.

If the manufacturers and merchants of the New World incline to conceal the veritable figures of their affairs, they but feebly imitate those of Europe and the eastern hemisphere, who have hidden, and probably continue to hide, the extent of their transactions.

I estimate four hundred and seventy thousand as the number of looms employed in the silk goods production, including power looms, which thus explains the difference; for if hand looms were alone used, the number would be very considerably greater.

SILK MANUFACTURES IN NEW JERSEY.

During the year ending July 1st, 1883, silk goods were manufactured by ninety-four firms in our State, nineteen additional firms being employed in throwing, dyeing, and finishing, and three firms in making spun silk. The total number of firms engaged in this industry was one hundred and sixteen, giving employment to six thousand eight hundred and twelve men, six thousand six hundred and seventy-four women, and three thousand three hundred and forty-eight boys and girls, or to a total number, regularly employed, of sixteen thousand eight hundred and thirty-four. This shows an increase of two thousand seven hundred and fourteen over the number employed in 1881.

The greatest number employed at any one time is estimated at eighteen thousand one hundred and fifty-six, an increase of two thousand four hundred and sixteen.

Thirteen firms operate two mills each, and four operate three mills. The total of establishments engaged in the manufacture of silk goods in our State is, therefore, one hundred and thirty-seven.

Ninety-three firms were in operation all the year, sixteen over six months, and eight new firms were established during the year.

The capital invested in the business is $8,968,000, and the value of product is $22,183,346. The relative value of product was the same as that shown by our statistics of 1881, viz., that $1 of invested capital reproduces $2.50 in value of silk goods

The proportions, respectively, of men, women, boys and girls employed, to the whole number of employes, are as follows, viz.: Men, forty and forty-seven hundredths per cent.; women, thirty-nine and sixty-four hundredths; boys and girls, nineteen and eighty-nine hundredths. It will be noticed that, while the number of men employed has increased (since 1881) from five thousand four hundred and fifty-eight to six thousand eight hundred and twelve, and of women from five thousand one hundred and seventy-five to six thousand six hundred and seventy-four, the number of boys and girls has decreased from three thousand four hundred and eighty-nine to three thousand three hundred and forty-eight. The percentage of boys and girls, also, to the whole number of employes, has decreased from twenty-five per cent. in 1881 to nineteen and eighty-nine hundredths in 1883. No doubt this may be attributed, in a great measure, to the operation of the act of the Legislature approved March 5th, 1883, regulating the employment of children in factories, an inspector being appointed to enforce the law. The silk manufacturers generally anticipated this law by discharging all who came within its provisions, several months before the bill went into effect.

The wages of men varied from $2 to $1.20 per day; of women, from $1.50 to sixty-six cents, and of boys and girls from $1 to fifty cents.

Skilled mechanics were employed by seventy firms, and received from $4 to $1.66 daily, the average being $2.62½ per firm. Skilled women were employed by fifty-eight firms, and received from $2.50 to $1 per day, an average of $1.50 per firm.

The total amount paid for labor (exclusive of office and selling expenses) was $5,592,189, or twenty-five and two-tenths per cent. of the value of the whole product. The average cost was, therefore, $332.20 for each man, woman and child employed, either as skilled mechanic or ordinary laborer. In 1879, the percentage of wages to total value of product was twenty-six and forty-six hundredths; in 1880, twenty-six and thirty-seven hundredths; in 1881, twenty-six and five-tenths, and in 1883, twenty-five and two-tenths. The percentage given for the whole country, in 1880, by the special agents on silk manufactures of the United States census, was twenty-six and forty-nine hundredths. Although no reduction in wages is reported for the fiscal year ending July 1st, there evidently has been a general reduction of five per cent. since our reports were taken in 1881. Eighty-four firms pay their help semi-monthly, thirty-one weekly, and one monthly.

The following table will show the relative improvement in production, number of hands employed, and amount distributed or paid out in wages since the Bureau first collected statistics of this industry, in 1879:

	1879.	1880.	1881.	1883.
Reports filed	66	106	105	116
Average number of men employed	3,600	4,852	5,458	6,812
" women "	3,176	4,065	5,175	6,674
" boys and girls employed	3,648	3,763	3,489	3,348
Wages paid	$3,625,166	$4,168,335	$4,787,500	$5,592,189
Value of product	$13,700,846	$15,808,424	$18,053,210	$22,183,346

The production of silk goods in the United States for the calendar year 1882 is stated by the Secretary of the Silk Association of America at $39,464,541. Owing to the general depression in business and to the consequent decline in production, from January 1st to July 1st, 1883, the value of manufactures for this period would certainly be no greater, probably less, than from January to July, 1882. We can, then, safely assume that the value of production of silk goods in the year 1882 would fairly represent the production for the fiscal year ending July 1st, 1883, which shows that New Jersey not only stands first in rank in the manufacture of silk goods, but that we produce

fifty-six and two-tenths per cent. of the whole product, or over twelve per cent. more than all the other States combined.

The low prices obtained and the depressed condition of the market have caused our manufacturers to reduce their production. The loss in value of product of silk goods in New Jersey during the fiscal year ending July 1st, 1883, is estimated, by good judges, to be not less than twelve and one-half per cent. of the whole value of product. In other words, instead of the value of product amounting to a little over $22,000,000, as shown in our statistical report, we should have produced about $25,000,000, with the plant now employed in our mills.

In the report of the chief of the Bureau of Statistics at Washington, D. C., the invoice values of silk goods imported during the past fiscal year (ending June 30th, 1883,) are given as follows: Dress and piece goods, $16,964,733; hosiery, $820,088; other manufactures of silk, $18,979,455, making a total of $36,764,276. If to this amount we add twenty-five per cent., or $9,191,069, for estimated undervaluation in the original invoices, and add also the tariff of fifty per cent., or $22,977,672, we get the value of the imported silks in our own market, viz., $68,933,017. Adding to the market value of imported silks the value of our own manufactures, $39,464,541, we have a total of $108,397,558, as the grand total value of goods consumed in the United States in the past year.

The following tables give in detail the statistics of the silk industry in New Jersey for the year ending July 1st, 1883:

SILK.

Office number.	When wages are paid.	How many hours constitute a days work.	Months in operation.			Number of establishments.	Capital.	Greatest number of hands employed at any one time during the year.	Average number of hands employed.			Total amount paid in wages during the year.	Average daily wages.					Materials.	Products.
													Ordinary.			Skilled.			
			Full time.	Half time.	Idle.				Males above 16 years.	Females above 15 years.	Children and youths.		Men.	Women.	Children.	Men.	Women.		
1	Semi-monthly...	10	6	.....	*	1	$80,000	330	100	200	30	$50,000	$1 75	$1 35	$0 88	$2 50	$1 75	$50,000	$125,000
2	"	10	7	5	.....	2	400,000	950	250	300	250	310,000	1 75	1 00	85	3 00	2 00	440,000	1,000,000
3	"	10	12	.....	.....	1	70,000	150	30	.....	111	30,000	1 50	.....	90	.....	.....	50,000	85,000
4	"	10	12	.....	.....	3	650,000	1,000	350	350	175	325,000	1 75	1 00	88	3 00	2 10	525,000	1,400,000
5	"	10	12	.....	.....	1	225,000	350	220	110	20	185,000	1 75	1 10	88	3 00	2 00	260,000	700,000
6	"	10	12	.....	.....	1	75,000	250	30	190	30	79,000	2 00	1 00	75	.....	.....	80,000	200,000
7	"	10	12	.....	.....	1	20,000	60	30	23	4	18,000	2 00	1 00	75	2 75	1 75	35,000	75,000
8	"	10	12	.....	.....	1	20,000	50	38	6	2	15,000	1 50	1 00	1 00	2 80	1 50	20,000	50,000
9	"	10	12	.....	.....	1	3,000	12	6	3	2	4,800	1 75	85	75	.....	.....	.....	†7,500
10	"	10	12	.....	.....	2	360,000	800	300	325	105	80,000	1 75	1 00	60	3 00	1 50	500,000	850,000
11	"	10	10	.....	2	1	10,000	8	4	.....	3	3,000	2 00	.....	60	.....	.....	5,000	11,000
12	"	10	12	.....	.....	1	10,000	20	13	5	2	11,500	1 50	1 00	70	2 25	1 50	16,000	40,000
13	"	10	12	.....	.....	1	35,000	125	75	25	8	35,000	1 50	1 00	70	3 00	1 50	75,000	160,000
14	"	10	8	.....	4	1	8,000	18	5	7	2	9,500	2 00	1 00	75	.....	.....	12,500	30,000
15	"	10	12	.....	.....	1	9,000	30	2	16	8	4,100	1 40	90	60	.....	.....	.....	†11,000
16	"	10	12	.....	.....	1	16,000	50	18	10	5	10,000	1 33	80	50	.....	.....	14,000	45,000
17	"	10	6	.....	*	1	2,000	8	1	2	5	1,100	1 50	1 50	66	.....	.....	.....	†1,500
18	"	10	12	.....	.....	2	400,000	700	250	200	200	200,000	1 75	1 00	85	3 00	1 50	375,000	800,000
19	"	10	12	.....	.....	2	200,000	350	300	10	2	135,000	1 75	1 50	75	4 00	1 50	.....	†400,000
20	"	10	12	.....	.....	1	30,000	50	50	.....	.....	27,500	2 00	.....	.....	4 00	.....	.....	†80,000
21	"	10	12	.....	.....	1	10,000	20	13	.....	.....	9,500	2 00	.....	.....	.....	.....	.....	†12,000
22	"	10	12	.....	.....	1	45,000	60	16	30	5	14,400	1 75	1 00	66	.....	.....	125,000	210,000
23	"	10	12	.....	.....	1	4,500	8	4	2	.....	3,500	1 50	85	.....	.....	.....	.....	†9,000
24	"	10	12	.....	.....	1	20,000	55	20	29	4	24,000	1 50	1 00	70	2 50	2 00	30,000	75,000
25	"	10	12	.....	.....	1	5,000	40	30	5	3	12,000	1 50	1 25	50	.....	.....	.....	†16,000
26	"	10	12	.....	.....	1	14,000	20	13	4	1	11,000	1 50	1 00	50	2 00	.....	17,000	40,000
27	"	10	12	.....	.....	1	30,000	115	16	70	20	26,000	1 50	85	66	1 66	1 00	125,000	200,000
28	"	10	12	.....	.....	2	40,000	125	65	35	15	65,000	1 50	1 00	75	2 50	2 00	90,000	225,000
29	"	10	12	.....	.....	1	15,000	50	10	25	15	19,000	2 00	85	75	2 50	1 25	30,500	75,000
30	"	10	12	.....	.....	1	125,000	230	120	68	10	86,000	1 25	1 00	66	3 00	1 50	130,000	310,000
31	"	10	3	.....	9	2	75,000	300	60	150	75	29,500	1 50	1 00	66	3 00	1 50	43,000	100,000
32	"	10	6	.....	6	1	60,000	200	60	60	40	46,000	2 00	1 00	75	3 00	1 50	72,000	175,000
33	"	10	12	.....	.....	2	600,000	500	200	200	50	200,000	2 00	1 00	70	3 00	1 50	320,000	750,000
34	"	10	11	.....	1	1	10,000	50	4	25	20	19,000	1 50	80	68	2 50	1 50	28,000	60,000
35	"	10	12	.....	.....	1	350,000	500	100	200	150	96,000	1 25	80	70	2 50	1 50	270,000	550,000
36	"	10	12	.....	.....	1	10,000	50	20	20	2	18,000	1 50	1 00	70	2 50	1 50	33,000	80,000

37	"	10	12	.....	.....	1	65,000	110	15	65	20	55,000	1 30	1 00	70	.....	.....	75,000	165,000
38	"	10	12	.....	.....	1	30,000	40	10	15	5	15,000	1 50	1 00	65	3 00	1 50	21,000	50,000
39	"	10	12	.....	.....	1	2,500	5	4	.....	.....	2,500	2 00	.....	.....	.....	.....	.....	†7,500
40	"	10	12	.....	.....	1	20,000	100	60	5	.....	29,000	2 00	1 00	.....	.....	.....	.....	†50,000
41	"	10	12	.....	.....	1	35,000	100	20	.....	80	26,000	1 50	.....	50	.....	.....	.....	†50,000
42	"	10	12	.....	.....	1	25,000	75	38	35	2	24,500	1 50	1 00	50	2 50	.....	35,000	85,000
43	"	10	12	.....	.....	1	35,000	65	25	25	15	26,000	1 50	1 08	60	2 00	1 50	30,000	78,000
44	"	10	12	.....	.....	1	18,000	45	10	25	10	16,500	1 66	66	66	2 75	1 10	21,000	50,000
45	"	10	12	.....	.....	1	25,000	160	68	62	18	52,500	1 50	90	60	3 00	1 50	95,000	200,000
46	Weekly.....	10	12	.....	.....	1	27,000	33	3	15	.....	9,500	.....	83	83	3 00	1 16	25,000	40,000
47	"	10	12	.....	.....	1	75,000	175	100	50	20	55,000	1 50	66	66	2 00	.....	80,000	200,000
48	"	10	5	.....	*	1	60,000	110	45	40	20	40,000	1 50	1 00	66	2 00	1 35	60,000	140,000
49	"	10	12	.....	.....	1	15,000	40	25	8	5	14,500	2 00	1 25	60	.....	.....	20,000	50,000
50	"	10	10	.....	*	1	65,000	120	60	40	5	44,000	1 25	1 00	60	2 00	.....	70,000	195,000
51	Semi-monthly...	10	12	.....	.....	1	200,000	400	150	150	130	120,000	.....	.....	.....	2 00	1 50	180,000	400,000
52	"	10	5	.....	*	1	75,000	125	40	85	20	22,000	1 50	90	70	2 50	1 50	60,000	105,000
53	"	10	12	.....	.....	2	60,000	160	15	115	20	45,000	1 50	85	50	.....	.....	160,000	300,000
54	Weekly.....	10	12	.....	.....	1	40,000	75	10	60	.....	24,000	1 25	90	.....	2 50	1 25	80,000	150,000
55	Semi-monthly....	10	10	2	.....	1	80,000	178	78	42	8	51,981	1 25	95	50	1 90	1 45	61,169	185,968
56	"	10	12	.....	.....	1	150,000	120	15	80	25	25,000	1 50	1 00	60	.....	.....	80,000	200,000
57	Monthly.....	10	10	2	.....	1	15,000	100	17	.....	60	8,000	1 15	.....	66	.....	.....	14,000	30,000
58	Weekly.....	10	12	.....	.....	1	325,000	300	95	120	60	110,000	2 00	1 00	50	.....	.....	220,000	500,000
59	"	10	12	.....	.....	1	3,000	32	30	.....	.....	10,000	1 66	.....	.....	.....	.....	.....	†20,000
60	"	10	12	.....	.....	1	3,000	12	3	.....	8	2,750	.....	.....	.....	.....	.....	3,500	7,500
61	"	10	10	.....	2	1	2,500	12	5	5	.....	5,000	2 00	1 00	.....	2 50	.....	8,000	18,000
62	"	10	12	.....	.....	1	25,000	50	20	25	5	19,500	1 50	85	65	2 50	1 25	29,000	70,000
63	Semi-monthly....	10	12	.....	.....	3	350,000	850	250	250	325	325,000	2 00	1 00	75	3 50	1 50	625 000	1,500,000
64	"	10	12	.....	.....	1	40,000	130	52	60	10	52,500	1 25	1 00	75	3 00	1 60	85,000	190,000
65	"	10	12	.....	.....	3	850,000	1,050	240	600	190	380,000	2 00	1 10	1 00	3 00	.....	640,000	1,500,000
66	Weekly.....	10	12	.....	.....	1	8,000	20	7	8	.....	6,000	2 00	1 00	.....	.....	.....	9,500	20,000
67	Semi-monthly...	10	12	.....	.....	1	18,000	30	12	13	5	16,000	1 75	1 00	75	3 00	1 50	23,500	50,000
68	Weekly.....	10	4	.....	*	1	1,200	8	5	2	.....	2,600	2 00	1 00	.....	.....	.....	3,900	8,500
69	"	10	12	.....	.....	1	1,500	5	.....	5	.....	1,600	.....	1 10	.....	.....	.....	.....	†3,000
70	Semi-monthly ...	10	12	.....	.....	1	12,000	70	15	30	20	19,500	1 50	1 10	75	2 00	.....	20,000	50,000
71	Weekly.....	10	6	.....	6	1	800	5	3	1	.....	500	1 50	1 00	.....	2 25	.....	650	1,500
72	Semi-monthly ...	10	12	.....	.....	1	2,000	15	12	3	.....	4,900	1 50	1 00	.....	2 00	1 25	7,500	17,500
73	Weekly.....	10	4	.....	*	1	3,000	18	8	6	2	3,500	2 00	1 00	60	.....	.....	5,000	12,000
74	Semi-monthly...	10	10	.....	2	1	10,000	25	18	4	3	14,500	2 00	1 00	50	.....	.....	20,000	45,000
75	"	10	12	.....	.....	1	65,000	100	40	25	20	52,000	2 50	1 00	75	3 00	2 50	100,000	225,000
76	"	10	12	.....	.....	1	2,500	50	6	15	28	12,000	1 25	1 00	85	.....	1 90	.....	†25,000
77	"	10	12	.....	.....	1	30,000	100	15	60	25	30,000	2 00	1 00	70	.....	.....	120,000	170,000
78	"	10	12	.....	.....	1	1,500	9	1	6	1	1,800	1 75	1 00	50	.....	.....	1,400	4,000
79	"	10	12	.....	.....	2	50,000	115	98	3	.....	59,000	2 00	1 00	.....	2 50	.....	.....	†140,000
80	"	10	12	.....	.....	2	50,000	100	70	2	.....	50,000	2 00	.....	50	.....	.....	.....	†135,000
81	"	10	12	.....	.....	2	160,000	200	125	50	25	80,000	2 00	1 00	50	3 00	1 25	140,000	325,000
82	"	10	12	.....	.....	1	60,000	100	60	25	15	42,000	2 00	1 00	55	3 00	1 25	72,000	175,000
83	"	10	12	.....	.....	1	25,000	130	55	35	25	44,000	1 25	1 00	60	2 50	1 20	63,000	160,000
84	"	10	12	.....	.....	1	30,000	50	8	30	8	20,000	1 50	1 00	60	2 50	1 50	40,000	90,000
85	Weekly.....	10	9	3	.....	1	5,000	16	12	.....	2	6,500	1 65	.....	75	.....	.....	9,500	24,000
86	Semi-monthly...	10	12	.....	.....	1	3,000	17	10	4	1	2,700	1 50	85	60	.....	.....	5,500	12,000
87	"	10	12	.....	.....	1	4,500	8	6	2	.....	4,100	1 60	90	.....	.....	.....	6,200	15,000
88	"	10	12	.....	.....	1	6,000	30	5	7	12	7,500	1 25	66	50	.....	.....	.....	†21,000
89	"	10	12	.....	.....	1	4,000	20	2	12	2	5,800	1 25	90	50	.....	.....	.....	†12,000
90	"	10	9	3	.....	1	40,000	75	3	60	10	20,000	1 30	90	50	.....	.....	.....	†40,000
91	"	10	12	.....	.....	1	50,000	90	78	.....	1	50,000	1 75	.....	75	.....	.....	.....	†125,000
92	"	10	12	.....	.....	1	3,500	7	5	1	.....	3,300	1 50	1 00	.....	.....	.....	5,500	12,500
93	"	10	12	.....	.....	1	8,000	25	12	8	2	9,500	1 50	1 00	60	2 50	1 50	15,000	35,000

* Men. † Added value.

SILK—*Continued.*

Office number.	When are wages paid.	How many hours constitute a day's work.	Months in operation.			Number of establishments.	Capital.	Greatest number of hands employed at any one time during the year.	Average number of hands employed.			Total amount paid in wages during the year.	Average daily wages.					Materials.	Products.
													Ordinary.			Skilled.			
			Full time.	Half time.	Idle.				Males above 16 years.	Females above 15 years.	Children and youths.		Men.	Women.	Children.	Men.	Women.		
94	Semi-monthly	10	12	.....	.....	1	$25,000	35	3	21	10	$9,500	$1 75	$1 00	$0 50	.....	.....	$45,000	$70,000
95	"	10	12	.....	.....	1	5,000	12	8	3	1	6,000	1 50	1 25	50	.....	.....	8,500	20,000
96	"	10	12	.....	.....	1	4,000	8	4	2	1	3,200	1 25	1 25	50	$2 50	.....	5,000	12,000
97	.....	.....	12	.....	.....	1	3,000	12	1	10	.....	5,000	.....	1 50	.....	.....	.....	3,000	10,000
98	Semi-monthly	10	12	.....	.....	1	14,000	65	28	16	12	23,000	1 25	1 10	60	2 50	$1 50	32,000	80,000
99	"	10	12	.....	.....	1	175,000	300	100	150	25	95,000	1 75	60	.....	2 50	.....	151,000	363,870
100	"	10	12	.....	.....	1	160,000	245	60	75	100	54,000	1 45	85	60	2 50	1 10	112,500	250,000
101	Weekly	10	12	.....	.....	1	85,000	550	230	250	30	125.000	1 60	1 00	60	2 50	1 50	260,000	600,000
102	"	10	12	.....	.....	1	50,000	65	10	25	25	12,500	1 25	75	50	.....	.....	.....	†40,000
103	"	10	12	.....	.....	1	30,000	60	35	18	2	22,000	1 60	1 00	60	2 50	1 40	32,000	75,000
104	"	10	12	.....	.....	1	40,000	130	65	50	12	31,000	1 30	1 00	.....	2 50	.....	52,500	125,000
105	"	10	12	.....	.....	1	50,000	120	60	30	15	41,600	1 50	1 00	.....	2 50	1 50	72,000	175,000
106	"	10	8	.....	*	1	30,000	60	40	15	2	26,000	1 50	1 00	.....	2 50	1 50	43,000	100,000
107	"	10	12	.....	.....	1	3,500	20	9	6	3	2,500	1 50	1 00	60	2 50	1 50	5,400	9,000
108	"	10	12	.....	.....	2	450,000	1,000	350	400	180	275,000	1 50	1 00	75	2 75	1 50	425,000	1,000,000
109	"	10	6	.....	6	1	20,000	110	70	20	10	18,000	2 00	66	45	.....	.....	26,000	65,000
110	"	10	12	.....	.....	1	22,000	65	50	12	.....	17,500	1 60	1 00	.....	2 50	1 50	28,000	65,000
111	Semi-monthly	10	12	.....	.....	1	55,000	160	12	25	118	45,000	1 25	75	66	2 10	1 25	115,000	240,000
112	"	10	12	.....	.....	2	150,000	300	70	150	70	95,000	1 50	1 00	75	3 00	1 50	150,000	350,000
113	Weekly	10	12	.....	.....	1	10,000	40	25	8	.....	9,500	1 50	90	60	2 40	1 50	16,000	40,000
114	"	10	12	.....	.....	1	15,000	60	45	10	.....	17,000	1 25	75	75	2 50	1 10	25,000	60,000
115	"	10	12	.....	.....	1	40,000	140	100	24	10	50,000	1 20	75	75	2 60	1 40	85,000	200,000
116	Weekly and monthly	10	11	1	.....	3	125,000	755	420	255	80	216,458	2 00	1 50	1 00	.....	.....	502,083	785,508
	Total for the State						$8,968,500	18,156	6,812	6,674	3,348	$5,592,189	.....	.....	.....	.....	.....	.....	$22,183,346

* Men. † Added value.

For the first time in over twenty years the silk manufacturers in our State have been obliged to stop many of their broad-goods looms because of low prices and slow sales.

When the iron works of Paterson shut down in 1873, thereby discharging several thousands of mechanics, the silk mills were running day and night, giving employment to thousands of women and children as well as men. The workingmen of Paterson, therefore, did not realize the hard struggle for a bare subsistence that was experienced throughout the country.

At the present time some of our largest mills have a large portion of their plant standing still, and the production of most of the mills where broad goods are made has been greatly curtailed. This has resulted in the discharge of many of the employes.

Among the various causes assigned for this depression in the trade are overproduction and heavy importations in anticipation of a large reduction in the tariff. As we manufacture considerably less than forty per cent. of the amount of silk goods actually consumed in our markets, it does not seem probable that there has been any overproduction, but, on the contrary, that with a fair protective tariff justly enforced we should be enabled greatly to increase our home production without overstocking the market.

The large importations of broad goods are said to have been caused not by the reduction of ten per cent. in the tariff (sixty per cent. to fifty per cent.), but by the expectation that the change would be much greater. The goods were sent here, put into bonded warehouses, and afterwards sold at auction at prices considerably below the cost of manufacture. Buyers, who were accustomed to give their orders to our own manufacturers, purchased their goods at these sales, in many cases canceling large orders that had been given to our mills.

The result has been that the manufacturers whose capital would permit, reduced their production of this class of goods by stopping their looms and discharging a large number of their employes, while those who were doing business with borrowed capital were obliged to meet the market values, notwithstanding the fact that they lost money on every piece of goods they sold. This had a still further demoralizing effect upon prices.

The prices of piece silks are said to have fallen over thirty per cent. since the 1st of January, 1883, making it impossible for our manufac-

turers to employ their plant on this class of goods without incurring serious losses. One of the largest manufacturers in our State, Mr. William Strange, of Paterson, was requested by the bureau to give his opinion as to the causes of the depression in the silk manufactures, and we give in full his reply to the several questions presented.

"1st. As to the cause of the present dullness in the market for broad goods. This, in my opinion, is not due as is the case in other branches of industry, such as the cotton, woolen, shoe, &c., to actual overproduction beyond the ordinary requirements of the trade, but to the fact that stagnation in mercantile affairs generally, from whatever causes, has for the time being reduced the consumption of articles of luxury and produced its injurious effects upon broad silks, as such, as well as upon other fabrics made from the same material.

"Add to this the unusually large foreign consignments which of late have been thrown upon our market and sold, without regard to cost, at any obtainable price, and you have ample reason for the present complained-of condition.

"Your second question is, 'Can you give me, approximately, the reduction which has been made in the value of silk goods caused by the last change in the tariff reducing the *ad valorem* duty from sixty per cent. to fifty per cent.?'

"The reduction in price of piece silks since the reduction of the tariff is equal to between thirty and thirty-five per cent., smuggling and misconstruction of the intended provisions of the new law, added to the general dullness of trade, having been the means of producing this enormous shrinkage in values.

"To your third question, regarding the difference paid in wages to silk operatives in America as compared with the same class in Europe, I would say that a fair computation would place the figures at one hundred per cent. in favor of the former, or in other words we pay in America $1 for work which in Europe would cost only fifty cents.

"In some branches of our industry the comparative figures would show a much greater difference, but taking them all together I feel certain that my statement is within the bounds, rather than otherwise."

In response to a request from Joseph Nimmo, Jr., chief of the United States Bureau of Statistics, the following table, showing the comparative rates of wages paid to silk operatives in the United States and foreign countries, was prepared by the secretary of the Silk Asso-

ciation and sent to Washington, where it was embodied in Ex. Doc. No. 173, Forty-seventh Congress, First Session, pages 30, 31:

RATES OF WAGES IN SILK MANUFACTURE PER WEEK.

Designation of Operative.	Sex.	Average per United States census 1879–1880.	Recent in United States (1882.)	Estimated average in England.	Estimated average in Germany.	Estimated average in France.	Estimated average in Italy.
Hard silk winder*	F.	$5 25	.....	$2 96	.....	$1 40	.....
" doubler	F.	5 18	.....	.....	.....	2 45	.....
" spinner	M.	5 57	.....	.....	.....	.....	$2 10
" "	F.	4 87	$5 00	.....	.....	2 00	1 44
" twister	M.	5 98	.....	.....	.....	3 42	.....
" "	F.	5 67	.....	.....	.....	2 10	.....
Soft silk winder	F.	6 35	8 00	.....	.....	2 00	.....
Warper	M.	10 71	.....	.....	.....	.....	.....
"	F.	7 62	10 00	.....	.....	2 40	.....
Beamer †	M.	12 11	.....	.....	.....	.....	.....
" †	F.	7 72	.....	.....	.....	.....	.....
Warp twister	M.	13 96	.....	.....	.....	.....	.....
Weaver on hand looms ‡	M.	14 15	.....	.....	$3 93	5 40	4 80
" "	F.	8 44	.....	.....	2 72	3 00	2 28
" power looms	M.	11 43	.....	5 40	3 00	.....	.....
" "	F.	7 94	.....	4 38	.....	.....	.....
" of plain common ribbons	.....	.....	.....	.....	.....	2 70	.....
" " better grade ribbons	.....	.....	.....	.....	.....	3 90	.....
" " fancy ribbons	.....	.....	.....	.....	.....	5 10	.....
" " best novelty ribbons	.....	.....	15 00	.....	.....	9 60	.....
" " damasks	M.	.....	.....	.....	3 93	.....	.....
" " dress goods	M.	.....	12 00	.....	2 73	6 00	.....
" " "	F.	.....	9 00	.....	1 66	.....	.....
" " plush, &c.	M.	.....	.....	.....	4 07	.....	.....
" " " "	F.	.....	.....	.....	2 76	.....	.....
Loom fixer †	M.	15 87	.....	.....	.....	.....	.....
Finisher †	M.	13 50	.....	.....	.....	.....	.....
Designer	M.	24 71	.....	12 00	.....	.....	.....
Lace operative (machine)	M.	14 75	15 00	9 11	.....	.....	.....
" " "	F.	5 00	.....	3 00	1 00	3 60	.....
Braid " " §	M.	16 00	.....	.....	7 90	.....	.....
Braider §	F.	5 41	.....	.....	2 32	.....	.....
Fringe maker	F.	5 30	.....	.....	1 43	.....	.....
Dyer	M.	12 77	.....	7 00	.....	.....	3 30

*Lower figures are given for wages of children in England. †Not separately employed under such designations in Europe. ‡Hand looms are more used than power looms in Europe; the reverse is true here. Statistics from Europe do not distingulsh the two classes. §Systems of employment here and in Europe differ materially.

In this connection we quote from a letter written by Mr. A. B. Strange, at that time traveling in Italy and France, to his son, William Strange. He says, under date of July 7th, 1882: "In France and Italy the price of throwing raw silk sizing from twenty-two to twenty-four deniers into organzine is seven francs per kilo., and of sizing from twenty-eight to thirty deniers, five francs per kilo. *

"At Cannobia, Italy, four hundred orphan children are employed under the direction of six sisters of charity. They are fed, clothed and lodged at the factory, but get no other compensation for their labor during the term of five years, for which they are bound and apprenticed to their employer.

"The full-grown women who attend to the milling, spinning and reeling from the cocoons earn from ninety centimes to one franc (twenty cents) per day, finding and lodging themselves, and these prices are higher than those paid for the same class of work in Novi and other parts of Italy where operatives are more abundant, and in which sections fifty centimes (ten cents) is considered a fair day's pay."

The following extract from a letter of Robert P. Porter to the New York Tribune, dated St. Etienne, (Loire,) October 6th, 1883, is of the same tenor:

"I interviewed one of the largest velvet-ribbon manufacturers in St. Etienne. This gentleman employs over one thousand hands, but requested, for obvious reasons, that his name should not be published.

"'How is the ribbon industry of St. Etienne carried on at the present time?'

"'There are two methods in vogue in this district—first, the weaver is the owner of the loom and works at his own risk. This state of things, although giving satisfaction to the self-complacency of the working class, has been in the long run a nursery for discontent and socialism. I cannot state exactly the average earnings under this system, but should say from sixty cents to $1 a day during full work. In bad times these men are the first to suffer, as they have no capital and the capitalist has no interest in them save to give out the work.'

"'What about the factory system?'

"'Velvet ribbon is also made in large factories with steam and water power. In such establishments we can ascertain the exact

* One kilo. is equal to two and twenty-one hundredths pounds.

wages paid, and it will give me pleasure to submit to you the abstracts from my books for the year just closed.'

"This manufacturer then gave me the figures derived from the books, which showed that the average earnings for weavers (men) for the year had been sixty-five cents a day; for winders (women), thirty cents a day. This gives a very accurate idea of the factory earnings which, though less than the weavers working in their own homes, have the advantage of regularity, so that in the long run the operatives are about equally well off."

One of our silk throwsters in Paterson, speaking of the improved condition of the operatives in silk mills in our State, referred to an old pay-roll, and said: "You here notice that in 1859 twelve hours constituted a day's work, and that girls received from $1 to $2.50 per week, while here [referring to his pay-roll for the current year], you see we pay from $5 to $8 per week to the same class of help for ten hours work per day, and the same kind of labor."

From the reports of our factories for the current year we find that men (ordinary laborers) receive from $1.20 to $2, and women from sixty-six cents to $1.50 per day, while skilled mechanics, employed by seventy firms, average $2.62½ per day.

The tariff upon imported silk goods has enabled our manufacturers to pay the larger wages and build up a large industry. The greatest cause of complaint among manufacturers has been the alleged systematic undervaluation of invoices of imported silk goods. This matter has attracted the attention of the United States treasury department, and, if necessary, additional legislation will undoubtedly be obtained to give to the American laborer the protection to which he is entitled.

The undervaluation of imported silk goods, in common with other imports, as well as other tricks resorted to for the purpose of evading the duty, robs the U. S. treasury, the honest importer and the manufacturer in this country, and throws thousands of workmen out of employment. In our report of 1881 on the silk industry, we referred to the practice of undervaluing invoices of silk goods, and stated that the duty was not paid on more than seventy-five per cent. of the real value of the goods. The report of the supervising special agent of the treasury, dated June 30th, 1883, fully substantiates the above. He says: "From the reports of the special agent in Europe, who is

specially charged with keeping the department advised of the actual foreign market value of all kinds of goods exported to the United States, it appears that the foreign manufacturers of the same classes of merchandise produced in the United States maintain their market in this country, in competition with American manufacturers, by undervaluing their invoices, so that all advantage supposed to be conferred upon American labor by the protective tariff is counterbalanced.

"If the American manufacturer lowers the prices of his goods, as the result of improved methods of production, the European competitor has only to make his invoices a little lower, to enable him to retain his American trade, and thus compel the United States revenue to contribute to that end. There is no doubt that the protective system is much less effective, and secures results far short of the intent of the law, owing to the systematic, persistent and universal undervaluation of all merchandise subject to *ad valorem* duties.

"Many kinds of staple goods are now consigned by European manufacturers to their agencies established in the United States, and while these manufacturers sell freely and openly to purchasers from other countries, they refuse to sell their products directly to American purchasers, but refer them to their American agents, to whom all their goods for the United States are consigned. The American purchaser is thus compelled to buy his goods from the agent of the manufacturer, duty paid, and as a rule, without any knowledge of the foreign market value of the goods. By this system, the importing business is becoming concentrated in the hands of foreigners, whose chief efforts are employed to get their goods through the custom house upon the lowest possible valuation and payment of the least possible amount of duties, and the appraising officers are wearied with perpetual contests on the subject of values.

"It is found that foreign manufacturers of or wholesale dealers in many classes of merchandise decline to sell or to furnish price lists to American merchants. It turns out that those manufacturers or dealers have established business houses or agencies or special consignees in this country, to whom they make shipments exclusively. It is suspected—it might be said that it is found out—that in many cases the goods sent over to these representatives are invoiced below their actual value abroad. There is no risk in this of mercantile loss to the foreign consignor, as his interest and that of his representa-

tive are the same; the latter pays not at the invoiced value, but accounts at the actual selling price, in which both have an interest. It is not easy for the government appraiser to learn, in all cases, the real market value abroad, for price lists have been withheld, and actual sales are supplanted by this process; and it is hard to maintain criminal or civil actions for fraud against the consignee, for it is not easy to prove that he had a hand in the fraudulent undervaluation. Legislation aimed at these practices is needed."

Under date of December 1st, 1883, a report is made by the same officer to the Secretary of the Treasury, giving reports of the special agent detailed to investigate the alleged undervaluations. Reports of of United States consuls in Europe have been received on the same subject:

"The consul at Horgen, Switzerland, in a report to the Secretary of State, dated June 16th, 1882, says:

"'I have considered it my particular duty to make a careful examination into the system of invoicing silk, that article being the principal item of export from this jurisdiction, and I am convinced that the government loses a very large sum annually, from undervaluation of said material.

"'I have already been informed that two houses within my jurisdiction have a system of undervaluing their goods, and Mr. Byers, consul at Zurich, has informed me that he has heard the same report. It is openly said here that the silk trade is so heavy to the United States that half the profit of the export is drawn from undervaluation.'

"Under date of October 8th, 1883, the consul at Zurich states that his employe, an expert who had been examining silk invoices for some weeks, almost constantly, found regular undervaluation of prices. He states that the former silk expert employed by him left his office after one day's work, with the remark that he found too much fraudulent undervaluation among prominent shippers, some of whom were his friends, and that they would make it too hot for him to do his duty with the invoices. The present expert has been approached by silk shippers, and inducements offered, with the hope that he would leave the office and let the invoices alone. He says that some twenty-five invoices have been undervalued, in amounts ranging from 400 francs to 1000 francs each, and in some cases, even more than this.

Invoices from Horgen have been found always undervalued. These calculations are on cost alone; packing, insurance, &c., are omitted.

"VELVETS AND RIBBONS.

"Under date of October 11th, 1883, the consul at Basle, reporting upon invoices of velvets and short plush ribbons, states that investigations made by him demonstrate the proofs of former reports on undervaluations. He refers to one of the most favorite and successful tricks of dishonest importers of including a small quantity of correctly-valued goods in some shipment with a large quantity of undervalued ones, and covering the whole with a consular invoice so vague and indefinite in its terms that, in the haste and pressure of business at the appraiser's office, the undervalued merchandise may escape undetected. He gives a list of fifteen invoices of ribbons, shipped by Fichten & Fils, manufacturers of Basle, to C. A. Auffmordt & Co., of New York, amounting in all to 130,000 francs. He states that these invoices are fraudulent in character; that the ribbons therein mentioned are invoiced at from sixty-five to sixty-eight centimes per line, while in no case has he been able to obtain an estimate of the market value of the goods at less than ninety centimes.

"In a despatch from the consul at Basle, dated October 22d, 1883, he states that velvets manufactured at Crefeld, Germany, which are imported this year into the United States, in large quantities, are greatly undervalued; that the methods by which these undervaluations are maintained are well known to American merchants who are engaged in the importation of consigned merchandise from Europe; that the velvet manufacturers of Crefeld and the adjacent village of Vursen form a close co-operative association. In respect to their foreign trade, while they sell their goods freely to purchasers from England, France and other countries, they refuse, absolutely, to sell any part of their products directly to importers from the United States. Each of the principal velvet manufacturers in the Crefeld districts has an agent or consignee for sale or commission for the account of the manufacturers.

"When an independent purchaser from the United States goes to the manufacturer to buy velvets, he is either referred to the agent in New York or is told that he can purchase the goods in dollars and

cents payable in New York. By this method, the goods are imported at New York at values unknown to the actual purchaser, the consular invoice being made to the agent in New York, who pays the duties and delivers the goods, duty paid, to the purchaser who orders them at Crefeld.

"Almost all these dollar price system manufacturers of silk goods in Crefeld state that they have been, for years, enabled to export their goods to the United States in immense quantities, without revealing to the custom-house authorities the actual market prices at which their products are really sold, and which form the basis of consular invoices and dutiable values. By such means, honest importations are made practically impossible, and the customs revenue of the United States systematically robbed of vast sums of money.

"A STRIKING CONTRAST.

"In one of the reports, dated September 14th, 1883, the consul at Basle submits a full statement, showing the result of an examination made by him of the valuations of velvet, or short plush ribbons, showing the comparison between the prices at which actual sales were made and the prices stated in the consigned invoices. After treating the subject in detail, he sums up the matter as follows:

"'A recapitulation and comparison of the foregoing actual market values, as shown by the invoices of J. J. Linder to Jaffray & Co., with the consignment prices of Fichten & Fils to Auffmordt & Co., exhibits the following striking contrast:

Actual Values.		Consignment Prices.		Difference.	
6 wide	1.12½ centimes.	6 wide	68 centimes.	43½	centimes.
8 "	1.08 "	8 "	67½ "	40½	"
10 "	1.075 "	10½ "	66⅔ "	41	"
13 "	1.02 "	14 "	68.4-7 "	33½	"
18 "	98 "	18 "	65¼ "	32¾	"
24 "	95 "	22 "	65.1-5 "	30	"

"'There is exhibited, therefore, a clear and convincing disparity of from thirty to forty per cent. between the prices at which short plush ribbons are purchased in Basle by skillful buyers representing the highest class of American importers and the declared prices at which similar goods are invoiced for consignment to rival importing-

houses. Can there be any doubt that the latter are, almost without exception, grossly undervalued?

"'And yet I am informed by several of these consignors of velvet ribbons, that their invoices usually pass the New York custom-house without difficulty. If this be true, which is hardly credible, what must be said of the efficiency of our impost system? What encouragement does it offer for the legitimate importer to stand up against a disadvantage of from thirty to forty-two per cent. in the dutiable valuation of a class of goods upon which a duty of fifty per cent. *ad valorem* is assessed? How can Mr. Jaffray, for instance, who pays 103 centimes per line for goods like this sample [sample enclosed], and the fifty per cent. duty thereon, maintain himself in competition with Mr. Auffmordt, who receives on consignment large invoices of similar merchandise like this, at sixty-five centimes per line [sample enclosed.] Aside from all consideration of the vast revenue that is lost to the government by these wholesale undervaluations—this persistent disregard of law, their debasing and degrading influence upon commercial morality is far-reaching and deplorable.

"'Probably five-sixths of all the silk goods imported into the United States are consigned, and I only report the sum of all that I have observed or heard from persons familiar with the facts, in saying that of this vast amount of consigned silks, nearly all are, in my deliberate opinion, undervalued from fifteen to forty per cent. below their market values in Europe, and the average of this undervaluation cannot be less than twenty-five per cent.'

"In a report dated Paris, August 17th, 1883, the special agent calls attention to the invoices of Martin Hubsch, of Lyons, consigned to Myer & Co., New York, which he finds are largely undervalued, and suggests that a careful investigation be made of these importations. Upon inquiry at the appraiser's department on the subject, it was ascertained that the invoices of the firm referred to were undervalued to such an extent that the consignee usually made large additions to the value upon entry to avoid penalties upon advances by the appraiser.

"ADDITIONS BY CONSIGNEES.

"In August last Myer & Co. received from Hubsch a consignment of silks valued at $14,160, to which the consignee added $4200, and

the appraiser subsequently added $300 more, being an advance of thirty-one per cent., and to another invoice, received by the same vessel, they added $2722, and to another one $2600, and to another invoice of the value of $26,000, consigned to another firm, Hoerninghouse & Curtis voluntarily added $7646.40, to make market value, and to another of $35,000 the same firm added $10,601.25, to make market value.

"Undervaluation of silks consigned is the rule, and the consignees know that unless they make advances on entries they incur the risk of penalties upon advances liable to be made by the appraisers.

"CERTIFICATES FROM OTHER CONSULATES.

"August 17th, 1882, the special agent reports the practice prevailing in Europe of shipping goods to the United States from various ports of Europe, and having the invoices certified at consulates other than those in whose jurisdiction the goods were purchased, and shipped by persons who were not the owners, purchasers or actual shippers of the goods, and had no actual interest in them. He states that the advantages derived from these practices are—first, the saving of duty for inland transportation, and second, to avoid detection in undervaluation by the consular officers certifying the invoices, who are not supposed to be familiar with the market value of the goods extensively dealt in within their jurisdiction.

"September 6th, 1882. In a report respecting the market value of silks shipped from Switzerland to the United States, he furnishes information derived from one of the most extensive and reputable manufacturers of silks in the Zurich district, that a manufacturer consigns all his products for the American market to a commission, house in New York, and that the consular invoices were uniformly undervalued twenty per cent. The manufacturer justifies this practice on the ground that the United States tariff is iniquitous and contrary to public policy and international comity, and that he could not ship to the United States if he declared his goods at the true value; that this practice had become established both at Zurich and at Lyons.

"The special agent also gives information from another manufacturer who, as commissioner, assisted in arranging a commercial tariff between Switzerland and France, and who, prior to and pending

negotiations between the two countries, ascertained beyond any question of doubt that Zurich sales shipped to the United States were undervalued fully twenty per cent., and that such undervaluation was absolutely necessary to enable the Swiss manufacturers to compete with the American-made goods. He was also informed that it was perfectly understood, and no secret, that Lyons goods for the American trade were undervalued from ten to twenty per cent. He also states that Consul Byers, at Zurich, informed him that the Zurich agent or representative of the large and reputable house of Passavant & Co., of New York, told him in plain terms that our tariff for silk goods was commonly regarded as a monstrosity not entitled to respect, but a thing to be avoided and evaded by all possible means and methods, and that the declarations upon consular invoices were not held to be in the least binding upon the conscience.

"ALLOWANCES FOR DEFECTS.

"The undervaluation of silks at Zurich is not alone in invoicing the goods at prices below their true market value, but it is quite a common practice to make deductions also from such prices in the form of 'allowances' for pretended defects or imperfections in the goods, under such designations as 'imperfect,' 'defective,' 'light,' 'spotted,' 'soft,' 'streaked,' 'uneven,' 'wrinkled,' 'bad,' 'dirty,' &c.

The manufacturers of silk handkerchiefs are doing a fair business. Our Paterson manufacturers excel in this branch of the industry and have overcome the prejudice of the public in favor of imported goods. The competition of foreign makers does not materially affect their business. During the past year the silk handkerchiefs manufactured in the United States are valued at nearly $5,000,000, while the value of imported handkerchiefs was only $60,000. There is a sharp rivalry for the trade in this line of goods, which has caused them to be sold on small margins of profit. The consumers are found principally among the middle and poorer classes, and the demand is for a medium grade of goods. The best market is found in the Western States.

The manufactures of sewing silk, machine twist, &c., in the United States (for the fiscal year ending July 1st, 1883,) are valued at $9,250,-

000, and of ribbons at nearly $8,000,000. The importations of ribbons for the same period are valued at a little less than $2,250,000.

In both of these lines of goods the trade has been remarkably good, when the general depression is taken into consideration.

The following tables, compiled by Mr. Wm. C. Wyckoff, Secretary of the Silk Association of America, giving imports of raw silk at New York and San Francisco, as well as the home production of finished goods in the United States, will also be interesting in this connection:

Imports of Raw Silk at New York and San Francisco in the Fiscal Years Ending June 30th.

	Bales.	Value.
1882–1883	23,927	$14,687,584
1881–1882	21,682	13,177,898
1880–1881	20,198	10,885,167
1879–1880	21,741	11,749,943
1878–1879	15,949	8,080,681
1877–1878	10,190	5,002,483

Imports of Silk Manufactures Entered at the Port of New York in Fiscal Years Ending June 30th.

Articles.	1882–83.	1881–82.	1880–81.	1879–80.	1878–79.	1877–78.	1876–77.
Silk piece goods	$18,585,896	$19,429,606	$16,167,056	$16,696,145	$13,877,796	$11,281,968	$12,647,212
Satins	109,666	200,763	272,641	263,591	113,705	33,081	28,460
Crapes	479,962	536,277	489,560	457,071	434,744	324,040	517,014
Pongees	30,938	8,651	16,477	3,212	1,996	580	2,431
Plushes	875,785	1,121,990	495,496	212,176	130,657	57,963	80,731
Velvets	1,940,015	1,402,663	1,575,715	2,207,296	1,713,879	1,221,545	1,398,737
Ribbons	2,229,226	2,707,693	3,103,564	2,975,147	1,995,257	1,640,647	1,524,724
Laces	3,126,577	4,073,891	1,883,236	1,295,017	944,530	1,064,437	1,033,228
Embroideries	.....	.....	.....	.....	.....	1,552	468
Shawls	6,810	7,790	17,466	13,908	9,978	1,057	5,650
Gloves	333,716	170,151	204,703	223,265	106,483	104,970	30,591
Cravats	69,455	60,341	69,914	117,996	121,555	63,881	51,066
Handkerchiefs	59,786	75,671	53,727	65,135	47,248	41,926	67,278
Vestings	.....	.....	.....	.....	.....	.....	1,616
Hose	297,960	179,254	110,277	106,596	60,646	45,686	51,381
Threads and yarns	155,282	128,790	175,627	303,215	59,563	85,924	35,456
Braids and bindings	1,087,416	1,191,140	1,323,437	1,707,114	1,002,042	1,129,209	992,549
Silk and worsted	90,786	123,939	174,390	135,434	158,995	125,121	141,062
" cotton	4,486,836	5,011,843	4,366,921	3,813,793	2,244,018	1,852,105	2,092,326
" linen	1,039	2,253	1,644	398	811	2,969	7,555
Totals	$33,967,171	$36,432,706	$30,501,851	$30,596,509	$23,023,903	$19,078,661	$20,709,585

SILK MANUFACTURES IN THE UNITED STATES.

Production of finished goods in the calendar year ending December 31st, 1882—

Sewing silk, machine twist, &c.	$9,281,263
Dress and piece goods	7,459,109
Tie silks and scarfs	609,332
Millinery silks	978,906
Handkerchiefs	4,948,804
Ribbons	7,967,263
Laces	695,155
Braids and bindings	1,150,307
Trimmings, &c.	5,248,230
Mixed goods, &c	1,126,172
Total	$39,464,541

RECAPITULATION.

Sewings, twist and floss silk	$9,281,263
Broad goods	9,047,347
Handkerchiefs, ribbons and laces	13,611,222
Trimmings and small goods	6,398,537
Mixed goods and silk values therein	1,126,172
Total	$39,464,541

The following are the values of imports of silk manufactures and raw silk imported during the past thirteen years, as given in the "Annual Statements of the Imports and Exports of the United States," prepared under the direction of the United States Secretary of the Treasury :

TOTAL VALUE OF SILK IMPORTED.

Fiscal Year.	Manufactures of Silk.	Raw Silk.	Pounds.
1871	$32,341,001	$5,739,592	
1872	36,448,618	5,625,620	
1873	29,890,035	6,460,621	
1874	23,996,782	3,854,008	
1875	24,380,923	4,504,306	
1876	23,745,967	5,424,408	
1877	21,830,159	6,792,937	
1878	19,837,972	5,103,084	
1879	24,013,398	8,371,025	
1880	32,188,690	12,024,699	2,562,236
1881	32,056,701	10,888,264	2,550,103
1882	38,985,567	12,890,392	2,879,402
1883	36,764,276	14,043,340	3,253,370

The values of raw silk as given in the above table are the actual market values in the United States, while the values of manufactured silk goods represent the invoice value. To get the actual market value in this country, allowance should be made for probable under-valuations and sixty per cent. for custom duties. The reduction in the tariff on silk goods from sixty to fifty per cent. took effect at the end of the fiscal year 1883, viz., June 30th.

The following table will show the imports of raw silk at New York and San Francisco, classified by countries of export, for the calendar year ending December 31st, 1883:

MONTHS.	SHIPMENTS FROM EUROPE.				SHIPMENTS FROM ASIA.						TOTAL.	
	Strictly European.		Reshipped Asiatic.		Japan.		Hong Kong.		Shanghai.			
	Bales.	Value.	Bales.	Value.	Bales.	Value.	Bales.	Value.	Bales.	Value.	Bales.	Value.
January	307	$369,236	13	$9,777	1,182	$729,434	540	$184,190	801	$383,345	2,843	$1,675,982
February	234	284,667	8	4,135	639	395,661	389	133,034	367	186,406	1,637	1,003,903
March	223	265,138	19	11,894	788	482,168	441	155,075	552	261,621	2,023	1,175,896
April	280	314,613	6	4,392	870	516,515	173	57,764	255	130,206	1,584	1,023,490
May	297	334,773	61	35,475	964	568,129	662	233,688	682	316,635	2,666	1,488,700
June	174	195,073	40	24,829	503	309,056	217	74,059	611	292,327	1,545	895,344
July	280	313,754	38	16,836	314	203,376	313	106,657	63	28,899	1,008	669,522
August	226	254,212	14	6,508	237	150,640	191	68,722	17	7,100	685	487,182
September	306	332,003	1	799	806	523,310	454	161,004	148	71,975	1,715	1,089,091
October	379	428,992	50	35,806	1,439	906,274	555	197,076	360	158,593	2,783	1,726,741
November	337	341,854	13	10,608	1,831	1,157,497	819	257,806	250	110,046	3,250	1,877,811
December	297	332,236	5	2,992	1,877	1,014,433	681	222,348	434	200,045	3,294	1,772,054
Totals	3,340	$3,766,551	268	$164,051	11,450	$6,956,493	5,435	$1,851,423	4,540	$2,147,198	25,033	$14,885,716

SILK CULTURE.

The special report made by William C. Wyckoff, for the tenth census of the United States, gives a history of the several attempts made to introduce sericulture in America, beginning with the first settlers and continued at intervals up to 1880. A brief summary of the report will be found of interest.

Silk culture was first introduced into this country in 1619, under instructions from James I. Very little progress was made, however, until large bounties were offered, and fines imposed on all planters that did not have at least ten mulberry trees to every hundred acres of land. No effort appears to have been made to encourage the manufacture of silk goods. The policy of Great Britain was, on the contrary, opposed to the introduction of manufactures into the colonies, and the raw material was shipped to England. Notwithstanding the great pressure brought to bear on the colonists, the culture of silk proved so unprofitable that it was abandoned. In 1732, an effort was made to revive the industry in Georgia, and the same means was adopted to force the industry upon the colonists. The settlers were required to plant a certain proportion of mulberry trees. Ten years were allowed for the cultivation of the soil, and one hundred trees were to be planted on every ten acres of land, when cleared. A man was sent from Piedmont to teach the colonists the art of reeling, and in 1734–35, Gen. Oglethorpe took with him to England, eight pounds of colonial silk, which was presented to Queen Caroline. Under royal instructions, Sir Thomas Lambe took charge of the precious consignment, and had it thrown and woven at his factory. In 1735, on the king's birthday, the queen honored the colony by appearing at a levee in a dress said to be entirely made of Georgia silk.

The industry progressed slowly, but favorably, until 1766, when the maximum production was reached. In this year were produced twenty thousand pounds of cocoons, which would yield about three thousand pounds of reeled silk. In 1770, the yield of cocoons had fallen to two hundred and ninety pounds. Other colonies had followed the example of Georgia, with similar results. A filature was established in Philadelphia, in 1770, and received, in 1771, about two thousand three hundred pounds of cocoons; two-thirds of the cocoons had been grown in New Jersey. Susannah Wright, of Columbia, Pa.,

a Quaker lady of some literary ability, reeled and wove, from home-grown cocoons, a piece of mantua sixty yards in length, and a dress was made from this fabric for Queen Charlotte. Thus, for a second time, the wife of a British sovereign honored the colonies by appearing at court in American silk. Another Quaker lady, Grace Fisher, a noted preacher, made some silk fabrics, which were presented by Governor Dickinson to Mrs. Catharine Macaulay, the historian.* The outbreak of the revolutionary war checked the progress of the industry, and very little was heard of sericulture up to the time of the excitement over the discovery of the *Morus Multicaulis.* This silk-culture madness, which took complete possession of a large number of our quiet New Jersey people, and, on a small scale, rivaled the tulip mania of the Dutch, merits more than mere mention. Some conception of the extent of this craze may be obtained from the legislation of the period. In 1836, New Jersey, following the example of other States, offered a bounty of sixteen cents a pound for cocoons and fifty cents a pound for reeled silk. Nor was this all the encouragement the silk growers received, for premiums were offered by counties, fairs and stock companies. The excitement culminated in the formation of a United States Silk Society, the result of national silk conventions held during the years 1838 and 1839, in Maryland, New Jersey, New York and Connecticut.

The number of private individuals engaged at this time, in silk culture, cannot be estimated. "In Burlington, New Jersey," says a writer of the day, "you can scarcely go into a house but you find the inmates engaged in breeding worms." Speculation in trees reached enormous proportions. The anticipated profits of producing silk were insignificant, as compared with the fortunes to be made by raising the new mulberry tree. Orchards were planted in every State in the Union. At least three hundred thousand trees had been sold at Burlington, New Jersey, by September, 1838, and all that were then growing there could have been sold at forty to fifty cents apiece, if owners had been willing to take that price. In December, 1838, sales were made in Boston at $1 per tree, but the owners withdrew most of the lot, being dissatisfied with the prices obtained. Trees of a single season's growth were sometimes sold at $5 each. The sales of trees, cuttings, &c., in a single week, in Pennsylvania, exceeded $300,000, and in many cases

* Watson's Annals, p. 619.

the same trees were sold two or three times, at advancing prices. Other instances are noted where the trees standing on fifteen acres were sold for $32,500; on two acres, for $4000; on ten acres, for $38,000.

Although a belief in the profit of silk culture was the basis of the demand for the tree, very little progress was made in the industry, and it was completely ruined by the wild speculation and consequent loss to all who had been swept into the current.

The manufacture of silk goods was almost unknown in New Jersey as late as 1840, and there was, consequently, no home market for either cocoons or reeled silk. The report of the United States census (1840) on the manufacture of silk gives the values, &c., of reeled, thrown and manufactured silk together for the whole country, as follows, viz.: "Value of silk reeled, thrown or other silk made, $119,814; hands employed—males, 246; females and children, 521; capital invested, $274,374." Connecticut ranked first, producing $55,485; Massachusetts second, $38,079; Pennsylvania third, $14,-644, and New Jersey *seventh*, producing $858, and employing ten males and seven females and children, upon a capital of $2020.

Late in 1839 agriculturists, finding that growing cocoons was unprofitable, and angered by their losses, which, in many cases, resulted in financial ruin, pulled up most of their mulberry orchards. Sericulture has not, however, at any time, been entirely abandoned, although very little attention was paid to it until a few years ago, when a few philanthropic ladies in Philadelphia associated themselves together under the title of "The Women's Silk Culture Association of the United States."

Cheaper labor in Europe and Asia renders it impossible to raise silk in this country on equal terms. It will, perhaps, never do more than provide employment for those who would be otherwise non-producers. These would be such persons as from sex or circumstances are not engaged in any remunerative business, and would find silk-worm raising a means of adding to their revenues. Silk culture would, under such conditions, add largely to our agricultural resources.

A special report of the United States Department of Agriculture on this subject contains the following statement:

"Silk culture never was and never will be an exceedingly profitable business, but it adds vast wealth to the nations engaged in it, for the simple reason that it can be pursued by the humblest and poorest, and requires so little outlay.

"The question of its establishment in the United States is a question of adding to our own productive resources.

"There are hundreds of thousands of families in the United States who would be most willing to add a few dollars to their annual income by giving light and easy employment for a few months each year to the more aged, to the young, and especially to the women of the family, who may have no other means of profitably employing their time. This holds especially true of the people of the Southern States, most of which are pre-eminently adapted to silk culture. The girls of the farm who devote a little time each year to the raising of cocoons may not earn as much as their brothers in the field, but they may earn something, and that something represents an increase of income, because it provides labor to those members of society who at present too often have none that is remunerative. Further, the raising of a few pounds of cocoons each year does not and need not materially interfere with the household and other duties that now engage their time, and it is by each household raising a few pounds of cocoons that silk culture must, in the end, be carried on in this, as it always has been, in other countries. Large rearing establishments seldom pay."

The movement inaugurated by the Women's Silk Culture Association has not yet passed the experimental stages, but is making progress. One of the first acts of the association was to establish a school to teach all branches of silk culture, with a view to introducing it as a domestic industry into families living in rural districts.

The greatest difficulty encountered in the effort to establish sericulture in this country has been the imprudence of many parties who have started in the business on a large scale without the experience and the knowledge which are absolutely essential to success. They confidently expected easily to amass large fortunes in a few years. Invariably, disappointment and discouragement follow, and the enterprise is abandoned.

Some substantial progress has, indeed, already been made. Farms have been purchased, mulberry trees planted and cocooneries established in different parts of the country.

Messrs. Wise & Des Lauriers have a large farm in Virginia devoted to silk culture. Virion Des Lauriers, of this firm, imports silk worm eggs and mulberry trees in large quantities for our market, and

has recently filled an order from the Department of Agriculture for eighty ounces of eggs, which will probably be distributed among the people.

J. Herbelin, of New Orleans, La., has five farms, of twenty acres each, devoted to the culture of silk; each of these farms is in charge of a family brought from Piedmont, Italy. He expects to hatch sixty ounces of eggs (2,400,000) next season. Mr. Herbelin also operates a steam filature, running twelve reels. He will probably increase the number to thirty next year, and employ about forty women and six men.

It is claimed that Mr. Herbelin can reel the silk from the cocoons at a cost of not more than seventy-five cents per pound, which leaves him a margin of profit on the raw silk at the present market rates. A company of ladies and gentlemen in New York have organized a company and purchased a large tract of land on the east side of the Wading River, in Burlington county, N. J., and have ordered twenty-five thousand mulberry trees from France, which are to be planted next spring. While sericulture is the main object of this company, grape-vines and fruit trees will also be planted in large numbers.

In addition to the filature at New Orleans, La., there is one at Corinth, Miss., and another at San Francisco, Cal. The reeling of silk with hand-reels is found to be too expensive to yield any profit. An Austrian woman, with her daughter, has been employed by the Woman's Association for some time at an expense of $1.50 per day. The woman and child, under favorable circumstances, reel a half pound of silk in one day, showing that the cost of reeling alone is $3 a pound As it takes at least four pounds of cocoons, worth $1 per pound, to make one pound of reeled silk, we find that silk reeled on a hand-reel would cost at least $7 per pound, exclusive of cost of transportation, office and other necessary expenses, while the raw silk imported from Asia or Europe can be delivered at our factories for from $4.25 to $5 per pound. Until some successful automatic reel is introduced that can be operated by steam power, silk-reeling will not prove to be a profitable branch of the industry. The woman referred to above would receive about twenty cents per day in Italy for the same work, or only twenty per cent. of the amount paid here.

When the filature is located at a great distance from the producer,

the expense of handling, transportation, &c., is a matter for consideration in any computation of probable profits.

It takes between seven hundred and one thousand dry cocoons to weigh one pound, and nearly four thousand to make a pound of raw silk, which, if well reeled, is worth about $5 per pound.

Experience and great care are necessary in reeling from the cocoons, for if the thread is of irregular thickness the value of the silk is very greatly reduced.

Among the consular reports made to the State Department is one from Ben Franklin Peixotto, United States Consul at Lyons, on the future of silk culture in the United States. He begins by showing that it is not practicable for the cultivator to reel his silk after the manner of people in Europe, where the instruments used centuries ago are still employed, but that the raiser of cocoons must sell them.

"For the success of silk culture in our country two things are now requisite—the acquisition on the part of those about to engage in it of sound knowledge of its processes and requirements, and proper organization. In order to avoid delays and losses, the person who begins silk culture should have a pretty clear idea of the scale of operations which is likely to be most profitable, of the trees, or rather shrubs, which must be obtained, of the apparatus and fixtures necessary, and of the results which may be reasonably expected from the labor and expense required. All of these items will be found to vary in different parts of the country, and I fear that general rules, broad deductions, and such information as would apply under all circumstances and in all places would be extremely difficult to formulate and too vague for practical use at any given point. In fact, as far as information which may be considered perfectly general is concerned, I have, for the time being, only one point to put forward in addition to what has already been published in the United States, which is to repeat and show as emphatically as possible that the use of the reels at present employed for the filature of silk is entirely impracticable in our country, and that the raiser must sell his cocoons. This has been so often said and so clearly shown that I should consider it unnecessary to repeat it had not my attention been called to the fact that the success of several people and associations in the United States in raising cocoons has again made it a temptation to endeavor to reel silk, and during the past year I have received applications from people in differ-

ent States for information as to the kind of silk-reel employed here which would be most suitable for use by them.

"I am aware, also, that estimates have been made and published by some eminent authorities tending to show that this work could be done on a paying basis in some places in America. So far as I have seen them, however, these estimates are fatally defective in that they do not allow for differences in quality of silk reeled by competent or incompetent people, and under circumstances favorable or otherwise, but seem to assume that any silk reeled in our country would be a first-rate article, and paid for accordingly. While this might be true in isolated cases, it could not be true in general, as with present appliances the art of reeling good silk is only to be acquired and retained by years of apprenticeship and constant practice, joined to a natural talent for the work. So true is this that even in districts where the work has been largely carried on for many generations quite a large proportion of women who try for years find it impossible to become good reelers. Now, there is a considerable difference in price between well-reeled and poorly-reeled silk—a difference so great that silk not well reeled in every way is not worth as much as the cocoons from which it is derived. It is therefore quite a hopeless task to reel silk unless the reeler is skilled. Even if it could be done to advantage, which I do not think it could, there exists in America no means of training reelers. In Europe they are taught by degrees in the filatures, working first at the easier stages of the operations, and afterward being helped forward under the eyes and guidance of experienced operatives. Another grave defect in the estimates alluded to is that all the profit is assumed to be paid to the reeler. This can evidently only be the case when each reeler runs her own reel, owns and cares for her own cocoons, sells her own silk, and furnishes her own capital. Now, even supposing that persons so fortunately placed as to be able to fulfill all these conditions should wish to engage in silk-reeling, which is in the highest degree improbable, there exists an almost insuperable obstacle to the production of good silk except by an establishment large enough to use the cocoons of many producers. Nearly every silk crop as raised by the individual growers contains three or four grades of cocoons, and to produce good and uniform silk these must be separated and each sort reeled by itself, producing several grades of silk.

"Without going into detail, it is enough to say that this is not prac-

ticable for those who attempt to reel their own cocoons, and that for this reason, and many others, hand-reels and single basins have been nearly abandoned, even in Italy, the women finding so much difficulty that they prefer to sell their cocoons and work in large establishments, where the work is done to more advantage. It is evident, therefore, that, from the estimates made, there should be a considerable deduction for poor workmanship, and another for use of capital, organization, selling expenses, superintendence, insurance, repairs, deterioration, &c. In fact, I do not see in what way the reeling of silk in the United States, by the ordinary method, could be made to bear a much higher charge for labor than that borne by European filatures, which barely pay with labor at one franc *per diem* of thirteen hours. To be able, then, to reel silk by the ordinary reels, it would first be necessary to find a sufficiency of highly-skilled operatives willing to labor in a factory thirteen hours per day for twenty cents each. I sincerely believe and hope that this can never be done. I have enlarged somewhat upon this difficulty for the purpose of showing that the growers, or, at any rate, individual growers, of cocoons should not attempt to do the reeling, but by no means with an idea of discouraging the raising of silk-worms, which is and should be an entirely separate matter. To use a rough comparison, I should esteem it as wasteful, even if possible, for each grower to attempt to reel his own cocoons, as for each farmer to grind his own wheat upon his farm and endeavor to sell the flour. It is therefore clear that the object of the sericulturist should be to raise and market as good a crop of cocoons as possible to the best advantage, and with the least possible expense and risk. * * * I am of the opinion that individual growers will have great difficulty in selling cocoons, if they are isolated from others, and I therefore doubt the wisdom of encouraging sporadic and ill-directed efforts, which, however well meant and earnestly pursued, are much more apt to end in disappointment, discouragement, and discredit to the newly-developing industry than in anything else. It seems to me to be neither wise nor fair to furnish estimates of returns, which presuppose an organization of the industry, without mentioning the difficulties which must be encountered where the organization is lacking."

There is, however, a market for waste silk and pierced cocoons, in this country, a large amount being annually imported and consumed in our factories, in the manufacture of spun silk. The following

table, compiled by the Secretary of the Silk Association of America, shows the amount and value of waste silk and pierced cocoons imported at the ports of New York and San Francisco, in calendar years ending December 31st:

MONTHS.	1883.		1882.		1881.	
	Pkgs.	Value.	Pkgs.	Value.	Pkgs.	Value.
January	180	$62,548	469	$161,819	78	$30,763
February	266	103,213	142	16,871	12	4,872
March	299	113,752	391	145,178	327	138,492
April	123	47,870	7	3,537	647	178,949
May	71	34,650	318	121,591	266	120,258
June	126	64,709	3	1,935	33	19,515
July	83	37,535	359	130,349	69	53,086
August	27	9,896	58	14,033	240	87,295
September	41	9,970	70	9,993	13	8,266
October	50	14,282	237	65,762	50	24,498
November	474	124,024	383	80,718	88	39,471
December	245	77,871	603	196,616	187	63,721
Total	1,985	$700,320	3,040	$948,402	2,010	$769,186

MONTHS.	1880.		1879.		1878.	
	Pkgs.	Value.	Pkgs	Value.	Pkgs.	Value.
January	177	$73,924	.....	.....	102	$19,095
February	70	12,604	35	$2,702	56	29,101
March	50	16,210	67	30,007	196	40,048
April	10	6,939	29	14,604	189	57,891
May	32	16,781	100	48,380	68	20,904
June	27	28,097	14	6,187	6	2,112
July	.....	.....	2	246	26	7,569
August	28	12,590	164	50,872	6	926
September	20	6,155	441	209,533		
October	17	8,828	1,584	412,286	1	300
November	42	14,212	1,055	300,441	34	10,469
December	19	8,264	338	78,573	30	20,148
Total	492	$204,604	3,829	$1,153,831	714	$208,563

From the foregoing table, it will be noticed that we imported, in the year 1883, nearly two thousand packages of waste silk and pierced cocoons, valued at over $700,000, while the total production of silk cocoons, during the past year, seems insignificant, as it does not exceed ten thousand pounds, worth about $1 per pound, which would yield about two thousand five hundred pounds of raw silk. During the past year, twenty-five thousand and thirty-three bales of raw silk, valued at $14,885,716, were imported for consumption in our mills.

THE SILK-WORM.

The silk-worm proper, which supplies the ordinary silk of commerce, is the larva of a small moth known to scientific men as *Sericaria Mori*. It is often called the mulberry silk-worm.

There are several closely-allied species which spin silk of different qualities, none of which, however, unite strength and fineness in the same admirable proportions. The mulberry species, moreover, has acquired many useful peculiarities during the long centuries of cultivation it has undergone. The quality which man has endeavored to foster in breeding this insect has been, of course, that of silk-producing. Hence, we find when we compare it with its wild relations that the cocoon is vastly disproportionate to the size of the worm which makes it or the moth that issues from it. Other peculiarities have incidentally appeared, and the varieties or races of the silk-worm almost equal in number those of the domestic dog. The white color of the species, its seeming want of all desire to escape as long as it is kept supplied with leaves, and the loss of the power of flight on the part of the moth, are the result of domestication.

The egg of the silk-worm moth is called by silk-raisers the "seed." It is nearly round, slightly flattened, and in size resembles a turnip seed. Its color, when first deposited, is yellow, and this color it retains if unimpregnated.

If impregnated, however, it soon acquires a gray, slate, lilac, violet, or even dark green hue, according to variety or breed. It also becomes indented. When diseased it assumes a still darker and dull tint. With some varieties it is fastened to the substance upon which it is deposited by a gummy secretion of the moth produced in the act of ovipositing.

Other varieties, among which are the Adrianople whites and the

yellows from Nouka, in the Caucasus, have not this natural gum. As the hatching-point approaches, the egg becomes lighter in color, which is due to the fact that its fluid contents become concentrated, as it were, into the forming worm, leaving an intervening space between the worm and the semi-transparent shell.

Just before hatching the worm within becomes more active, and a slight clicking sound is frequently heard. This sound is also common to the eggs of many other insects. After the worm has made its exit by gnawing a hole through one side of the shell, the shell becomes perfectly white. Each female produces from three to four hundred eggs. Forty thousand of these eggs weigh one ounce. The color of the albuminous fluid corresponds to that of the cocoon, so that when the fluid is white the cocoon produced is also white, and when yellow the cocoon again corresponds. There is nothing of more importance in silk-raising than the selection of a breed that is productive of silk, as some are greater spinners than others. Although these natural capacities are greatly augmented by plentiful feeding and careful tending, in good races, yet there are varieties, the natural force of which cannot be changed by any amount of food.

The attempt to raise several crops of worms in a season has generally proved disastrous. The same amount of labor is required to raise *Bivoltines* and *Trivoltines* as is necessary to raise one good crop of annuals, and the *many-crop* worms produce a thin cocoon, eat as much and occupy as much time to complete their work as the annual. Besides being of small quantity, the silk obtained is generally coarse, rough and of comparatively little value.

Mrs. E. C. Long, of Tallahassee, Fla., has given much of her time to experimenting in sericulture, and gives as her experience the following breeds of worms as those yielding the best results: *Milinaise yellow*, which is of medium size, a rich cream color, very fine, said to yield one hundred and twenty pounds of cocoons to one ounce of eggs.

The *yellow var* is larger, same color, and will yield from eighty to one hundred pounds of cocoons to one ounce of eggs.

The *Corsica white* is a large, firm, white cocoon, not satin-looking (which is a defect), and will yield from one hundred to one hundred and twenty pounds of cocoons to one ounce of eggs.

The Japanese green, a small, firm, green cocoon, very fine, yielding forty pounds of cocoons to one ounce of eggs.

There is no way of distinguishing the race by the appearance of the egg.

The eggs are usually kept at the temperature of ice until the hatching-time approaches. No special preparation of the seed is required for hatching, the great difficulty being to keep the eggs from hatching too soon. After being removed from the ice-house they should be kept for a day or two in a cool cellar and then taken to a warm room, in order gradually to accustom them to the change of temperature. A too sudden change would be very injurious.

The fowl brings her eggs gradually to a temperature that develops life, and it is well known that any unnatural depressions of this heat would destroy the vitality of the egg. The French peasants carry the silk-worm eggs about the body, even placing them in the bed at night, so that there can be no loss of heat until incubation is complete. They then proceed to raise the larvæ in their kitchens or sleeping-rooms. A small, well-plastered, low-ceiling room is best adapted for this purpose, because in such a room an equilibrium of heat can best be sustained. This room should be well warmed for a day or two before the eggs are brought into it. The heat should then be gradually increased, starting at sixty degrees and increasing daily until the temperature reaches eighty degrees or even ninety degrees by the seventh day.

The eggs will hatch at a temperature of from sixty-five to eighty degrees.

They will hatch usually in five days, but the higher the temperature is kept the sooner they will hatch. The worms will usually hatch out in the morning, for three or four successive days. When the worms begin to appear, a piece of mosquito netting, on which a few branches or leaves are laid, should be spread over them. They will soon crawl up through the netting and the branches will be covered with little black worms, almost too small to be seen by the naked eye.

"The worms should be fed as soon as hatched and removed, by sprinkling young and tender leaves over the net or paper; repeat the feeding every two hours during the first age, and afterwards every three or four hours. In general, give the first feed at five o'clock in the morning and the last at ten or eleven at night. Before each feeding spread a net or paper over the worms and place the leaves on it.

About every two days lift the net with the worms to a new frame and remove the litter. The space must be increased as the worms grow, so as to avoid crowding. They will need double space the second day. To accomplish this, in feeding, when about half the worms have come through the net or paper, remove, and place a second paper with leaves for the remainder; in the same way the space may be trebled by removing one-third at a time. The leaves should be spread evenly, so that the worms may get the same amount of food and keep together in their growth, as it is important to have them molt together.

"The leaves must be fed *fresh and dry, never wet or wilted;* leaves wet with dew are especially injurious. Gather the leaves in the evening for the next morning's meal, and when rain threatens, gather a day ahead and keep in an airy, cool place, stirring occasionally to prevent heating and fermentation, which will ruin them. If only wet leaves can be had, dry them by shaking up before a fire, or in a breezy place. When food is scarce, lower the temperature of the room, and the worms will eat less.

"For young worms, gather only the small leaves. After the second age, small twigs or branches may be cut with the leaves.

"The quantity of food consumed increases very rapidly. The worms are said to consume their own weight of leaves daily. The worms from an ounce of eggs will require about one pound of leaves the first day, two pounds the second, three or four the third; after that the quantity diminishes as the time of molting approaches.

"After the second or third age, the net (or paper) and frame may be discarded, and the leafy twigs or branches, with the worms, may be placed on the platforms directly. The successive feedings of twigs are spread evenly on the old ones until the mass is piled up four or five inches to the next tier of pins or nails, then lay a new set of five bars or sticks, with the food on these, and when the worms have ascended, drop out the lower tier with its litter, and remove.

"In using a second or third tier over the first, it is necessary to place beneath, on a couple of bars, cloth or boards to catch the leaves and litter from above.

"The utmost cleanliness being necessary, the litter should be removed often, especially during the last three ages, as well as all dead and sick worms. The consumption of food is enormous during this

age, the hatch from an ounce of eggs requiring about fifty pounds the first day, and by the fourth one hundred and fifty, and double that amount the fifth, sixth and seventh, after which the quantity falls to about one hundred pounds for the eighth day, but the quantity depends on the vigor of the worms and the temperature.

"During this last age the closest attention is necessary and the amount of labor is greatly increased. During the earlier ages a woman or half-grown child can attend to the worms, and a man or boy in one or two hours, two or three times a day, can supply the leaves required for the worms from an ounce of eggs; and even during the last age, one person is sufficient in the cocoonery, and one to gather the leaves for the hatch of half a dozen ounces of eggs or more, with the apparatus above described."

It is not a difficult matter to raise silk-worms, but to raise them so that they will make firm, full cocoons requires care and experience. To reach satisfactory results great care and constant watchfulness are required. The worms must be kept supplied with plenty of good food and space, pure air of uniform temperature and thorough cleanliness. The worms must be protected from ants, mice, birds and poultry, which, if allowed to reach them, will very soon destroy all prospect of a crop.

To avoid ants, the legs of a table or stand may be set in cups of water tinctured with spirits of turpentine, and the tables and even the floor wiped off with a little carbolic acid mixed with water; this will also tend to keep the worms healthy. Sweeping must be avoided; floors may be wiped with a wet cloth. All noise, even thunder, must be shut out if possible, and no noxious vapors, such as tobacco, be admitted. The worm goes through three to four molts or sicknesses, the latter being the normal number. The periods between these different molts are called "ages," there being five of these ages if the first from the hatching and the last from the fourth, to the spinning period, are included. The time between the several molts is usually divided as follows: the first period occupies from five to six days, the second from four to five, the third about five, the fourth from five to six, and the fifth from eight to ten. The time from the hatching to the spinning varies from thirty to forty days, according to the race of the worm, the quality of the food, mode of feeding, tem-

perature, &c., but the same relative proportion of time between molts usually holds true.

The color of the newly-hatched worm is black or dark gray, and it is covered with long, stiff hairs, which, upon close examination, will be found to spring from pale-colored tubercles. Different shades of dark gray will, however, be found among worms hatching from the same batch of eggs. The hairs and tubercles are not noticeable after the first molt, and the worm gradually gets lighter and lighter until, in the last age, it is of a cream-white color. The preparation for each molt requires from two to three days of fasting and rest. During this time the worm attaches itself firmly to the leaves or branches, and holds up the fore part of the body and sometimes the tail. In front of the first joint a dark triangular spot is at this time noticeable, indicating the growth of the new head. When the term of sickness is over the worm casts its old skin, rests a short time to recover strength, and then freshened, supple and hungry, goes to work feeding voraciously to compensate for lost time. This so-called "sickness" which preceded the molt was, in its turn, preceded by a most voracious appetite, which served to stretch the skin. In the operation of molting the new head is first disengaged from the old skin, which is then gradually worked back from segment to segment, until entirely cast off. If the worm is feeble, or has met with any misfortune, the shriveled skin may remain on the end of the body, being held by the anal horn. In such case the individual usually perishes in the course of time.

The most critical period in the growth of the worm is after the fourth molt, during the fifth age, and the success of the culture depends upon its safe passage. This is the time during which destructive diseases are most likely to attack the worms, and the effect of former mismanagement to become apparent. They must be most carefully watched, so that any showing symptoms of disease may be at once removed, and plenty of pure, dry air must be admitted. The value and quantity of silk depends upon the quality of food at this time, and it should be the very best that can be secured. Not the soft and tender leaves of suckers or leaves of young trees should be chosen, but the firmest, darkest-green leaves from old trees, free from dew or dampness; and especially should no change in the variety of food be made at this time. The worms should have more frequent feeding—in fact, should not be allowed to be without food. The tem-

perature of the room must be watched carefully, for, if kept too high, it will exhaust the vigor of the worms, and cause them to produce small and thin cocoons. If the weather is stormy and the air damp and chilly, close the windows, and, if necessary, make a little fire, but if the weather is clear and dry, open the windows and let in light and air. The floor can be sprinkled or wiped with a wet cloth if the heat seems oppressive.

As the worms advance to maturity, they assume a yellow color, and are upwards of three inches in length. When they have attained their utmost growth, the extremity begins to grow shining and yellowish, and finally they seem to grow less, eat less, and begin to wander, as if in search of something. At this time, the night temperature must be watched, and it may be advisable, at times, to have a little fire in the cocoonery, for if the worms are chilled at this critical period, they will never revive to spin to any advantage. Atmospheric changes must be considered, for one false step in this matter, or relaxation in other matters, may be fatal.

When ready to spin, which is eight or ten days after the fourth molt, the worms cease to eat, become restless and empty themselves, diminish in size, becoming transparent, beginning at the head. When any of them are observed in this stage, give a light, fresh feed, to bring forward the laggards. And as soon as they begin to emit silky fibre, take the frames (that were used to hold the young worms), tie together two and two, bottom to top, set upright on their edges, with the slats of one opposite the intervals of the other, upon the platforms, among the worms. They will use these as ladders, and crawl up between the slats to spin. Or, instead of these, dry, branching twigs, two or three feet long, or broom-corn or weeds, may be used, setting them upright among the worms, and interlocking them in arches above. If any of the worms fail to mount, remove them on the leaves or twigs to which they are attached, lest they be soiled by droppings from above them.

The worm will soon begin to weave silk threads back and forth, making an enclosure, in which is made the cocoon proper. The silk flows more freely in a warm atmosphere. It is thrown out in a fluid condition, in two long, slender, convoluted vessels, one upon each side of the alimentary canal. As these vessels approach the head, they become less convoluted and more slender, and finally unite within the

spinneret, from which the silk issues in a glutinous state, and apparently in a single thread.

The glutinous liquid which combines the two, and which hardens immediately on exposure to the air, may, however, be dissolved in warm water. The worm usually consumes from three to five days in the construction of the cocoon, and then in three days more, passes, by a final molt, into the chrysalis state. As the worms begin to spin, see that no two of them spin too near each other and make double cocoons, which cannot be reeled.

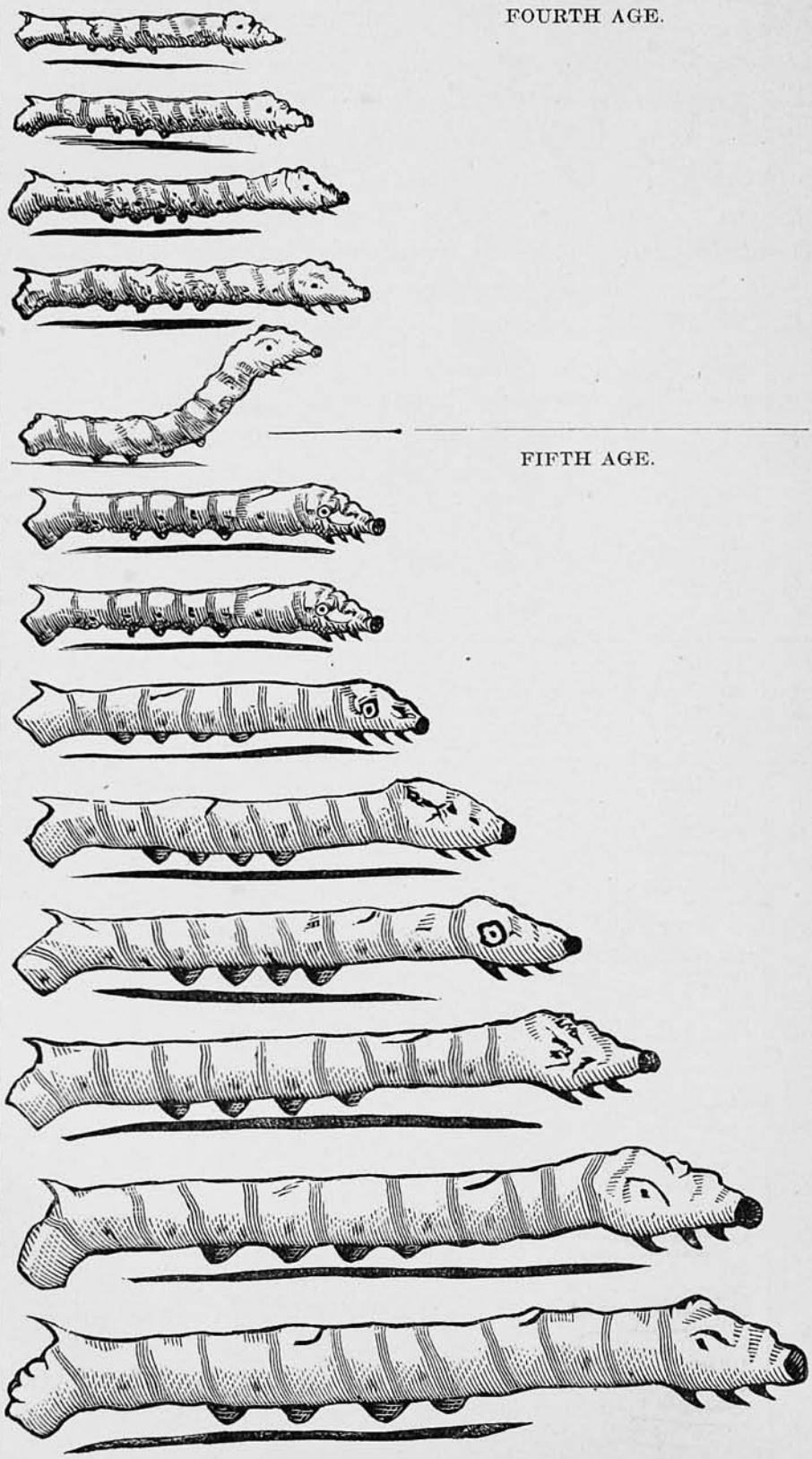
To sum up, the points requiring special attention are:

1. Keeping the worms of a batch in a uniform state of progress, so that they will all molt together. 2. Abundance of fresh, dry, food, except during the molt. 3. Plenty of room, so that the worms shall not crowd each other. 4. Plenty of fresh air. 5. Uniform temperature, as nearly as practicable, and avoidance of sudden changes. 6. The utmost cleanliness.

The following illustrations were kindly furnished by the Women's Silk Culture Association of Philadelphia:

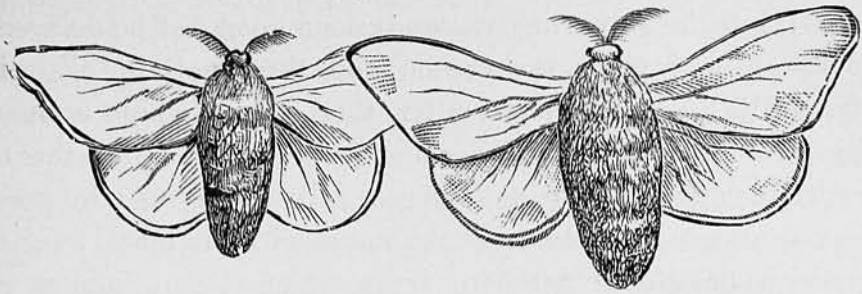
No. of days of crop.	Ages.	DEVELOPMENT.	Temperature.	No. of meals a day.
		HATCHING.		
1			70° to 75°	
2				
3				
4				
5			75° to 80°	
6				
		FIRST AGE.		
7	1st day.			10
8	2d "		75° to 80°	10
9	3d "			9
10	4th "			9
11	5th "			6
		SECOND AGE.		
12	1st day.			8
13	2d "			8
14	3d "			7
15	4th "			5
		THIRD AGE.		
16	1st day.			6
17	2d "			7
18	3d "			7
19	4th "			6
20	5th "			
21	6th "			5

No. of days of crop.	Ages.	DEVELOPMENT.	Temperature.	No. of meals a day.
		FOURTH AGE.		
22	1st day.			4
23	2d "			6
24	3d "			6
25	4th "			6
26	5th "			
		FIFTH AGE.		
27	1st day.			4
28	2d "			5
29	3d "			6
30	4th "		70° to 80°	7
31	5th "			7
32	6th "			7
33	7th "			8
34	8th "			8



MOTHS.

MALE. FEMALE.



Count Dandolo's Table of the Rearing of Silk-Worms from One Ounce of Eggs

AGES.		SPACE.		TEMPERATURE.	LEAVES.		TOTAL AMOUNT OF LEAVES.
		FT.	IN.		LB.	OZ.	LB.
FIRST AGE.	1st day.				0	14	
	2d "				1	6	
	3d "	9	6	75°	3	0	7
	4th "				1	6	
	5th "				0	6	
SECOND AGE.	1st day.				4	8	
	2d "	19		73° to 75°	6	12	21
	3d "				7	8	
	4th "				2	4	
THIRD AGE.	1st day.				6	12	
	2d "				21	8	
	3d "	46		71° to 73°	22	8	69
	4th "				12	5	
	5th "				6	8	
	6th "				6	8	
FOURTH AGE.	1st day.				23	4	
	2d "				39	0	
	3d "				52	8	
	4th "	109		68° to 71°	59	4	210
	5th "				29	4	
	6th "				26	12	
	7th "				26	12	
FIFTH AGE.	1st day.				42	0	
	2d "				66	10	
	3d "				93	0	
	4th "				130	0	
	5th "				185	8	
	6th "	239		68° to 69°	223	0	1,281
	7th "				214	0	
	8th "				150	0	
	9th "				120	14	
	10th "				56	4	

It is difficult to determine just when the worm ceases to spin and is transformed, but the gathering of the cocoons must not be delayed too long or the fly will pierce the cocoon and thus spoil it for reeling. From the sixth to the tenth day after they begin to spin is the time generally considered safe for gathering the cocoons. Up to this time, however, they must be left undisturbed. In gathering the cocoons care must be taken not to stain the clean ones with the black fluid from worms which have died, as there are some of these in almost every cocoonery. The loose or floss silk should first be stripped off and the cocoons separated according to firmness, color and weight. Any that are stained, soft or imperfect, should be removed, or they will reduce the value of the whole crop. The cocoon consists of an outer lining of loose silk known as "floss," which is used for carding, and is spun by the worm in first getting its bearings. The amount of this loose silk varies in different breeds. The inner cocoon is tough, strong and compact, composed of a firm, continuous thread, which is, however, not wound in concentric circles, as might be supposed, but irregularly in short figure-of-eight-loops, first in one place and then in another, so that in reeling, several yards of silk may be taken off without the cocoon's turning round. In form the cocoon is usually oval, and in color yellowish, but in both these features it varies greatly, being either pure silvery-white, cream or carneous, green and even roseate. It is very often contracted in the middle.

If the object is to raise eggs for home use or for sale, the largest and best-shaped cocoons must be selected for that purpose. An equal number of each sex is chosen, the female being determined by greater roundness and the male by a slight depression in the middle, like a peanut. These indications are not, however, always reliable. Sixteen ounces of cocoons will make one ounce of eggs. Cocoons selected for egg-raising can be placed aside in a dark closet, for it will be twelve or fifteen days before the moth appears.

The cocoons must be protected from rats and mice, which are the enemies of the silk-worm in all its stages. To prepare the cocoon for reeling the chrysalis must be killed. This should be done in from six to ten days after the spinning commenced. Steaming is generally considered the best mode of stifling, as there is less danger of injuring the silk. It can also be done by putting them in an oven. This method requires great care and attention, as there is danger of scorching and

spoiling the lustre of the thread. Sometimes they are suffocated with camphor and alcohol in air-tight vessels. A practical and very simple method by which the stifling may usually be effected is by exposing the cocoons to the hot sunshine from nine o'clock till four, for two or three days. A longer time is needed if there is much air stirring, or if the sunshine is not strong. And the process is surer if conducted in a shallow box under glass, with a crevice for the escape of moisture. In either case, guard against ants. The stifling should be attended to as soon as the cocoons are gathered, lest cloudy weather should intervene. In this case (and perhaps better in any case) the result may be reached by packing the cocoons in a barrel carefully lined with paper, so as to be nearly air-tight, with alternate sprinklings of camphor, roughly granulated in the hand, beginning with camphor on the bottom, then three or four inches of cocoons, again camphor, and so on, finally closing the barrel for two or three days. About a pound of camphor should be used to the barrel.

After three or four days, spread the cocoons on boards or shelves to dry in an airy room or attic, stirring frequently the first two or three days, and afterwards occasionally, for about two months, when they will be thoroughly dry and may be packed for market. Guard must still be kept against rats and mice, ants and smaller insects, which will penetrate the chrysalides and injure the silk. The latter may be expelled by a sprinkling of camphor or other insectifuge drugs, or by the bark of sassafras root, or chips of red cedar, tobacco stems, &c., &c.

In from twelve to twenty days from the time when the worm commenced to spin the moths will begin to issue from the cocoons selected for breeding purposes.

The moth has no jaws, and being confined within the narrow space of the cocoon, it finds some difficulty in escaping. It is provided, however, in two glands near the obsolete mouth, with a strong alkaline liquid secretion, with which it moistens the end of the cocoon and dissolves the gummy lining; then by a forward and backward movement it forces its way out. When once out the wings soon expand and dry.

The silken threads are simply pushed aside, but enough of them are broken to render the cocoons comparatively useless for reeling. The male is known by the continuous fluttering of its wings, and smaller size. Neither sex flies.

They will generally be seen coming out of the cocoons early in the morning, from four to eight o'clock. As soon as they appear they should be taken by the wings and the sexes kept apart for a short time. A few hours after issuing, the sexes, in equal numbers, may be placed together, great care having been taken to destroy any that are deformed, in order that the breed may be kept as good as possible. They may be placed on paper or cardboard, and the room must be kept as dark as possible, in order that the males shall not uncouple themselves. For the complete impregnation of the eggs, the sexes should be kept together from five to six hours, and occasionally visited to replace those males which may have become separated. After the necessary time has expired they must be separated, which is done by taking them by the wings and body and pressing the male very gently away from the female. As soon as they are separated the females should be placed on sheets of blotting-paper for a few minutes, where they will free themselves of a quantity of greenish-yellow fluid. From the blotting-paper they should be transferred to trays lined with cloth, upon which the eggs are to be laid. Cloth is generally considered best adapted for the reception of the eggs. If paper is used it should be thick and not too smooth, or the eggs will not adhere. Upon the trays the female moths may be placed in rows, and they will immediately begin depositing their eggs. It is advisable to incline the trays a little, as the moths are then more apt to lay their eggs uniformly. The room should be kept as dark as possible, plenty of fresh air admitted, and the temperature kept at about 75°. All of the thoroughly impregnated eggs will be laid in twenty-four hours, and the moth should be removed after that length of time. The eggs can be detached from the cloth during the winter by giving them a bath in cool soft water and drying *thoroughly* with blotting-paper. They can then be gently scraped off with a paper-knife and packed in boxes, like seed. They should be kept at a temperature not lower than 32° or above 50°. Eggs that will float on the surface of the water when they are being washed off the cloth or paper are considered bad and should be discarded. The egg retains the color of the unimpregnated ones (light yellow) for twelve or fifteen days, when it gradually acquires the gray or greenish tint of impregnation. Having no jaws the moths do not eat and live only a few days after having perpetuated their kind. The mere rearing of the silk-worm and the production of the cocoons

is quite a simple matter, but the process of reeling the silk from the cocoon is very difficult, the greatest skill, patience and experience being required to make a marketable thread. The reeling is done by uniting the threads of five or more cocoons in one even, smooth thread. The length of the thread varies from eight hundred to one thousand feet, and it will be found that worms of the same breed will not spin the same amount of silk. The inner and outer thread of the same cocoon will differ in fineness, and some defective cocoons will be found.

The reeler must detect all inequalities or defects in the threads so quickly that no break or change can be seen in the reeled silk thread by microscopic examination. The cocoons must not be reelel too close to the chrysalis, as the silk is there of an inferior grade. That portion of the silk can be macerated, carded and spun. Double cocoons and the outside floss are also used in making spun silk, in the same manner as pierced cocoons. The art of reeling from the cocoons can be acquired only by careful instruction and long experience. A number of cocoons are placed in a basin of hot water, and the loose, or floss threads, whipped loose and gathered into the hand of the reeler, until single threads wind from the cocoons. The natural gum makes them adhere, and they pass over the wheel as one thread. If the water gets too hot, the silk will come off in bunches; it will not unwind at all, if lukewarm. It should be kept at nearly the boiling point.

Cocoons that are old and dry will require more soaking than fresh or green ones. Several hanks can be reeled at the same time if the reeler is expert. The uniformity of the thread depends on the skill of the operator, who must supply a new thread as soon as one begins to give out. This is done by dexterously casting, with the thumb, the new thread upon the strand, to which it immediately adheres.

The silk of the cocoon gradually gets lighter and finer as it approaches the end, and the uniformity of strand does not entirely depend on its being composed of an equal number of individual threads. There is probably no process of manufacture through which the silk must pass from the cocoon to the manufactured goods more important or that requires more skill and good judgment than the reeling the silk from the cocoon.

The following illustrations show the different stages of silk culture, beginning with the moth laying her eggs, in figure 1, and showing the

hanks of reeled silk ready for delivery to the manufacturer of silk goods, in figure 12. These plates were kindly furnished by the Nonotuck Silk Company of Florence, Mass., and illustrate the exhibit made by this company at the centennial exhibition in Philadelphia, 1876. They were designed to show "How Corticelli Silk is Made:"

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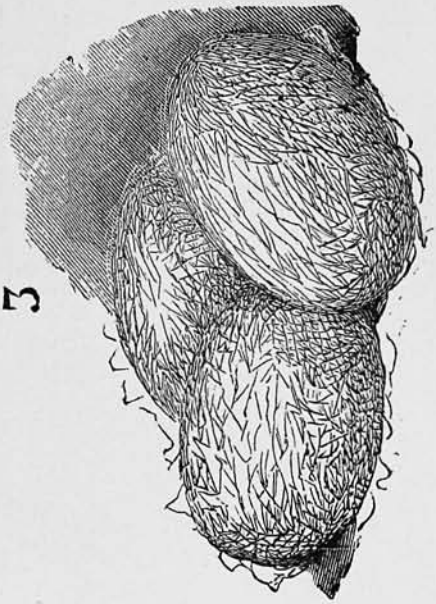

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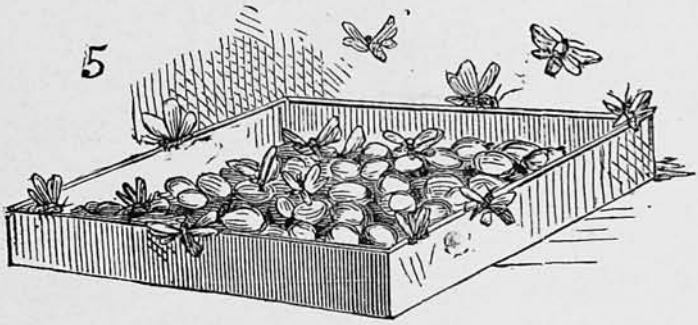

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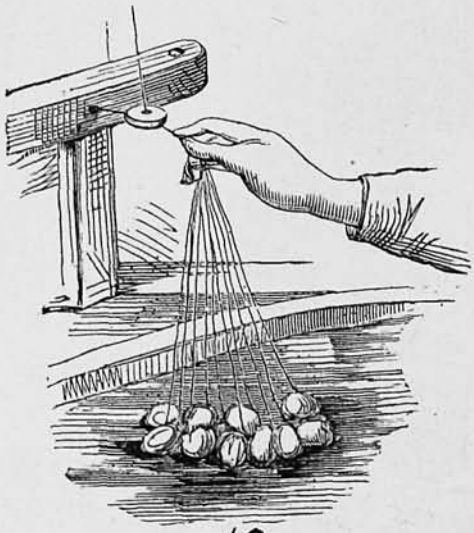

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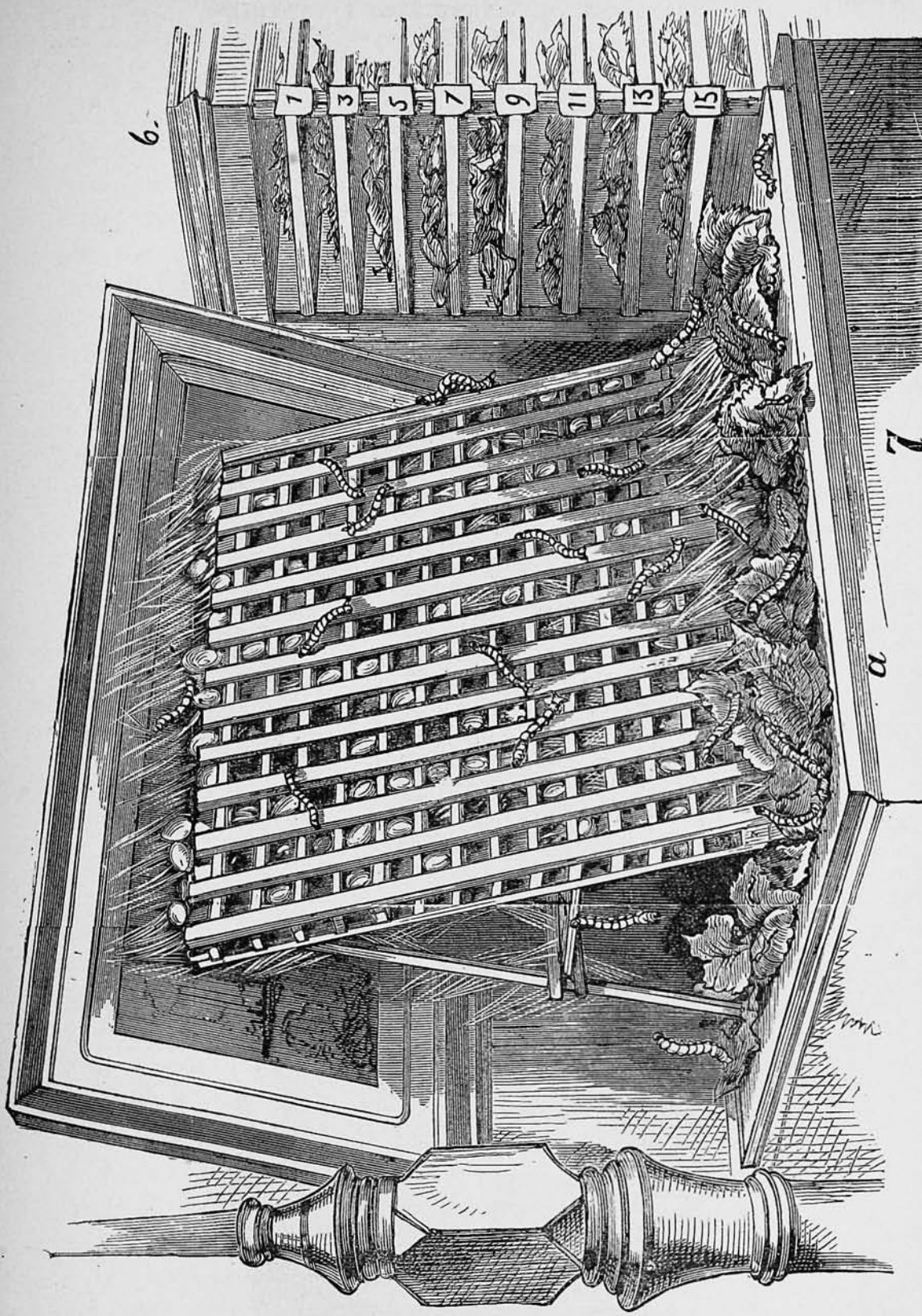
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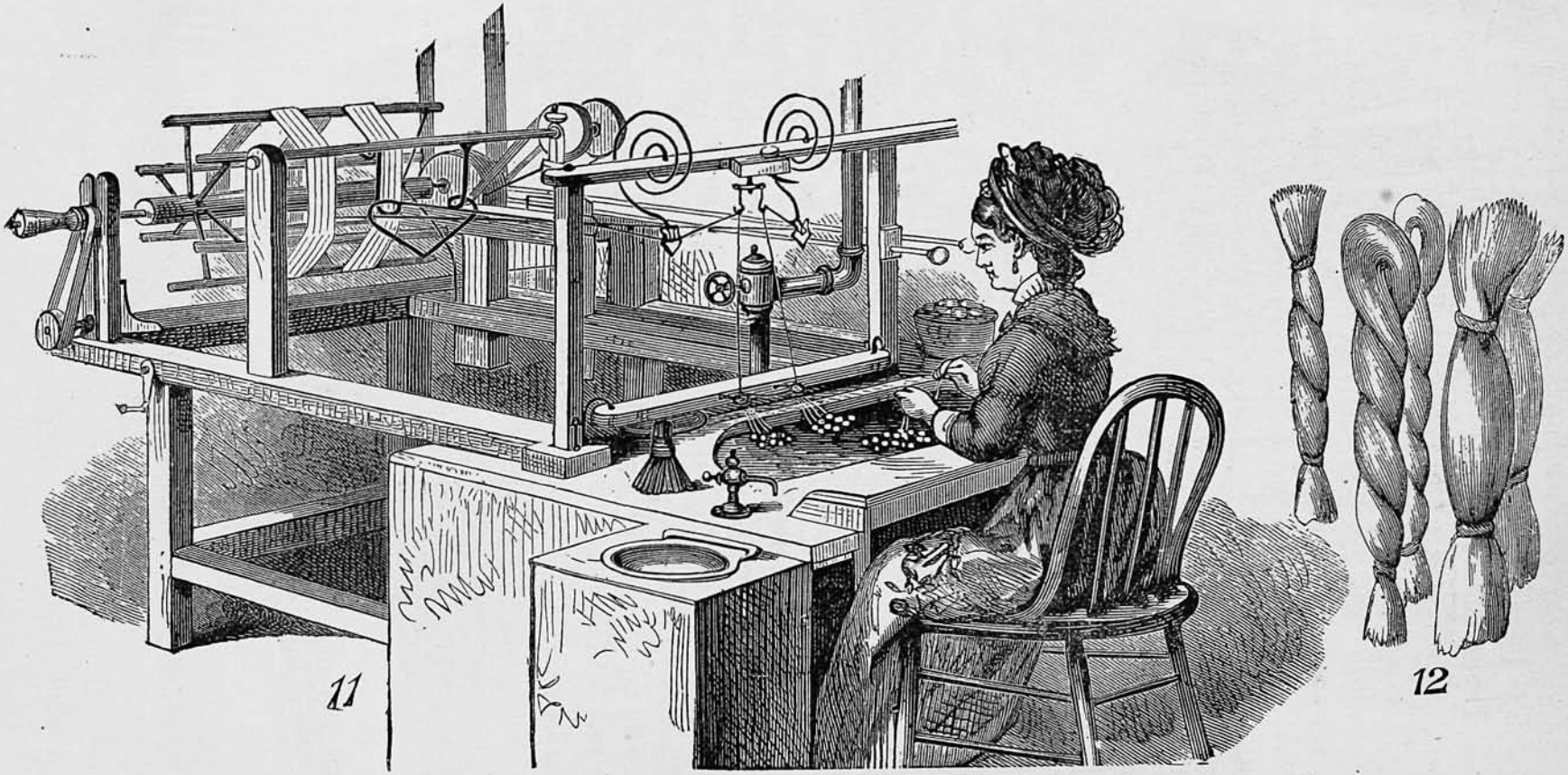

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1. *a.* The moth laying eggs, life size. *b.* Silk-worm one day old life size. *c.* Silk-worm three days old, life size. *d.* Silk-worm seven days old, life size. 2. Silk-worm spinning a cocoon, life size. 3. Cocoons, natural size. 4. Chrysalis, natural size. 5. Moths emerging from cocoons. 6. Glass jars of cocoons. 7. *a.* Double lattice frame for the worms to spin upon. *b.* Case showing progressive daily growth of worms. 8. Loosening the outer fibre of the cocoons. 9. Removing the outer fibre. 10. Gathering fibres into threads. 11. Spinning silk thread. 12. Hanks of raw silk.

The silk-worm is very particular in its choice of food.

Cabbage, lettuce or dandelion leaves may be fed to the worm for a short time, but when it reaches the "fifth age," it must have a full supply of the best food or it will not make any silk. Mulberry leaves are generally considered the best food that can be obtained for the worms, as they give more weight and strength.

The white mulberry is easily propagated. It flourishes best in light sandy or gravelly soils. One full-grown tree will yield two hundred to three hundred pounds of leaves. Two hundred trees may be planted on an acre of land. In three years they will yield, under fair conditions of soil and cultivation, ten to twelve pounds of leaves each, or more than two thousand pounds to the acre. Eighteen hundred pounds suffice for an ounce of eggs—that is, will produce one hundred to one hundred and twenty pounds of cocoons. At seven or eight years the yield will be ten-fold.

The French use the *Morus Alba,* the Italians the *Moretti,* the Persians, Russians and Spaniards select the fruited or *Morus Nigra,* and they all make good silk. The Mennonites of Kansas use the black mulberry. This variety grows very rapidly, bears fruit of good size and flavor in great abundance. It frequently begins to bear when only two years old and bears fruit every year. It is not seriously injured by drouths or extremely cold weather. Worms will thrive and make good silk when fed on the Osage orange.

A good crop of firm, well-shaped cocoons can only be obtained by keeping the worms well supplied with food, care being taken not to feed the worms with leaves that are rough or tough.

Old leaves should not be fed to young worms, nor young leaves to old ones. The leaves must never be heated or fermented, as leaves so treated would be too stimulating.

CHAPTER II.

CLAY AND CLAY PRODUCTS.

"The study of the art of pottery," says Edward Garnier in his "Histoire de la Céramique," "embraces, truly, in its *ensemble* products of kinds and uses so varied that it touches upon all the questions which affect the history of peoples, religion, morals, customs, arts, and science; and we do not think that anything can give an idea truer, and at the same time more exalted, of the progress achieved by human industry than the comparison between the pottery, ill-shaped, clumsily kneaded, hardly baked, or, indeed, simply dried in the sun, of the primitive races, and the vases, so elegant, so pure, and so sparkling with colors and with gold beneath their brilliant glaze, issuing from the kilns of Sèvres or of Meissen."

This glowing eulogium upon the art which reached perfection in Greece twenty-two centuries ago, and again in China a thousand years before our time, comes very naturally from the compatriot of Braquemond and Renard, who brought their handicraft once more to the acme of human endeavor. Our country, born as a nation on the eve of those social convulsions which liberated the energy of mankind and prepared the way for the era of vast manufacturing enterprises, started with a handicap in the race for manufacturing honors. In Europe the needs of a complicated civilization kept in existence a large number of workmen of trained taste and of great manual skill. The earth, also, already had been ransacked for her treasures, so that the newly-awakened spirit of scientific investigation had an abundance of materials at hand. Therefore, although the number of laborers was at first inadequate to meet the sudden demand, Europe had a training-school already organized; and, although her mineral wealth had poured but a handful of its treasures into her lap, the miner knew where to dig, the potter knew where to place his kiln, and all knew

that a market would swallow their products with an eagerness born of an age of starvation. In this country, on the contrary, only the rudest manufactures had been produced, and the wealth of the soil and rocks lay locked up beneath the primeval forests, waiting for chance-discovery or pains-taking scientific search. Trained labor there was practically none, and among the good folk of that day, with their simple habits and easily-satisfied wants, no market would have been found for its products had artistic workmanship existed. Such, then, were the difficulties with which the enterprise of this new nation had to contend—difficulties insuperable to perhaps any other nation that ever existed. The labor had to be imported at a time when demand exceeded production; a market had to be trained and stimulated; from the earth must be wrested her jealously-guarded secrets. Little wonder, then, that American manufactures were at first crude, and that the busy, practical, vulgar (if you will) cast of mind that resulted knew little and cared less for the great world of sentiment ruled by the artists and the poets. That longing for beautiful objects which must precede the production of artistic work literally found no place or time for existence in our intensely-occupied lives. Here, again, education must interpose, object-teaching, carried on by foreign masters with imported materials. Necessarily, therefore, such an industry as the manufacture of artistic pottery and porcelain, in which art cultivation as well as special manual skill has an indispensable part, was forced into abeyance. Culture, for which established prosperity alone affords opportunity, is a necessary condition of success in such an enterprise. In view of these facts it is not at all a thing to be ashamed of, that, ourselves producing only the rudest and most bulky wares, and these as inadequate in quantity as they were defective in quality, for three-quarters of our national existence we contentedly imported the higher products of the potter's mould and wheel. It is with the greatest pride, however, that we citizens of New Jersey can point to the fact that, when the conditions of art-cultivation and the discoveries of clay, helped by persistent and scientific experiment, made the industry practicable, our state was one of the first to break the fallow ground. From the establishment of Van Wickle's *stoneware* factory at Old Bridge, in 1810, to the successful efforts of the Trenton potters, within the past few years, to produce artistically-decorated porcelain, the progress of the world in this

branch of manufacture during modern times, seems to be epitomized. Undeterred by the deep-seated prejudice against American pottery, and by the sneers at American art, arising from the habit of Americans to expect everything from foreign art productions, and, it must be confessed, arising also from the abortiveness of American efforts in art—undeterred by this unfavorable state of things, but rather stimulated by first failures to make greater efforts, the Trenton potters steadily improved in taste and workmanship. They now have won a recognition which will soon, it is to be hoped, turn the tide of popular approval full in their favor. In the historical portion of this article the defects of the Trenton ware and the dangers which menace the industry, will be considered.

While artistic pottery naturally interests us most, as being indicative of progress, and as raising us in the eyes of the world, the material of which pottery in common with brick and pipe is made must first occupy our attention. After describing at some length the clay deposits of New Jersey, we shall treat briefly of the brick, firebrick, terra cotta and pottery industries. The terra cotta manufacture will occupy our attention at more length. Then we shall devote the remaining space to the consideration of the pottery industry of Trenton and elsewhere in the State.

CLAY AND ITS ECONOMICAL USES.

Clay is defined as "a finely levigated (powdered) silico-aluminous earth," found in a natural state in beds of varying depth. In the opinion of geologists it was probably formed by the disintegration of felspathic rocks in the waters of the prehistoric seas, and the precipitation of the fine particles from ancient ocean currents. Lime, potash, sodium and coloring metallic oxides are occasionally present in certain natural clays, the best clays being those which contain more alumina than silica, and no oxides. In general it may be stated that the proportions of these substances determine the character of the clay, and consequently its use. Clay is non-crystalline, opaque, varying in hardness from that of stiff mud to the consistency of chalk. It emits a peculiar odor, called argillaceous, when moistened, and has a strong affinity for water. All clays are plastic, those of a high degree of plasticity being technically called fat, or long. The less plastic are called meagre, or short. All clays shrink, in drying, to a degree de-

pendent upon the proportion of water contained in them. Pure clay (silicate of alumina) is infusible, but the admixture of alkaline earths makes it fusible in proportion to the alkali added. The clays used in making pottery may be divided roughly into two classes, refractory, infusible or fire clays, and fusible or potter's clay. Porcelain-clay or true kaolin belongs to the first class. Kaolin, so called from a hill in China, where the substance is found, contains much free silica, which makes it soft and friable. The specific gravity is 2.2 (*i. e.*, 2.2 heavier than water, bulk for bulk.) Its composition is, roughly:

Alumina	.40
Silica	.47
Water	.13

And its chemical formula: $Al_4O_{37}2SiO_2+2H_2O$, or, with a lower equivalence of alumina: $Al_2O_32SiO_3+2H_2O$. It may be regarded as being derived from potash felspar by a loss of all the potash and two-thirds of the silica and by the addition of two parts of water. Some of the foreign varieties show the following analyses, useful for comparison with American kaolins:

China-clay, Redruth, Cornwall, England.

Silica (combined)	28.40
Alumina	24.11
Water (combined)	7.20
	59.71
Titanic acid	.20
Silica (quartz sand)	37.80
Potash	.96
Sesquioxide of iron	.79
Hygroscopic water	.70
	100

Porcelain-clay from Passau, Bavaria.

Silica	43.65
Alumina	35.93
	79.58
Sesquioxide of iron	1.00
Carbonate of lime	.88
Water	18.5
Undetermined	.04
	100

Porcelain-clay from Guttenberg, Germany.

Silica	39.02
Alumina	45
	84.02
Carbonate of lime	.07
" " magnesia	3.32
Sesquioxide of iron	.19
Water	10
Undetermined	2.40
	100

The kaolins are "friable in the hand, meagre to the touch, and with difficulty form a paste with water." They are absolutely infusible in the kiln, and remain perfectly white after being hardened with heat. Most of these clays consist of alumina and silica in equal proportions. Rocks of felspar and quartz, called graphic granite, yield, by their decomposition, most of the kaolin that is found. The kaolin occurs in thin seams in the rocks, and is found only in rough, mountainous districts. The European kaolins are found in Saxony, in Germany and near Limoges, and near Bayonne, in France. In England the Cornwall kaolin or "Cornish clay," is the source which supplies the porcelain manufacturers. Kaolin was accidentally discovered in Saxony by Böttcher, or Böttger, in 1709, and Dresden porcelain, now of world-wide reputation, is made from that clay. The discovery of kaolin in France, also accidental, was made by a poor woman named Darnet, who took it for natural soap, in 1765. The felspar and silicious sand, which are mixed with the infusible kaolin in the manufacture of porcelain, are found in abundance.

We will now consider the other infusible clays, namely, those used in the manufacture of fire-brick and other products which must be infusible at very high temperatures. The best fire-clays, that is to say, the least fusible, contain about thirty-nine per cent. of alumina, forty-one and a half per cent. of silica, fourteen per cent. of quartz sand, very small proportions of potash and soda, and a very little oxide of iron. Thus it will be seen that the infusibility of fire-clay is due largely to the absence of substances acting as fluxes. These are the metallic oxides, magnesia, lime and potash. The great shrinkage of fire-clay when subjected to the heat necessary to harden it, is the most serious difficulty encountered in its use. Great care has also to be

taken in gradually bringing the bricks and crucibles, manufactured from this clay, up to the temperature of the furnace. The best foreign fire-clays are the Glenboig, the Stourbridge and the Yorkshire clays of Great Britain, the Bolene clay of France, and the Coblentz clay of Germany. The Glenboig clay shows the following analysis:

Silica	56.42
Alumina	26.35
Combined water	10.95
Potash	0.48
Lime	0.60
Magnesia	0.55
Sesquioxide of iron	1.33
Titanic acid	1.15
Moisture	2.80
	100.63

The Stourbridge Clay Contains:

Silica	65.10
Alumina	22.22
Potash	0.18
Lime	0.14
Magnesia	0.18
Protoxide of iron	1.92
Water (combined)	7.10
Water (hygroscopic)	2.18
Organic matter	0.58
	99.60

The German clays, which, until lately, were extensively used by glass manufacturers in this country as material in the making of glass-pots, are found near Coblentz, on the Rhine. We give the analyses of two.

Clay from Vallendar, near Coblentz.

Silica	38.21
Alumina	33.47
Water	11.81
Potash	1.18
Lime	0.93
Magnesia	0.67
Sesquioxide of iron	4.60
Sand	9.43
	100.30

Clay from Ebernham, near Vallendar.

Silica	32.18
Alumina	37.95
Water	10.02
Potash	3.00
Lime	0.04
Magnesia	0.11
Sesquioxide of iron	0.95
Sand	14.79
	99.04

The German clays are rivaled by our western infusible clays, of which the following are analyses:*

Clay from Cheltenham, St. Louis Co., Mo.

	I.	II.	III.
Silicic acid	56.137	56	52
Alumina	32.575	26	25
Ferric oxide	1.020		
Lime	1.603		
Magnesia	.....	2.	trace.
Combined water	10.570	14	12.6
Sand	.....	2.0	9.8

These refractory clays are used in making fire-bricks, in the composition for crucibles, or, more properly, retorts for steel-works, zinc factories, gas-works and glass furnaces, where the retort is heated gradually to the heat of the furnace before "setting," and is not subjected to sudden falls in temperature while in use. See article on Glass. The raw clay is in all cases tempered to prevent too much shrinking, by adding clay previously burnt and ground. Each manufacturer mixes his paste according to his own formula, which is in his opinion the best adapted to the particular product he manufactures.

Clays which are not sufficiently refractory for making fire-brick, and are free or almost free from oxide of iron, are used in the manufacture of the various grades of pottery. Composition of one of these clays shows the following proportions: Silica, twenty-five per cent.; alumina, twenty per cent.; quartz sand, forty per cent.; oxide of iron,

* Prof. Eggleston.

one per cent.; one or more of the fluxing agents, lime, potash and soda, one per cent., and water combined and free, seven per cent. In their natural state these clays are soft to the touch, and polish with the pressure of the finger. Mixed with water they form a tenacious, very ductile and somewhat translucent paste. The color of the ware made from these clays depends upon the amount of iron contained in the clay employed, the slightest trace of iron giving the clay a buff color. Common earthenware is made of the purer qualities of common clay, simply worked into shapes and burned. Any liquid of small density will soak through it unless a coating of some vitrifiable material, called a *glaze*, is applied to the interior surface. We will not give analyses of clays suitable for earthenware; it is sufficient to state that great purity (*i. e.*, a large proportion of alumina) is required, and the comparatively large proportion of oxide of iron, which renders the clay useless for a higher grade of pottery, is no drawback. Good pottery-clays, containing sufficient oxide of iron to fuse the particles together in a high heat, produce a ware of a bluish or grayish color, impervious to water, called *stoneware*. The best English stoneware-clay, or *pipe*-clay, as it is called from its use in making pipes, is found in Devonshire and Dorsetshire. From the little port of Poole, in Dorset, a very large quantity of clay is shipped.

Clay of the common kind, which occurs in abundance throughout the world, is tempered and burnt in the shape of bricks, drain-tiles and coarse pottery-ware. These products resist enormous crushing force and withstand the action of the weather for a great length of time. The clay of which they are made is "soft to the touch, and forms, with water, a somewhat tenacious paste, but is less compact and more friable than the plastic clays." When mixed with water no commencement of translucency, noticeable in the purer clays, is exhibited, and frequently mica and iron-ochre are contained in it. Having given a short summary of the various kinds of clay, in order to a better understanding of the subject, we shall now describe the clays of New Jersey.

If a straight line be drawn upon the map of New Jersey from a point on Raritan bay four miles northwest of Keyport to Upper Penn's Neck on the Delaware river, and another straight line from a point on Staten Island sound, a few miles northeast of the town of Woodbridge, in Middlesex county, to the city of Trenton, between

these lines will be included all the districts of New Jersey in which are found potters'-clay, fire-clay, and sands of use in the manufacture of clay products. Excavations lately made by Mr. Augustus Reeve, at Pea Shore, Delaware river, in which strata of fire-brick-clay, fire-sand, white-clay, &c., were discovered, show that this portion of our State, three hundred and twenty square miles in area, may perhaps be underlain throughout by strata of clay and sand, but only in certain places does the clay lie near enough the surface to be of present commercial value. In fact all the more valuable clays are mined in Middlesex county, in the neighborhood of Woodbridge and South Amboy. Dr. Cook, in his most comprehensive and valuable *Report on the Clay Deposit in New Jersey*, says:

"This district is so limited in extent that there are no large streams wholly within its bounds, and yet it is remarkably intersected by tide-water and navigable channels. Thus in this area of about sixty-eight square miles there are about thirty miles of shore fronting on navigable water, or counting both sides of the Raritan as high up as Sayreville, and excluding the more tortuous bends of the Raritan and South rivers and Cheesquake creek, there are twenty-five miles of water-front. So that there is not a point in the district three miles from navigable water; and of the one hundred clay, kaolin and sand pits, none is more than two and a half miles away from such water-front. The advantages of this remarkable location for the development of such a country are plainly shown by the rapid growth of its industries.

"The materials of the clay formation are earthy; and no rocky or stony layers or beds are to be found in it. There are some small places in which the sand and gravel have been cemented with oxide of iron sufficiently to form a rough building stone, and concretions of clay and oxide of iron, of a stony hardness, are found in some of the clay beds; but the layers of sand and clay, of which the formation is made up, are all earthy, and so soft that they can be dug with a spade.

"The whole formation is composed of a series of strata of fire-clay, potters'-clay, brick-clay, sand and lignite. The details of these, with their order, thickness and qualities, will be given farther on in this report. The thickness of the series of strata is nearly three hundred and fifty feet. The strata are generally parallel to each other, and are all inclined downwards towards the southeast, with an average

dip of about forty-five feet per mile. The direction or *strike* of the outcropping edges of the strata is south, forty-six degrees west, true bearing.

"The source from whence the materials for this formation originated must be looked for to the southeast of the present strata. Though bordering upon and overlying the red-shale and sandstone which lies to the northwest of it, there is not a fragment of those rocks to be found in any of these beds, nor any of their striking and characteristic red color to be perceived in them. On the contrary, the materials of these beds are white, grey, or blackish, and if at all tinged with the reddish color of oxide of iron, it is a yellowish red, and not a purplish red like the red-shale and red sandstone. The appearances all indicate that they have originated from the materials of disintegrated and partially decomposed feldspathic granite or gneiss. In some places, these products of disintegration have been sorted by water, the fine particles of clay deposited by themselves to make the present clay beds; in others, the quartz has been deposited as sand in beds by itself; and in still other places, the finest of the sands, with a little mica almost in powder, has been deposited to make the so-called kaolin beds. In other beds, the materials are deposited in their original mixed condition—clay and quartz together—constituting the so-called feldspar beds of this district.

"There does not appear to have been any violent or irregular movements since the deposit of the clay beds, which has disturbed or distorted them. But there must have been high ground to the southeast and outside the present line of sea-coast, from which the materials for the clay and sand could have been washed and deposited on the lower ground upon which they still lie. And this high ground, besides what wore away to make these beds, must have gradually settled down till it was hidden beneath the ocean, and the beds of the clay formation have risen along their northwestern border till they were above the sea-level, and till the beds had so altered their inclination as to slope down towards the southeast instead of towards the northwest, as they did when first deposited."

The best clay for red brick is found immediately under the stratum of fire-clay, but all of the clays not distinctively fire-clays are used for brick. Most of the clay used in the manufacture of red brick, in the *Middlesex county clay district* is obtained from the member of the

clay series* which Prof. Cook calls "laminated clay and sand," and from the bed of micaceous sand underlying it. The following remarks upon these formations are quoted from the report:

"The extent of these beds is quite equal to the largest demands. As implied in its name, the laminated clay and sand-bed consists of thin layers of sand and sandy clay, alternating quite irregularly. Some of these are less than an inch, while others exceed a foot in thickness. Both lignite and pyrite abound, more, however, in some than in other layers, and disseminated irregularly in all of them. The carbonaceous matter gives the dark color to much of the clays in this subdivision. The sandy layers are almost all white quartz, although, in places, blackened by small fragments of lignite. In consequence of this sorted character of these layers and laminæ and the lack of homogeneity, as well as the very general prevalence of both pyrite and lignite, the materials found in them are only used in the manufacture of red brick. Some of the layers might be used for more valuable purposes. The division plane between this and the overlying sand cannot be located accurately. There are but few sections showing the whole thickness of the two, and consequently, it is impossible to define, exactly, their limits. As nearly as can be determined, the thickness of this laminated clay bed is put at thirty feet, leaving twenty feet as the thickness of the sand-bed.

"Micaceous sand and sandy clay, dark-colored to black, make up the mass of the sand-bed, not uniformly mixed, but more or less in layers of varying thickness; but the sand predominates over the clay and gives character to it, distinguishing it from the more clayey beds under it. Mica also appears more abundant here than in some of the lower strata of this formation. It occurs in the form of very minute flakes or scales."

Pipe-clay, or "top white clay," as it is sometimes called, is found in beds of varying thickness, some beds being eight feet thick and others only three or four. The following analysis is given by Prof. Cook, from Sayre & Fisher's bank:

Alumina	28.24
Silicic acid	29.15
Water	6.60

*See pp. 34 and 35 of Prof. Cook's Report.

Quartz sand	28.63
Ferric oxide	2.76
Magnesia	0.19
Lime	
Potash	2.87
Soda	
Titanic acid	1.03
	99.47

This clay is simply an inferior fire-clay, used in making pipe.

Feldspar and kaolin occur in many banks, in beds varying from two to twelve feet in thickness. * Representative analyses are—

Feldspar.

	1	2	3
Alumina	18.95	17.55	16.07
Silicic acid	16.99	16.59	
Water	4.90	6.30	4.30
Quartz sand	58.89	57.41	77.40
Ferric oxide	0.49	0.54	0.53
Magnesia	.....	.....	0.25
Lime			
Potash	0.15	0.12	0.15
Soda	0.21	0.21	
Titanic acid	.....	0.90	

1. Feldspar from Forbes' farm.
2. Edgar Brothers' feldspar.
3. Feldspar from farm of Knickerbocker Insurance Company.

Kaolin.

	1	2	3
Silicic acid and sand	77.10	89.40	92.70
Alumina and ferric oxide	17.10	7.80	5.70
Water	4.50	2.60	0.70
Potash	1.30	.....	0.35

* Report on Clay Deposits, p. 62.

1. Is from Mrs. Merritt's pits, near Perth Amboy.

2. From Whitehead Brothers' pits, Washington.

3. A typical specimen from Charles A. Campbell & Co., Staten Island.

With regard to the feldspar and kaolin of New Jersey, the Report on Clay Deposits holds the following:

"The names 'feldspar' and 'kaolin,' as used everywhere in this clay district to designate these strata and their materials, are applied incorrectly. The feldspar is more properly a kaolin, although not answering fully to all the characters implied in that well-known term. It is a mixture of a rich clay with white quartzose sand and fragments of quartz, nearly all of which are slightly rounded on their edges and lack the sharp-grained character of the quartz in most of the true kaolins. Both the clay and the quartzose portions are of a *secondary* origin, that is, they are not the result of rock disintegration *in place.* Nor are they sorted as the materials of the clay and sand beds. There is no lamination in its structure, nor any arrangement other than a most intimate mixture of these two constituents, somewhat similar to the blending of quartz and feldspar in some of our granitic rocks. Whence it came and how it was deposited, in this unsorted condition over comparatively so large an area, and so uniformly, are difficult questions. If there were gneissic or granitic rocks immediately under it, the explanation would be easy. Instead of such a rock basis it reposes on a sand bed, which is one of a series of sedimentary strata, and these, too, of earthy materials, such as clays and sands, all of which appear to have been sorted by the action of water during their deposition. The mixture is so intimate that there is not the slightest trace of lamination or stratification in it.

"The so-called 'kaolin' is a micaceous sand, consisting of fine-grained, white quartz sand, mixed with a small and varying percentage of white mica, in small flakes or scales, and a very little white clay. The mica, however, is conspicuous and gives the mass a glistening appearance, and a somewhat soft and soapy feel, but the sand is very largely in excess, constituting from sixty to ninety per cent. of the mass in the more clayey and micaceous specimens."

In the latter part of his report Prof. Cook, speaking of the properties of New Jersey clays, says: "In these statements relating to New Jersey clays, it must be understood that our clays are nearly all of a

sedimentary origin, and are not properly kaolins or porcelain clays, in the sense in which those terms are used. The only clays of the latter class are those found in unimportant quantities in the northern part of the State. They are in or very near the localities of their origin, and the parent rock, from the decomposition of which they have resulted."

Fire-clay, which perhaps is the most important of our New Jersey clays, is found in great abundance in beds averaging fifteen feet in thickness. Specimen clays from the Raritan and from the Woodbridge beds gave the following analyses:

Raritan Fire-clay Bed.

	1	2	3
Alumina	27.13	.....	15.70
Silicic acid (combined)	31.32	.....	18.13
Water	9.63	9.60	4.90
Quartz sand	29.00	.....	58.09
Ferric oxide	1.26	.....	1.21
Magnesia	0.08		
Lime	traces.		
Potash	traces.	0.42	0.17
Soda	traces.		
Titanic acid	1.93	.....	1.61
Totals	100.35	.....	99.81

1. William B. Dixon's clay.
2. David Flood's clay.
3. B. Ellison's clay.

In No. 2 the percentage of water shows the amount of sand to be quite small.

In No. 3 the percentage of quartz sand is a little higher than in some of the clays from that property. It is a varying constituent.

Woodbridge Fire-clay Bed.

	1	2	3	4	5	6	7	8	9 Average.
Alumina	40.14	37.94	38.87	36.49	37.92	35.95	36.34	36.78	37.55
Silicic acid (combined)	42.88	44.26	44.77	42.82	42.40	38.18	36.60	40.28	41.52
Water	13.59	14.10	12.97	12.42	14.60	12.38	12.23	13.06	13.17
Quartz sand	0.50	1.10	0.80	5.80	1.41	10.50	12.33	8.10	5.07
Ferric oxide	0.51	0.96	1.14	0.78	1.05	0.96	0.97	1.02	0.92
Magnesia	.....	0.11	0.11	0.11	.....	traces	.....	0.04	0.09
Lime	0.10	.....	.....	.....	.....	.....	.....	.....	0.10
Potash	0.41	0.15	0.16	0.45	0.35	0.37	0.08	0.15	0.26
Soda	0.08	.....	.....	.....	0.37	.....	.....	.....	0 22
Titanic acid	1.42	1.30	1.30	1.12	1.41	1.61	1.52	.....	1.38
Totals	99.63	99.92	100.12	99.99	99.51	99.95	100.07	99.43	100.28

1. Loughridge & Powers' fire-clay, Woodbridge.
2. Hampton Cutter & Son's fire-brick clay, Woodbridge.
3. Hampton Cutter & Son's ware-clay, Woodbridge.
4. A. Hall & Son's fire-clay, Woodbridge.
5. Wm. H. P. Benton's fire-clay, Woodbridge.
6. Crossman Clay and Manufacturing Company's fire-clay, north shore of Raritan river.
7. Charles A. Campbell & Co.'s *white* fire-clay, north shore of Raritan river.
8. R. N. & H. Valentine's fire-clay, north shore of Raritan river.
9. An average, 1–8.

The fire-sand used in tempering fire-brick is found in various localities, notably near Bonhamtown. A good fire-sand must have grains angular and of irregular sizes, in order that the grains may vitrify at different temperatures. Partial analyses of this Bonhamtown sand, which is in places thirteen feet thick, are as follows:

	1	2
Silica (quartz)	98.00	96.40
Titanic acid	0.25	
Alumina and oxide of iron	1.45	2.10
Potash	0.20	
Soda	traces.	
Lime	traces.	
Totals determined	99.90	98.50

1. Coarse-grained fire-sand.
2. Fine-grained fire-sand.

Prof. Cook adds that, according to these figures, the first is a little better than the fine-grained. The alkalies and alkaline earths were not determined in 2.

The poorer fire-clays, *i. e.*, the less refractory, are used in large quantities in the manufacture of drain-pipe, sewer-pipe and terra cotta throughout the country.

A caution should be inserted here against too great reliance upon chemical analyses of clays. Clay is a natural deposit, and the different kinds differ from one another not only in proportions of chemical elements, but also in degree of levigation of some or all of the constituents. Thus it happens, as Mr. Ingraham, of Woodbridge, testifies, that two clays, differing so little in chemical analysis, that an analytical chemist pronounced them practically the same, behave very differently in the kiln. It is only, therefore, by subsequent practical tests that clays which analyze well can be given their rank. The chemical analysis, by proving the presence or absence of iron, would be of benefit in excluding certain uses, but practical fire tests are cheaper and more certain. Too much stress will not be laid, therefore, upon the formulæ of this article, which are given rather as interesting than as particularly useful facts, in connection with the mention of the location and extent of the beds. Where clay is scarce, chemical analysis may, indeed, have another use in showing by the addition or removal of what substances the clay might be improved. Prof. Eggleston says (see "Proceedings of American Institute of Mining Engineers," vol. IV., p. 263): "The power to resist heat is, undoubtedly, owing in part to the molecular condition of the particles, a subject which has been but little studied, and is but little understood. Many clays which would be rejected from chemical analysis, are sometimes found in practice to be excellent refractory materials." Dr. Eggleston further states that "of two materials having exactly the same chemical composition, one being coarse and the other fine, the coarse may be practically infusible, while the fine may be more or less easily fusible. * * * It may be said in general terms that the value of a given refractory clay will be inversely as the coarseness and as the amount of iron contained. Where the amount of iron reaches five per cent., the material becomes worthless."

Potter's clay, under which general title we may include clay suitable for earthenware, for stoneware and for opaque porcelain, is scarce, in comparison with the quantity of less pure clays found in this country and in Europe. Our New Jersey clay district is "singularly rich," to quote Prof. Cook, in clays suitable for fine earthenware. This abundance of excellent earthenware clay may well console us for the lack of the much-coveted *true kaolin*, for which the sedimentary origin of our clays forbids us to hope, at least in the great clay district of our State. Analyses of several earthenware or potter's clays by the Geological Survey gave these results:

Ware-clay from Loughridge and Powers'. Bank.

Alumina	39.53	
Silicic acid	42.23	
Water	13.59	
		95.35
Silica (quartz sand)	0.50	
Titanic acid	1.40	
		1.90
Potash	0.41	
Soda	0.08	
Lime	0.10	
Sesquioxide of iron	0.50	
Hygroscopic water	1.21	
		2.30
		99.55

Stoneware-clay Bed.

	1	2	3
Alumina	21.07	20.45	21.29
Silicic acid (combined)	29.95	29.14	29.46
Water (combined)	7.22	5.87	6.81
Quartz sand	36.75	40.43	38.14
Ferric oxide	1.47	1.46	1.71
Magnesia	0.30	0.51	0.30
Lime	0.11	traces.	0.11
Potash	1.56	1.61	1.82
Soda	traces.	0.48	0.18
Titanic acid	1.15	0.91	1.01
Totals	99.58	100.86	100.83

1. Stoneware-clay from E. R. Rose & Son's pits.
2. Stoneware-clay from Otto Ernst's clay mines.
3. Stoneware-clay from N. Furman's clay mines.

Clay from E. F. & J. M. Roberts' Pits.

Alumina	39.14	
Silicic acid	44.20	
Water (combined)	14.05	
		97.39
Silica (sand)	0.20	
Titanic acid	1.05	
		1.25
Potash	0.25	
Soda		
Lime		
Magnesia		
Sesquioxide of iron	0.45	
Water (moisture)	0.90	
		1.60
		100.24

The geological report adds: "The purity of this clay is apparent at a glance at these figures, there being less than three per cent. of foreign matter, and of this nine-tenths of one per cent. is moisture."

Ware Clay of Hampton Cutter & Sons.

Alumina	38.81	
Silicic acid	44.14	
Water (combined)	12.97	
		95.92
Silica (sand)	0.80	
Titanic acid	1.30	
		2.10
Potash	0.17	
Soda		
Lime	traces.	
Magnesia	0.11	
Sesquioxide of iron	1.14	
Water (moisture)	1.23	
		2.65
		100.67

Clay Used in Making Yellow-ware. Mrs. Clark's Pits.

Alumina and titanic acid	17.58	
Silicic acid	19.50	
Water (combined)	4.50	
		41.58
Sand (quartz)	53.20	
		53.20
Potash	2.24	
Soda		
Lime	traces	
Magnesia	0.43	
Sesquioxide of iron	1.42	
Water (moisture)	1.20	
		5.29
Total (determined)		100.07

The process of removing the clay from the beds, as now carried on, is a very simple one. After the spot for operation has been decided upon, the top dirt, or "bearing," is removed, and a pit about fifty feet in circumference, of more or less irregular outline, is sunk. The clay is dug with cylindrically-shaped spades, and, if hard, is first loosened with picks. The spits, or lumps, dug out are thrown upon a working platform, where they are sorted and impurities picked out. The sorted clay is removed by hoisting-machines or carts, and carried to storage heaps or shipped directly to buyers. In some places clay-mining by shafts and drifts is practiced. The dangers to the workmen are from the caving in of the sides of the pits, best guarded against by leaving a thickness of two or three feet of clay on the sides of the pits and by board casing. The chief factors which determine the owner's profits are the quality of the clay, thickness of the clay, cost of transportation, and cost of removing water from the pits. Prof. Cook gives the following interesting data with regard to washing clays at South Amboy:

"The improvement of clays by washing is practiced at a single locality only, by George Such, at Burt's creek, near South Amboy. The work is done on a large scale. The following account of the principles and practice followed in doing the work, is perhaps sufficiently full:

"Clay stirred up in water will remain in suspension a long time, while sand, gravel and nodules and grains of iron pyrites settle quickly.

And the finer the clay is, the longer it will remain suspended in water Advantage is taken of this property in washing the clays and freeing them from impurities. Washing has the further advantage, too, of bringing the clay to a uniform tint or color. As taken from the bank or pit it may be streaked with brown, or yellow, or red colors, or with all of these, but after passing through the washing process these colors are all blended into one uniform tint. And by a proper selection of the white and stained clays a great variety of colors is produced.

"Mr. Such's works are located on a stream from which an abundance of water can be drawn for all the purposes of the washing apparatus. The machinery for washing the clay is driven by a powerful steam engine.

"The apparatus for washing consists of large troughs or bins, in which the clay from the banks is dumped, covered with water and allowed to stand for twenty-four hours. Other large troughs, in which long horizontal shafts, armed with knives, revolve, receive the clay. The knives are set at right angles to the shafts, and are fastened in a spiral line, so that at every revolution of the shaft the clay in the whole length of the trough is thoroughly stirred up and mixed with the water, which is constantly streaming into it. Large vats are used, in which to receive the clay and water. These vats are made of puddled clay at the bottom, which is then covered with boards; the sides are made of a double casing of boards, filled in with puddled clay between the boards and backed up with earth. They are nearly five feet deep, and they cover about an acre and a half of surface. There are a number of vats, entirely separate from each other, which are intended for white clays and different shades of colored clays. Each vat also has partitions or guiding-boards in it, which are so arranged as to cause the water with suspended clay in it to circulate between them and cross the vat repeatedly before it reaches the furthest part, and so that the clay may have time to settle and let the water run off clear at last. Some of the vats are low enough to be filled through troughs, which run from the washers directly to them, while others, on higher ground, have to be filled by pumping up the clay and water together, from the washing-machine, and running it off through elevated troughs to the proper vats.

"When the washing-machine is in operation a constant stream of water is run into it and is thoroughly mixed up with the clay, which

is thus divided into its finest particles and separated from its heavy impurities, and only that which is fine and completely suspended in the water can run off into the settling-vats. The process of washing any desired quality of clay is carried on from day to day, till the deposit in the vat is thick enough to handle conveniently and to furnish a supply adequate to the demand.

"The removal of sand, pyrite or other mineral masses from clay, by washing, is easy and effectual, and the washing of poor clays is therefore very profitable. The removal of oxide of iron, which discolors the clay, is attended with more difficulty, as washing does not take it out. The treatment of such clays with hydrochloric acid has been tried in Europe and found effective in removing both oxide of iron and lime from them. A practical way of using this method to obtain good fire-clay from inferior and common clays is given as follows in the *Oesterreiche Zeitung*, No. 32, by Kerpely: 'Clays containing lime and iron are stirred with boiling water, the latter being poured on till it is eight or ten inches deep above the clayey mass. To this is added hydrochloric acid to the extent of two per cent. of the clay. After further agitation it is allowed to stand for some hours and then the acidulated water is conducted to a second vessel, to which more acid is added. The clay mass is well washed with hot water and is thrown upon a linen filter stretched over the waste-ditch. In four washing-troughs it is possible to clean one hundred centners (five tons) of clay, for which the cost amounts to 5–5.80 florins ($4.30.)'

"The washing of clay is common in all kaolin districts where clays for ware or paper are obtained, and also at potteries, as a further preparation for their use in the body of the finest white ware. These modes involve various styles of machinery whereby the clay or kaolin is agitated with water, and then the clayey liquid is conveyed to a series of settling-vats. The simplest form of a washer or agitator consists of an inclined trough in which a cylinder, set with spiral rows of knives or cutters, revolves, and by the movement of its knives pushes the mass from the feeding end up the incline and out at the opposite end. There may be many modifications in the mechanical arrangement of these appliances for stirring the clay, as well as differences in the sizes and forms of vats. The washed clay is allowed to dry in the vats on long exposure, or the water is pressed out of it by subjecting it to great pressure in bags. The latter method obviates the length of time requisite for drying in the open air, and does not need such large vats."

The impurities occurring in our clays are titanium in an unknown combination, and quartz in almost all, feldspar, mica, pyrite, lignite, oxide of iron, amber, carbonates of copper, vivianite, red-shale and various earthy matters. Iron and lime give a cream color to the baked product; magnesia gives a brownish yellow.

Mr. C. W. Boynton, of Woodbridge, kindly furnished the following list of the uses to which New Jersey clays are put:

I.....
1. Common brick.
2. Front-building brick.
3. Drain-tile.
4. Sewer-pipe.
5. Roofing-tile.
6. Garden border-edging.

II.....
7. Fire-brick.
8. Gas-retorts.
9. Stove-linings.

III.....
10. Enameled wall and floor-tiles.
11. Architectural terra cotta.

IV.....
12. Porcelain ware (as part of mixture.)
13. Granite ware.
14. White ware.
15. Yellow ware.
16. Rockingham ware.

The following table will show the output of clay for the year ending July 1st, 1883, as ascertained by the agents of this bureau:

Name of Clay (for what used.)	No. of Tons.	Value.
Moulding-sand	22,700	$34,000
Fire-brick clay	273,000	1,056,000
Fire-sand	69,000	69,000
Foundry-clay	20,000	35,000
Paper-clay	1,000	10,000
Stoneware-clay	18,000	54,000
Whiteware-clay	11,300	79,100
Drain-pipe clay	100,000	175,000
Terra-cotta clay	8,000	24,000
Red-brick clay	559,200	669,000
Total	1,082,200	$2,205,100

CLAY PRODUCTS.

Before entering upon a short historical sketch of the potter's art, it may be well to define a few of the technical terms by which different kinds of pottery are distinguished. The following definitions are compiled from Dr. Prime's "Pottery and Porcelain:"

Pottery, in the broadest sense of the word, includes everything made by baking in fire or furnace, into the composition of which clay enters. In common parlance, however, *pottery* denotes opaque clay or part-clay products, and *porcelain* denotes translucent part-clay products.

Soft Pottery is made of common clay, as common brick and flower pots. This was formerly a favorite, and the products were polished or enameled. Now a coating of glass is used for the rough ware of this kind still manufactured.

Hard Pottery is made of a mixture of sand with infusible clay, an example being fire-brick. Stoneware and Wedgewood's cream ware are hard pottery.

Porcelain is made by the union of two substances, one vitrifiable and the other non-vitrifiable, by heat. The result of the baking is a body which consists of the minute opaque particles of the non-vitrifiable substance held together by the translucent melted substance.

Soft Paste Porcelain is of two kinds, the *natural*, which is made by the use of any clay except true kaolin as the non-vitrifiable substance, and the *artificial*, made by a combination of any non-vitrifiable substance except clay and any vitrifiable substance. Artificial Sèvres soft paste porcelain was formerly made by using nitre, salt, alum and soda as vitrifiable ingredients, and gypsum, sand, chalk and marl as non-vitrifiable ingredients.

Hard Paste Porcelain (true porcelain) is made by the union of true kaolin (see page 240) and a stone, feldspar. It cannot, therefore, be made where kaolin cannot be obtained.

Soft paste porcelain is usually oily or soapy to the touch, is easily attacked by a file, and is completely covered by the glaze. The hard paste porcelain has a hard, cold glint, is not easily scratched with a file, and is usually unglazed on the bottom and bottom rims.

The following table from Miss Young's "Ceramic Art" will serve to summarize the whole subject:

Pottery	Soft....	Unglazed.....Common Brick Earthenware.
		Lustrous.....Greek Pottery.
		Glazed .....Modern Faience.
		Enameled .....Robbia Ware.
	Hard..	Stoneware.
		Fire-brick.
Porcelain	Soft....	Naturally soft....English Porcelain.
		Artificially soft...French *pate tendre*, old Sèvres.
	Hard...	Chinese.
		Dresden.
		Sèvres.

Biscuit is the name applied to pottery and porcelain before they are glazed or enameled.

The art of making pottery of a more or less rude description seems to be co-eval with the human race. The story of the building of the tower of Babel is the earliest reference to the art in literature, and the stupendous plan of that work goes to show that the art was then in an advanced stage. Pliny attributes the invention of the potter's wheel, which established for all time the method of finishing pottery ware, to Choralbus, an Athenian, or Anacharisis, a Scythian. The latter conjecture—it can be nothing more than mere conjecture—seems to hint at an early development of the art among the inhabitants of northern Asia. On ancient Egyptian tombs, Ptah, the Creator, and Kneph, the Divine Spirit, are depicted fashioning clay at the potter's wheel, from which material they doubtless were supposed to form men. The credit, therefore, for the invention of the potter's wheel cannot be given to any one nation, but we must conclude that necessity, that mother of invention, produced the revolving disc very early in the history of the race. The earliest references to pottery in Greek literature are found in Homer, who prai-es Samian ware. Eubulus, a dramatist, whose date is put at 376 B. C., speaks of "Cnidian pots, Sicilian platters and Megarean vases," thus giving us some idea of the location of the most famous Greek and neighboring potteries. Birch thinks that glazed vases were made by the Greeks as early as 480 B. C., while Kramer distinguishes three styles of Greek vases: the old or soft style, dating back to 557 B. C.; the second or hard style, first

made about 457 B. C., and the third or fine style, the manufacture of which was begun about B. C. 417. Greek and Roman earthenware was not glazed in the sense in which the word *glaze* is now employed, but, like the Peruvian ware, was covered, while hot, with tallow, or perhaps with wax, bitumen or other substances of the kind. The earliest specimens of true glazing are the glazed tile found in the door-

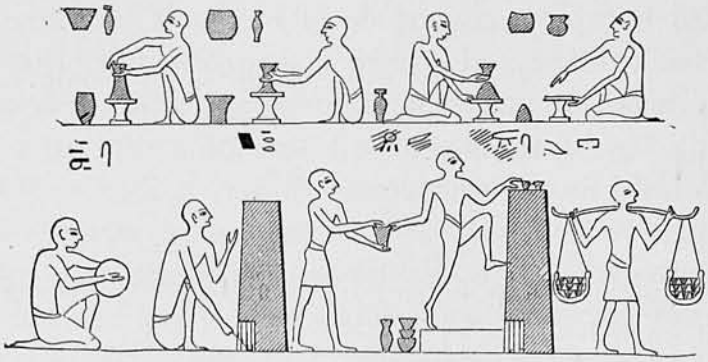

Fig. 1.

way of the pyramid of Saggara (Fig. 1), and the beautiful blue vases inscribed with the name and titles of Rameses II., the Sesostris of Greek legend. Athens held a very high, if not the first place among the ancient Greek centres of pottery manufacture. Little is known of the condition of these Athenian potters. We know, however, that they formed guilds, and grew wealthy by exporting their ware to the emporia of the world. The oldest Greek potteries were probably in Samos, Corinth, and Ægina, and the Athenian potters perhaps came from those places and settled in the city of Athens in the quarter called Kerameikos, from Keramos, son of Theseus, patron deity of potters. The principal men of Athens were connected with these potteries, and great rivalry existed among them. Potters were frequently called Prometheans, because of the legend that Prometheus placed the fire he stole from heaven in a man fashioned of clay. All of this ancient pottery was of the soft style (see page 250). The earliest attempt to make compact stoneware was made by the Arabs in Spain, in the ninth century. Glazed tile are found in the Alhambra, which closely resemble those found in the Caravanserai of Mayar, near Ispahan, Persia, built in 1550, and in the mosque of Gour, in India, built in 1475, showing, perhaps, that the Arabs of Spain attained a recognized pre-eminence in the potter's art. From Spain the

art went to Majorca, where Majolica was made in the fourteenth century. The Italians soon after began to imitate the much-admired Majolica ware, and the imitation was called *porcellana*, a Portuguese word signifying a small shell, which in its turn received its name from a fancied resemblance to the back of a pig, *porcella*. The first pottery for stoneware was established by the Italians at Fayenza, whence the French derived their word "Faience." The body of the ware was of red clay, with an opaque glaze made of oxides of lead and tin and of potash and sand. Bernhard de Palissy, in the middle of the sixteenth century, first manufactured white Faience, at Saintes, France, and the Dutch soon after began the manufacture of Delft ware. A small works, established in the seventeenth century, at Burslem, in Staffordshire, by Josiah Wedgewood, was the beginning of the vast pottery industry of England. The Staffordshire potteries use light brown clay from Dorsetshire and white clay from Cornwall as non-vitrifiable substances. Porcelain, a name already in use in Italy, was applied to translucent part-clay ware, first invented in China about eighteen hundred years ago, and first known in Europe A. D. 1518. It will be interesting here to quote the observations of Gui Panciroli, an Italian *savant*, who lived about this time, in order to show how mysterious this new product appeared to the people that first saw it in Europe. The "*célèbre jurisconsulte et erudit Italien*" says that "porcelain is a certain mass composed of plaster, of eggs, of scales of sea-locusts and other similar substances, which, being well bound together, is hidden beneath the ground secretly by the father of the family, who discloses the place only to his children, and there it remains eighty years without seeing the day, after which time his heirs draw it forth, and make of it these precious vases." The secret of porcelain was afterwards rediscovered in Europe by Chicanneau, in France, in 1695, and by Böttger, in Saxony, about 1709. Porcelain is thought to have been made, a hundred years earlier than these dates, at Florence, but the art must have been soon lost. The secret was carried to Vienna about 1720, by the escaped foreman of Böttger's works at Meissen, in Saxony. The first hard porcelain works were established at St. Cloud, in 1695, the second at Vincennes, afterward removed to Sèvres.

The aborigines of America made a common, underbaked pottery, a few specimens of which have been unearthed. The early settlers appear to have been, in this respect, more primitive than their savage

predecessors, since, up to the time of the Revolution, pewter mugs and wooden trenchers were almost universally used instead of crockery. Only the very wealthy had a little Delft and queensware. At the end of the eighteenth century, when the production of brick equaled the demand, nothing else in the way of pottery than the coarsest earthenware was made in this country. The first ware of tolerable excellence made in this country was probably that produced in Norwich, Connecticut, by Charles Lathrop, about 1790. Soon after, Isaac Hanford, at Hartford, and Adam States, at Norwalk, made pottery. The sons of Adam States seem to have improved the quality of the ware made in their pottery. The value of pottery produced in Connecticut in 1822 was $30,740. The first pottery built in New Jersey was established about 1800, at Herbertsville, then called Old Bridge, a fact which places New Jersey in an honorable place in the history of American pottery. The first ware of any artistic beauty whatever was probably made by William Tucker, in Philadelphia, about 1816. This was slightly decorated, as was also the ware of the American Pottery Company, founded at Jersey City, N. J., in 1829. The decorative department of the latter company employed forty men. Lyman, Fenton & Co. did still more creditable work at Bennington, Vermont, in 1847. The first white ware made in New Jersey was probably made by the American Pottery Company of Jersey City.

The pottery business of Trenton was begun in 1852, by James Taylor, a thrower from the American Pottery Company of Jersey City, in partnership with a man named Speeler. Yellow and Rockingham ware were successfully made, and porcelain and Parian were attempted. In 1856, this firm was making white granite, in connection with yellow and Rockingham ware. The Franklin Institute conferred a medal upon Taylor & Speeler in this year. Mr. Bloor entered this firm in 1854, and remained with them for five years. Soon afterward, Mr. Speeler sold out to John F. Houdayer, and in 1870, the firm consisted of Mr. Taylor and John Goodwin. A year later, Mr. Goodwin was bought out by his son, James H. Goodwin, and Isaac Davis, the latter of whom soon afterward acquired Goodwin's share, and in 1875 became sole proprietor, by purchasing Mr. Taylor's interest. Mr. Davis is an Englishman, from Staffordshire. He began as workman, for William Young & Sons, in 1862, soon after joined the Glasgow Pottery Company, and later established himself by buying out Mr.

Goodwin and Mr. Taylor. William Young & Sons began in a very small way, to make cream-colored ware, in 1853. Their business had reached large proportions, when, in 1879, they sold out to the Willets Manufacturing Company. The following extract from an article in one of the Trenton daily papers ("The Trenton Times"), gives a very complete account of the company:

"The Excelsior Pottery Works owes its existence to the late William Young, who, it will not be disputed, did more to develop and advance the pottery industry in this country than any other individual. And, notwithstanding there were others engaged in the manufacture of the commonest grades of earthenware, in this city and elsewhere, previous to 1853—the year that the late William Young and others leased a small pottery, built by Charles Hattersly, located on the present site of the City Pottery Company's works—this period practically dates the foundation of the industry in America, and the name of the founder of the Excelsior Pottery Works deserves to be handed down to posterity as the father of the pottery industry in this country.

"An idea of the size of the pottery industry in Trenton, at the period referred to, may be gathered from the statement that the Hattersly Pottery, built in 1852, was supplied with one small kiln, six feet in diameter, and its rapid growth is readily comprehended when it is known that the number of potteries springing out of this single establishment amounts to twenty-three large and thrifty concerns, with an aggregate of one hundred and ten kilns, which have an annual production of $4,000,000 worth of white and decorated goods. Long before the expiration of the lease of the Hattersly Pottery, which William Young and his partners secured for a term of five years, the venture proved so successful that, in order to keep pace with the demands of trade, it was necessary, from time to time, to increase the productive capacity of the works; and after expending considerable money in this way, they concluded it would prove more profitable, in the end, to spend their money improving their own property, and active steps were taken looking to the erection of a pottery of their own. The site chosen for the new establishment is the one now occupied by the works of the Willets Manufacturing Company, along the north bank of the Delaware and Raritan canal, a few hundred feet east of Rose street, and the new enterprise, christened the Excelsior Pottery Works, was put in operation in 1857. The pottery subse-

quently passed into possession of William Young & Sons, under whose vigorous management the industry was conducted until 1870, at which time the founder of the works withdrew from active business life, and for the nine succeeding years the business was carried on by two of his sons, under the firm name of William Young's Sons, who disposed of the industry to the Willets Manufacturing Co., the present owners, in 1879.

"Before attempting a brief description of the Excelsior Pottery Works in its present enlarged shape, and briefly referring to the character of product, it will not be out of place to add, in this connection, a word concerning those who have made this the largest pottery plant in the country. The parties composing the Willets Manufacturing Company, consisting of Joseph Willets, president; Daniel Willets, secretary, and Edmund R. Willets, treasurer, need no introduction or recommendation to the trade, for they have been so prominently identified with the crockery interests of this country as extensive importers, for years previous to engaging in the business as producers, that the name and the interest they represent have become synonymous terms in trade circles throughout the United States. Their father, the late Edmund Willets, laid the foundation for an importing trade as early as 1824, and the house he established occupied a leading position in this line, in New York, for more than half a century, all of which time it was conducted in the name of Willets, by the founder and his sons, and was only closed out four years ago, by the latter, who decided to quit the importing trade and become manufacturers of American pottery. How well they have succeeded in this important undertaking, the reader can best judge from the simple statement that the Excelsior Pottery Works passed into their possession four years ago, with the productive capacity limited to five kilns, and the number has since been increased to eleven, including two of the largest decorating kilns in Trenton. Aside from this, various other improvements have been made, notably the erection of several large brick buildings, including a new slip-house, equipped with the most approved machinery for preparing clays, including four improved presses; in short, it is no exaggeration to say that these works now represent one of the most complete potteries in the country, and is so acknowledged by several English potters, recently in Trenton, who inspected a number of American potteries.

"The premises owned by the company embrace six acres of land, half of which is covered by a series of brick buildings, some twenty-two in all, ranging from one to four stories in height. The principal buildings comprising the plant are imposing in their dimensions, the more prominent of which consists of a main building, 75x415 feet in dimensions, two and three stories in height, with four wings, respectively 50x80, 30x80, 20x80, and 30x50 feet in dimensions, also two and three stories in height. To the rear of these stands another structure, 100x150 feet in dimensions, three stories and a basement in height, while near by is a four-story building, 50x125 feet in dimensions, and a two-story structure of the same dimensions.

"The motive power necessary in an industry of this character is derived from a fifty-horse-power engine, fed by three large boilers, which also supply the steam to heat the principal buildings. A large basin, extending for several hundred feet along the eastern end of the premises, affords ample wharfage facilities, a very important feature, by the way, as the supply of clays and fuel is received by way of the Delaware and Raritan Canal. The product of the industry, which amounts to $350,000 annually, comprises a general line of thin opaque porcelain and white granite ware, plain and decorated, including porcelain door furniture and telegraph and telephone insulator supplies. The Willets Manufacturing Company excel in under-glaze printing, and a large portion of the product of their industry consists of a choice line of artistically decorated dinner, tea and toilet ware, a conspicuous feature of which is the under-glaze printing, which is so greatly admired, but somewhat more difficult to produce than the over-glaze decorations, at present the principal process employed in the decoration of pottery in this country.

"The prevailing style of under-glaze printing, with the Willets Manufacturing Company, consists of a series of tropical scenes, and it would be difficult to conceive anything more attractive in pottery decoration applied to articles intended for general use, than what is known as their illuminated gold series, which are done in three colors—blue, brown, and neutral. The leading designs consist of a series of a new Doric-shape ware of a most attractive model, which afford unlimited opportunities for effective decorative work. At present, the industry gives employment to three hundred and seventy-five people, including thirty-five decorative artists, whose aggregate weekly

wages amounts to $3000. In addition to its thousands of tons of clay, the industry consumes between five and six thousand tons of anthracite coal annually. The number of packages of all kinds, shipped the current year, will foot up nearly ten thousand."

Rhodes & Yates operated the first pottery for white granite and cream-colored ware exclusively, at the present City Pottery in 1859. They successfully overcame the violent prejudice in favor of imported wares of the better class, and thus have the honor due to pioneers in a new industry. As usual, other firms were not slow to follow in their steps, and of these the company now known as the Etruria Pottery Company was organized in 1863 by Messrs. Bloor, Ott & Booth. In 1865 Mr. J. Hart Brewer entered the firm. Messrs. Ott & Brewer were left alone in the enterprise by the withdrawal of the other members of the company previous to 1871, and in 1878 first adopted the name Etruria Pottery Company, by which the concern is now known. Great enterprise has been displayed by Messrs. Ott & Brewer in experimenting with new wares and new shapes. Their ivory porcelain attracted attention at the centennial exhibition, while their parian vases and heads, modeled by Mr. Broome, were among the best artistic works exhibited at the exhibition. Very lately the firm has been making a ware very closely resembling the Irish Belleek, formerly manufactured at a famous Irish pottery. This ware is of perfect true porcelain body and the decoration is rapidly improving. The interior of the cups is usually colored a delicate yellow or mother-of-pearl, the effect of which latter color, when toned by experience to the proper tints, will undoubtedly be excellent. The staple product of this, as of all our potteries, is still the common hotel ware.

John Moses & Co., who own the Glasgow Pottery, founded in 1862, make large quantities of white and cream-colored ware. They have succeeded in producing a semi-porcelain of excellent body.

The firm of Coxon & Co. was founded in 1863 by Charles Coxon. Mrs. Coxon, widow of Charles Coxon, in partnership with J. G. Forman and S. M. Alpaugh, carried on the business in w. g. and cream-colored ware until 1883, when the firm was changed to Alpaugh & Magowan.

Mr. James Moses is sole proprietor of the Mercer Pottery, founded in 1868. He makes the ordinary wares, and also experiments with

finer pastes. The product of this pottery is much of it artistically decorated.

The Arsenal Pottery, owned by Mr. Joseph Mayer, produces Rockingham and crown stoneware.

The Greenwood Pottery Company's works, now one of the most extensive and complete potteries in the country, is the outgrowth of one of the oldest in Trenton. The business was originally established by William Tams and William Barnard in 1862, in a small brick building, formerly occupied as a carriage-works, and which still comprises a portion of the pottery.

The business subsequently passed into the possession of Stephens, Tams & Co., who were succeeded by Brearley & Stephens, who in turn were succeeded by the Greenwood Pottery Company, incorporated in July, 1868, with the following officers: President, James Tams; Secretary and Treasurer, James P. Stephens. The president of the company, a son of the founder, who has been connected with the industry ever since it was established, acquired a thorough knowledge of potting in England, where, at the age of seven years, he was apprenticed under his father, who was manager of a large pottery, and in regular order served a full apprenticeship at the various branches of the trade. The works of the Greenwood Pottery Company are admirably located on a strip of land with a frontage of five hundred feet on Canal street, extending in depth to Mercer Cemetery, a distance of one hundred and thirty feet, which is almost entirely covered with a series of brick buildings, ranging from one to three stories in height. The number of kilns, including four for decorating purposes, foots up a total of twelve, the productive capacity of which amounts to $250,000 annually. One of the kilns is the largest ever built in this country, while three are two stories in height, similar to the kilns used in France. At present the industry gives employment to nearly two hundred and twenty-five people, including several of the most skilled decorative artists in the country, who are chiefly engaged at the choice and artistic Royal Worcester decorations. The bulk of the product of this pottery consists of a line of table-ware in "thick" and "half-thick," especially adapted for hotels, steamboats, railroad dining-cars, restaurants and family use. A very important product of the industry consists of a line of very superior works of art, principally vases of various shapes and sizes, richly and artistically decorated in the Royal

Worcester styles, similar in design to Japanese decorations. These beautiful art pieces are especially valuable, not only on account of the superiority of the ware and artistic skill embodied in design and decorations, but also on account of an established rule not to manufacture more than one piece of a kind, consequently it is impossible to find duplicate copies scattered throughout the land. Another decoration employed at this pottery, probably the most difficult of any, consists of what the French call *pate surpate*, which in English means clay upon clay, and is somewhat similar to enameling. Not the least important feature of the product is the manufacture of porcelain hardware, trimmings and telegraph insulators.

In 1879 the International Pottery was established at Mr. Speeler's old pottery, and in the same year the New Jersey Pottery Company was organized. The latter company was re-organized in 1883 as the Union Pottery Company, and is now making a great success of a semi-porcelain decorated dinner-set, known as the "Newport" design. It employs one hundred and seventy-five people, including thirty-five decorators. Dale & Davis built the Prospect Hill Pottery in 1880, and are now manufacturing w. g. and opaque porcelain, in dinner, tea and toilet-sets. One hundred and thirty potters and twenty decorators are employed. The six kilns of this company are of unusual size and convenience. In 1881 the Trenton China Company and the Enterprise Pottery Company were started, and in the next year the Harris Manufacturing Company began the manufacture of porous tile and kindred products.

In connection with the history of pottery in Trenton, it should be added that within three years decorating has been increased many hundred per cent. Potteries which, three years ago, had but two or three decorators, have now from twenty to fifty, while the outside decorators still continue their business.

Having reached now that portion of the history of pottery which most concerns us—the history of the industry in our own state—our subject calls for some general remarks upon the progress of the industry in the past and upon its prospects for the future. Fifteen years ago, when the manufacture of pottery in Trenton was in its infancy, the practical men who engaged in it saw its practicability, but hardly appreciated its possibilities. Their ambition did not soar beyond the making of such ware as is put to the most ordinary uses. Gradually,

however, by a species of industrial evolution, higher grades of pottery and better glazes took the place of the less perfect, and competition introduced variety into the products of our kilns. As the master potters grew in experience, the workmen were compelled to exert their powers to the utmost. The result is indeed gratifying to the pride of Jerseymen, and it requires no occult powers to presage the future of Trenton pottery. At present, if we put aside the experiments in which the potters may have recently been successful, the decorative work does not compare favorably on the whole with the average decorative work of the English and other foreign potters. Crudeness in design and bad taste in coloring are only too prominent to the man of æsthetic culture who scrutinizes our pottery. On the contrary, the body of our pottery, especially of the opaque porcelain or vitrified china, has reached here a degree of perfection which leaves nothing to be desired. Our true porcelain, too, is exquisite. Shapes, also, have been greatly improved, and the spirit-harrowing "stuck-on" ornaments, so dear to the worse than barbarian "hoosier" taste, have disappeared and thus relieved our pottery of an incubus. In the matter of colored decoration alone, it would seem that our American enterprise finds itself baffled, or, as we should rather say, is provokingly blind. In shapes we copy and at the same time improve upon the pottery of foreign make. In design and coloring we are content to be original at the expense of being inartistic. A broad and generous policy on the part of the potters employing decorators, in securing, at any reasonable cost and trouble, the artistic talent which undoubtedly exists in this country, or by founding, in Trenton or elsewhere, a technical school, are the remedies. A school like the Kensington schools of London, with the practical aim of training its pupils in the true principles of art as applicable to pottery decoration, could not fail to be, in the end, not only of great pecuniary advantage to the potters, but also an engine of artistic culture for the masses of our land. Who will take advantage of the liberal offer of assistance in such an enterprise made by our state three years ago,* and prove himself sufficiently philanthropic —nay, sufficiently practical and far-sighted, to found a technical school in our state? The foundation of such a school would do much to remove, at least from the State of New Jersey, the too just reproach

*See Laws of 1880.

upon us as a nation that greed for money is the ruling motive in all the concerns of our life. The nation heard the cry of the potters for a high protective tariff for their pottery. Let the potters show their gratitude by giving the nation an industry which may be as reasonably a matter of pride to us as the great Staffordshire potteries are to England.

The condition of the potters has steadily improved. Twenty years ago, when the foreign potters first came to Trenton, hardly a sober man was to be found among them, and it was impossible to keep liquor out of the potteries. Those who were children at that time grew up under American influences, and while still retaining, in most cases, the dialectic peculiarities of their parents, by no means follow their parents' careless courses. Out of the two hundred employes of one of our largest potteries, a member of the firm assured the writer that not half a dozen drunkards could be found, and that liquor is never brought into the pottery. The kilnmen, who formerly were a set of sots, are now as sober as any laborers in the city. This is an encouraging condition of things when it is considered that, as a manufacturer who has been thirty years in the business stated, twenty years ago all the Trenton pottery was the work of drunken potters.

Since the unsuccessful strike of 1877 no organization has existed among the potters, although meetings are occasionally held to discuss subjects of interest. We shall now consider in detail the various industries of the state using clay.

RED BRICK.

The process of manufacture of red bricks, of which, as will be seen by reference to the table on page 265, 186,400,000 were made in New Jersey in one year, is very simple. The excellence of this universally-used building material depends upon the clay mixture used in the making. In New Jersey, as has been stated above, all the clays not strictly fire clays are used for making bricks, the proper mixture having been arrived at by experiment in the different yards. For good bricks the clay is carefully freed of iron pyrites, which burn out and leave cavities in the bricks, and of stones. The clay is then left to weather, the operation consuming more or less time according to atmospheric conditions. After being rotted and dried by the air,

the clay is ground in roller mills, usually moved by horse power, and is then mixed for use. The object of the mixing is to obtain bricks that will be uniform throughout, that will dress easily with the trowel and that will be sufficiently porous to make the mortar adhere firmly. If the clay is too fat it produces bricks liable to bend and crack, and not sufficiently porous. Clay which is too *poor* produces bricks that crumble easily. The bricks are moulded by the workman upon a bench set before him, in a mould of sheet iron with detached bottom, called the stock board. The assistant sprinkles the bench with dry sand, and, taking a *clot* from the mass of tempered clay, roughly moulds with his hand a *clot* of clay in the shape of a brick. The moulder takes this *clot* and dashes it into the mould. He then presses the clay into the angles of the mould with his hands, and, with the *strike*, previously wetted by immersion in water, removes the superfluous clay. The brick is then thrown out of the mould ready to be taken to the drying-room. In what is called *slop moulding* the mould is dropped in water to prevent the adhesion of the clay, and the brick is carried to the drying-room in the mould. It is said that a moulder with proper assistance can make two thousand bricks in a day. Sometimes brick machines are used, two varieties of which are represented in Figs. 2 and 3. The first of these (Fig. 2) is the simplest and requires little explanation. The clay is thrown into the hopper, and is ground and

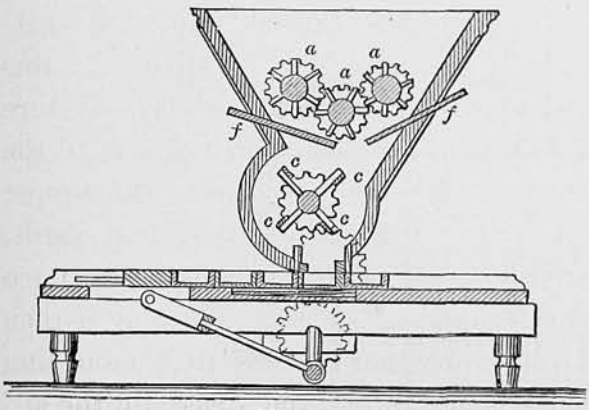

Fig. 2.

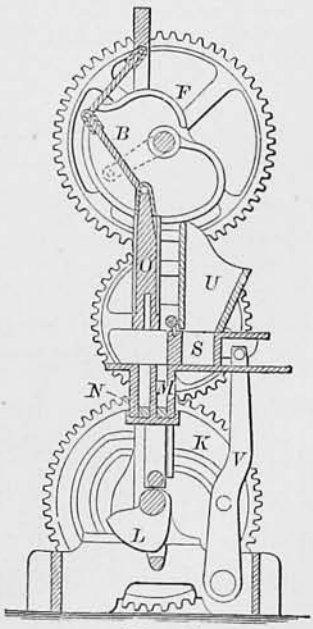

Fig. 3.

forced downward by the wheels, *a a a*, through the opening below. Here the beaters, *c c c*, press the clay into a mould below. The mould is then moved along by suitable machinery, giving place to another mould. In the machine represented in Fig. 3, the clay is fed into the hopper, *U*, and falls into the box, *S*, which, by the cam *V*, is forced under the piston, *O*. The piston, *O*, drives the clay into the moulds, *M*. Another piston rod from below forces the bricks up to the opening opposite the box, *S*, the return of which pushes the bricks to the left of *O*. These machines are fair specimens of brick machines in use.

Bricks were first manufactured in Middlesex county upon a large scale by James Wood, in 1851, at Roundabout. In the fall of the same year Peter Fisher and James Sayre began making bricks west of Wood's yard, and in 1858 the firm began the manufacture of fire-brick near Washington. The business passed into the hands of Peter Fisher as sole owner in 1876, and is now carried on by him. R. L. Serviss began making brick in the same neighborhood in 1853, but

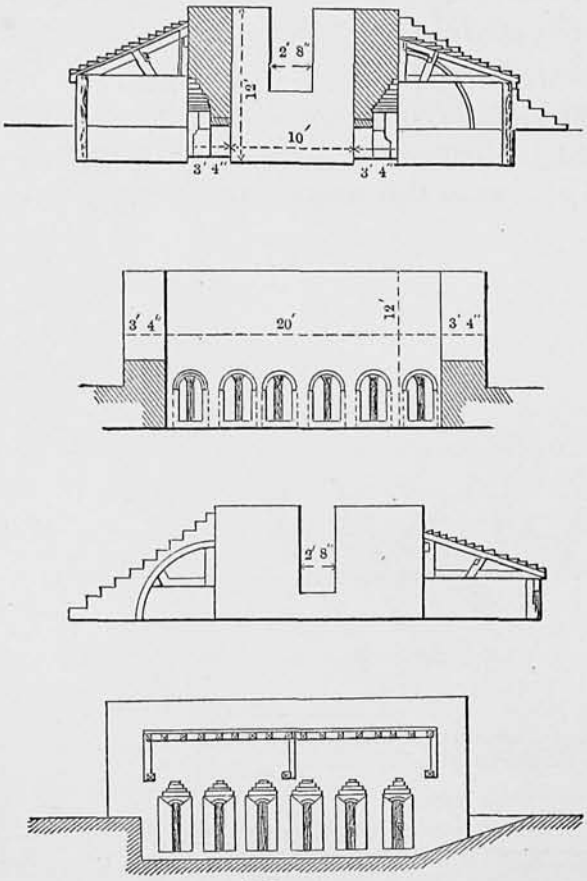

Fig. 4.

abandoned the business in 1871. The works are now operated by W. F. Fisher. The Middlesex Company, established in 1881, manufacture refractory materials on Burt's creek, near the Raritan. There are upwards of thirty-five kilns in this neighborhood, with a capacity, as shown by the appended statistics, of eighty-four million brick. The use of anthracite dust has reduced the time of burning a clamp of bricks from two weeks to about four days. The expense of burning is estimated at $80 for sixteen cords of wood, $3 for seventy-five bushels of anthracite dust, and $6 for four days' attendance—total, $89 for each hundred thousand bricks. The greatest expense in the manufacture is incurred in the preparation of the clay and in the moulding and handling of the bricks. The bricks burn unevenly in the kiln (Fig. 4), those near the flues becoming well vitrified or *clinker bricks*, while those farther from the flues are *soft* and of use only where sheltered from the weather and not subjected to attrition.

The laborers employed in the brick-yards are nearly all of the unskilled class. A full complement of hands is employed from seven to nine months each year, and about one-quarter the number during the balance of the year, for sorting and shipping. The wages earned are from $1.25 to $1.75 per day by ordinary laborers, and from $2.25 to $3 by the few skilled laborers employed. The following table gives the production of red bricks for the State of New Jersey for the year ending July 31st, 1883:

Number of Firms.	Locality.	Number of Bricks.	Value.	Hands Employed.*
5	Hackensack river	31,500,000	$220,500	211
13	Raritan and South rivers	84,000,000	588,000	676
1	Raritan bay and Matawan creek	18,000,000	126,000	190
7	Trenton and Kinkora	32,900,000	398,200	578
2	Delaware river, Pea shore	8,000,000	64,000	100
	† Camden county and South Jersey	6,000,000	42,000	75
	† Scattering throughout state	6,000,000	42,000	75
	Total	‡186,400,000	$1,480,700	1,905

* Average nine months.

† Estimates.

‡ Estimated at 110,000,000 by Prof. Cook in 1880.

FIRE-BRICK.

The manufacture of fire-brick from the extraordinarily fine refractory clays of New Jersey was begun at Woodbridge, in 1825, at the present Salamander Works, and Mr. John R. Watson established his factory at Perth Amboy eleven years later. The fact that two hundred and seventy-three thousand tons of clay was used last year by the different firms in the business shows to what proportions the fire-brick industry has grown. The fire-bricks are used in rolling mills, lime kilns, blast furnaces, iron foundries, gas works, tanneries, boiler and grate settings, glass works, &c. Simple as the process of manufacture is, we shall describe briefly how fire-bricks are made. The clay, after being ground in a common roller mill, is mixed with fire-sand in the proportion of one-third sand and other non-shrinking material (chiefly ground fire-brick,) and two-thirds fire-clay. The clay is then moulded in hand moulds or ordinary moulding machines, and, after being partially dried, is then pressed in hand brick presses, in which operation some of the moisture is expressed. The bricks are now allowed to dry, and are then piled in the kilns, carefully separated by non-vitrifiable sand. About six days are consumed in the burning, upon which the perfection of the brick largely depends. For three days a slow fire of sifted coal is kept up, to dry the bricks and gradually heat the kiln. A hot fire is then begun, and the temperature of the kiln is slowly raised until a blue heat is attained, and nothing can be seen through a trial hole excepting the glare of the furnace. This heat is kept up for seven hours, the test of the proper degree of heat being that the smoke of bituminous coal thrown into a fire grate is consumed before issuing from the top of the kiln. The bricks are now considered baked, and, the fires being drawn, the kiln is shut up and left to itself. The kilns used are some of them up-draught and some of them down-draught. Muffled kilns are used in some instances.

Production of Fire Brick in Middlesex and Hudson Counties.

County.	No. of Firms.	Number of Fire Brick.	Value.	Hands Employed.
Middlesex	7	19,500,000	$483,250	550
Hudson	.....	1,000,000	25,000	

Hollow brick and drain-pipe occupied three firms in Middlesex county, and the product was valued at $243,000. The product of drain-pipe and kindred manufactures in Hudson county was $50,000. Union county produced $30,000 in value of drain-pipe, sixteen men at $1.50 per day being employed. The product of three firms in Essex county was $75,000.

TERRA-COTTA.

The best clay used in the manufacture of architectural terra-cotta is found in Middlesex county. Ninety per cent. of the whole product of clay used in the United States, for this rapidly-increasing business, is taken from the clay-beds in this county, and sixty per cent. of the manufactured product is furnished by the two firms founded by Mr. Alfred Hall, at Perth Amboy, thirty per cent. being produced in Boston, and ten per cent. in Baltimore and Chicago. The Baltimore firm uses clay found in that region, while that used by the Chicago firm is found in Southern Illinois and Indiana.

The use of sawdust and other combustibles, mixed with clay, to make a porous body, is an old feature in the manipulation of clays. When the clay thus prepared and pressed into the required forms, is subjected to the great heat of the kilns, (reaching, in some goods, 2500° Fahrenheit,) the combustible matter is entirely consumed, leaving pores or air-cells throughout the burnt clay. This renders the body absolutely fire-proof, while its penetrability is such that nails may be driven into it with a tenacity equaling that of pine and the various kinds of wood generally used in building.

The iron-work used in the construction of the Mutual Life Insurance Company's new building on Nassau street, New York, is entirely cased with this material. The value as casing material is shown by the fact that the edge of a slab of porous terra-cotta six inches square may be subjected to a jet of flame until it attains a white heat, and still be cool enough to handle by the other edge, without discomfort.

Porous terra-cotta for fire-proof purposes was first introduced by Sanford E. Loring, of Chicago, who obtained patents in 1874, for its use to encase with terra-cotta all columns, girders, partitions, floors, and iron and wood-work of every description used in the construction of buildings. Aside from its great value as a non-conductor of heat,

it has the additional advantage of being very tenacious and light, weighing from forty-five to sixty pounds per cubic foot, or less than one-half the weight of solid burnt clay.

The Terra-Cotta Lumber Company, which promised so largely, under the Gilman patents, has not met with the success anticipated by its promoters, and after an expenditure of a large amount in experimenting, has gone into the hands of a receiver. This again demonstrates the fact that simplicity and untiring vigilance are the two principal elements of success in the use of clay in the arts. Evidence of this is seen at the Raritan Hollow and Porous Brick Company's factory, which has been run to its full capacity since the owners started in the business.

Among the many prominent buildings in New York city that have been erected in the past two years, in the construction of which terra-cotta has been largely used, are the Produce Exchange, the Metropolitan Opera House, the new Jefferson Market, in Sixth avenue, the Williamsburgh Fire Insurance Company's building, the Mutual Life Insurance Company's new building, the "Post" building, Fulton Market, the Washington Market, now building, and many others, equally well known. The exterior of the Metropolitan Opera House is of terra-cotta and buff brick.

The Cut Tile and Pottery Works at Perth Amboy, (under the direction of M. S. Fertitiés, an artist of great ability,) which has been established during the past year, is making large quantities of cut tiles for interior decorations. The goods are said to be fully equal to the English majolica tiles in excellence of design and workmanship, and command a ready sale.

Terra-cotta proper (not the pale, streaked product manufactured under this name from drain-pipe clay) burns in the kiln to a hardness that gives the articles, when struck, the ring of iron. The clays used are more or less largely colored with oxide of iron, which, according to mixture, produces a red, a buff, or a brown color. When single pieces are ordered, the moulder produces his design in clay, which is dried and fired. If more than one are wanted, as in the case of stringers, friezes and ornaments that run throughout a large space upon a building, moulds of the object are taken in plaster. The clay is *pressed* with the hands, into the mould, and the objects are afterwards finished with the fingers—the secret of the *life* of terra-cotta

decoration. The kiln used is an up-draught kiln, so constructed that the fire does not come into contact with the object to be burned. The flames pass from the grates, at the base of the kiln, through flues between the walls of the kiln and through a pipe set up in the centre. The objects are placed in tiers, separated by fire-brick, the large pieces being placed upon the topmost tier. The time and method of burning are the same as in the case of fire-brick. (For statistics, see remarks on table, page 276.)

POTTERY.

The Trenton potters use, for their white ware, clays from the State of Delaware and Delaware county, Pennsylvania, which are totally or almost entirely free from oxide of iron. These clays are found in the place of their first deposit, and therefore contain all the sand of the gneiss or granitic rock of the disintegration of which they are the product. New Jersey clay, which is not found free from oxide of iron, but is very much more plastic, is mixed with these clays to render the paste manageable. All of the saggers, however, that are used in the Trenton potteries are made of New Jersey fire clay. The value of good fire clay to the potter will be understood when it is considered that * true porcelain could not be made in England, owing to the

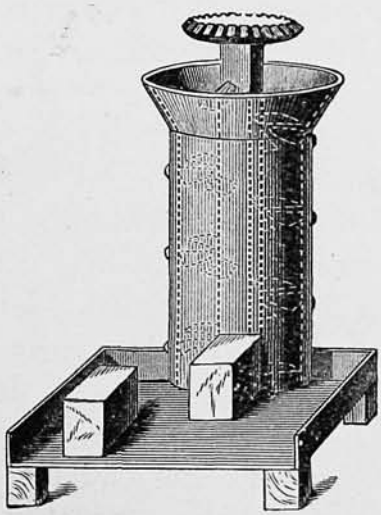

Fig. 5.

* See Muspratt's Chemistry, &c., Vol. II., *sub voce* "Pottery."

scarcity of a cheap material for saggers, ten per cent. of the ordinary saggers being lost in the firing of true porcelain.

The process of preparation of clay for making good ware is as follows: After having been washed by a process analogous to that described on page 247, the clays, reduced to the consistency of cream, are separately passed through lawn sieves, and are then mixed by measure in proportions that will give the required plasticity in the mixture. The mixture is now allowed to evaporate in troughs or *slip kilns*, under which furnace flues run. When a uniformly doughy mass is obtained, the prepared clay is taken from the troughs, passed through a pug mill (see Fig. 5,) cut into rough lumps, and is stored for a time not exceeding one year in a damp cellar, where it disintegrates by fermentation. The process of preparing the rotted clay for actual use is called *slapping* or *wedging*. A large mass of clay is placed upon a bench, and the workman, cutting it through with a wire, lifts up the upper half, turns it about half way round, and throws it down violently upon the half which remains on the bench. The operation is repeated until the mass is intimately mixed, and every vesicle containing air has been broken and the air expressed.

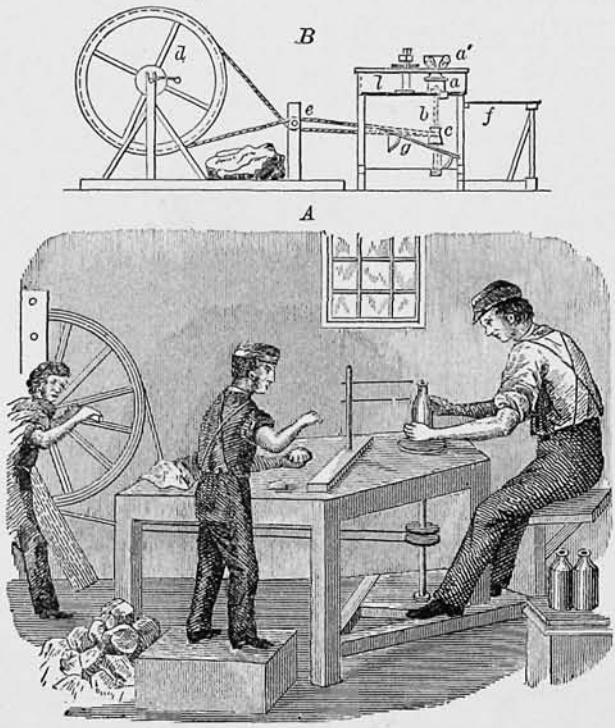

Fig. 6.

The process of preparing porcelain paste is much the same as that employed for the stoneware paste, a stirring-vat being employed to knead up the mass of clay with water before it passes to the subsiding vats. The grinding of the felspar, chalk, broken porcelain, &c., which enter into the composition of the paste, must be well done, and all particles of iron, mica and such foreign substances must be removed. The ingredients are mixed either in the form of slip or in the form of dry powder, the latter being the least convenient method, but more accurate. Analysis of the best Sèvres porcelain manufactured between the years 1770 and 1836 gave this result:

Silica	58.00
Alumina	34.00
Lime	4.5
Potassa	3
	99.5

The mixture is freed of superfluous water by being subjected to hydraulic pressure in closely-woven sacks.

There are three methods of fashioning the innumerable and various articles made from clay. The first and most ancient is that of *throw-*

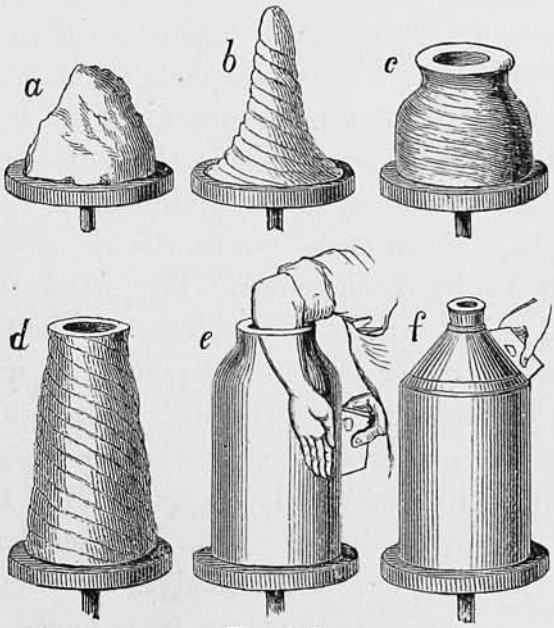

Fig. 6 C.

ing, in which the *thrower* or *jigger* throws down a lump of clay upon the revolving table of his lathe (Fig. 6 B.) Using both hands (Fig. 6 A), he works the lump into the shape of a rude cone, and then flattens the mass within a few inches of the table, the object of the operation being to force out any air bubbles that may still remain in the clay. By means of his hands and fingers, and referring continually to measuring sticks he fashions the vessel according to a model or after his own fancy. (Fig. 6 C.)

Few jiggers are employed in our potteries, the best examples of this art being found in the country earthenware potteries. *Presswork* is the method commonly employed. This work is done in moulds made of plaster-of-paris, one-half of the pattern being formed in one side of the mould, and the other half in the other side. (Fig. 7.) The two mould-

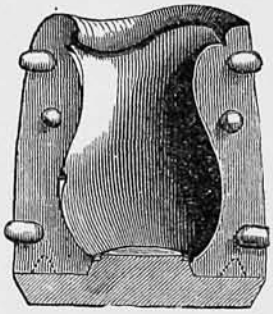

Fig. 7.

ing pieces are then fitted accurately together. Handles are moulded separately and fastened on with slip. Handles of teapots, fluted solid rods, and all such slender ornaments are made by forcing clay, under great pressure, through a narrow hole in the bottom of a piston previously charged with dough-clay. As the thread of clay issues it is cut in suitable lengths. From these pieces, the ornaments are bent and fastened on with slip by the *handlers*. For articles of very irregular shape a method called *casting* is employed. The two halves of the mould are fastened together and slip is poured in until the cavity is quite full. As the moulds are previously thoroughly dried, the absorbent power of the plaster soon abstracts the water and makes the coating of clay next to it stiff and doughy. When the liquid is now poured out this doughy coating remains. If each half has been cast separately, as is the usual practice, the halves are allowed to dry to the green or most tenacious state, and are then joined with slip. The

method of casting is that usually employed in moulding porcelain. Another method of forming articles in porcelain we may call the *crust* method. The dough is spread with a rolling-pin upon a moistened sheepskin, and is transferred over the mould by lifting it carefully upon the skin. All pieces, whether pottery or porcelain, are finished upon the lathe when they have dried to their greatest tenacity. A moist sponge and knives are the implements used in turning. (Fig. 8.) Owing to the low degree of tenacity possessed by the porcelain

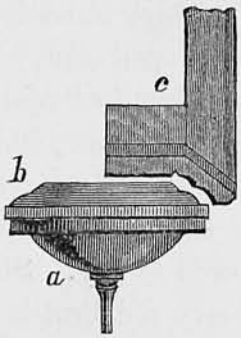

Fig. 8.

paste, hardly more than one-sixtieth as many pieces can be finished for firing in porcelain paste as in stone-ware paste, by the same force in the same time.

Saggers are vessels of fire-clay, in which all articles except the commonest earthenware are burnt. They are fashioned of clay slabs roughly cut with a spade and compacted with a mallet, over an oval-shaped form. The bottom is put on separately and the whole is fired. The ware is placed in saggers, which are piled upon one another so that the bottom of each succeeding sagger forms a cover for the one

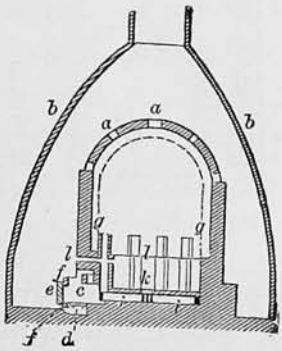

Fig. 9.

immediately below. Only a single article of porcelain paste can be burnt in a sagger, and the bottom of the sagger must be sprinkled with infusible quartz sand to prevent adhesion between the porcelain and the sagger. Saggers for stoneware may be filled, the pieces being separated by variously-shaped cockspurs, &c. Stoneware, w. g. ware and kindred wares are raised in the kiln (Fig. 9) to a white heat, which is continued for thirty-six hours. The fires are then allowed to cool, the saggers removed and the biscuit taken out. This biscuit is very porous, and, when dressed of all rough prominence, is ready for the glaze. The glaze for these wares is usually a "frit," composed of ground felspar, twenty-five per cent.; ground quartz, twenty-five per cent.; sal soda, twenty-five per cent.; plastic clay, fifteen per cent., and boracic acid, ten per cent., which is fused in a reverberatory furnace, ground in a mill and mixed with water in *glaze tubs.* The biscuit is dipped in the slip contained in these tubs, the marks are affixed and the articles allowed to dry. Since the glaze is much more fusible than the ware, a cherry-red heat is sufficient to fuse the glaze. A porcelain furnace has two stories (Fig. 10.) In the upper the ware

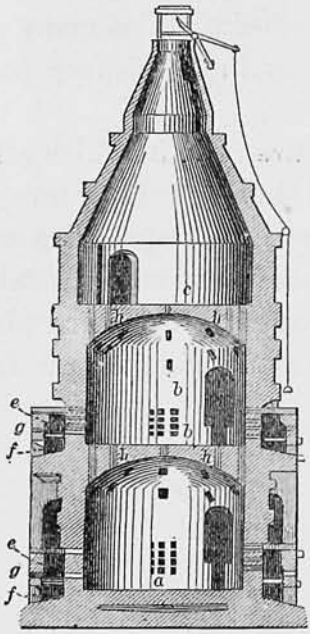

Fig. 10.

is first fired, the ware being converted into a soft, as distinct from a hard or stoneware biscuit. This biscuit is dipped in a glaze of ground quartz, felspar, lime and porcelain clay. In the second firing, which

is done in the lower story of the kiln, (Fig. 10), the glaze and the biscuit are fused together, producing a translucent mass. Stoneware, granite ware, &c., are chiefly decorated by a process called printing or transferring. The intended design is engraved upon copper or stone, and is then transferred in transfer ink to the surface of a prepared elastic sheet. This sheet is stretched on a frame until the design is brought to the size of the article to be decorated. The pattern is now re-transferred to a zinc plate by the ordinary process of lithograph printing. The zinc plate is *engraved* by electricity, and then presents all the gradations in depth and tone of the original design. The printed pattern is applied either to the biscuit or above the glaze, and may be finished by hand and brush after the printing. Decoration is always applied to porcelain over the glaze, the ware being afterwards placed in a muffle (Fig. 11) and subjected to a heat just sufficient to

Fig. 11.

vitrify the colors, which must be of earthy character so as to form colored glasses.

The following table will show the condition of the pottery industry in New Jersey for the year 1883:

Office number.	Capital.	Greatest number of hands employed at any one time during the year.	AVERAGE NUMBER OF HANDS EMPLOYED.			Total amount paid in wages during the year.	AVERAGE DAILY WAGES.			Products.
			Males above 16 years.	Females above 15 years.	Children and youths.		Men.	Women.	Youths.	
150	$75,000	100	60	20	20	$42,000	$2 00	$0 80	$0 75	$150,000
151	150,000	70	62	.....	2	33,000	1 65	.....	85	200,000
152	50,000	65	30	.....	30	30,000	2 00	.....	50	110,000
153	135,000	175	100	50	20	70,000	2 00	75	50	175,000
154	100,000	150	90	15	30	60,000	2 25	66	66	125,000
155	200,000	200	115	35	50	100,000	2 00	1 00	50	250,000
156	200,000	225	145	30	35	75,000	2 50	75	75	225,000
157	125,000	200	115	35	30	73,000	2 25	75	75	140,000
158	200,000	250	150	40	40	108,000	2 25	75	75	275,000
159	3,000	15	8	7	.....	4,500	2 50	1 25	.....	8,000
160	120,000	200	150	30	20	75,000	2 50	70	66	175,000
161	110,000	130	100	16	10	60,000	1 50	75	66	120,000
162	5,000	10	6	2	2	7,000	3 00	1 50	90	10,000
163	9,000	15	6	4	1	9,000	2 50	1 00	90	15,000
164	7,500	12	5	3	2	7,000	2 50	1 50	90	12,000
165	20,000	60	8	24	25	19,500	3 00	1 50	60	40,000
166	6,000	10	4	2	2	6,500	2 50	1 25	75	10,000
167	130,000	210	110	40	50	90 000	2 00	1 00	66	150,000
168	125,000	210	100	25	80	75,000	2 00	75	50	145,000
169	200,000	300	150	60	75	90,000	2 50	66	66	200,000
170	35,000	65	54	.....	6	42,000	2 00	.....	66	120,000
171	8,000	20	11	8	1	7,500	1 50	66	60	10,000
172	30,000	45	32	13	.....	17,500	2 00	1 00	.....	50,000
173	200,000	200	100	50	50	85,000	2 00	1 00	66	255,000
174	300,000	400	240	.....	150	160,000	2 00	.....	66	325,000
175	30,000	55	35	15	.....	13,000	2 50	1 40	66	40,000
176	30,000	80	60	10	8	16,000	1 50	75	50	60,000
177	50,000	40	37	2	.....	20,000	1 60	1 00	.....	49,000
178	180,000	225	150	20	40	75,000	2 00	66	66	200,000
179	150,000	200	135	35	30	100,000	2 25	1 10	50	200,000
180	60,000	150	100	25	25	60,000	2 50	1 00	60	90,000
181	8,000	20	10	8	2	8,000	1 50	66	66	12,000
182	100,000	100	92	.....	.....	40,000	1 50	.....	.....	88,000
183	200,000	300	200	.....	.....	114,800	1 50	.....	.....	210,000
184	8,000	26	15	.....	.....	6,000	1 50	.....	.....	25,000
185	60,000	100	63	12	22	41,000	2 25	50	50	85,000
186	80,000	85	55	.....	20	50,000	2 25	.....	75	90,000
187	40,000	35	35	.....	.....	15,000	1 25	.....	.....	25,000
	$3,539,500	4,753	2,938	636	878	$1,905,300				$4,469,000

REMARKS.

The above table includes decorators, terra-cotta (common and architectural), pottery supplies and tiles, as well as the earthen, stone and china-ware. Decorators, independent of the potteries, employ seventy-two men and fifty-seven women, and, upon a capital invested of $80,500, added $135,000 to the value of undecorated ware.

Three terra-cotta works—one common terra-cotta, of the chimney-top description, and the other two architectural—produced $438,000 worth of useful and decorative material, upon a capital of $325,000, and employed four hundred and seven men and thirty-five women.

Manufacturers of tiles valued their product at $100,000. The

capital invested in this new and flourishing industry is $78,000, employing eighty-two men and forty-eight women.

Keepers of pottery supplies sold goods to the amount of $71,000, their capital reaching $66,000.

The product of the earthen, stone and china-ware factories was valued at $3,725,000.* The capital invested is $2,990,000, and two thousand three hundred and nineteen men and four hundred and seventy-eight women are employed, besides youths, the number of whom is about equal to that of the women. The wages paid to the employes of the potteries amounted to $1,577,000.

The following short extract, from the report of the Secretary, Mr. Oliver, of the Potters' Association, at their meeting held at Spring Lake, last summer, will give the extent of the pottery industry of the United States at large:

"We have now in the United States, engaged in the manufacture of plain white, c. c. and china-ware, over two hundred kilns, giving an annual production of over $5,000,000, not including decorated and printed goods, the value of which, if added to the foregoing figures, would very materially increase the amount.

"The total number of potteries now in the United States is six hundred and eighty-six; capital invested, $6,380,610; number of employes, nine thousand four hundred and ninety-four; annual wages paid, $3,279,535; value of materials, $2,564,159; value of products, about $8,000,000."

The importations of earthen, stone and china-ware, into this country, during the year 1883, were valued at $8,620,527, as against $5,650,267 in 1880. This heavy increase in importations may be part of the carrying out of the English threat to "unroof every pottery in the United States," but our potters have naught to fear, if they continue to improve in their manufactures. We may see the prediction of the President of the Potters' Association verified, who said that, under certain conditions, he could "confidently predict that the next decade will see ten millions of goods made in this country, of white and decorated china and e. w., and that, too, of all the grades of body and of ornamentation made by any other nation in the world."

* Estimated by Mr. Brewer, in 1880 at $3,000,000.

Summary of Statistics for 1880.

Number of employes	3,195
Total paid for labor	$1,225,775
Value of products	$2,936,047
Number of women employed	444
" boys "	655

WAGES OF POTTERS.

The question of potters' wages has long been a mooted one. Although it would seem a simple matter to ascertain what wages the potters actually make, the range is so wide and difference in manual skill so great, that there has been too much room for misrepresentation. In their argument before the United States Tariff Commission, at Long Branch, August 22d, 1882, a member of the committee of the pottery manufactures makes the following assertions: "I have taken fifteen potteries in Trenton, with the **average* work of each man in the different branches, for comparison with the earnings in English manufactories. * * * It will be noticed [from tables given] that plate-makers in the English manufactories average $7.70; Americans average $20.30. English dish-makers, $9.62; Americans, $19.43. English cup-makers, $9.92; Americans, $19.67. English saucer-makers, $7.63; general average of all in England was $8.69 a week, and in Trenton $18.50; American average, $18.58; and so on right through the list of branches, showing that we are paying a little more than one hundred and thirteen per cent. above the rate paid in England for the same work." This extraordinary statement, which went unchallenged, is not at all borne out by the facts. Wages paid for help and for steam power by the workmen were evidently not deducted, and evidently the *average* could hardly have been correctly calculated. A communication, which will be found in full on page 78 of this report, gives the average wages paid at one of the principal potteries of Trenton in 1881—

* The italics are our own.

	Our own.	Potters' committee.
Hollow-ware pressers	$10 38	$17 90
Dish-makers	16 35	19 43
Flat-pressers, all pressers except hollow ware	12 18	20 30
Handlers	9 13	16 62
Jiggermen	17 10	21 89
Turners	12 19	16 97

This is certainly a reliable estimate, and will show that the estimates of the potters' committee must be cut down from twenty-five to fifty per cent. The potters earn good wages, but not the wages of the committee's estimate. It should also be remarked that in the above comparison, the branches in which the fewest are employed, jiggermen and dish-makers, are those in which the statements regarding wages most nearly agree. According to the testimony of a potter, the idea prevails among the bosses that the men should earn from $2 to $3 per day. If a man is getting seven or ten cents a dozen for making some article, and by some scheme so increases his production as to make $5 a day, the boss immediately cuts down the rate, in order to keep the wages at the lower figure. Since 1877 the turners have suffered a reduction of about twenty per cent. through being compelled to turn a superior quality of ware with no increase in the price-list. Workmen frequently "play off" with a new shape until the boss fixes the rate, and then increase their production. Continual strife is waged between the bosses and the men on this point, and the result is that the men make as little as possible at as large a price as they can obtain.

Only two pottery establishments pay semi-monthly, all the rest paying their workmen weekly. The value of weekly payments, in encouraging independence and frugality among workingmen, need not be set forth here. With monthly or even semi-monthly wages the workingman is very likely to be one month or two weeks, as the case may be, in debt for provisions and house rent, for, when these debts are paid, what is left is too often spent in a short season of indulgence in luxuries or in worse ways. From weekly wages, on the contrary, the workingman is apt to form the good habit of saving something,

having so apportioned his income as to provide for the maintenance of his family and for the little superfluities, his right to which no thinking man would deny. The small amount to be spent at any one time for luxuries keeps these luxuries within bounds.

It will be seen by reference to the table on page 78 that skilled workmen in the potteries earn from $2 to $3 per day. The pay-rolls of the potteries show that skilled female employes earn from twenty-five cents to $1.50 per day, while the workers in the more ordinary branches receive from $1.25 to $2.50 per day, the females in the same departments getting from fifty cents to $1.50. Youths earn from fifty to ninety cents per day. So far as practicable, all the work is piece work. The workmen pay for the help they require in the finishing of that portion of the work allotted to them, and also for steam power, if they find its use necessary.

The year has been a good one for the potters, steady work having been the rule in all the potteries, and there exists, apparently, no tendency to depression in the trade. The competition is purely local and the markets good. The outlook for the potters, both for manufacturers and for workingmen, is excellent.

CHAPTER IV.

GLASS.

"La Verre," Eng. Peligot; "Histoire de l'Art de la Verrerie dans l'Antiquité," Achille Deville; S. Birch; "Curiosities of Glass-Making;" Lardner's "Cabinet Encyclopædia;" "Dictionnaire des Arts et Manufactures;" "Statistique de la France comparée avec les divers pays de l'Europe," Maurice Block; "Tableau général du Commerce de la France;" "Report on the Manufacture of Glass," Jos. D. Weeks; * *"Chemistry as applied to Arts and Manufactures," Muspratt.*

We of the nineteenth century, surrounded with every comfort, served by steam, and kept informed of the events of the world by messengers whose swiftness is that of the thunderbolt, can with difficulty bridge the economic gulf separating us from an almost immediate past. It is only when we examine the history of one of the gigantic industries which have risen like permanent tidal waves to flood the earth with their manufactures, that we in some sort realize the wonders of production in our age. Perhaps no industry better illustrates this marvellous stride of mankind in the manufacture and distribution of all manner of commodities than the glass-making industry. Glass is all the better index, in that the mode of manufacture is substantially the same as that employed three thousand years ago by the Egyptians. To a great extent hand-work, and therefore differing from industries in which the introduction of machinery has wrought a revolution, yet in its products it presents endless variety. The Portland vase is of glass, majestic sister of the blue-glass proprietory medicine bottle. To lead, therefore, to a better understanding of modern glass-making, we shall, using as much brevity as is consistent with the importance of the subject, trace the history of glass. In dividing the subject, the

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*Special acknowledgment is due to Mr. Weeks for his kindness in lending the advance sheets of his most valuable report, from which we freely quote in this article. This report practically exhausts the subject of glass.

antiquity, rather than the economic importance of each branch is considered.

I. That the discovery of glass was an achievement of a very remote antiquity is proved by fortunate archæological researches. Glass con-

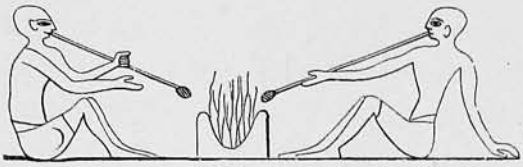


Fig. 1.

taining little lime, soda or potash, so that it withstood the dissolving agencies of the air and of the soil, chanced to be manufactured in ancient Egypt. The rude sculptures in the grotto of Beni Hassan (Figs. 1 and 2), by some archæologists considered as dating back to the reign of Osortasen I., 3000 B. C., also afford proof of the antiquity of glass-blowing. The oldest existing specimen of Egyptian glass is a glass bead found by Capt. Hervey at Thebes. This bead is three-quarters of an inch in thickness and bears in hieroglyphic characters the name of the queen of Thothmes III., B. C. 1500. Sir J. G. Wilkinson thinks that the vitreous glaze upon very ancient Egyptian pottery is another proof of an early knowledge of glass. Leaving Egypt, we find a glass vase in the British museum inscribed with the name of Saragon, an Assyrian king, who rebuilt the city of Nineveh, shortly before his assassination in 704 B. C. This vase, found in the ruins of the palace of Nimrod, is transparent and has upon one side a lion and upon the other a cuneiform inscription. It is the earliest known specimen of *transparent* glass, excepting the vitreous glaze upon pottery mentioned above. Perhaps the next in point of time of our

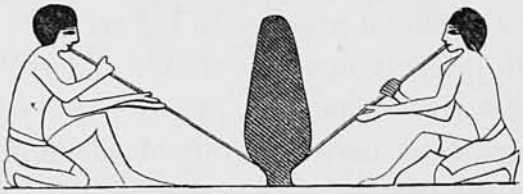


Fig. 2.

data is the mention of Theophrastus, B. C. 370, who speaks of glass-blowing as in a very advanced stage in his time. Strabo, who died A. D. 54, says that the sands of the Belus were good for making glass,

although he does not mention the story told by Pliny (Book XXXVI., § 65,) that glass was accidentally discovered by some Phœnician mariners, who, by chance landing at the mouth of the Belus, used some cakes of *nitrum* (probably soda) from their cargo as stones on which to build a

CESNOLA COLLECTION OF CYPRIOTE GLASS IN THE METROPOLITAN MUSEUM, NEW YORK.

fire, whereupon the *nitrum* fused with the sand underneath and formed glass—a story on the face of it impossible, in view of the heat required to melt sand with any flux. Undoubtedly, however, the Phœnicians made glass in very ancient times at Tyre, and at the mouth of the Belus, near Sidon. Since these Phœnicians were the voyaging traders of ancient times, and exported their wares to all parts of the then

known world, it is very likely that antique glass objects found in Denmark are of Phœnician manufacture. The Glain Neidyr, or glass "snake-rings" of the Druids, found near Stonehenge, which certainly date back of the Roman invasions of Britain, are probably of Syrian manufacture. The curious legends and superstitions concerning these rings it would be foreign to our purpose to describe here. According to Herodotus the Ethiopians were very skillful in glass-making.

From these data, we draw the conclusion that glass was first made in the countries immediately east and southeast of the Mediterranean sea. We may feel certain that the Egyptians, the Ethiopians and the Syrians made glass simultaneously, and Peligot, Sir J. G. Wilkinson, Mrs. Martineau and Dr. Kitto, all of them authorities upon oriental subjects, consider it certain that the Jews manufactured glass long before the Christian era. Nor is it at all unlikely that they copied their neighbors and adopted this industry.

From this cradle of the industry of glass-making—as it was the starting point of so much of the industrial progress of our race—the art of glass-making crossed the Mediterranean to Greece, where, in such objects as medallions, comic theatre masks and bas reliefs, very perfect results were accomplished. Almost at the same time that the Greeks became glass blowers, the Etruscans must have acquired the art, carrying it, according to Deville, to a refinement, in their *millefiori* work, never reached in more modern times. It was not, however, till the palmy days of the republic, that the Romans turned their attention to glass manufacture. Accustomed to look to Greece, Egypt and the East, for their articles of luxury, a trading, rather than a manufacturing spirit, was developed in them, which made them slow to emulate the handicrafts of the nations they excelled in so many qualities. The Roman glass makers used, Pliny tells us, white sand gathered at the mouth of the Volturnus, mixing the sand with *nitrum*, shells of mollusks, fossil chalk, a little manganese, and even with bits of copper. The copper gave the bluish tint which is characteristic of ancient glass. Their melting was done by the process of double fusion, in contiguous furnaces. Having first made a frit, called *ammonitrum* of sand and soda, they carried this into another crucible, where the refining process took place, and the coloring matters, or the oxides, were introduced. The objects were fashioned by blowing, and cut on the wheel. One cannot help but be struck with

the resemblance these processes bear to those now employed, even the frit being used nowadays for some kinds of glass. According to Strabo, the sand of Egypt was highly esteemed and much used by Roman glass blowers, as well as that obtained from Cuni and the Volturnus. Glass was made resembling crystal, and was preferred to gold and silver for table use. Two little glass cups of this kind sold in Nero's reign for 6000 sesterces, $252. Most of the old Roman glass was, however, colored more or less. Virgil speaks of glass, (Æn. VII., 759,) and, according to Deville, many of the drinking utensils mentioned by Horace, in his Odes and Satires, were of glass. Among the remains of ancient Italian glass, the most celebrated are the vase of Naples, in the museum of Naples, the Portland vase, of the British museum, and the reticulated vase, which was preserved, before the war of 1870, in the library of Strasbourg. The vase of Naples is of clear, dark blue glass, covered with white, opaque glass, through which the figures are cut. The Portland vase, so well known through Wedgwood's jasper imitation, was sold by the Barberini at Rome, to the Duchess of Portland, for 1800 guineas. It was once broken into a thousand pieces by the cane of a madman, but has been perfectly restored. From its having been found in the sarcophagus in the suburbs of Rome, supposed to be that of Alexander Severus, it is thought that the vase dates back to the Antonines, 138 B. C. It is of dark blue glass, with figures of opaque white glass fastened to the body. The Strasbourg vase bears the name, MAXIMIANVS AVGVSTVS, probably Maximilian Hercules, who died at Marseilles 310 B. C. Many plates of opal glass, the *vasa diatreta* of the Romans, have been found in old tombs. The nature of some of the ancient Roman glass may be inferred from a letter of the Emperor Hadrian, who died 138 B. C., to the Consul Servianus, his brother-in-law, in which we find the words, "I send you some *iridescent* vases," &c. Glass utensils, and a plate of glass used for paneling, have been found at Herculaneum, the city destroyed in the reign of Titus, by an eruption of Mount Vesuvius. With regard to the glass workers of ancient Italy, we have meagre data. In the reign of Tiberius a company of glass blowers lived in a street near the Porta Capena, in Rome, and in the year 220 A. D., had reached such importance that a tax was laid upon them by Severus. A law of Constantine I., of the year 337 (*C. ad Maximum*), included the *vitriarii* among the thirty-five profes-

sions exempt from all public charges. The effect of the measure was, naturally, to render the members of this profession, limited as it was to a small number of families, exclusive, resulting in their forming a part of the noble class. It is worthy of remark that these noble glass workers retained their rank, though with difficulty, during the feudal age, when work was despised. The art of glass-making, according to H. De Fontenay, fell into decadence under the reigns of Gallianus and his successors, but revived a little under Tacitus. The glass objects of the Romano-Gallic period that have been found are articles of Phœnician manufacture, and Gallic balls and bracelets. Ruins seem to prove that the Gauls were glass makers, such names as Verreria, Vitreria, &c., going back to the second and third centuries. Many remains, principally Phœnician and Greek, but some undoubtedly of ancient Gallic manufacture, have been found. in Poitou, in La Vendée and elsewhere in France. It is worth while noting, in leaving the subject of ancient glass, that the ancients knew glass only in the form of articles of luxury of great value. These articles were deposited in the tombs of the dead, and had not the custom existed none of these objects would have come down to us. Thus, for the ancients, glass, like pottery, had chiefly an artistic value. The exact date of the introduction of useful glassware is not known. Venice, in the middle ages, still produced only objects of luxury. "It seems likely that the glass makers of Bohemia and of Gaul have by the cheapness of their products," says Peligot, "greatly contributed to the spread of the use of glass." It is probable that from 500 A. D. to 1000 A. D. the glass industry almost disappeared from western Europe. In the eleventh century Venice began to make glass, having introduced the art from Egypt, or, as Peligot would have us believe, learning it from the Jews. The taking of Constantinople by the Latins, in which the Venetian republic took part, gave the industry in Venice new vigor by opening the eyes of glass makers to the superiority of the eastern taste and manufacture. Greek operatives were imported, and everything was done to improve the craft. Such success attended the efforts of the glass makers that the glass-houses increased very rapidly in number, becoming, in the thirteenth century, so numerous that the grand council forced them to remove beyond the walls as a safeguard against the frequent fires to which the houses were subject. These glass makers went to the island of Murano, where glass-making still flourishes.

Marco Polo's explorations opened markets for Venetian glass even as far as China, where glass, apparently, was not an early discovery. The taking of Constantinople by the Turks (1453) drove many artists to Venice, who soon greatly improved the art. Toward the middle of the sixteenth century filigree work in white opaque glass was invented, and added another beauty to Venetian glass. As in Rome in earlier times, so in Venice in the fifteenth century, glass makers reached, socially, the rank of distinguished artists and were ennobled by the senate. The destruction of the republic was the death blow to the industry in Venice, for it very soon degenerated to the making of domestic utensils in common glass, not, however, before France, Germany and Bohemia had acquired the art from the "Bride of the Sea." The skill of the Venetians in glass-making was very remarkable in the excellence of their mirrors, and it was in this branch of glass-making that the French first sought to rival them. Early in the seventeenth century, under the patronage of Colbert, a successful attempt to manufacture mirrors was made in Tourlaville, a village near Cherbourg, in Lower Normandy. Abraham Thevart invented an improved process, by which plates eighty-four inches by fifty inches (nearly double previous sizes) could be cast, and the Tourlaville company united with his concern in 1695. Early in the fourteenth century the French government had passed laws to encourage glass-making, granting royal charters, which subsequently became sources of great wealth to the families of the grantees. In 1647 we find the king of France saying to the Marshal de Villeroy, after enumerating the occupations of the people: "Among which manufactures the art of glass-making seemed to them [the former kings of France] one of the most noble and most excellent." In 1428 Onossorus di Blondio, a Venetian, established glass works in Vienna, thus laying the foundation of the art in Germany. The Austrians endeavored to transplant the Venetian glass blowers to Austria, and had partly succeeded when a wiser policy guided them to original efforts. The famous Willkomm vases in white or green glass, ornamented with enamel colors, were first made in 1553. The first Bohemian works were those of Peter Berka, at St. Georgenthal, founded previous to 1442. The works at Danbitz and Krubitz were founded soon after. The industry spread throughout Bohemia and still flourishes. Bentham states, following Bede, that in the year 675 the Abbot of Vermouth sent from England to France

for glass makers to make glass for a church, which was to be built in the Roman style, the art of glass-making being then absolutely unknown in England. Queen Elizabeth brought over Venetian glass blowers, and in 1589 a glass worker named George Long asserts that sixteen glass factories existed in England. Robert Mannsell obtained in 1635 the privilege of applying coal to the heating of glass furnaces. Finally the revocation of the edict of Nantes (1685) drove so many glass makers to England that glass-making in all its branches was soon established. Fine glass was first made at the Savoy and Crutched Friars in London, in 1557, and the first flint glass was made at Savoy House in the same city, in 1670, by Venetian workmen. The first glass factory in the United States of which we have a reliable account, was established in 1780 by Robert Hewes, of Boston, who placed his factory in New Hampshire, in the town of Temple. Mr. Hewes' workmen were Hessian and Waldecker deserters from the British mercenary forces, who, in their own country, were skilled workmen. The enterprise did not prove a success, in consequence, probably of the poor quality of the product. Specimens of the glass made by Mr. Hewes are preserved at Harvard University. Mr. Weeks (Special Report, p. 80,) thinks it likely that several glass works were built in eastern Pennsylvania between the breaking out of the revolutionary war and the close of the century. Dr. T. W. Dyott states that "the manufacture of ordinary descriptions of glassware, such as apothecaries' vials and bottles, and the common varieties so extensively used for domestic and other purposes, was not successfully prosecuted in this country until long after the period of the late war [1812]." The Dyottville works, in which Dr. Dyott was interested, situated within the present city limits of Philadelphia, were "the first establishment that continued in operation for any number of years." In 1810 there were already small glass-houses in Pittsburgh, the first established being perhaps the "Ohio" works of Denny and Beelen, started about 1800. In 1826 there were eight window glass works in Pittsburgh, four or five at Brownsville, Pa., and six other works in western Pennsylvania, while in 1857 there were thirty-three glass-houses in Pittsburgh alone. Glass-making was started early in Massachusetts, but between the years 1812 and 1850 no glass was made. In 1850 a glass factory started at Cheshire, which in 1880 was the only window glass works in New England. In 1880 there were in all only four glassware

works in Massachusetts in successful operation. The successful works in Maryland are all of recent date and are situated in Baltimore. In 1870 there were three plate or window glass works in Ohio and six glassware factories. Plate glass was first made at the Lenox (Mass.) Plate Glass Company's works, by a newly-invented machine, in 1865. The company sold out in 1870 to parties who failed to make the business pay for the outlay, and the works, again sold in 1879, are now running partly on rough plate. Three other plate glass works, making as good plate glass as any in the world, are now in operation, one at New Albany, Ind., another at Jeffersonville, Ind., and the third at Crystal City, Mo., all established within a decade. Plate glass-making is in its infancy in this country, and meets with bitter opposition from importers of this kind of glass. Of glass-making in New Jersey, Mr. Weeks' report gives the following history, which we shall quote entire, adding a few data collected from other sources:

GLASS-MAKING IN NEW JERSEY.

"The first glass factory in New Jersey was located about two and a half miles from Allowaystown, Salem county, and was built some time from 1760 to 1765 by a German named Wistar, who brought a company of workmen with him from Germany. He carried on the works a few years and failed about the outbreak of the revolutionary war, and upon his failure, in 1775, the workmen went to what is now known as Glassboro, Gloucester county. Two objects led to the selection of this place as a site for the works—it was so far inland that the operations were not interfered with by the armies, and it was a yellow-pine country, which wood was better for melting glass than the oak of Allowaystown. Mr. Bodine is of opinion that 'the principal kind of glass made was hollow-ware or bottles; but from some recollections of an old man that descended from and knew some of the old Glassboro settlers and heard them talk when he was a boy, I think part of them, if not all, could make both bottles and window glass, such as was used in those days.'

"The blowers at these works also made the pots, cut the glass into lights and packed the same. In the scheme of division of labor in more modern works, each of these operations is a separate branch of work. At these works bottles and crown glass were made. Mr. Bodine says:

"'I knew some blowers, when I was a small boy, that were then old men, and could make both bottles and window glass. I have been unable to fix a time when window glass commenced to be made in cylinder form. I find that about 1812 or 1813 a crown glass (window lights) factory was started up the Delaware river, ten miles from Belvidere, at a place called Columbia, in what was then Sussex county, now being Warren county. This factory run until 1833, when it ceased operations. I personally know of cylinder window glass being made in 1827 or 1828 at Millville. About the time of starting the Columbia works a factory was started at a place called Clementon, now in Camden county, where bottles were made part of the time and window glass the balance. My informant worked at Clementon in 1814 as an apprentice, learning to blow.'

"About the years 1814 and 1815 there were factories started at Port Elizabeth, Cumberland county, and at Malaga, Gloucester county. Both of these were run as window glass factories, and in 1816 to 1819 Tuckahoe and Hammonton were started, and manufactured principally window glass.

"The next works was Millville, started in about 1822. For some years after this no new works were started, until 1827, when between that date and 1832 Waterford, Jackson, Old Brooklyn and Winslow were built. These last-mentioned places were in what was Gloucester, now Camden, county. The next location was Squankum, now Williamstown, built in 1835, making bottles; then Estilville, Bridgeton and Temperanceville (now part of Glassboro), built in 1836 and 1837; then Jersey City flint glass works, built in 1840 or 1845. Somewhere about this date, flint glass works were built at Kaighn's Point, now part of Camden. Then Greenbank, 1840 to 1845; New Columbia, 1845 to 1848; Tansboro, 1848; Batsto, about 1850; Crowleytown, 1850 to 1851; Clayton and New Brooklyn, about 1851 to 1852; Medford, Milford and Lebanon, 1855; Bulltown, 1859; Quinton, 1858 to 1860; Salem, 1863; Westville, 1868; Riverside and Herman City, about 1870.

"There was a glass works started at Elizabethport some twenty-five years ago and run for a short time; also one started in Camden about 1868 and run for a short time.

"This makes in all thirty-seven locations in New Jersey. Of these the following have gone out of existence entirely: Allowaystown,

Columbia, Clementon, Tuckahoe, Hammonton, Jackson, Old Brooklyn, Estilville, Greenbank, New Columbia, Batsto, Crowleytown, Kaighn's Point, Milltown, Bulltown, Lebanon, Westville, Jersey City and Elizabethport—nineteen in all; two run two years, one three years, two five years, two ten years, four fifteen years, four twenty years, two thirty years, one thirty-five years, one forty-five years, while Waterford, Medford, Camden, New Brooklyn, Riverside, Herman City and Port Elizabeth, seven in all, have not run for several years.

"The balance of the locations, eleven in all, have forty-five furnaces, of which thirty-nine furnaces have run the past year, to wit, twelve window glass, twenty-one green hollow-ware, and six lime or white glass. Four of the green hollow-ware and the six lime or white glass furnaces are situated at Millville and are run by one firm, Messrs. Whitall, Tatum & Co."

The first firm manufacturing glass in Bridgeton* started one furnace for hollow-ware in 1836 or 1837. The firm name was Strapp, Buck & Co. In 1856 or 1857 a second hollow-ware furnace was added. In 1863 a third furnace for hollow-ware was added. A window glass furnace was built in 1869, another about 1870, and a third in 1880. The works are now called the Cohansey Glass Company.

G. E. Getzinger started in 1881 or 1882 with two furnaces. He has since added two, making four furnaces in all. He has three furnaces of eight pots and one of six pots.

Clark & Co. started one hollow-ware furnace in 1881 on the west side of the Cohansey river and were burnt out in the following year. They moved along the New Jersey Southern railroad and now have one (five-pot) furnace for hollow-ware and one small furnace for press work. They have also one large furnace for rough plate and one window glass furnace now building and soon to start. The plate glass furnace is the only one in the State, and perhaps the only one now in operation in the country.

Moore, Jones & Moore started in June, 1882, 1 (five-pot) hollow-ware furnace, and a window glass furnace, now building, and to start about January 1st, 1884.

Benjamin Lupton built a furnace in 1879 which ran for a time as a joint-stock concern under a lease. It is now standing idle. The capi-

* We are indebted to Mr. J. N. Bodine for this information.

talists since built a factory of their own called the West Side Glass Company, limited, now running. The South Avenue Window Light Works, under Constant Albertson, will soon start. Bowen & Kirby are now building and will soon start. When the factories now organizing shall have started, Bridgeton will have one rough plate glass factory, six hollow-ware works and eleven window-glass houses, making it one of the largest glass centres of the country.

II. Window glass constituted, in 1880, one-fifth of the whole product of the glass works of the United States, *i. e.*, nearly $5,000,000 worth of window glass was manufactured in that year. The glass-houses of New Jersey produced $723,355, in value, of the total product, being second to Pennsyvania in window glass manufacture.

It would seem as if window glass must be of great antiquity, but the reverse is true. Until within a few centuries of the present time, glazed windows were a rarity outside of the churches, and it is only within the last three hundred years that the use of glass for lighting has become indispensable. The use of window glass among the ancients was long in doubt, but it is now established that this use of glass was known at least to the Romans, if not to the Greeks, before the Christian era. As far as the Romans are concerned, all doubt on this head has disappeared since the discoveries at Herculaneum and Pompeii. "They found, in 1772, at Pompeii," says Quatemère de Quincy, "a window with a good glass light, nearly three palms' breadth square, each pane being a palm's breadth square." A pane of glass found at Pompeii shows inequalities which, according to Mazois, prove it to have been moulded by being run into a metal mould, and not blown. The quality of this glass, containing too much soda and too little lime, resembles poor modern glass. The rarity with which fragments of glass suitable for windows are met with in the remains, shows that their use was far from common. Some archæologists would, indeed, explain these glass slabs as panelling, and not strictly window glass, but this seems an attempt to establish a distinction without a difference. In the third century, glass began to be used to ornament the windows of churches. St. Jerome (422) remarks that plates of glass were used for church windows, but these *plates* were probably the little round pieces called *chives*, which were used until the seventh century. The use of glass for house windows dates back only to the fourteenth century. Small square

pieces encased in lead, were, at first, alone used, and the great cost of these tiny panes was not without its influence upon the size of the openings, so small in ancient edifices. Glass panes of one piece were not used in France until the reign of Louis XIV., and these, set into the wood of the casement,* were of small size. Usually, twenty-four panes were required for the filling of one window. Window glass began to be made about the seventh century, in England, the climate of this country making the utility of this material for window-glazing very evident. Until the tenth century, squares of window glass were very rare, but after this date, the use gradually became universal. In Scotland, as late as 1661, window glass was seen only in the principal rooms of the king's palace. According to Le Vieil, St. Vilfrid's bringing glass and glaziers to England, near the end of the seventh century, to close the windows of York cathedral, first brought glass to the notice of the islanders. "A new thing then in this country," says M. Fleury, "and necessary against the rain and the birds." The bishops—Villibrod, Quinfrid and Villehade, of English extraction—carried the use of window glass among the Germanic nations. In the middle ages, in some eastern countries, marble slabs having holes filled with glass, were used to close windows. Specimens of this old method of glass lighting were exhibited at the Paris exhibition of 1867. Le Vieil attributes to Philip de Coquenay, Seigneur of Saint Immes, the production, in 1330, of the first *large glass* manufactured in France, but another authority, M. M. A. Micler, describes a furnace for large glass in operation in Normandy in 1302. Several curious documents, quoted by Peliglot, show how rare glass was even in the fifteenth century. In Antoine de la Salle (1455) is found the following: "Abbé Damp led my wife into his warm room, which was very well draped, carpeted and *glazed;*" and in the "Cent Nouvelles" (1459): "He answered that he was more comfortable than those who have their beautiful apartments glazed." In the accounts of John Avin, receiver-general of Auvergne (1413), we find the entry: "For the coming of the Duchess de Bery, on her way to Montpensier, have made certain casements for the windows of that castle, to close them with waxed cloths, in default of glass." In 1467, wooden casements, to hold transparent paper, were ordered for the palace of the dukes of

*See description of Dudley Vennor's house, in O. W. Holmes' "Elsie Vennor,' for curious reference to this mode of setting panes.

Burgundy. Not to multiply instances, we shall quote one more document, an order of the overseer of the Duke of Northumberland, bearing date 1567: "And because, in the high winds, the glass windows of this castle * * * deteriorate and are ruined, it would be good that the glass of each window were dismounted and put in safety when his lordship departs. * * * They could be put back without great cost, while now the injury would be *very costly*, and would make necessary great repairs." At the end of the eighteenth century, there existed still in France, under the name of *châsissiers*, a company for furnishing windows with squares of oiled paper. The "Encyclopédie Méthodique," 1791, describes this art in connection with the art of glass making.

The first glass works established in the United States—those of Mr. Hewes, at Temple, New Hampshire (see chap. I.)—made window glass by the cylinder process. Crown glass was made in New Jersey (*V. S.*) in 1812 or 1813, having crossed the Delaware from Pennsylvania, where it was made as early as 1786, at the falls of the Schuylkill. A reference to the latter part of chap. I. of this article will show the growth of window-glass making in our own State. Painting on glass was discovered in the twelfth century, either in France or in Germany. Specimens of glass, probably colored by the use of vitrifiable colors, have, however, been found in Egypt.

Glass is defined as a transparent and artificial substance produced by the igneous fusion of silicious earth with certain alkaline earths or salts, or with metallic oxides (Muspratt.) Chemically, a more satisfactory definition is that deduced by Muspratt from the phenomena of devitrification, that "all glasses are silicates in definite proportions, or, at least, mixtures of different definite silicates, dissolved the one by the other." The term "glass" is of uncertain etymology, although seemingly connected with the Anglo-Saxon root *gel* or *glis*, occurring in many forms in such words as "glisten," "glitter," "glint," &c. The perfect ductility of glass in a certain stage of cooling after liquefaction, has led to its use in many forms. The glass manufactures of New Jersey, however, of which the present article treats, are confined to the making of window-glass, of bottles and druggists' hollow-ware, of miscellaneous flint glass-ware, such as vases, lamp chimneys and table ware (in small quantity), and of rough plate. Each of these branches will be described in turn, the remainder of

this chapter being devoted to window-glass manufacture, many features of which, naturally, are common to all branches of glass manufacture.

The window-glass furnace is oblong or square, the pots being placed in two banks or rows, one on each side.

"In the construction of furnaces the principal ends to be attained are the production and maintenance of an intense heat, its uniform distribution through the furnace and around the pots, and its direct and most intense application to the fusion of the glass-making materials. Without entering into a detailed description of the varying shapes and sizes of the ordinary furnace in use in this country, it may be said in general that these furnaces consist of two parts, the combustion, or melting chamber, and the cave, or ash-pit, which also serves as a draught passage. These are separated by the fire grate and 'siège,' the raised bank or narrow platform in the melting chamber on which the pots are placed. The grate or fuel space is square, and occupies the centre of the furnace, and the fuel is charged generally from both ends. The grate is usually on the same level as the floor of the glass-house. Under, and connected with it, is the arched subterranean passage or chamber known as the cave or ash-pit, extending the entire length of the furnace, both ends opening outside the building, thus forming a passage by which air for combustion is fed to the grate. Sometimes two of these passages, crossing under the grate bars at right angles to each other, are built, so that either can be used, according to the direction of the wind. There are doors at both ends of these archways to regulate the draught. Within the furnace, around the grate-space in the case of circular furnaces, or on both sides of it, in quadrangular furnaces, is the raised bank or platform termed the 'siège,' on which the pots are placed. The fire thus lies below the bottom of the pots and in the centre of the furnace. The number of pots in a furnace varies from four to eighteen or more."

Each pot is reached for working by means of a hole in the side of the furnace, situated directly over the pot, which is represented in Fig. 4 by the open pot upon the right side of the cut. The furnaces frequently have no chimneys or flues, the products of combustion issuing through the working holes. Some furnaces, however, have a flue between each two pots along each side of the furnace.

"Furnaces are often constructed with a double arch, the lower one the reverberating arch and the upper one forming the top of the furnace. The space between the arches forms a chamber for the reception of the products of combustion, which pass out by a common flue at the top. Frequently, instead of the outer arch, the outside walls of the furnace are curved up in the form of a truncated cone or open chimney, and in others separate flues open into the glass-house itself." Mr. Weeks also adds that a ten forty-four-inch pot window-glass furnace would be about twenty feet long by twelve wide. The arrangement of the pit over which the window-glass blowers work will be

Fig. 3.

understood from the above cut (Fig. 3,) which represents window-glass blowers at work opposite the working holes of the furnace.

The pots (Fig. 4) in which the batch is melted, which stand on the inside of the furnace opposite the working holes, are made of refrac-

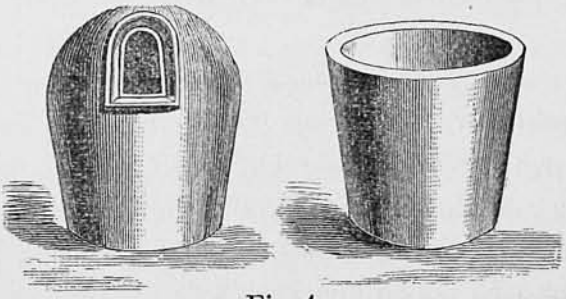


Fig. 4.

tory clay mixed with ground pieces of broken pots as non-shrinking material. The clays used were formerly German clays from Coblentz and Ebersham (see p. 233.) According to a statement of Mr. Thomas Coffin, of Pittsburg, about two-fifths of the clay now used is Missouri (American) clay, the American clay being found to be purer and more refractory, although less dense than the German clay. The American clays, according to the same authority, are slowly but steadily displacing the German clays. At Millville, N. J., Missouri clay is altogether used. The process of manufacture of the pots is tedious and difficult. After the clay has been allowed to disintegrate in a cellar for a sufficient time, it is ground and mixed with water until a thick paste is formed. This paste is mixed with ground bits of baked clay and a small portion of bits of broken glass-pots, carefully freed from adhering glass. The proportions for non-shrinking material, given by Mr. Weeks, are one-fifth to one-fourth of the weight of the paste. Peligot gives the following proportions: One hundred parts plastic clay, one hundred parts *ciment* (ground bits of baked clay), one hundred parts pieces of old glass-pots.

The mixture is first thoroughly worked together in a mill and is then tramped in the same way as porcelain paste is finally kneaded, a man being able to tramp in one day sufficient clay for one pot—about six hundred pounds. The paste is then cut into rough blocks, which are allowed to rot for several weeks. The result of these operations is to give the clay great plasticity. The actual making of the pots is conducted entirely by hand, with or without an exterior mold, by the superposition, upon one another, of little cylinders of the clay paste. In this way the pot is built from the centre of the bottom to the top rim, the cylinders of clay being well pressed together so as to form a perfectly homogeneous mass. After the pot has been built up, the outside surface is beaten smooth with a paddle-shaped wooden instrument. A good pot maker can furnish three pots a week, or with assistance, one pot a day. The dimensions of the pots are about these: Height, four feet; diameter at top, four feet; capacity, twenty-five hundred pounds of metal. After the pots have been made they must be thoroughly dried for from four to eight months in a temperature of thirty to forty degrees cent. Finally, in the annealing arch, the completed pot is raised to a red heat and then quickly placed in the furnace. This last operation is called "setting." Open pots "live" about seven

weeks, and, although some pots would hold out longer, it is found safer to remove the pot when it has attained the average "life." The breaking of a pot is a very serious catastrophe, subjecting the manufacturer to great loss in the injury of the glass in the other pots, and forcing the men to stop work until the furnace has been put in order again. In the words of M. Peligot, "The fabrication of the pots, according as it is good or bad, assures or endangers the prosperity of the establishment." For this reason nearly all glass-works make their own pots, as well as the bricks used in the construction and repair of their furnaces. The temperatures which these refractory materials have to withstand are very high, the most fusible batches not melting much below one thousand degrees cent.—eighteen hundred and thirty-two degrees Fahr.. In the pasty state suitable for working, the metal is at a temperature of about seven hundred and seventy degrees cent.—fourteen hundred and eighteen degrees Fahr. In the mixing of the batch the exercise of great skill and care is required, the conditions of the atmosphere and the unavoidable variation in the materials making different proportions necessary to obtain a good result. The proportions given in the following table, from Mr. Weeks' report, show those of the mixtures used for the window glass batch :

Proportion of Materials Used in Window Glass.

Constituents.	Pittsburg.*	FRENCH.			ENGLISH.†		
	Pounds.	No. 1.† Parts.	No. 2.‡ Parts.	No. 3.‡ Parts.	No. 1. Pounds.	No. 2. Pounds.	No. 3. Cwt.
Sand	8,000	100	100	100	560	448	16
Sulphate of soda	2,200	.....	44	58 to 75	63	17	1.25
Carbonate of soda	.....	28 to 35	.....	.....	119	168	5
Lime	2,500	.....	6	13 to 15	.....	.....	.....
Chalk	.....	35 to 40	.....	.....	154	146	5
Powdered coal or coke	40	.....	4	4 5 to 5.5	.....	.....	.....
Arsenic	50	0.20	.....	.....	2	2	.....
Manganese	.....	0.25	.....	.....	.....	.....	.....

* Authority: Pittsburg manufacturers. † Lippincott's Cyclopædia. ‡ Authority: Dumas.

The materials are thoroughly mixed by hand with a sieve and shovel. At present the batch is placed directly in the pot. Formerly, owing to the impurity of the alkali made from kelp, which was used before the discovery of the process for making soda from salt, the materials were first calcined in a fritting furnace. The sand used for window glass in the New Jersey glass-houses is found in the southern part of the State, near the works. Being very uniform and pure, this

sand is often used without washing. The bases used in the manufacture of window glass are sulphate or carbonate of soda and lime, the latter now being used in the form of powdered limestone. The sulphate of soda (salt cake) and carbonate of soda (soda ash) are imported from England, only a very little of these products being made in the United States because of the limited demand for the by-products, muriatic acid and hydrochloric acid. England manufactures more than half of all the salt cake and soda ash manufactured. The solvay or ammonia method of making soda is now rapidly replacing the old Leblanc method, and, inasmuch as the former method is better adapted to the markets of our country, we may expect a rapid growth of the soda industry in the near future. Limestone is found everywhere.

In charging, the pots are first filled as full as possible, the materials being shoveled into the white-hot pots. The remainder of the batch is shoveled in as the materials sink in melting. Cold air is excluded by keeping the grate-bars well filled with coal. The teaser (*Fr. tiseur*) now urges the fires until the glass becomes thoroughly molten and carbonic acid gas ceases to escape from the surface. Finally the metal is stirred with a pole of green wood, and the melting and refining are finished. The melting and fining are as short as possible, as a long continuance of this operation injures the quality of the glass. When the fining is complete the metal is too fluid for working; therefore the fires are covered with "braize," or fire coke, and the metal is

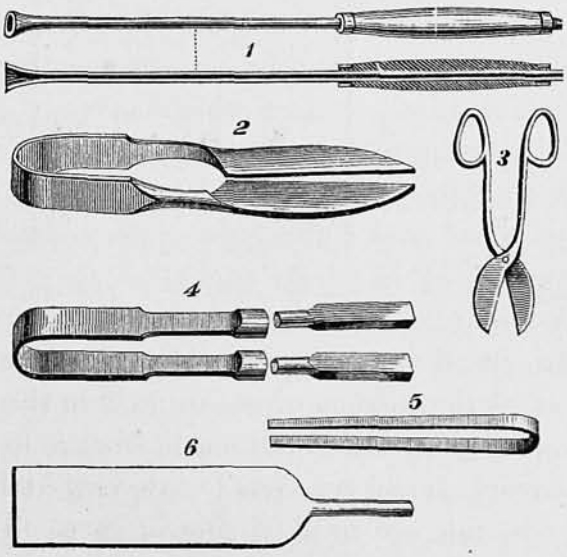


Fig. 5.

allowed to cool to the viscid state and is kept at this point by the banked fires.

Two processes are in use for the manufacture of window glass. The Venetians and the Bohemians made use of the *cylinder process* in the twelfth and thirteenth centuries; the other process, that of *crown glass*, was employed at about the same period in the glass-houses of Normandy, of England and of the north of Germany. This latter process has for a long time been abandoned, except in England, where it exists still to a small extent. The *crown* process was used in this country in the early days of window glass-making, the greater brilliancy of the crown glass being preferred to the greater uniformity and more convenient sizes of the cylinder-made glass. This process, although it is of no practical value now, merits a short description for its ingenuity.

The *gatherer* dips the end of the pipe (Fig. 5, 1) into the pot, and by twirling he gathers upon the *nose*, as the end of the pipe is technically called, almost exactly nine pounds of molten glass. Rolling this upon the marver, he forms the mass into the shape of a pear. This lump, heated again, is blown into a large globe, on which, opposite the point where the pipe is attached, a conical mark, called the *bullion-point* is made by pressing the globe against a small hollow cup. The globe is now flattened down to the shape of a large decanter, and a rod, called a *ponty*, is attached to the bullion-point. Cracking off the pipe, which is the next operation, leaves a hole exactly opposite the ponty-rod and the bullion-point. The hole is enlarged a little by means of the tool shown in Fig. 5 (2), and the glass, now in the form of a flattened sphere with a hole in it opposite the point of support, is taken to the *flashing furnace*, from which a very hot flame issues. Resting his ponty on a support opposite the flash hole, the workman begins to revolve the glass, increasing his speed as the glass begins to melt. Centrifugal force causes the glass globe gradually to open out, until, with a sound which has been compared to that caused by the opening of a wet umbrella, the final fold vanishes and a perfect disc appears. The disc, with the exception of the bullion-point and the slightly thickened edges, presents a pretty uniform sheet of glass sixty inches in diameter. The *table*, as the finished sheet is called, is taken to the annealing oven, where it is piled with other tables, to undergo the process of tempering. A high degree of perfection had been reached by the English in their crown glass-blowing (tables seventy

inches in diameter having been blown), when the requirements of the trade compelled them to abandon the method for the cylinder process. As in the *crown glass* process, the gatherer here first gathers upon the nose of his pipe the amount of glass that will be necessary for his sheet, but with this the parallel between the processes ends. The cylinder blower now places his glass in a hollow mould, the diameter of which is the

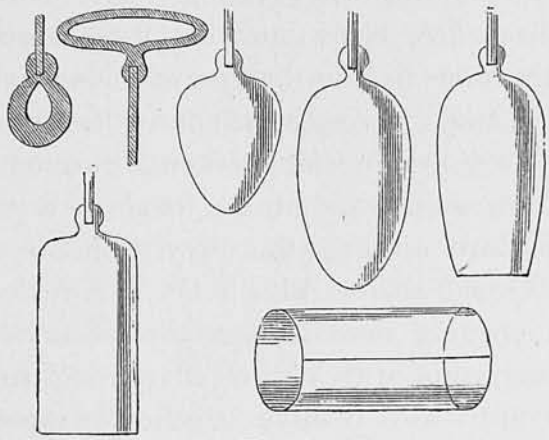


Fig. 6.

diameter of the finished cylinder. He then carries his incipient cylinder, which has the form of the second figure from the left-hand upper corner, in the above cut, to the blowing furnace (Fig. 3.) Having heated his glass, he brings it, by a swinging motion, to the form represented by the next figure in the cut, holding it over his head, to counteract any tendency toward undue elongation. When the spheroid has reached the required length, the end is cracked open by blowing air down the pipe and stopping the mouth end with the finger. The air expands with the heat and bursts open the spheroid at the hottest and softest part, which is the point farthest from the pipe nose. The opened body is brought to the cylindrical shape with the purcellas (Fig. 5 (2).) All that is now left to be done is the cracking off of the *cap* of the cylinder, which is accomplished, usually, by drawing a thread of molten glass around the head of the cylinder and touching a part of the heated band with a cold iron. The cap cracks off, leaving a perfect cylinder, as shown in the last figure of the cut. If the cylinder is a very thick one, the operation of bursting open is somewhat complicated by the thinning of the end, which must be reinforced by the addition of metal from a ponty-rod. The completed cylinders are placed upon chevalets, or benches grooved so as to hold them, where

they are split open by drawing a hot iron to and fro along the inside and touching the heated line with a cold iron. The *flattening* and annealing of the cylinders are conducted in the *flattening furnace* and the *annealing kiln*, two contiguous circular buildings. The former contains a revolving stone, of the diameter of the inside of the furnace, supported in the centre; the latter contains, instead of the revolving stone, a revolving wire grating. The flattening furnace is heated by flues from fires below, and has three apertures in its wall, on a level with the stone. Into the first of these openings, the cylinder is introduced, and, growing continually hotter, is carried round upon the stone to a second opening, where, being now soft enough, it is spread out with a wooden rod in the hands of a workman outside. Passing on to the third opening, the wavy sheet is made smooth with an instrument of wood shaped like a hoe. A little further on, the sheet reaches an opening into the annealing kiln. Here it is transferred to the wire grating of this kiln, and, passing through a steadily-decreasing temperature as it revolves, reaches an aperture, where it is drawn out annealed. The speed of the revolving portion of the furnace and kiln is regulated to the powers of the flatteners or the heat of the furnace. The annealed sheets are taken to the cutting room, where, with great skill, the cutters, using the glazier's diamond, cut the greatest number of "bests," "seconds," "thirds," "fourths," and "H" (Horticultural) that the imperfections of the sheets will allow. In most window glass-works, professional cutters are employed.

III. The use of the bottle for liquids of all kinds is of very recent date. The ancients preserved their wines, for instance, in skins, a custom which, indeed, still exists in Spain. It is only since the end of the fifteenth century that the use of the bottle has become general. The most ancient establishment in France for the making of bottles is still in existence, and dates back to the year 1290. It holds patents granted by several kings in succession, beginning with Charles of Burgundy. In New Jersey, bottles have been made since the third decade of this century. Bottles are made in New Jersey, of green glass and of lime glass. The former are green and black bottles, fruit jars and beer bottles. Of flint glass are made "prescriptions," *i. e.*, druggists' ware—fancy articles sold by druggists (as well as the larger glass vessels used in the same trade), in clear white, amber, and

opaque white. The term "flint glass" here means lime, and not lead flint. In 1880, of the $5,670,433 product of green glass in the United States, New Jersey produced $1,681,015 worth, and stood at the head in this manufacture. In glass-ware—lamps, lamp chimneys, flint bottles, &c.—the product of New Jersey, for the same year, was valued at $400,000, the State standing sixth in rank in glass-ware making.

For green glass, a furnace is used which differs from the window-glass furnace only in not having the pit and such arrangement as the pit necessitates. Furnaces for reheating are placed at convenient distances from the melting furnaces, and annealing kilns for the larger and more frail articles, are near at hand. Bottles are annealed in kilns called leers. The leer is a long kiln heated at one end and cooler toward the other end. Through these kilns run cars, which are filled and drawn slowly through the kiln, thirty six hours being the time usually required. When drawn out, the bottles are annealed and ready for the sorter.

The proportions of the constituents of the green-bottle glass and of the lime flint-glass are given as follows, in Mr. Weeks' Report:

Proportion of Materials Used for Bottle Glass.

Constituents.	Pittsburg.* Pounds.	French.† Parts.	English.‡ Parts.	Belgian.† Parts.
Sand	8,000	100	100	10
Sulphate of soda	.....	8	.....	15
Carbonate of soda	2,200			
Peat-ashes	.....	.....	.....	20
Lime, slacked	.....	24	80	
Limestone	2,400	.....	.....	5
Salt	250	.....	3	
Soapers' waste	.....	.....	80	
Clay	.....	.....	5	

* Authority: Pittsburg manufacturers. † Authority: Colne. (The sand contains about twenty per cent. of calcareous matter.) ‡ Authority: Pellatt.

Proportions of Materials used for Flint (Lime) Glass.

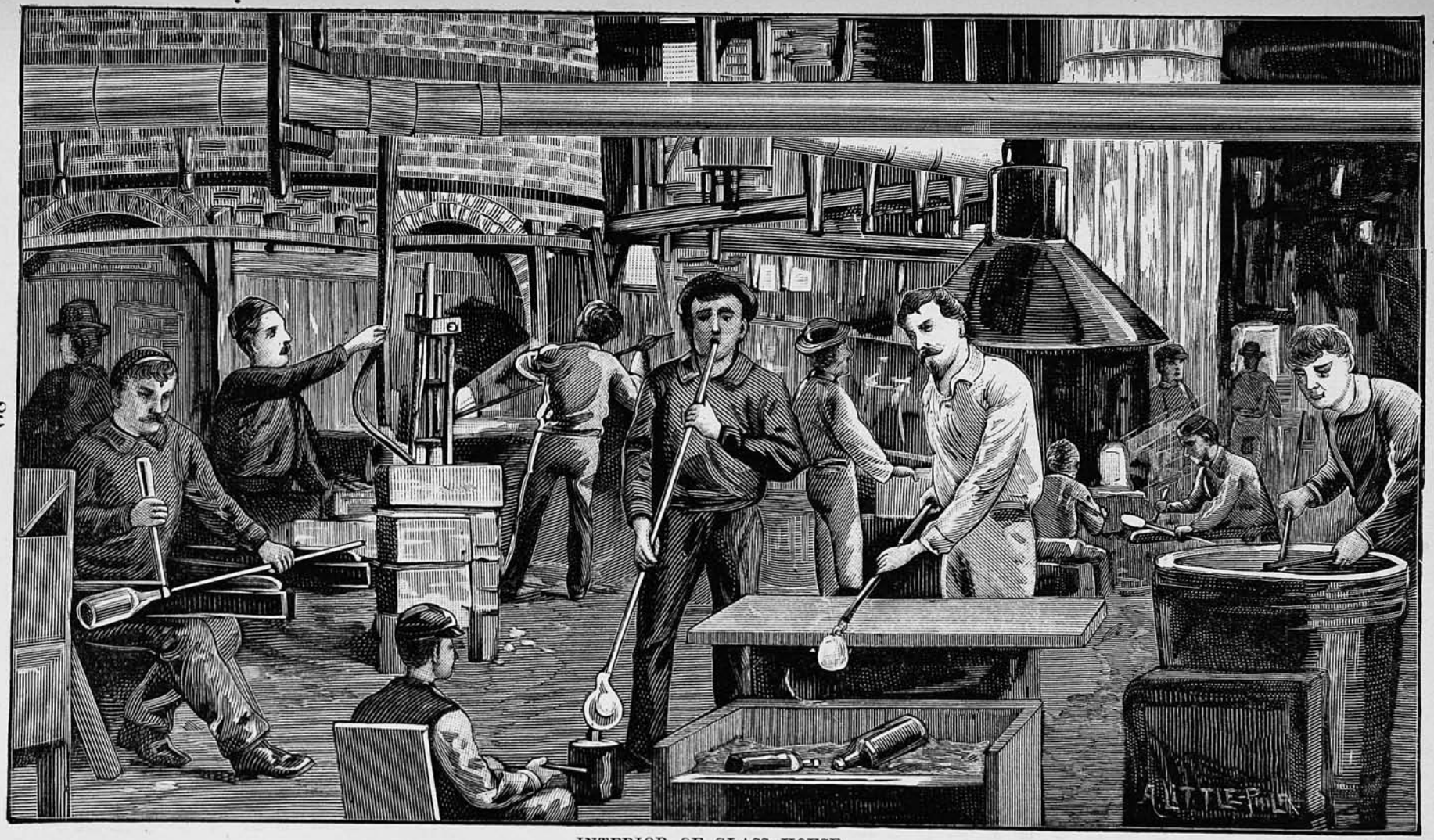
[Sometimes a few hundredths of saltpeter, borax, and red lead are added.]

Constituents.	Pittsburgh.*	Bohemian.†	French.‡	Lime-white.†	Clear white.†	Chemical.†
	Pounds.	Parts.	Parts.	Parts.	Parts.	Parts.
Sand	1,500	.....	300	100	100.0	100.0
Quartz	.....	100.00	.....	.....	.....	.....
Carbonate of potash	.....	60.00	.....	30	65.0	41.4
Carbonate of soda	500	.....	170	.....	.....	.....
Lime	150	.....	75	18	6.0	17.5
Chalk	.....	8.00	.....	.....	.....	.....
Manganese	.....	0.75	.....	.....	0.5	.....
Charcoal	.....	.....	10	.....	.....	.....
Arsenic	.....	.....	.....	.....	.....	.....
Nitrate of soda	200	.....	.....	.....	.....	.....

* Authority : Pittsburg manufacturers. † Authority : Lippincott's Cyclopædia. ‡ Authority : Colne.

For the bottle glass (green) less pure sand is used, and the batch is melted in open pots (Fig. 4, left side.) Decolorizers are not used. The melting and fining consume only about nine hours, one-third less than the window-glass batch requires. Alumina and iron occurring as impurities in the sand, give the glass its greenish hue. Less care is taken in the working, an instance of which is the fact that the cold glass is not cleaned from the pipe-nose before gathering upon it for another bottle. The lime-flint is a very pure glass, and in its melting, fining and working, great care is taken. It crystallizes more quickly than the green glass, so that the blowers must be skillful in their work in order to finish, properly, the more elaborate articles. That the glass may be kept free from the discoloring agencies of the combustibles used as fuel, covered pots are used (Fig. 4, right-hand.) The melting of a 3200-pound batch consumes twenty to twenty-four hours, the fining from two to four hours, and the cooling from one-half to one hour.

In this country, all bottles of ordinary shapes are blown in moulds, a process the convenience of which is obvious, although by it the lustre of the glass is somewhat injured. The glass is somewhat restored, however, by fire-polishing, in which the surface is brought to the melting point in the face of a hot furnace. After the gatherer has gathered and rolled upon the marver sufficient glass for a bottle, the blower blows and rolls the mass into a shape approximating that of the bottle. He then places the glass in a mould, in sections, which is immediately closed by a boy. The blower blows the glass strongly, so that it fills all the interstices of the mould, and withdraws his pipe



INTERIOR OF GLASS-HOUSE.

a short distance from the mouth of the mould. Blowing a small bubble in the tube of glass adhering to the nose of his pipe, he waits a second or two until this cools, and then breaks it by a blow or by twisting his pipe. The bottle is then taken from the mould and is carried to the *gaffer* by a boy, who, as he carries it, trims off the thin glass at the mouth. The *gaffer*, after reheating the neck of the bottle, finishes it with a tool, consisting of a pin, which exactly fits the inside of the neck, and of a small mould in two sections, which is pressed against the outside of the neck; the parts are held in place by a spring, as in the purcellas, Fig. 5, (2, 4). The completed bottles are placed in the leer for annealing. If the bottle is square or has sharp corners, it is held at the end of the ponty-rod by a "snap," consisting of a square sheet-iron box which fits the bottle. If the bottle is round, it is attached to the ponty-rod with molten glass, which a blow easily severs after the neck has been finished. Round objects are, however, frequently finished in the "snap." For holding and rolling the ponty-rod with bottle attached, the *gaffer* uses the bench, easily understood from Fig. 7, the arms supporting the rod at a convenient height for the workman. Many curved hollow articles are blown and finished

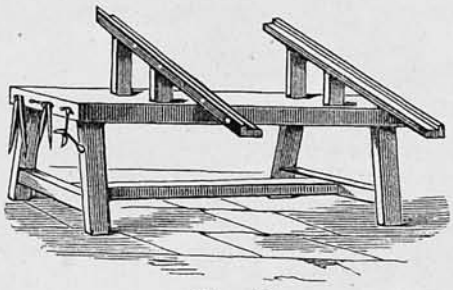


Fig. 7.

without the use of a mould. For a conception of this work a description of the making of a druggists' graduate will suffice. The gatherer having gathered with extraordinary skill upon the nose of his pipe the exact amount of glass necessary, rolls it upon the marver, and by blowing and swinging forms it into the shape of a hollow ellipsoid. Another workman, seated on a bench (Fig. 7), takes the pipe, and with the instruments shown in Figs. 5 and 6, (purcellas and battledore), shapes the lower part of the graduate. Molten glass is then brought on a ponty-rod, and, as it drops, the workman cuts off as much as he needs to fashion the base of the graduate above the foot. More glass is then brought, and with the same instruments the foot is

formed. A ponty-rod is now attached to the foot, and then by a smart blow the pipe is broken off. The unshaped end of the body being now reheated, the workman clips it smooth with the shears, opens it out with the purcellas, and finally draws out the lip with one blade of the same instrument. The graduate is now ready for annealing and subsequent engraving. The mark of the ponty-rod is afterwards removed from the graduate by grinding.

When an article in glass is to have an irregular exterior but a regular cylindrical or conical interior, a process of manufacture called press-work is employed. The press, which is an American invention, is of various forms, the simplest being that represented by the following cut. A plunger, raised and lowered by means of a lever, regulated

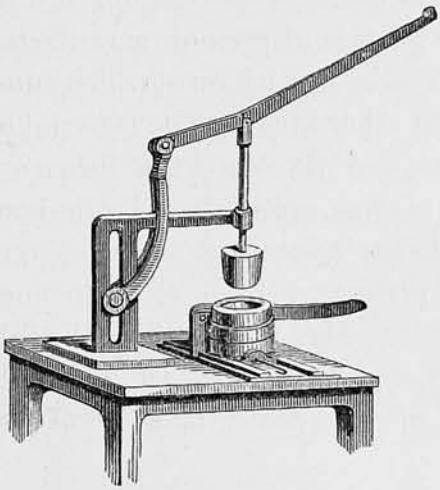


Fig. 8.

by a slot and clamp, descends into a mould. The mould is of two or more pieces, according to the simplicity or complexity of the design. Sufficient glass to form the vessel is dropped into the mould from a gatherer's pipe or rod. The pressman draws down the handle of the lever, and the plunger, entering the mould, forces the glass into the cavities. He then opens the mould and throws out the pressed vessel. In the case of many articles, such as cologne bottles, fancy stoppers, &c., the bottom or top, as it may be, is not put on in the press, but flanges or lips are left, which are afterwards reheated and fashioned at the bench, into the required part of the vessel. New moulds, carefully cooled, produce glass nearly approaching cut-work in brilliancy. By various devices which bring the joints in inconspicuous places on the ware and by fire-polishing, press-work has been brought to a high degree of

excellence. Cut-glass, however, from its matchless sparkle and perfectly clear-cut angles, must always retain its popularity. The cutting is done by first grinding the pressed or moulded design on a wheel of fine sandstone, upon which a continuous stream of fine sand and water is dripping, and by afterwards polishing the surfaces upon a wooden wheel covered with emery powder, and finally with oxide of tin. Stoppered-bottle necks and stoppers are first ground with iron tools, kept moist with sand and water. The stopper is then fastened in the chuck and ground into the neck of the bottle, to insure a perfect fit. Obscured glass is ground in the same way, with sand and water. For engraving, copper discs revolved by a lathe, are used. Fine work can be accomplished in this way by skillful engravers, although etching with hydrochloric acid is frequently employed for the best work.

No polished plate glass is at present manufactured in New Jersey. Rough plate was made by one concern, which runs partly on this kind of glass and partly on other kinds. The material used in this case is the common green glass, and therefore the furnace differs in no respect from the furnaces of the green-glass bottle-houses. No reheating furnaces are needed, but annealing ovens, so constructed as easily to receive the finished plates, are built close to one another, along one wall of the glass-house. Mr. Weeks gives the following table of proportions for plate-glass, which, although not applicable to the meagre plate-glass product of our State, may be of interest in connection with the subject:

Proportion of Materials Used for Plate-Glass.

Constituents.	FRENCH.		ENGLISH.	
	Saint Gobian.* Pounds.	Saint Gobain.† Pounds.	No. 1.‡ Parts.	No. 2.§ Parts.
Sand	100	100.0	400	720
Sulphate of soda.				
Carbonate of soda	35	60.0	250	450
Nitre	.....	.....	.....	25
Lime	5	.....	.....	80
Carbonate of lime	.....	13.0		
Chalk	.....	.....	30	
Charcoal.				
Arsenic.				
Manganese	.....	1.0		
Smolt	.....	0.5		

*Authority: Knapp. †Authority: Bastinaire. ‡Authority: Pellatt. §Authority: Lippincott's Cyclopædia.

The casting-table is set up opposite the mouth of the annealing-oven. It consists of a slab of stone, with flanges at the edges, back and front, over which a very heavy roller may be rolled. A trough at the end farthest from that at which the glass is poured, catches superfluous glass. The glass metal is brought to the casting-table in a pot supported by a crane. When the pot is above the end of the table nearest the oven, it is tilted over gradually, and the metal allowed to pour upon the table. The flanges at the side prevent the glass from running over. When the table is well covered, and the glass begins to rise above the flanges, temporary movable flanges are placed on the top of the stationary flanges, and the roller is set in motion. The roller pushes the movable flanges in front of it, as it advances, and leaves behind a tolerably-level surface, on a level with the top of the stationary flanges. The movable flanges prevent the glass which rises in front of the roller from flowing off at the sides. When the roller reaches the end of the plate, whatever superfluous glass may have accumulated in front of it flows over into the trough. The plate is allowed to cool a few moments, and is then shoved into the annealing-oven. It is separated from any other plates that may be there, by fine sand. In the case of fine plate, grinding and polishing follows, but our rough plate, when annealed, is ready for the market. The day, perhaps, may come when, with our own or with Massachusetts sand, we shall manufacture fine plate.

V. The wages of glass blowers, owing to the good organization of the workmen throughout the country, are very fair. In New Jersey glass-works, strikes have occurred from time to time, as will be seen from reference to page 155, about half of them being successful and a portion of the other half compromised. The following table, which is a series of averages from individual returns made to this Bureau, gives the earnings of the glass blowers in the bottle and vial, window-glass and flint-glass houses in the State.

Wages of Glass-Workers.

Occupation.	Average annual earnings.	Time lost.
1. Bottle and vial—		
Blowers	$1,025 00	60 days.
Tending-boys	148 74	60 "
Master shearers	776 00	60 "
Shearers	399 50	60 "
Packers	364 21	60 "
Pot makers	814 00	60 "
2. Window glass—		
Blowers	459 00	7 months.
"	750 00	3 "
Gatherers	294 00	7 "
"	463 00	3 "
Flatteners	457 00	7 "
"	750 00	3 "
Cutters	400 00	7 "
"	778 00	3 "
3. Flint glass—		
Blowers	987 00	2 "
Tending-boys	158 00	2 "
Batch makers	520 00	2 "
Mould "	800 00	2 "
Stopper grinders	900 00	2 "
Lamp workers	650 00	2 "
Cutters	750 00	2 "
Box makers	590 00	2 "

Mr. Chance, of England, a great glass manufacturer, in reply to a letter of American Consul King at Birmingham, said: "The manufacture of glass in this country is conducted under such very different conditions to those which rule in the United States, that the statistics, if furnished, would be of no practical utility." While Mr. Chance probably referred to the cost of materials and of transportation, his remark applies equally well to wages. The American blower not only does better work than the English and European blower, but he does much more work. This is caused by his higher wages, resulting in a higher standard of living and a better spirit for his work. His rent is high and his food is dearer, or, at least, better. More, therefore, as a matter of curious interest, we give the following tables of foreign glass workers. Wages paid in Belgium and Holland, where conditions are more similar to those of glass workers in this country, will be found on page 79 of this report.

From document No. 29 of the Department of State, containing consular reports on the subject of the glass manufactures of Europe, the following tables of wages of glass workers have been compiled.

At Verona, Italy, master window-glass blowers are paid by the piece at the rate of four cents per square meter of glass (meter, 39.37 inches), measured after it comes from the flattener; the flatteners are paid one cent per square inch; the cutters, six cents for every case. The masters are paid for all productions at the same rate, except the spoiled ware (refuse), for which they receive nothing. Packers earn $23.16 a month. The melter and his assistants, as well as the blacksmiths, are included in the hand-workers, and receive: the melter, $1.16 a day; his assistants fifty-eight cents; the foreman of the blacksmiths, ninety-six cents, and his assistants fifty-eight cents. The usual size of the roller is eighty square inches, and every master works about one hundred of them daily.

Rome—Window Glass.

	Per day.
Blowers	$2 32
Blowers' assistants	48
Flatteners	1 16
Flatteners' assistants	48
Furnace man	2 32
Carpenters and balers	1 93
Cutters	1 93

In addition to these wages, workmen have their lodgings on the premises, free of cost.

Consul-General Walker, in his report on the window-glass manufacture of France, under the head "Statistics of a French window-glass factory," gives the following table of the

Cost of Labor.

	Per month.
1 master stoker, night work	$37 64
1 " day work	34 74
1 smelter	32 81
2 smelters' assistants, each	23 16
1 pot maker	28 95
1 pot maker's assistant	18 34
2 glass composition makers, each	17 37

Blowers are paid 9.6 cents per twelve kilograms* of glass ready to work.

2 blowers' assistants, first hand, each	$32 81
2 " " second hand, each	27 02
4 " " third " "	22 20
3 flatteners, first hand, each	27 02
1 flattener, second hand	25 09
1 " third "	17 37
2 flatteners' assistants, each	8 69
5 shovers, each	5 79
1 overseer of the cutting department	28 95
1 cutter, first hand	23 16
1 " second hand	22 20
1 packer, per box of any size	39
1 box maker, per box of any size	39
1 carpenter, per day	58
3 laborers "	58

Wages in 1881.

Overseer, per day	$1 25
Engineers, machinist, foremen, &c	70
Laborers—common hands	51
Workmen	1 09
Lads, from fifteen to twenty-one years of age	51
Women	29

The average number of working days is three hundred and eight per year.

Germany—Hollow-Ware.

The glass blowers work by the piece and receive 5.25 marks, or $1.26, for either of the following number and kinds of bottles blown, viz.:

360 pieces 1–1 ordinary Bordeaux bottles.
460 " ½ " " "
370 " 1–1 heavy-bottom Bordeaux bottles.
370 " 1–1 green Rhine wine bottles.
440 " ½ brown " " "
340 " 1–1 " " " "
420 " ½ " " " "
350 " 1–1 ale bottles.
420 " ½ " "
460 " ⅓ liter beer bottles.
390 " ½ " " "
360 " 1–1 selters bottles.
440 " ½ " "

* Kilogram, 2.2046 lbs.

From the report of the United States consul at Bremen, we find that at a furnace for bottles and brown or green-glass demijohns, blowers earn $21.64 a month, shearers $26.75, and day laborers $19.

German Window Glass.

Blowers' wages, $4.76 per one hundred square meters, 4–4; $9.52 per one hundred square meters, 8–4; $9.52 to $42.84 per month to assistants. Flatteners' wages, $12.42 to $35.70 per month; shover assistants, $9.52 to $11.90 per furnace, $23.80 per month; cutters, $19.04 to $28.56 per month; master shearer to run furnace, $23.80 per month; assistant shearer, $21.42 per month; engineers, $28.56 per month; day laborers, forty-eight to seventy-one cents per day; blacksmiths, forty-eight to ninety-five cents per day.

Liverpool, England—Window Glass.

Blowers' wages, single-thick or sixteen-ounce, per one hundred feet, $8.75 to $15 per week; double-thick or twenty-four-ounce, tenders or blowers, $4 per week. Flatteners earn $1 per one hundred feet; shovers, $4 per week; layers-out, $7.50 per week; takers-off, $7.50 per week; cutters, $6.25 to $10.50 per week; master shearer, to run furnace per month or per melt, $7.50 per week; assistant shearer, $3.75 per week; engineers, $10 per week; day laborers, $5 per week; blacksmiths, $6.25 per week.

The general condition of the glass-workers in our State is good. In Millville, where the Institute for Working Men, described in the preceding part of this report, has recently been built, the glass workers are in comfortable circumstances, and, in general, it would be difficult to find a more thrifty, moral and intelligent body of workmen than the glass blowers of South Jersey.

GLASS FACTORIES IN NEW JERSEY.

The following is a list of the bottle and window glass works of New Jersey, kindly furnished by Mr. F. L. Bodine, of Philadelphia:

Bottle Factories.

Salem	5	Furnaces.
Camden	1	"
Tansboro'	1	"

Williamstown	2	Furnaces.
Winslow	2	"
Bridgeton	7	"
Clayton	5	"
Medford	1	"
Woodbury	2	"
Glassboro	4	"
Riverside	1	"
Port Elizabeth	2	"
Millville	5	"
Total	38	"

Of above, the following are idle:

Winslow	1	"
Bridgeton	1	"
Clayton	1	"
Medford	1	"
Port Elizabeth	1	"
Millville	2	"
Total	7	"

Window Glass Factories.

Malaga	2	Furnaces.
Millville	2	"
Quinton	2	"
Winslow	2	"
Glassboro	2	"
Bridgeton	10	"
Woodbury	2	"
Elmer	1	Not yet started.
Atco	1	" " "
Total	24	

Of above, three window glass and two bottle furnaces are run by Cohansey Glass Mauufacturing Company.

Of above, the following are idle:

Elmer	1	Furnace.
Atco	1	"
Total	2	"

Rough Plate Glass Furnace.

Bridgeton	1	"

Flint Glass Furnaces.

Millville	8	Furnaces.
Glassboro	1	"
Jersey City	1	"
	10	"

Total in the State.

Green glass	38	Furnaces.
Window glass	24	"
Rough plate	1	"
Flint glass	10	"
	73	"

Imports of Glass and Glass-Ware.

Articles.	1881.	1882.	1883.
Cylinder, crown or common window	$1,414,709	$1,387,257	$1,736,700
Cylinder and crown polished	57,754	27,117	62,630
Fluted, rolled or rough plate	32,422	56,407	62,898
Cast polished plate, not silvered	979,452	1,183,482	1,145,709
Cast polished plate, silvered	833,385	943,706	1,226,432
Other manufactures of	2,560,303	3,036,402	3,528,174
Total	$5,976,025	$6,634,371	$7,762,543

The steady increase observable in this table, is due, partly, at least, to the prolonged strike which has existed among a large portion of the glass works in the West, but must also be attributed to the fact that the demand for glass increases very rapidly, while the production of the country increases slowly in comparison. The foreign product also, in some branches, excels the home product.

PART IV.

THE STATE BOUNTY.

CHAPTER 1.—BOUNTY ON FIBRES.

CHAPTER 2.—SUGAR FROM SORGHUM.

CHAPTER I.

BOUNTY ON FIBRES.

By an act of the Legislature, approved March 3d, 1881, entitled "An act to encourage the production and treatment of fibres in this State," $15,000 was appropriated for the payment of bounties upon fibres and fibrous plants, including jute, ramie, flax and hemp. Of this amount $5000 was appropriated for stalks of proper lengths suitable for fibre, $5000 for the cleaned fibre, and $5000 for ramie yarn. No application has been made for bounty upon jute or ramie since the passage of the act, but, as will be seen by reference to the fifth annual report of this Bureau, the whole amount of the $5000 appropriated for the stalks of the fibrous plants named was paid upon flax straw, for which vouchers were presented, properly sworn to, and attested by the clerk of the county in which the straw was grown. It will also be seen, by reference to the same report, that the only vouchers presented for the bounty upon cleaned fibre were for flax fibre, for which fibre a bounty was paid upon properly certified vouchers, amounting to the sum of $4770.74. The balance of the amount of the appropriation, amounting to $229.26, has since been paid.

Notwithstanding the liberal bounties offered for the cultivation of jute, ramie and hemp, we cannot learn that any persistent effort has been made to raise these plants in New Jersey, and it is not at all probable that the $5000 remaining unpaid out of the appropriation of $15,000 will be called for before the time specified in the law at which paying of bounties shall cease, viz., the 1st day of April, 1885.

Table Showing the Amount Disbursed and to Whom Paid for Bounty Upon Flax Fibre.

Date.		Name.	P. O. Address.	Quantity—pounds	Bounty—cents.	Amount paid.
1883.						
Jan.	2	Wm. H. Snyder	Everittstown, Hunterdon Co.	900	3½	$31 50
"	3	Charles B. Everitt	Sergeantsville, " "	600	"	21 00
"	3	Jeremiah G. Housel	Copper Hill, " "	414	"	14 49
"	6	W. E. Rothermel & Co.	Flemington, " "	740	"	25 90
"	12	" " "	" " "	775	"	27 12
"	12	Samuel Leffever	Kingwood, " "	360	"	12 60
"	12	David M. Kise	" " "	461	"	16 13
"	13	Isaac Smith	Locktown, " "	225	"	7 87
"	15	Abel Kerr	Kingwood, " "	920	"	32 20
"	13	Nevius Conner	Stockton, " "	500	"	17 50
"	16	Watson Emmons	Kingwood, " "	656	"	22 96
						$229 26
Amount of bounty paid up to December 30th, 1883 (see fifth annual report, page 209)						4,770 74
Total						$5,000 00

CHAPTER II.

SUGAR FROM SORGHUM.

The manufacture of sugar from sorghum in this State has not extended beyond the plant located in the county of Cape May by the Rio Grande Sugar Company. The cane required to carry on these works was raised mainly upon land owned by the company, nine hundred and sixty-four acres of which was well fertilized, planted with sorghum seed, and the crop was raised under the direction of practical farmers employed for that purpose. Sorghum was also raised by a number of farmers living in the vicinity of the works; and certificates for the State bounty were sent this Bureau, showing deliveries of cane in lots of from *five* tons to more than *one hundred* tons.

The seed planted was chiefly the Early Amber and the Orange, these two varieties having been found from experience better adapted to the soil and climate than any others. Twenty-five acres were also carefully prepared for experimental purposes, upon which was planted sixty-eight varieties of sorghum seed. Of these varieties, only four proved of sufficient value to warrant even gathering the seed. In many instances the seed did not germinate, and in others the sorghum proved worthless for sugar-making. In the spring of 1882, the farmers planted their seed about the middle of April, and the season being favorable, a large portion of the cane became too ripe to be used to advantage before it could be crushed at the mill; consequently the yield of juice was so small, that a very small percentage of sugar in proportion to the cane used was obtained. Having had this unfortunate experience last year, planting this year was not begun until the middle of May—one month later. Unfortunately, the season this year was wet and unfavorable, and the opening of the factory was delayed on account of the backward state of the cane. Work was, however, begun

on the tenth day of September, on the early amber cane, which was then in excellent condition, yielding an abundance of juice of remarkable purity. This continued about a week, and the mill was working under most promising conditions, when the coast of New Jersey was visited by one of the heaviest storms on record, the wind blowing a hurricane and the rain falling in torrents. The result of this storm was, that fully two thousand five hundred tons of early amber cane, which was in prime condition for the mill, was blown down by the gale and so broken into pieces, that, although it was hauled to the mill and crushed, the yield of sugar ran down as low as four per cent. without a corresponding increase in syrup. The orange cane had usually been planted later, with the view of its coming into condition for grinding about the time the early amber crop had all been used. This was done in order that the mill might be kept running as late in the season as possible. The same course was pursued the present season, but on account of the severe drought in the month of August, and the unusually cold nights that followed, the cane did not ripen until the 25th of October, and then had not attained its usual saccharine strength. The orange cane resists high winds much better than the amber, the roots striking deeper into the ground; and in this respect, as well as from the fact that it matures later in the season, it possesses great advantage for the manufacture of sugar.

The effect of favorable weather upon the cane will be apparent when we compare the saccharine strength of the cane for the two years. The average test at the Rio Grande works for 1882 was 11.11 polariscope, 7.336 Baumé and 84.16 purity, while the average test for 1883, was 9.75 polariscope, 7.57 Baumé and 71.55 purity. The Rio Grande Company has been carefully experimenting in the culture of sorghum, believing that by proper cultivation a much larger quantity of sugar can be obtained than has yet been secured. They have used a great variety of fertilizers, and in some instances with remarkably good results. During the past season cane was worked at their mill which showed a polariscope test of 13.14, and in one instance 15 per cent. The factory was closed November 14th, no frost having occurred during the working season to injure the cane in the slightest degree. *Nine hundred and forty* barrels of sugar, and about *fifty-five thousand* gallons of syrup were manufactured.

The experiment of making sugar from sorghum is now being fairly

tested at the works at Rio Grande, and if success follows, a most valuable addition will be made to the agricultural products of our State. This matter has been considered so important that careful experiments have been carried on at the New Jersey Experiment Station during the past year, and we feel warranted in quoting freely from their Bulletin * * * upon the subject, issued November 16th, 1883.

The object of this Bulletin is:

First, to show the effect of fertilizers upon the formation of sugar in sorghum.

Second, to prove that by the present process of extraction more than one-half of the sugar formed in the plant may be wasted. That even when a mill yields from fifty to sixty per cent. of juice it may still have more sugar in the bagasse than it extracts from the cane.

The plots selected on the College farm for this experiment, formed a portion of a field of twelve acres, proved to be of uniform quality, which had been in grass during three previous years. Ten acres of this field, dressed with barn-yard manure, produced seven hundred bushels of shelled corn—an indication that the season was favorable, and that the soil was extremely fertile.

The sorghum ground was first prepared as if intended for Indian corn and then staked out into sixteen plots, each one-tenth of an acre. The fertilizers were spread broad-cast and harrowed in. The quantities and combinations used on each plot, as well as the cost of the material, can be found in the table. As in former experiments, 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 11 and forty pounds of gypsum, or land plaster, upon plot 10. Two plots, 1 and 6, were left without fertilizers, in order to learn what the soil alone was able to produce.

On the 19th of May, early amber seed was planted in rows three feet eight inches apart. The plants were thinned out as much as was necessary and cultivated twice during the season; late cultivation, however, was avoided, as this is believed to have prevented seed development in a former experiment.

The fertilizers exerted no perceptible effect on the growth of the plants. Those upon plots 1 and 6 appeared at all times to flourish quite as well as any on the rest of the field. At the close of the experiment there were also no marked differences, except, perhaps, in case of plot 11, on which the canes seemed rather unripe, although their seed was well developed and hard.

Samples of cane for analysis were secured from each plot during the last week in September. Some of these samples weighed nearly ninety pounds each; from two to three per cent. of the cane grows on a plot. To obtain such samples two average canes were cut from every row. In other cases the samples weighed about forty pounds, one cane only being taken from each row.

After the leaves and seed tops were removed each sample was divided into two portions, one of which was immediately ground in a heavy mill and the weighed juice thoroughly mixed and analyzed. The results are tabulated as *extractable sugar per*

acre. The remaining portion of each sample was passed through a Lion fodder cutter and carefully mixed. A sub-sample was then taken, dried as rapidly as possible and ground to a fine meal. From this meal the sugar was extracted with boiling alcohol and determined by means of the polariscope. The results are tabulated as *total amount of sugar per acre.*

Clerget's method of using the polariscope was followed in all determinations of sugar published in this Bulletin.

The action of the fertilizers may be studied from these standpoints:

First. What fertilizing element exerted most marked influence on sugar production?

Second. For sugar development in sorghum is the sulphate or muriate of potash to be preferred?

Third. Has phosphoric acid hastened to any noticeable extent the ripening of the plant?

By studying in the table the *total amount of sugar per acre* it will be seen that with one exception potash was present in every case where the yield of sugar was *four thousand* pounds or more per acre. The exception is found in the land plaster plot No. 10. The action of this material is believed by many to lie chiefly in its power of making potash, which is stored in the soil, available for plant food. If this field, therefore, had been deficient in potash the plaster would probably have been much less serviceable.

Potash used alone developed more sugar per acre than any other single material. Compare plots 4 and 12 with 2 and 3. Potash combined with nitrogen gave in both cases the highest yields of sugar obtained: on plot 7, *four thousand five hundred and eighty-two pounds;* and on plot 14, *four thousand eight hundred and sixty-six pounds* per acre. The yield of sugar was relatively low wherever phosphoric acid was used, and its yield was considerably diminished when the amount of phosphoric acid was doubled. Compare plots 15 and 16. The conclusion, then, from this experiment is, that *potash was the element which influenced sugar production in sorghum most favorably, but that the highest yield per acre was obtained when potash was used in combination with nitrogen.*

In every case sulphate of potash surpassed muriate of potash in developing sugar in sorghum. Compare, *under total amount of sugar per acre,* plot 4 with 12; plot 7 with 14; plot 8 with 13; and plot 9 with 15. That sulphate of potash is to be preferred in cultivating beets for sugar and potatoes for starch has been known for a number of years; but if the same observation has been already made in the case of sorghum it has escaped notice.

It was expected that the cane on the several plots would show marked differences in the time of ripening seed. This was to have been the standard for measuring the power of phosphoric acid to shorten the period of growth of sorghum. Conclusions on this point cannot, however, be drawn from this experiment, as the cane on all the plots matured seed at about the same time. At the Rio Grande plantation, however, where the season has been wet and unfavorable, fields fertilized with phosphoric acid matured earlier than those without it, an experience which corresponds with the practice in some sugar-beet districts, where land from which the crop is to be taken in September is dressed with twice as much superphosphate as that which is to be left until October.

One more point deserves notice in connection with study of fertilizers: *quantity of*

cane alone is no index to the value of a fertilizer as a sugar developer in sorghum. In this experiment, the heaviest yields of cane were from plots 11 and 4, *nineteen and three-tenths tons* and *nineteen and seven-tenths tons* respectively, while plots 15 and 16 each gave three tons less per acre. In spite, however, of the smaller quantity of cane, plots 15 and 16 each produced from three to four hundred pounds more sugar per acre than plots 11 and 4.

Even when a mill expresses from fifty to sixty per cent. of juice from stripped and topped cane, it may yet leave more than one-half of the sugar in the bagasse. This fact can best be shown by an example. The cane on plot 11 contained *four thousand one hundred and nineteen pounds* of sugar per acre. Of this, the mill expressed *nineteen hundred and eighty-three* pounds, leaving in the bagasse fifty-two per cent. of the sugar which the cane contained. This result is the most favorable in the experiment. The other extreme is found on plot 10, where nearly *seventy per cent.* of the sugar was wasted. In eleven other cases, the loss exceeds *sixty per cent.* Apparently, the greener the cane, the smaller the loss of sugar by the milling process.

To explain this loss, it is necessary to assume that a considerable portion of the sugar is stored in the cane in a solid state, either as pure crystallized sugar or in some combination easily decomposed or dissolved in water. It is claimed that the microscope has shown crystals of sugar in the cells of the sorghum. If this is true, it is irrational to attempt the perfect separation of sugar from the cane fibre by mechanical means. For attaining this end, the process of diffusion seems to be the most practical and promising method. It has been thoroughly tested and generally adopted by the beet-sugar industry, and experiments thus far reported indicate that it is also applicable to the sorghum and tropical cane.

Mr. H. B. Blackwell states, in the Boston *Journal of Chemistry*, that by following this process, he was able, without difficulty, to make *thirteen* pounds of crystallized sugar and six pounds of good syrup from one hundred pounds of amber cane.

This process, as followed in the beet-sugar industry, is explained in detail in Stohman's Hand Book. In brief, it is as follows: The beets, cut into small strips, are placed in a steam-tight iron tank. Steam, at a certain temperature, is then allowed to act long enough to destroy the vitality of the plant cells, when a quantity of water about equal to the weight of beets taken is forced into the tank from below and kept in contact with the beet strips for about ten minutes. During this time, two or more of the eleven other tanks in the battery are stocked with "strips" and steamed. The dilute sugar solution now in the first tank is next forced up through the beets in the second tank, where it becomes still richer in sugar. In turn, it is pressed through eight other tanks, becoming more and more charged with sugar from repeated contact with fresh beets, and is finally forced into the defecator as rich, almost, as juice from the same beets would be if expressed with hydraulic presses. The amount of water to evaporate is not, therefore, materially increased.

When the dilute sugar solution is pressed out from the first tank, fresh water immediately takes its place, and when the sugar solution is sent to the defecator, the "strips" in the first tank have been leached ten times with fresh water, and, practically, all the sugar extracted. The tank is then refilled with fresh beets, and takes its place again in the battery, as No. 10. The process is thus made continuous. One tank is always being emptied and cleaned, another being refilled, while the remaining ten are in operation. One boy to manage the valves, two men to fill the tanks and two to empty and clean them, is the necessary working force.

Table Showing Results of Field and Laboratory Experiments with Sorghum, for the Season of 1883.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
							Potash as muriate.					Potash as high-grade sulphate.				
	Nothing.	Nitrogen, 22½ lbs.	Phos. acid, 52½ lbs.	Potash, 75 lbs. From muriate of potash.	Nitrogen, 22½ lbs. Phos. acid, 52½ lbs.	Nothing.	Nitrogen, 22½ lbs. Potash, 75 lbs.	Phos. acid, 52½ lbs. Potash, 75 lbs.	Nitrogen, 22½ lbs. Phos. acid, 52½ lbs. Potash, 75 lbs.	Land plaster, 400 lbs.	Nitrogen, 204 lbs. Phos. acid, 164 lbs.* Potash, 200 lbs.	Potash, 80 lbs.	Phos. acid, 52½ lbs. Potash, 80 lbs.	Nitrogen, 22½ lbs. Potash, 80 lbs.	Nitrogen, 22½ lbs. Phos. acid, 52½ lbs. Potash, 80 lbs.	Nitrogen, 22½ lbs. Phos. acid, 105 lbs. Potash, 80 lbs.
Cost of fertilizers per acre	.....	$4 50	$5 25	$3.25	$9 75	.....	$7 75	$8 50	$13 00	$1 50	?	$5 60	$10 85	$10.10	$15.35	$20 60
Pounds of sorghum per acre	31,040	31,930	35,200	39,390	33,530	33,220	36,780	33,680	32,860	32,820	38,590	36,740	29,790	36,320	33,600	33,180
Tons of sorghum per acre	15.5	15.9	17.6	19.6	16.8	16.6	18.4	16.8	16.4	16.4	19.3	18.4	14.9	18.2	16.8	16.6
Percentage of leaves	8.6	8	4.6	6.3	6.7	8.1	8.2	7.2	8.8	7.6	6.5	6.4	9.1	8	8.7	6.6
Per cent. of stripped and topped cane	83.9	84.5	83.9	85.7	85.3	82.5	83	84.5	82.7	84.5	84.8	85.1	83.1	84.1	84.1	84.5
Pounds of stripped and topped cane per acre	25,730	26,980	29,530	33,760	28,600	27,410	30,530	28,460	27,180	27,730	32,720	31,270	24,860	30,550	28,260	28,040
Per cent. of sugar in stripped and topped cane	15.05	13.13	12.97	11.74	11.40	12.50	15.01	11.79	12.70	15.20	12.59	13.57	15.42	15.93	16.09	15.37
Total amount of sugar in pounds, per acre	**3872**	**3542**	**3830**	**3963**	**3260**	**3426**	**4582**	**3355**	**3452**	**4215**	**4119**	**4243**	**3833**	**4866**	**4547**	**4309**
Amount of extractable sugar in pounds, per acre	1,362	1,513	1,493	1,558	1,458	1,190	1,634	1,537	1,343	1,302	1,983	1,701	1,343	1,663	1,563	1,503
Per cent. of total sugar lost in bagasse	61.8	57.3	61	60.7	55.3	65.3	64.3	54.2	61.1	69.1	51.9	60	65	65.8	65.6	65.1
Per cent. of juice extracted from stripped and topped canes	57.6	58.6	58.8	58.8	57.1	54.3	60	57.1	56.6	58.1	57.9	56.1	51.6	53.9	51.2	52.3
Per cent of sugar in juice	9.19	9.57	8.60	7 85	8.93	8	8.92	9.33	8.73	8.08	10.47	9.70	10.51	10.10	10.80	10.25
Bushels (56 pounds) of clean, dry seed per acre	31.6	26.1	33.9	39.1	32.9	30.8	36.7	33.7	32.8	30	38	34	25	33	27.6	29.6

* Twenty (20) tons barnyard manure.

NEW BRUNSWICK, N. J., November 16th, 1883.

GEORGE H. COOK, *Director.*

The Rio Grande Sugar Company have, since the closing of their works in October, expended about *ten thousand dollars* in placing in position a full bench of tanks, for the purpose of subjecting the bagasse to the diffusive process after the cane has been passed through the mill. During the past year, the bagasse and seed have been utilized in feeding pigs and hogs, and more than three hundred have been penned and fattened. It is the purpose of the company largely to increase this number, with the expectation that enough pork can be sold each year to cover the expense of raising the crop of cane. As the meadows near the pens contain a large quantity of muck, this material is freely carted and thrown into the pens, to be trampled upon by the hogs. Thousands of tons of fertilizing material, which is used in keeping the land in good condition, are thus made.

Instead of pursuing the usual plan of threshing the seed in the field and storing it in barns, where it was liable to be spoiled by becoming heated, and subjected to waste by vermin, the seed is now, after being stripped from the cane, left on the field until well dried out, when it is put into stacks; and whenever seed for feeding the hogs is required, the threshing machine is taken into the field, and from two to three hundred bushels cleaned at a time. No seed has been damaged by stacking in the field, and much less labor has been required to gather the crop than by the old method.

The amount of bounty paid during the year, under an act entitled "An act to encourage the manufacture of sugar in the State of New Jersey," approved February 16th, 1881, was as follows:

For 6,761 tons of sorghum cane, stripped and topped, at $1 per ton.....	$6,761 00
" 282,711 pounds of merchantable sugar, at one cent per pound.....	2,827 11
	$9,588 11

PART V.

JAIL STATISTICS.

SUMMARY OF REPORTS FROM KEEPERS OF THE COUNTY JAILS AND PENITENTIARIES, SHOWING THE NUMBER OF COMMITMENTS AND OTHER FACTS CONCERNING THE CONDITION OF THE INMATES FOR THE TWELVE MONTHS ENDING OCTOBER 31ST, 1883.

JAIL STATISTICS.

With the present report the duty imposed on the Bureau under the "Act providing for the record and report of jail statistics," approved March 23d, 1882, ceases, as the Legislature of 1883 wisely provided (ch. 205, Laws 1883,) for a "Council of State Charities and Corrections," to have the general oversight of all charitable and correctional institutions in this State, to gather statistics from the same, and so to study and arrange the facts thus obtained "as may be necessary to aid in a knowledge of the cause of dependency, pauperism and crime." The Council "may investigate the system of public charities and correctional institutions of the State, and examine into the condition and management of all prisons, penitentiaries, jails, reform schools or other places of correctional detention, whether State, county, township, city, town or borough, and the same as to all lunatic asylums, hospitals, infirmaries or other public institutions of charity or care, and persons therein detained, and recommend, in writing, such changes and additional provisions as it may deem necessary or desirable for the economical and efficient administration of any one or all of them, which recommendations shall be laid before the officers, directors and overseers of such institutions."

Such a council is an absolute necessity in every well-regulated commonwealth; but in only ten of our States—Massachusetts, New York, Ohio, Rhode Island, Pennsylvania, Illinois, Wisconsin, Michigan, Connecticut and Kansas—are Boards of Charities and Corrections in full operation. The example has been followed by New Jersey none too soon. Good citizens generally avoid our poor-houses and jails, yet no places are in greater need of missionary efforts. Of the inner workings of these institutions little is known; and while it is generally admitted that pauperism and crime are increasing among us,* few have

* Secretary Round, of the New-York Prison Association, states that "There are locked up in the jails, houses of refuge and other places in New York State, where people are sent for wrong-doing, 50,690 persons. This we may estimate as one-fifth of the criminal population of the State. During the last decade this criminal popu-

any conception of the extent of these evils, which are only called to the attention of the citizen and taxpayer by increasing taxes or the occasional articles in the newspaper, publishing some shocking details of mismanagement by officials who have the charge of public penal or eleemosynary establishments.

It is most unfortunate that thus far little attention has been given to the science of crime-cause and its proper treatment, or penal laws and convict punishment. While our civil law has been developed to almost an exact science, our penal jurisprudence is still in its infancy. To pass criminal laws and to build prisons, it has been well said, is not all that should be required of legislation. To subserve the substantial welfare of a State is to discriminate between violations of its laws and wisely classify offences and offenders. When a State shall construct its criminal code on such principles, then prisons will be established for the purpose of reforming offenders and for the substantial benefit of society. The work which the Bureau, under instructions of the Legislature, began a year and a half ago, and which will hereafter be carried on more satisfactorily by other persons specially qualified for it, will do much to hasten the desired reform, for it will give the public some knowledge of the number, condition and treatment of its criminal classes, which the brief reports of our State penal and reformatory institutions do not and cannot show, as the great majority of wrong-doers get no further than our twenty-three county jails and penitentiaries. And how little of a reformatory this county jail is, "a relic of a past age," as it has been called, may be gleaned from the following observations made in a report as delegate (in 1881) to the National Conference of Charities and Corrections, by Mr. A. S. Meyrick, one of our best-informed citizens on this subject:

"The darkest part of the prison system of the United States, in the opinion of the late conference, as it has been in that of each of its predecessors, of every State Board of Charities and Corrections, and of every enlightened citizen who has taken the trouble to inquire into its character and effects, is the county jail. While there has been great improvement in the construction and management of our State prisons generally, while our cities have frequently roused themselves and enforced sweeping reforms in their penitentiaries, the county jail remains, in a vast number of cases, the same vicious and abominable institution that

lation has increased thirty-eight per cent., while the population of the State has increased but twenty-four per cent."

it was when a century ago its crying abuses started John Howard upon the career of philanthropy which terminated only with his life; which fifty years later led the kindly and philosophic Tocqueville to say, 'the jails in the United States are the worst I have ever seen;' and induced the Prison Reform Conference at Newport, in 1877, to denounce the whole system as 'a disgrace to civilization, hopelessly, irremediably bad—an attempt to cure crime, the offspring of idleness, by making idleness compulsory, and to teach virtue by enforced association with those who scoff at virtue, duty and religion.'"

It is the universal opinion of those interested in prison reform, that the greatest evil that exists in the whole prison system is the county jail. It is bad enough to huddle hardened offenders together in these places, but it is nothing less than criminal to allow free communication between male and female offenders, and to permit the five hundred and twenty-six children under sixteen years of age,* many of whom were not even wrong-doers, and the eighty-five witnesses, whose only misfortune was in being *witnesses* to the commission of crime and in being too poor or friendless to furnish bail for their future appearance, to remain days and weeks in these "schools of vice and colleges of crime," in close confinement with the worst criminals.†

*There were reported confined in our jails during the year, eighteen hundred and fifty-five inmates under twenty years of age. In November, 1882, a boy *seven years of age* was committed to the Cumberland jail for malicious mischief.

†The last report of the State Reform School for boys states that the average time spent (in 1883) in jail by one hundred and fifteen boys, awaiting trial and after trial, until their arrival at the school, was over thirty days. This is the statement in detail:

½ day	3	19 days	2	58 days	1
1 "	7	20 "	1	60 "	4
2 days	1	21 "	7	61 "	1
3 "	4	22 "	3	62 "	1
4 "	1	23 "	5	66 "	1
5 "	1	24 "	3	67 "	1
6 "	3	25 "	1	70 "	2
7 "	4	26 "	1	71 "	1
8 "	1	27 "	1	84 "	1
9 "	1	28 "	1	90 "	1
10 "	3	30 "	4	120 "	2
11 "	3	31 "	4	124 "	1
12 "	3	32 "	2	135 "	1
13 "	2	37 "	2	156 "	1
15 "	3	39 "	2	176 "	1
16 "	1	45 "	2		
17 "	1	48 "	1	Total	115
18 "	10	53 "	1		

Average time ..... 30.13 days

Reports of jail statistics have been received by the Bureau for a period covering eighteen months. The returns for the first six months (May 1st, 1882, to October 31st, 1882,) were tabulated and given in our fifth annual report The statistics for the past year are reported on the following pages. Our object has been to obtain as many details as practicable concerning each inmate committed. The result may not be as satisfactory as could have been desired, for much was wanting in the way of accuracy in the reports of the keepers, and our tables will show a number of inconsistencies. Still, considering the class of persons from whom the information reported to the Bureau had to be obtained, the labor required in preparing the reports, and the fact that these gentlemen had little experience in this kind of work, it is rather surprising than otherwise, that this duty was so cheerfully and so well performed.

The statistics given in our report for 1882, showed that the total number of inmates in our twenty-three county penal institutions, for six months, ending October 31st, was 7533, of whom 5851 were returned as males, and 1230 females. Of these, 321 were children under 16 years of age, 67 witnesses, who were unable to give bail for their appearance, 5 died, 38 escaped and 12 were recaptured. The cost to the counties, of boarding the inmates, was in the neighborhood of $71,000. The penitentiaries of Essex and Hudson counties were the only institutions in which the prisoners were employed in productive labor (cracking stone) during the six months referred to. During the past year the warden at Caldwell, Essex county, reports that the average number employed was from 100 to 125 monthly; the monthly earnings of all having been valued at from $125 to $150. The reports from Snake Hill give no returns on this point. In Middlesex, there were reported employed, in 1882, in November, 7; in December, 40; and in February, (1883), 7; value of labor not estimated.

On November 1st, 1882, there were remaining in the twenty-three jails and penitentiaries, 1018 inmates. During the succeeding year the number of commitments was 13,600. This does not show the actual number of *persons* committed, as in some cases there have been several commitments for distinct crimes against a single person. How many jailers on reported commitments, we do not know. Presumably, this was done only by Mr. A. J. Johnson, warden of the Newark jail, who wrote on this point: "Frequently there is a plurality of

commitments against a single person. Last quarter (August, September and October,) there were 911 commitments, but the number of *persons* actually committed was only 842; and the plurality, 69, is a fair average through the year." If we take this into consideration, also the fact that 85 witnesses were committed in default of bail for their appearance, and that, probably, there was a not inconsiderable number of children who were committed with their parents (the keeper of the Jersey City jail reporting 8 during three months), we can safely place the number of *persons* charged with crimes, in the jails and penitentiaries in the various counties during the year, at 14,000. An estimate of the relative number of males, females and children committed can be formed from the data reported from the county jails, not including the penitentiaries: Males, 10,842; females, 2321; children under 16 years of age, 526.

OTHER PENAL AND REFORMATORY INSTITUTIONS.

In this connection the following information from the latest annual reports of the State Prison, Reform School, Industrial School and Newark City Home, will be appropriate.

According to the State Prison Report (1882–83) there were in that institution during the year 1243 convicts, of whom 798 were in confinement on October 31st, 1882. On October 31st, 1883, there were remaining in the prison 804, of whom 241, less than one-third, were foreign born, 767 were males and 37 females. [The average daily number was 817.] The ages when these convicts were received (the date of commitment is not given) were: Fourteen years, 1; fifteen to twenty, 109; twenty to twenty-five, 236; twenty-five to thirty, 139; thirty to forty, 183; forty to fifty, 91; fifty to sixty, 35; sixty to seventy, 8; seventy to eighty, 2. Of this number there have been committed for the first time, 663; second time, 96; third time, 36; fourth time, 6; fifth time, 2; eighth time, 1.

The superintendent of the Reform School for Boys says:

"Since July 6th, 1867, the date when the first boy was received, to the date of this report, there have been 1397 boys enrolled as inmates. In the meantime 1067 have gone out, leaving 330 still remaining. The largest number at any one time in the school since its beginning, was reached on March 15th, when we had 346 boys." On October

31st, 1882, the number of boys remaining was 322; committed during the year, 130; returned, 21; total inmates during the year, 473, of whom there were disposed of during the year, 143; absent on trial, 7; absent but not disposed of, 9; remaining in school October 31st, 1883, 314. The average time spent in the institution by those disposed of was two years five months and ten days. The following statistical details of the 130 committed during the year will be instructive and interesting:

Number foreign born, 9; number whose parents were foreign born —fathers, 75; mothers, 76. The ages when committed were: Eight, 2; nine, 5; ten, 16; eleven, 11; twelve, 17; thirteen, 19; fourteen, 25; fifteen, 31; sixteen, 4.

The offences for which committed were: Larceny, 23; petit larceny, 22; grand larceny, 5; breaking, 5; breaking, entering and larceny, 1; unmanageable and incorrigible, 1; indecent assault, 1; larceny and receiving, 3; vagrant and incorrigible, 2; obtaining goods by false pretences, 1; malicious mischief, 2; assault and battery and larceny, 1; picking fruit, 1; entering and stealing, 1; assault and battery and attempt to rape, 2; burglary, 1; breaking, entering, &c., 5; robbery, 2; habitual vagrant, disorderly and incorrigible, 3; larceny, &c., 5; larceny from person, 1; assault and battery, 5; incorrigible, 8; entering and larceny, 7; grand larceny and entering, 2; assault, 1; battery and assault at rape, 2; incorrigible, &c., 1; entering, 2; habitually incorrigible, 1; disorderly person and incorrigible, 1; committed as proper subjects, 12.

In the State Industrial School for Girls there were 42 inmates during the year. The trustees' report says:

"Since the establishment of the school in 1871 there have been 185 girls committed to our care. Of this number 27 are now with us. During the past fiscal year we received 12, 9 of whom were white and 3 colored; 7 were of American parentage, 3 German and 2 Irish; 6 were in the sixteenth year of their age, 3 were fifteen, and 1 each ten, twelve and fourteen. Three girls have been discharged and 12 have been indentured during the year. Twenty-six of our former girls are still out on indenture, and are giving good satisfaction to their employers."

The City Home* of Newark was designed to be a home and school

* Disbursements for 1882, $18,519.39.

for truants; but there are many committed for various other misdemeanors than truancy. The wards are younger than are generally found in the larger reformatory institutions. The ninth annual report of the superintendent, (December 31st, 1882,) gives the following information concerning the statistics and working of this institution:

"There have been, in all, 388 boys, and 68 girls, who have been subjects of environment at the City Home; 156 yet remain; 300, therefore, who have enjoyed the benefits of instruction, are making records in the world, from which statistics may be tabulated a decade hence, which will be significant of the value of reformatory work. It may be remarked, in this connection, that 92 per cent. of the boys paroled are on the law-and-order side of life, and are thrifty and industrious. * * * These children all came from the streets; they were truants more or less advanced in the indirections of their craft. They were held subject to our discipline and instruction, for a period varying in different cases from 15 months to 3 years. It requires several months of initiatory work, in some obdurate cases, before our inmates appreciate the necessities of their situation. When they begin earnestly to reach out for results, we have their sympathies, and they become loyal and efficient helps. Sometimes, it may be only a sense of policy that dictates this course; but, oftener, I think it a growth of conscientiousness. In their thoughtfulness and good conduct, extending over a period of 10 months at the least, we have the warrant of faith that they will be obedient and law-abiding, wherever they may be favorably placed."

COST OF CRIME.

The total cost, to the counties, of boarding the inmates of the twenty-three local penal institutions was $140,181.75 for the twelve months ending October 31st, 1883. We annex in our summary (Table No. 1) these items of expense as shown by the various county collectors' statements, which in many cases include the total cost of running the jails. Besides, the returns are made for the county fiscal years, which generally end in spring. This will probably account for the discrepancies between the two sets of figures. At the same time the collectors' figures more nearly show the total expense of maintaining our local prisons. This cannot be less than $160,000 annually. But even this large sum does not approximate the cost of crime, that is, the expense

incurred by State, county and local governments in protecting the people against our criminal classes. The police expenses of the various cities and towns in this State aggregate, in round numbers, $600,000. Expenditures for county jails, as stated above, $160,000. State Prison maintenance, &c., $145,700. Reform and Industrial Schools, $34,-400. To this must also be added at least one-half of the cost of our local and State courts, or $210,000. Total cost of crime in New Jersey, at least, $1,150,000.

Below are given a series of tables, which will show in detail just what information has been received by the Bureau. That there were duplications and other inaccuracies in many of the returns, and that, consequently, the data given can only be considered approximately correct, is shown by the fact that the number of persons reported to have been sent to the State Prison, Reform School and Industrial School, does not exactly tally with that actually received by the officers of these institutions, as stated in their latest reports (1883); still the difference between the two sets of figures is not great:

	State Prison.	Reform School.	Industrial School.
Reported sent, (Bureau returns).....	479	123	14
Reported received, (Official reports).....	445	130	12

TABLE NO. 1.

Number of Inmates and Cost of Maintenance.

SUMMARY.

Jails or Penitentiaries.	Total number of inmates from October 31st, 1882, to November 1st, 1883.	Total male inmates received since October 31st, 1882.	Total female inmates received since October 31st, 1882.	Total children under 16 years received since October 31st, 1882.	Total inmates convicted of crime.	Total inmates committed as witnesses.	Total inmates died.	Total escaped.	Total recaptured.	Total expenses for board of inmates.	Expenses of boarding, &c., as per county collectors' statements for fiscal years.
Atlantic county	67	48	10	2	13	2	..	..	..	$1,313 98	$1,873 00
Bergen "	214	162	39	5	20	2	2	..	..	3,059 00	2,968 58
Burlington "	848	730	108	13	45	2	1	4	..	3,750 90	4,628 76
Camden "	1,271	862	343	17	56	11	..	12	6	8,468 27	9,428 60
Cape May "	9	4	1	....	1	....	..	..	..	142 80	§482 27
Cumberland "	114	101	2	7	59	....	..	1	..	1,810 20	a1,972 00
Essex " (Newark)	*3,473	2,898	444	136	599	24	..	..	..	12,538 39	§15,345 36
Gloucester "	56	49	7	5	30	....	..	..	..	563 95	§1,332 72
Hudson " (Jersey City)	2,392	1,757	511	125	855	15	8	4	1	16,565 10	§16,955 77
Hunterdon "	345	277	58	10	16	2	..	..	..	1,773 90	1,859 09
Mercer "	646	543	60	20	82	2	1	12	3	4,284 65	3,046 22
Middlesex "	1,314	1,110	172	32	69	14	..	1	..	4,422 07	§5,497 13
Monmouth "	272	218	29	8	151	1	..	..	..	2,691 73	3,343 86
Morris "	392	344	17	10	152	3	1	2	1	2,924 36	b5,611 36
Ocean "	42	39	2	....	1	....	..	..	..	228 20	20 10
Passaic "	1,306	987	243	72	263	6	..	1	1	6,963 13	§10,809 41
Salem "	39	36	.....	4	9	....	..	..	..	598 20	§1,686 08
Somerset "	104	86	12	17	44	....	..	3	1	1,734 00	2,632 93
Sussex "	50	46	3	1	10	....	2	1	1	624 50	§1,709 56
Union "	577	475	53	38	332	1	..	3	..	4,647 06	4,782 31
Warren "	83	70	7	4	49	....	..	..	..	1,315 00	a1,817 99
Hudson Co. Penitentiary (Snake Hill)	†1,230	797	186	10	983	....	2	3	1	37,872 15	e37,872 15
Essex Co. Penitentiary (Caldwell)	‡737	561	37	....	256	....	2	5	1	21,890 11	23,539 27
Total	d14,618	c10,842	c2,321	c526	c2,855	85	19	52	16	$140,181 75	$159,214 43

* Commitments only were reported from Essex county. (See explanation, page 334.) † 355 of these were received from Jersey City jail, and are credited in returns from that institution. ‡ All but 139 included in Newark jail returns. § Jail expenses. a For 1882. b Court-house and jail. c Not including the two penitentiaries. d All duplications in Hudson and Essex returns deducted. e Bureau returns.

TABLE No. 2.

Number of Inmates and Cost of Maintenance.

ATLANTIC COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	9														
Received in November	4	4				4								$49 60	$0 43
" " December	6	5	1			6		2						72 00	46
" " January, 1883	1	1			1	1		1						76 80	43
" " February								1							
" " March	3	3												13 33	
" " April	6	5	1	1	4	6	1	2						32 25	43
" three months ending July 31st	22	16	6		2	20		5				16		792 00	43
" " " " October 31st	16	14	2	1	6	6	1	8						278 00	43
Total in jail, November 1st, 1882, to November 1st, 1883	67	48	10	2	13		2						*2,518	$1,313 78	

BERGEN COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	13														
Received in November	19	18	1	1	9	10		15				14	420	$189 00	$0 45
" " December	36	34	2	2	5	3		33				16	496	248 00	50
" " January, 1883	20	18	2		1		1	19				19	589	294 50	50
" " February	18	4	14			6		16				19	542	271 00	50
" " March	19	8	16		2	16	1	14				26	780	390 00	50
" " April	16	16				16		22	1			23	713	356 50	50
" three months ending July 31st	73	69	4	2	3	10		78	1			14	2,620	1,310 00	50
" " " " October 31st															
Total in jail, November 1st, 1882, to November 1st, 1883	214	162	39	5	20		2	197	2					$3,059 00	

* Number of days' board for fifty-six prisoners ; total cost, $1,079.45, or 42½ cents per day.

TABLE No. 2.—*Continued.*

Number of Inmates and Cost of Maintenance.

BURLINGTON COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	10														
Received in November	103	86	17	2	.....	3	1	85	.....	.....	.....	55	1,650	$495 00	$0 30
" " December	124	114	10	.....	5	.....	.....	113	.....	.....	.....	55	966	289 80	30
" " January, 1883	124	112	12	4	.....	7	.....	110	.....	.....	.....	70	2,170	651 00	30
" " February	94	82	12	2	.....	8	.....	70	.....	.....	.....	44	1,232	369 60	30
" " March	62	56	6	.....	.....	4	.....	41	.....	4	.....	30	930	279 00	30
" " April	27	20	7	.....	8	7	.....	15	.....	.....	.....	25	750	225 00	30
" three months ending July 31st	304	260	44	5	32	43	1	260	1	.....	.....	21	4,805	1,441 50	30
" " " " October 31st															
Total in jail, November 1st, 1882, to November 1st, 1883	848	730	108	13	45	.....	2	694	1	4	.....	.....	.....	$3,750 90	

CAMDEN COUNTY.

Remaining November 1st, 1882	66														
Received in November	64	51	13	1	2	22	.....	85	.....	.....	.....	50	1,490	$596 00	$0 40
" " December	89	63	26	.....	6	17	.....	68	.....	.....	.....	52	1,603	641 20	40
" " January 1883	141	101	40	4	7	41	3	127	.....	.....	.....	76	2,356	878 84	39
" " February	130	92	38	5	8	23	2	140	.....	.....	.....	88	2,460	985 60	40
" " March	123	99	24	.....	7	28	.....	118	.....	.....	.....	67	2,077	805 03	39
" " April	87	55	32	2	.....	14	.....	103	.....	.....	.....	64	1,920	768 00	40
" three months ending July 31st	311	222	89	2	19	78	6	320	.....	8	6	51	4,700	1,880 00	40
" " " " October 31st	260	179	81	3	7	84	.....	249	.....	4	.....	52	4,784	1,913 60	40
Total in jail, November 1st, 1882, to November 1st, 1883	1,271	862	343	17	56	.....	11	1,210	.....	12	6	.....	.....	$8,468 27	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

CAPE MAY COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	4														
Received in "												4	120	$60 00	$0 50
" " December								2				3	88	52 80	
" " January, 1883								2					12	7 20	60
" " February	2	1	1			2		2					26	9 60	60
" " March															
" " April	1	1			1			1					3	1 80	60
" three months ending July 31st	1	1				1		2					14	8 40	60
" " " " October 31st	1	1						1					5	3 00	60
Total in jail, November 1st, 1882, to November 1st, 1883	9	4	1		1			10						$142 80	

CUMBERLAND COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	11														
Received in "	5	5		1		5		8		1		9	290	$116 00	$0 40
" " December	17	17		1	10	6		8				12	361	144 40	40
" " January, 1883	19	17			10	7		24				15	462	184 80	40
" " February	10	19		1	16	3		7				19	543	217 20	40
" " March	4	4		1	3	1		15				19	591	236 40	40
" " April	5	4	1		5			8				13	377	150 80	40
" three months ending July 31st	23	22	1	1	10	13		12				13	1,104	441 60	40
" " " " October 31st	13	13		2	5	10		25				9	797½	319 00	40
Total in jail, November 1st, 1882, to November 1st, 1883	114	101	2	7	59			107		1				$1,810 20	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

ESSEX COUNTY (Newark.)

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st 1882	131														
Received in "	244	216	28	9	29	67	.....	293	.....	.....	.....	116	3,490	$1,074 56	$0 11
" " December	323	281	42	20	44	137	9	291	.....	.....	.....	115	3,588	1,072 83	10⅔
" " January, 1883	245	214	31	6	72	92	1	239	.....	.....	.....	115	3,574	993 60	11
" " February	244	209	35	1	36	97	1	219	.....	.....	.....	142	3,776	1,047 59	10⅛
" " March	293	252	41	7	79	123	4	283	.....	.....	.....	145	4,392	995 65	9¾
" " April	317	280	37	12	43	110	1	301	.....	.....	.....	132	3,960	805 96	10½
" three months ending July 31st	765	659	106	35	149	264	5	818	.....	.....	.....	118	10,739	3,294 58	10⅔
" " " " October 31st	911	787	124	46	146	381	3	883	.....	.....	.....	139	12,779	3,253 62	10
Total in jail, November 1st, 1882, to November 1st, 1883	*3,473	2,898	444	136	599	1,271	24	3,327	.....	.....	.....	.....	.....	$12,538 39	

* Commitments.

GLOUCESTER COUNTY.

Remaining November 1st, 1882															
Received in "	7	6	1	.....	.....	6	.....	2	.....	.....	.....	3	76	$33 20	$0 45
" " December	6	6	.....	.....	5	2	.....	8	.....	.....	.....	5	143	64 35	45
" " January, 1883	2	2	.....	.....	.....	2	.....	5	.....	.....	.....	2	68	30 60	45
" " February	2	.....	2	.....	.....	2	.....	1	.....	.....	.....	3	75	33 75	45
" " March	2	2	.....	.....	5	.....	.....	1	.....	.....	.....	3	110	49 50	45
" " April	1	1	.....	.....	2	1	.....	3	.....	.....	.....	3	113	50 85	45
" three months ending July 31st	19	17	2	4	16	3	.....	14	.....	.....	.....	.....	237	106 15	45
" " " " October 31st	17	15	2	1	4	9	.....	10	.....	.....	.....	5	439	195 55	45
Total in jail, November 1st, 1882, to November 1st, 1883	56	49	7	5	30	.....	.....	44	.....	.....	.....	.....	.....	$563 95	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

HUDSON COUNTY (Jersey City.)

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining in jail November 1st, 1882	124														
Received in November	131	96	35	5	70	61	.....	139	.....	.....	.....	119	3,482	$1,044 60	$0 30
" " December	156	128	28	7	67	86	3	129	2	.....	.....	127	3,938	1,181 40	30
" " January, 1883	167	140	27	10	78	87	2	165	.....	.....	.....	137	4,253	1,275 90	30
" " February	171	130	41	18	82	89	.....	175	.....	1	1	148	3,941	1,182 30	30
" " March	131	107	24	9	69	62	.....	136	.....	.....	.....	130	4,018	1,205 40	30
" " April	166	136	30	9	74	90	2	173	1	.....	.....	130	3,907	1,172 10	30
" " May	246	181	65	14	142	102	2	217	.....	1	.....	160	4,965	1,436 10	30
" " June	177	139	38	2	79	96	2	195	1	1	.....	156	4,678	1,323 80	30
" " July	223	171	52	10	128	95	.....	197	1	.....	.....	161	4,985	1,437 30	30
" three months ending October 31st, 1883	700	529	171	43	66	268	4	668	3	1	.....	193	17,686	5,307 00	30
Total in jail, November 1st, 1882, to November 1st, 1883	2,392	1,757	511	125	855	1,036	15	2,194	8	4	1	.....	.....	$16,565 10	

HUNTERDON COUNTY.

Remaining November 1st, 1882	21	20	1	.....	.....	.....	.....	4	.....	.....	.....	6	170	$76 50	$0 45
Received in "	124	100	24	6	6	7	.....	115	.....	.....	.....	37	1,415	636 75	45
" " December	129	105	24	1	.....	3	.....	130	.....	.....	.....	43	1,315	591 75	45
" " January, 1883	32	23	9	3	.....	1	.....	56	.....	.....	.....	20	560	252 00	45
" " February	3	3	.....	.....	1	2	.....	.....	.....	.....	.....	.....	25	11 25	45
" " March	5	5	.....	.....	3	2	.....	7	.....	.....	.....	2	59	26 55	45
" " April	8	8	.....	.....	2	6	.....	9	.....	.....	.....	1	91	40 95	45
" three months ending July 31st	13	13	.....	.....	4	7	2	12	.....	.....	.....	3	305	137 25	45
" " " " October 31st															
Total in jail, November 1st, 1882, to November 1st, 1883	335	277	58	10	16	.....	2	333	.....	.....	.....	.....	.....	$1,773 00	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

MERCER COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	43														
Received in "	86	76	10	2	13	23	.....	59	.....	4	.....	75	2,253	$415 00	$0 18½
" " December	108	100	8	2	12	28	1	80	.....	4	.....	86	2,734	488 50	18
" " January, 1883	45	41	4	.....	7	13	.....	56	.....	.....	.....	83	2,585	475 28	18½
" " February	40	39	1	9	9	21	.....	66	1	.....	.....	66	1,847	392 04	21¼
" " March	41	37	4	1	7	14	.....	52	.....	1	.....	51	1,586	348 85	28¾
" " April	35	31	4	.....	.....	14	1	21	.....	.....	.....	39	1,161	289 43	25
" " May	37	33	4	.....	7	16	.....	34	.....	.....	.....	54	1,627	366 53	22½
" three months ending August 31st	128	114	14	4	17	58	.....	123	.....	3	2	50	4,580	920 37	19¾
" two " " October 31st	83	72	11	2	10	28	.....	85	.....	.....	1	45	2,805	590 65	21½
Total in jail, November 1st, 1882, to November 1st, 1883	646	543	60	20	82	215	2	576	1	12	3	.....	.....	$4,286 65	

MIDDLESEX COUNTY.

Remaining November 1st, 1882	23														
Received in "	115	102	13	2	11	39	.....	100	.....	.....	.....	5	1,196	$625 50	$0 35¾
" " December	122	113	9	4	8	16	1	108	.....	.....	.....	.....	1,570	561 00	35¾
" " January, 1883	66	55	11	4	3	16	2	87	.....	.....	.....	2	1,470	515 00	35¾
" " February	71	56	11	4	.....	.....	1	66	.....	.....	.....	2	1,087	382 00	35¾
" " March	106	83	23	2	6	23	2	114	.....	.....	.....	3	1,169	410 00	35¾
" " April	95	78	12	5	9	23	.....	94	.....	.....	.....	3	763	270 00	35¾
" three months ending July 31st	370	330	40	7	17	44	5	331	.....	1	.....	28	2,606	930 71	35¾
" " " " October 31st	346	293	53	4	15	74	3	348	.....	.....	.....	.....	2,038	727 86	35¾
Total in jail, November 1st, 1882, to November 1st, 1883	1,314	1,110	172	33	69	235	14	1,248	.....	1	.....	.....	.....	$4,422 07	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

MONMOUTH COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	25														
Received in "	15	12	3	.....	8	3	.....	15	.....	.....	.....	22	877	$273 90	$0 33
" " December	6	5	1	.....	1	5	.....	17	.....	.....	.....	20	603	185 98	30
" " January, 1883	13	12	1	2	1	13	.....	9	.....	.....	.....	.....	554	166 20	30
" " February	17	15	2	2	6	16	.....	16	.....	.....	.....	20	576	172 80	30
" " March	15	14	1	.....	8	6	.....	15	.....	.....	.....	20	699	209 70	30
" " April	15	13	2	.....	7	8	.....	15	.....	.....	.....	20	617	185 10	30
" three months ending July 31st	77	64	13	4	52	24	1	59	.....	.....	.....	20	1,739⅓	521 80	30
" " " " October 31st	89	83	6	.....	68	67	.....	88	.....	.....	.....	35	3,254	976 25	30
Total in jail, November 1st, 1882, to November 1st, 1883	272	218	29	8	151	142	1	234	.....	.....	.....	.....	.....	$2,691 73	

MORRIS COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	30														
Received in " 1882	20	16	3	1	18	1	.....	23	.....	.....	.....	25	750	$262 50	$0 35
" " December "	29	27	2	.....	6	2	.....	19	.....	.....	.....	25	775	271 36	35
" " January, 1883	51	51	.....	2	26	32	2	37	.....	.....	.....	29	899	314 65	35
" three months ending April 31st, 1883	91	91	.....	5	32	24	.....	77	1	.....	.....	25	2,225	787 85	35
" " " " July " "	84	79	5	.....	14	26	.....	68	.....	.....	.....	20	1,840	644 00	35
" " " " October 31st, 1883	87	80	7	2	56	38	1	67	.....	2	1	20	1,840	644 00	35
Total in jail, November 1st, 1882, to November 1st, 1883	392	344	17	10	152	123	3	291	1	2	1	.....	.....	$2,924 36	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

OCEAN COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	1														
Received in "															
" " December	4	4						3				1	21	$8 40	$0 40
" " January, 1883												1	31	12 40	40
" " February								1				1	20	8 00	40
" " March	25	23	2			3		25				9	269	126 35	
" " April	3	3				1		3					22	11 25	
" three months ending July 31st	4	4				2							49	19 60	40
" " " " October 31st	5	5			1	5		4				1	105	42 20	40
Total in jail, November 1st, 1882, to November 1st, 1883	42	39	2		1	11		36						$228 20	

PASSAIC COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	76														
Received in "	98	76	22	6	16	46		89				65	1,997	$796 86	$0 40
" " December	92	76	16	8	6	43		77				60	2,128	586 78	27½
" " January, 1883	89	74	15	7	9	46		87				75	2,555	650 05	26
" " February	61	40	21	1	35	26		31				70	1,850	541 67	29½
" " March	69	52	17	2	47	21	1	18				50	1,083	541 67	50
" " April	78	62	16	10	50	28	1	20				60	1,550	596 70	39
" three months ending July 31st	414	332	82	16	64	402	3	103		1	1	40	4 500	1,622 21	36
" " " " October 31st	329	275	54	22	35	142	1	297				55	4,950	1,626 19	33
Total in jail, November 1st, 1882, to November 1st, 1883	1,306	987	243	72	262	754	6	722		1	1			$6,962 13	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

SALEM COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	3														
Received in November	3	3				1		2					58	$23 20	$0 40
" " December	5	5			1	4							83	33 20	40
" " January, 1883	3	3			3			5					150	70 00	40
" " February	3	3				3		5					137	54 30	40
" " March															
" " April															
" three months ending July 31st	14	14		3	1	13		9				4		149 50	50
" " " " October 31st	8	8		1	4	8		4						268 00	50
Total in jail, November 1st, 1882, to November 1st, 1883	39	36		4	9	29		25						$598 20	

SOMERSET COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	6														
Received in November	11	10	1	1		4		15				2	304	$136 80	$0 45
" " December	6	6		1	5	5		4		3	1	8	302	136 25	45
" " January, 1883	12	12			3	3		9				3	261	117 50	45
" " February	3	2	1					3				3	241	108 45	45
" " March	1	1			1	1		2				7	206	92 70	45
" " April	6	4	2	2	3	3		4				4	130	58 50	45
" " May	9	6	3	4	8	8		6				8	249	112 05	45
" " June	4	3	1			1		3				9	280	126 00	45
" three months ending September 30th	36	33	3	6	13	24		37				15	1,345	628 25	45
" " " " October 31st	10	9	1	3	11	6		10				17	483	217 50	45
Total in jail, November 1st, 1882, to November 1st, 1883	104	86	12	17	44	55		93		3	1			$1,734 00	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

SUSSEX COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	1														
Received in November	2	2				2							61	$30 50	$0 50
" " December	5	5			1	3		3	2	1	1		83	41 50	50
" " January, 1883	4	4				2		5					113	56 50	50
" " February	1	1						2					105	52 50	50
" " March	9	9				1		7					103	51 50	50
" " April	5	5			6	3		6					177	88 50	50
" " May	4	4			2	2		4					87	43 50	50
" " June	4	2	2			4		5					96	48 00	50
" four months ending October 31st	15	14	1	1	1	1		16					399	212 00	55
Total in jail November 1st, 1882, to November 1st, 1883	50	46	3	1	10	18		48	2	1	1			$624 50	

UNION COUNTY.

	Total received.	Males.	Females.	Children under 16.	Total convicted of crime.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of boarding prisoners.	Average daily cost of boarding prisoners.
Remaining November 1st, 1882	49														
Received in November	47	41	6	3	21	26		60				45	1,353	$434 27	$0 32
" " December	49	47	2	5	22	27		48				35	1,091	357 36	327
" " January, 1883	31	26	5	1	20	11		25				36	1,112	325 44	292
" " February	35	31	4		22	11	1	41				41	1,158	342 78	296
" " March	63	58	5	6	38	25		56				43	1,329	391 96	294
" " April	41	37	4	3	29	12		47		1		40	1,208	416 71	344
" three months ending July 31st	145	130	15	4	105	40		133				38	3,464	1,147 28	331
" " " " October 31st	117	105	12	16	75	42		135		2		41	3,740	1,231 26	33
Total in jail November 1st, 1882, to November 1st, 1883	577	475	53	38	332	194	1	545		3				$4,647 06	

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

WARREN COUNTY.

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expense of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	6														
Received in "	7	7			2	6		7				4	167	$83 50	$0 50
" " December	11	8	3		6	6		10				3	205	102 50	50
" " January, 1883	8	8		2	1			5				4	223	111 50	50
" " February "	6	6			6	6		9				3	188	94 00	50
" " March "	5	5			4			4				7	196	98 00	50
" " April "	3		3		2	3		4				7	234	117 00	50
" " May "	9	8	1		5			4				5	345	172 50	50
" " June "	3	3				1		3				10	300	150 00	50
" " July "	3	3		1	1	1		8				15	174	87 00	50
" three months ending October 31st	22	22		1	22	8		25				7	598	299 00	50
Total in jail, November 1st, 1882, to November 1st, 1883	83	70	7	4	49	31		79						$1,315 00	

HUDSON COUNTY (Snake Hill.)*

Remaining November 1st, 1882	247														
Received in "	93	71	22		93			120				220	6,600	$3,433 70	$0 47
" " December	119	99	20	3	119			110	1			221	6,630	3,792 99	57¼
" " January, 1883	109	92	17		109			103				109	3,379	3,511 17	45
" " February	100	81	19	1	100			73				235	7,112	3,162 59	40¾
" " March	92	79	13		92			108	1			237	7,347	3,486 62	43¼
" three months ending June 30th	199	159	40	2	199			277		1		195	9,302	9,199 37	52⅓
" " " " September 30th	199	154	45	3	199			87		2	1	167		8,510 02	56½
" in October, 1883	72	62	10	1	72			67				172	5,160	2,775 69	53¼
Total in jail, November 1st, 1882, to November 1st, 1883	1,230	797	186	10	983			945	2	3	1			$37,872 15	

*355 of these prisoners were received from Jersey City jail, and are credited in the returns from that institution.

TABLE No. 2—*Continued.*

Number of Inmates and Cost of Maintenance.

ESSEX COUNTY (Caldwell.)*

	Total.	Males.	Females.	Children under 16.	Total convicted of crimes.	Total committed for trial.	Total committed as witnesses.	Total discharged.	Total died.	Total escaped.	Total escaped, but recaptured.	Average daily number of prisoners.	Whole number of days' board.	Total expenses of keeping prisoners.	Average daily cost of keeping prisoners.
Remaining November 1st, 1882	139														
Received in "	55	52	3	.....	9	.....	.....	59	.....	.....	.....	115	3,938	$2,033 59	$0 51⅔
" " December	67	64	3	.....	24	.....	.....	46	1	.....	.....	153	4,625	1,892 14	40⅞
" " January, 1883	63	59	4	.....	32	.....	.....	45	.....	.....	.....	175	5,196	2,207 41	42½
" " February	59	55	4	.....	23	.....	.....	62	.....	.....	.....	152	4,784	1,404 45	29¼
" " March	30	25	5	.....	17	.....	.....	41	.....	.....	.....	138	4,881	1,626 48	33⅓
" " April	51	47	4	.....	15	.....	.....	76	.....	1	.....	155	4,907	1,736 39	35½
" three months ending July 31st	167	161	6	.....	68	.....	.....	151	.....	.....	.....	138	13,302	5,744 97	43¼
" " " " October 31st	106	98	8	.....	68	.....	.....	124	1	4	1	120	10,078	5,244 68	52
Total in jail, November 1st, 1882, to November 1st, 1883	737	561	37	.....	256	.....	.....	604	2	5	1	.....	.....	$21,890 11	

* Included in Newark jail returns.

TABLE No. 3.

Number of Crimes Reported, Age and Nativity of Prisoners.

SUMMARY.

COUNTIES.	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.
Atlantic	58	3	36	18	1	54	4	5
Bergen	200	19	120	60	1	94	106	33
Burlington	838	46	339	314	145	246	582	105
Camden	1,205	94	454	580	79	486	719	573
Cape May	12	.....	5	6	1	10	2	1
Cumberland	103	18	48	26	11	86	12	2
Essex (Newark)	3,343	472	1,159	1,320	391	1,857	1,484	444
Gloucester	55	6	22	21	4	46	9	4
Hudson (Jersey City)	*2,268	398	613	983	274	994	1,273	411
Hunterdon	335	18	38	143	40	215	120	56
Mercer	596	83	257	204	52	399	193	30
Middlesex	1,235	214	625	293	102	551	678	177
Monmouth	246	29	106	88	23	145	100	36
Morris	320	30	98	152	40	154	146	7
Ocean	13	3	4	3	3	4	1	
Passaic	1,209	246	400	434	129	458	710	201
Salem	36	5	19	9	3	25	4	
Somerset	89	21	36	24	8	53	41	10
Sussex	48	6	16	22	4	41	7	3
Union	528	131	185	169	43	342	186	53
Warren	77	13	48	14	2	67	10	4
Total	12,813	1,855	4,628	4,883	1,356	6,327	6,387	2,155
Essex County Penitentiary	†597	22	292	215	68	353	243	37
Hudson " "	‡887	169	291	311	116	403	504	175

* Includes 355 credited to Hudson county penitentiary. † Included in Newark jail returns. ‡ Partly included in Jersey City jail returns.

TABLE No. 4.

Number of Crimes Reported, Age and Nativity of Prisoners—By Counties.

ATLANTIC COUNTY.

	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.	Number whose parents, one or both, were foreign born.
November, 1882	4	.....	4	.....	.....	4			
December	6	.....	4	2	.....	6			
January, 1883	1	.....	1	.....	.....	1			
February.									
March	3	.....	3	.....	.....	3			
April	6	1	5	.....	.....	6	.....	1	
Three months ending July 31st	22	.....	9	13	.....	20	2	2	
" " " October 31st	16	2	10	3	1	14	2	2	
Total	58	3	36	18	1	54	4	5	

BERGEN COUNTY.

November, 1882	19	3	12	3	1	8	11	1	9
December	35	1	11	23	.....	14	21	3	17
January, 1883	20	.....	8	12	.....	7	13	.....	13
February	18	1	16	1	.....	13	5	5	
March	19	2	12	5	.....	10	9	15	15
April	16	.....	10	6	.....	7	9	6	2
Six months ending October 31st	73	12	51	10	.....	35	38	3	32
Total	200	19	120	60	1	94	106	33	88

BURLINGTON COUNTY.

November, 1882	103	5	70	20	8	30	73	17	40
December	124	5	30	70	19	30	94	10	94
January, 1883	124	4	60	40	24	40	84	12	60
February	94	2	50	30	14	30	64	12	50
March	62	.....	35	20	7	15	37	6	30
April	27	.....	14	10	3	11	16	7	18
Six months ending October 31st	304	30	80	124	70	90	214	41	214
Total	838	46	339	314	145	246	582	105	506

CAMDEN COUNTY.

November, 1882	64	7	19	35	5	33	31		
December	89	10	41	32	6	46	43	55	47
January, 1883	141	11	27	91	12	55	86	95	91
February	130	14	29	83	4	40	90	97	77
March	123	7	19	83	14	45	78	85	90
April	87	2	31	51	3	20	67	71	65
Three months ending July 31st	311	30	124	131	26	149	162	89	186
" " " October 31st	260	13	164	74	9	98	162	81	187
Total	1,205	94	454	580	79	486	719	573	743

TABLE No. 4—*Continued.*

Number of Crimes Reported, Age and Nativity of Prisoners—By Counties.

CAPE MAY COUNTY.

	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.	Number whose parents, one or both, were foreign born.
November, 1882	4	.....	.....	4	.....	4			
December									
January, 1883	2	.....	.....	2	.....	2			
February	2	.....	2	.....	.....	1	1	1	1
March									
April	1	.....	1	.....	.....	.....	1		
Three months ending July 31st	2	.....	2	.....	.....	2			
" " " October 31st	1	.....	.....	.....	1	1	.....	.....	1
Total	12	.....	5	6	1	10	2	1	2

CUMBERLAND COUNTY.

November, 1882	5	3	1	1	.....	2	3	.....	4
December	17	3	9	5	.....	14	3	.....	7
January, 1883	17	3	9	2	3	16	1	.....	7
February	19	1	12	4	2	19	.....	.....	6
March	4	3	.....	1	.....	4			
April	5	.....	1	2	2	4	1	1	
Three months ending July 31st	23	2	10	9	2	19	4	1	7
" " " October 31st	13	3	6	2	2	13	.....	.....	3
Total	103	18	48	26	11	86	12	2	34

ESSEX COUNTY (Newark.)

November, 1882	244	35	85	92	32	135	109	28	180
December	323	54	122	115	32	203	120	42	261
January, 1883	245	34	84	103	24	133	112	31	203
February	244	30	91	93	30	132	112	35	201
March	293	29	137	102	25	176	116	41	223
April	317	56	103	110	48	175	142	37	259
Three months ending July 31st	765	109	250	323	83	416	349	106	641
" " " October 31st	911	125	287	382	117	487	424	124	753
Total	3,342	472	1,159	1,320	391	1,857	1.484	444	2,721

GLOUCESTER COUNTY.

November, 1882	7	.....	4	3	.....	5	2	1	4
December	4	1	.....	3	.....	3	1		
January, 1883	2	.....	.....	.....	2	2			
February	2	.....	2	.....	.....	2	.....	.....	2
March	2	.....	2	.....	.....	2			
April	1	1	.....	.....	.....	1	.....	.....	1
Three months ending July 31st	19	1	7	9	.....	17	2	2	
" " " October 31st	18	3	7	6	2	14	4	1	1
Total	55	6	22	21	4	46	9	4	8

TABLE No. 4—*Continued.*

Number of Crimes Reported, Age and Nativity of Prisoners—By Counties.

HUDSON COUNTY.—(Jersey City.)

	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.	Number whose parents, one or both, were foreign born.
November, 1882	131	12	43	57	19	54	77	35	
December	156	36	40	67	13	77	79	28	
January, 1883	167	33	40	71	23	79	88	27	
February	171	30	51	63	27	79	91	41	
March	131	21	42	52	16	56	75	24	
April	166	26	49	70	21	72	94	30	
May	246	45	60	110	31	104	142	65	
June	177	28	40	89	20	69	108	38	
July	223	36	55	105	27	88	135	52	
Three months ending October 31st	700	131	193	299	77	316	384	171	
Total	2,268	398	613	983	274	994	1,273	411	

HUNTERDON COUNTY.

November, 1882	21	.....	2	17	2	14	7	1	14
December	124	6	.....	102	16	76	48	24	69
January, 1883	129	9	30	76	14	75	54	24	77
February	32	3	6	21	2	22	10	7	26
March	3	.....	.....	3	.....	3			
April	5	.....	.....	2	3	5	.....	.....	5
Three months ending July 31st	8	.....	3	4	1	7	1	.....	2
" " " October 31st	13	.....	3	8	2	13	.....	.....	1
Total	335	18	38	143	40	215	120	56	194

MERCER COUNTY.

November, 1882	86	15	36	32	3	55	31		
December	108	13	60	27	8	77	31		
January, 1883	45	5	22	15	3	28	17	.....	27
February	40	12	20	6	2	30	10	.....	20
March	41	3	23	12	3	30	11	3	23
April	35	1	18	14	2	24	11	2	25
May	37	5	15	13	4	27	10	1	28
Three months ending August 31st	125	21	40	47	17	82	43	13	83
Two " " October 31st	79	8	23	38	10	46	29	11	43
Total	596	83	257	204	52	399	193	30	249

MIDDLESEX COUNTY.

November, 1882	115	31	61	18	5	69	46	19	70
December	124	32	71	16	5	57	65	9	90
January, 1883	66	3	50	11	2	30	36	11	40
February	71	4	40	23	3	33	35	11	47
March	106	15	55	29	7	46	49	24	73
April	95	30	47	14	4	49	46	13	77
Three months ending July 31st	370	39	176	109	46	105	265	37	72
" " " October 31st	288	60	125	73	30	162	136	53	
Total	1,235	214	625	293	102	551	678	177	469

TABLE No. 4—*Continued.*

Number of Crimes Reported, Age and Nativity of Prisoners—By Counties.

MONMOUTH COUNTY.

	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.	Number whose parents, one or both, were foreign born.
November, 1882	15	.....	8	5	2	6	9	2	14
December	6	.....	3	2	1	4	2	1	5
January, 1883	13	2	8	2	1	9	4	.....	8
February	17	3	11	3	.....	12	5	2	11
March	15	.....	5	10	.....	7	8	1	9
April	15	1	11	.....	3	12	3	2	6
Three months ending July 31st	76	7	22	41	6	40	36	12	55
" " " October 31st	89	16	38	25	10	55	33	6	56
Total	246	29	106	88	23	145	100	36	164

MORRIS COUNTY.

November, 1882	20	2	2	13	3	10	10	3	15
December	29	1	9	14	5	14	15	3	18
January, 1883	51	8	15	21	7	30	21	.....	31
Three months ending April 30th	59	8	17	29	5	38	21	.....	32
" " " July 31st	84	.....	28	42	14	31	53	.....	57
" " " October 31st	77	11	27	33	6	31	26	1	38
Total	320	30	98	152	40	154	146	7	191

OCEAN COUNTY.

December, 1882	4	2	2						
Three months ending Aug. 15th, 1883	4	.....	.....	2	2				
" " " Nov. " "	5	1	2	1	1	4	1	.....	1
Total	13	3	4	3	3	4	1	.....	1

PASSAIC COUNTY.

November, 1882	98	18	27	49	4	45	53	22	69
December	92	20	35	32	5	39	53	15	65
January, 1883	87	19	35	25	8	40	47	14	58
February	71	14	25	22	10	14	28	21	37
March	69	11	23	28	7	23	40	6	29
April	72	7	43	13	9	13	59	3	62
Three months ending July 31st	414	81	126	175	32	141	273	82	
" " " October 31st	306	76	86	90	54	143	157	38	
Total	1,209	246	400	434	129	458	710	201	320

TABLE No. 4—*Continued.*

Number of Crimes Reported, Age and Nativity of Prisoners—By Counties.

SALEM COUNTY.

	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.	Number whose parents, one or both, were foreign born.
November, 1882	3	.....	1	2	.....	2	1	.....	1
December	5	.....	4	.....	1	5			
January, 1883	3	.....	1	2					
February	3	.....	1	2					
Three months ending July 31st	14	4	8	2	.....	13	1	.....	2
" " " October 31st	8	1	4	1	2	5	2	.....	2
Total	36	5	19	9	3	25	4	.....	5

SOMERSET COUNTY.

November, 1882	11	2	2	6	1	7	4	1	3
December	6	.....	1	2	3	3	3	.....	3
January, 1883	12	2	6	2	2	9	3	.....	7
February	3	1	1	1	.....	1	2	1	
March	1	.....	1	.....	.....	1			
April	6	2	3	1	.....	3	3	2	
May	9	6	1	2	.....	6	3	3	7
Three months ending Sept. 30th	31	8	15	6	2	16	20	3	30
October	10	.....	6	4	.....	7	3		
Total	89	21	36	24	8	53	41	10	52

SUSSEX COUNTY.

November, 1882	3	.....	2	.....	1	3			
December	5	1	3	.....	1	3	2	.....	3
January, 1883	2	.....	2	.....	.....	3	1	.....	1
February	1	.....	.....	1	.....	1	.....	.....	1
March	9	1	3	5	.....	6	3	.....	5
April	5	1	.....	2	2	5	.....	.....	4
May	4	2	2	.....	.....	2	.....	.....	1
June	4	.....	1	3	.....	4	.....	2	2
Four months ending October 31st	15	1	3	11	.....	14	1	1	3
Total	48	6	16	22	4	41	7	3	20

UNION COUNTY.

November, 1882	47	17	14	10	6	36	11	6	25
December	49	16	18	10	5	34	15	2	23
January, 1883	31	8	14	9	.....	21	10	5	23
February	35	9	12	11	3	17	18	4	29
March	63	14	27	18	4	45	18	5	52
April	41	8	12	20	1	24	17	4	34
Three months ending July 31st	145	31	39	63	12	87	58	15	120
" " " October 31st	117	28	49	28	12	78	39	12	100
Total	528	131	185	169	43	342	186	53	206

TABLE No. 4—*Continued.*

Number of Crimes Reported, Age and Nativity of Prisoners—By Counties.

WARREN COUNTY.

	Total number.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.	Number whose parents, one or both, were foreign born.
November, 1882	7	1	5	.....	1	6	1	.....	1
December	11	.....	11	.....	.....	8	3	3	3
January, 1883	8	2	3	2	1	7	1	.....	3
February	6	.....	6	.....	.....	6	.....	.....	2
March	5	1	4	.....	.....	4	1	.....	1
April	3	2	1	.....	.....	2	1		
May	9	5	4	.....	.....	9	.....	1	1
June	3	.....	2	1	.....	2	1	.....	2
July	3	1	2	.....	.....	3			
Three months ending October 31st	22	1	10	11	.....	20	2	.....	5
Total	77	13	48	14	2	67	10	4	18

HUDSON COUNTY PENITENTIARY.*

November, 1882	93	18	23	17	35	26	67	22	89
December	119	19	37	44	19	54	65	20	20
January, 1883	109	26	36	39	8	44	65	17	98
February	100	14	31	42	13	44	56	19	90
March	92	15	31	40	6	40	52	13	75
Three months ending June 30th	175	42	55	62	16	92	103	39	126
" " " Sept. "	199	35	78	67	19	103	96	45	177
Total	887	169	291	311	116	403	504	175	675

* Partly included in Jersey City jail returns.

ESSEX COUNTY PENITENTIARY.†

November, 1882	55	1	37	9	8	29	26	3	55
December	66	5	21	28	12	36	29	3	66
January, 1883	63	1	47	11	4	35	28	4	63
February	59	9	31	12	7	25	34	4	59
March	30	.....	12	17	1	15	15	5	24
April	51	.....	21	21	9	29	22	4	51
Three months ending July 31st	167	.....	85	66	16	118	49	6	148
" " " October 31st	106	6	38	51	11	66	40	8	93
Total	597	22	292	215	68	353	243	37	559

† Included in Newark jail returns.

TABLE No. 5.

*Crimes Reported, Age and Nativity of Prisoners.**

GENERAL CLASSIFICATION—SUMMARY.

CRIMES.	Total number reported.	Number under twenty years of age.	Twenty years and less than thirty.	Thirty years and less than fifty.	Fifty years and over.	Number born in United States.	Number foreign born.	Number females.
Against public order and decency	4,606	577	1,576	1,889	564	1,788	2,287	368
Against property	1,395	409	550	363	73	773	422	54
Against the person	1,244	169	521	427	127	516	607	30

PRINCIPAL CRIMES—SUMMARY.

Drunk, drunk and disorderly, disorderly	3,097	364	1,071	1,272	390	1,198	1,562	260
Tramps, vagrants, &c.	1,156	176	497	355	128	481	511	87
Breach of the peace	116	7	55	30	1	40	53	14
Assault, assault and battery	1,051	152	453	341	103	435	578	42
Abandonment, desertion of family, non-support	44	.....	21	19	4	16	19	
Rape, attempt at rape	24	5	10	7	2	13	10	
Larceny	869	282	321	229	47	307	262	51
Burglary, robbery, &c.	62	18	29	19	6	27	23	
Malicious mischief	94	23	43	22	6	56	35	
Breaking, entering and larceny	156	58	75	20	3	93	33	
Embezzlement	50	5	20	20	5	36	13	

* Many counties did not report fully these details. In some reports, only the totals were given; in others no mention was made of nativity or sex. This will account for the discrepancies between the different tables. In these classifications of crime, the finer technical distinctions are not observed.

TABLE No. 6.

Principal Crimes—By Counties.

CRIMES AGAINST THE PERSON.

	Atlantic.	Bergen.	Burlington.	Camden.	Cape May.	Cumberland.	Essex (Newark.)	Gloucester.	Hudson (Jersey City.)	Hunterdon.	Mercer.	Middlesex.	Monmouth.	Morris.	Ocean.	Passaic.	Salem.	Somerset.	Sussex.	Union.	Warren.	Hudson penitentiary.*	Essex penitentiary.†	Total.
Assault, assault and battery, &c	22	25	14	101	3	12	433	9	321	8	56	99	43	54	3	255	7	19	6	52	16	58	113	1,616
Abandonment, desertion, non-support	....	....	....	8	....	....	47	....	12	....	2	2	....	7	....	15	....	....	....	6	....	....	....	99
Murder, manslaughter, &c	....	1	2	1	....	....	9	....	8	....	....	1	....	2	....	2	....	1	....	8	1	....	1	36
Rape, and attempt at	....	2	2	9	....	1	8	3	12	1	....	4	....	....	....	3	....	1	1	3	1	....	....	51
Threats	....	....	....	....	....	....	11	....	16	....	1	6	5	7	....	4	....	....	....	....	....	....	....	50

CRIMES AGAINST PROPERTY.

Arson	....	1	....	....	2	2	3	....	7	....	1	4	3	....	....	2	1	6	....	....	....	....	....	32
Breaking, entering, &c	3	....	2	18	2	3	216	....	52	2	15	10	....	1	....	26	....	3	1	26	3	36	25	419
Burglary, robbery, &c	....	12	1	4	....	1	28	....	23	....	3	6	5	3	....	....	3	1	1	23	....	1	1	115
Debt	1	1	....	....	....	....	....	....	7	....	1	4	....	....	....	12	....	1	....	....	1	....	....	28
Embezzlement	....	1	4	2	....	....	24	....	35	....	2	2	....	....	....	....	....	3	....	....	....	6	3	79
False pretences	....	....	....	4	1	....	9	....	22	....	....	2	2	3	....	3	....	....	....	2	....	3	1	51
Forgery	....	2	2	1	....	3	1	1	3	....	2	2	1	1	....	12	....	....	1	....	2	....	....	34
Larceny	15	27	23	80	....	13	240	13	291	4	92	67	51	28	3	149	12	12	7	58	11	75	74	1,271
Malicious mischief	2	....	3	8	....	2	68	....	25	1	....	17	....	11	3	3	24	1	....	3	2	2	12	175

* Partly included in Jersey City returns. † Included in Newark returns.

TABLE No. 6—*Continued.*

Principal Crimes—By Counties.

CRIMES AGAINST PUBLIC ORDER AND DECENCY.

	Atlantic.	Bergen.	Burlington.	Camden.	Cape May.	Cumberland.	Essex (Newark.)	Gloucester.	Hudson (Jersey City.)	Hunterdon.	Mercer.	Middlesex.	Monmouth.	Morris.	Ocean.	Passaic.	Salem.	Somerset.	Sussex.	Union.	Warren.	Hudson penitentiary.	Essex penitentiary.	Total.
Adultery	2	....	1	2	....	....	7	....	7	....	5	5	1	....	....	5	....	1	1	1	....	....	1	38
Bastardy	....	1	2	....	1	....	13	....	3	2	1	....	1	....	....	2	....	....	....	1	....	....	....	27
Breach of peace	2	....	....	....	....	....	223	....	113	....	3	....	....	....	....	....	....	....	....	....	....	....	....	441
Bigamy	1	1	2	3	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	1	1	....	....	11
Counterfeiting and passing counterfeit money	....	....	....	....	....	....	6	....	11	....	....	1	....	....	....	....	....	....	....	....	....	1	1	19
Common drunkards	....	....	....	....	....	....	40	....	....	....	3	....	....	....	....	....	....	....	....	....	....	68	6	111
Drunk, drunk and disorderly	....	93	260	872	...	27	812	20	951	3	142	534	122	127	....	413	5	24	....	142	13	174	....	4,739
Disorderly	2	....	114	8	1	22	506	5	....	3	59	5	....	....	2	174	....	4	20	51	....	344	124	1,320
Disorderly house	....	....	2	5	....	....	13	....	....	....	1	9	2	23	....	8	....	....	3	2	....	1	1	69
Fornication	....	....	....	8	....	....	11	1	5	....	....	....	....	....	....	11	....	....	....	1	....	....	8	37
Lewdness	....	....	....	....	....	1	7	....	6	....	1	....	2	1	....	2	....	....	....	1	....	....	3	21
Perjury	....	....	1	1	....	....	....	....	4	....	....	3	....	1	....	....	....	....	....	....	1	....	....	11
Receiving stolen goods	....	....	....	3	....	....	9	....	4	....	3	1	....	....	....	....	....	....	....	6	....	....	2	26
Seduction	....	....	....	....	....	2	3	....	8	....	....	....	1	....	....	....	2	....	....	....	2	....	....	18
Smuggling	....	....	....	....	....	....	....	....	38	....	....	....	....	....	....	....	....	....	....	....	....	....	....	38
Tramps and vagrants	....	....	384	....	....	....	....	....	....	....	....	357	....	....	....	....	....	....	....	....	....	....	....	741
Tramps	....	16	....	....	....	5	6	....	161	311	....	....	....	47	....	....	....	....	8	....	....	126	1	680
Vagrants	....	....	....	....	....	....	369	....	49	211	....	....	....	....	....	31	....	3	....	39	2	87	211	794
Violating city ordinance	....	....	....	7	....	....	1	....	5	....	....	....	....	....	....	....	....	....	....	49	....	....	....	62

TABLE No. 7.

Nativity of Inmates.

	United States.	Foreign.	PRINCIPAL FOREIGN COUNTRIES.					
			Ireland.	Germany.	England.	Scotland.	France.	Italy.
Atlantic county	54	4	.....	2	1			
Bergen "	94	106	23	50	1			
Burlington "	246	582	*54	*75	75	.....	18	
Camden "	486	719	526	81	57	27	18	1
Cape May "	10	2						
Cumberland "	86	12	5	3				
Essex "	1,857	1,484	786	358	154	49	13	40
Gloucester "	46	9	1	4				
Hudson " (jail)	994	1,273	776	238	106	36	13	34
Hunterdon "	215	120	44	3	7			
Mercer "	399	193	91	32	39	13	5	
Middlesex "	551	678	274	136	20	36		
Monmouth "	145	100	25	5	1	.....	.....	5
Morris "	154	146						
Ocean "	4	1						
Passaic "	458	710	391	76	85	66	8	13
Salem "	25	4	1					
Somerset "	53	41	39	7	6			
Sussex "	41	7	5	.....	2			
Union "	342	186	111	38	21	7		
Warren "	67	10	6	1	1			
	6,327	6,387	3,158	1,109	576	234	75	93

* Also 340 credited to Great Britain.

TABLE No. 8.

COMMITTED, SENTENCED AND DISCHARGED.

Committed, Sentenced and Discharged.	JAILS.																					PENITENTIARIES.		Total, exclusive of penitentiaries.
	Atlantic.	Bergen.	Burlington.	Camden.	Cape May.	Cumberland.	Essex (Newark.)	Gloucester.	Hudson (Jersey City.)	Hunterdon.	Mercer.	Middlesex.	Monmouth.	Morris.	Ocean.	Passaic.	Salem.	Somerset.	Sussex.	Union.	Warren.	Hudson.*	Essex.†	
By whom committed or sentenced—																								
By justices	44	189	745	740	4	46	1,317	56	701	192	101	646	223	292	28	226	20	86	46	494	67	320	342	6,263
" recorders	1	....	....	....	....	....	....	....	612	....	31	544	....	....	....	898	....	....	....	....	....	181	....	2,086
" Special Sessions	....	5	....	3	....	....	17	....	....	....	5	49	3	6	....	70	....	....	....	2	....	119	254	160
" Quarter "	....	7	17	30	3	....	2	4	129	13	1	41	18	29	....	12	....	....	3	10	8	88	....	327
" Oyer and Terminer	....	....	22	4	....	6	120	2	1	....	....	1	1	35	....	....	13	14	....	....	....	....	....	219
" mayor	4	....	76	....	1	50	5	....	429	....	5	....	....	....	....	....	11	....	....	1	1	....	....	583
" United States courts and commissioners	....	....	....	....	....	....	7	....	62	....	....	....	....	....	....	....	....	1	....	....	....	....	1	70
" police justices	....	....	....	....	....	....	1,783	....	852	....	453	....	....	....	....	....	....	....	....	....	....	349	....	3,088
" requisitions	2	....	....	....	....	....	2	....	1	....	....	1	....	....	....	....	....	1	....	5	....	....	....	12
By whom or why discharged—																								
Served out time	2	72	598	905	....	51	1,076	8	733	189	81	693	116	40	....	402	2	22	27	170	35	808	398	5,222
Gave bail or bonds	3	50	31	146	4	10	438	8	330	5	53	1	40	42	4	7	5	15	9	90	21	....	....	1,312
Paid fine and costs	4	8	38	27	....	4	8	14	170	7	2	2	30	64	1	21	4	2	....	48	....	25	76	454
Sent to State Prison	10	15	18	40	....	4	125	3	111	2	11	22	15	10	1	50	4	4	6	20	8	....	....	479
" " Reform School	1	1	....	3	....	4	32	3	40	....	6	8	2	7	....	4	1	3	....	7	1	....	....	123
" " Industrial School	....	....	....	1	1	....	2	....	1	....	1	....	7	....	....	1	....	....	....	....	....	....	....	14
" " Penitentiary	....	....	....	....	....	....	623	....	423	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1,046
" " Asylum	....	....	....	2	....	....	1	....	....	....	....	....	....	....	....	2	....	....	1	....	....	....	....	6
By justices, police justices and recorders	....	2	77	12	1	....	639	3	88	2	3	482	4	14	....	396	....	19	1	25	1	35	....	1,769
" Quarter Sessions, Oyer and Terminer, &c	....	....	38	29	1	6	332	2	90	6	32	65	8	27	....	120	....	6	2	55	9	2	....	828
" Chosen Freeholders	....	7	29	14	2	....	3	3	40	1	123	27	7	....	....	....	....	4	....	121	4	2	136	385
" Sheriffs	....	....	2	....	1	1	....	....	11	....	....	5	....	....	....	....	2	....	....	....	....	....	....	22
" Common Pleas	....	....	....	10	....	2	4	....	2	....	26	....	....	....	....	....	....	....	....	....	....	....	....	44
" Grand Jury	....	....	....	....	....	....	....	....	126	....	....	....	....	....	....	....	....	....	....	....	....	....	....	126
" habeas corpus	....	....	....	2	....	1	5	....	5	....	5	1	2	....	....	....	3	1	....	1	....	....	....	26
Sentence suspended	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4

* Partly included in Jersey City jail returns. † Included in Newark jail returns.

TABLE No. 9.

Terms of Sentences, Religious Persuasion, Habits, Education, &c.

Jails or Penitentiaries.	Terms of Sentences.								Habits.			
	Five days or less.	Between five days and one month.	Between one and two months.	Between two and three months.	Between three and four months.	Between four and five months.	Between five and twelve months.	Over one year.	Temperate.	Moderate drinker.	Intemperate.	Confirmed drunkard.
Atlantic county	1	2	4	5	11	.....	.....	....	4	33	30	.....
Bergen "	37	25	32	10	33	.....	.....	....	45	34	86	.....
Burlington "	353	296	82	55	20	10	2	....	170	240	355	62
Camden "	47	774	33	16	2	.....	.....	....	137	189	409	551
Cape May "	1	3	.....	2	.....	.....	.....	....	7	6	.....	.....
Cumberland "	15	37	4	2	.....	.....	.....	....	48	6	38	11
Essex " (Newark)	42	1,661	71	274	12	3	87	65	436	1,928	893	85
Gloucester "	8	23	.....	1	.....	.....	.....	....	24	.....	45	.....
Hudson " (Jersey City)	11	789	98	148	23	.....	8	....	26	1,052	561	458
Hunterdon "	4	151	1	.....	.....	.....	.....	....	36	170	119	.....
Mercer "	3	298	50	33	.....	.....	.....	....	227	30	335	.....
Middlesex "	454	466	64	26	5	.....	3	2	209	100	853	130
Monmouth "	14	49	18	7	3	2	5	4	78	.....	117	.....
Morris "	140	54	29	6	1	.....	.....	6	26	45	167	9
Ocean "	.....	.....	.....	1	.....	.....	.....	....	.....	.....	1	.....
Passaic "	4	472	258	47	.....	.....	1	....	300	60	535	6
Salem "	2	3	3	4	2	2	.....	1	12	11	9	2
Somerset "	27	6	2	3	2	1	2	3	51	11	36	1
Sussex "	25	2	.....	.....	.....	1	1	....	11	13	22	.....
Union "	66	192	43	15	3	.....	3	5	222	.....	306	.....
Warren "	5	12	1	.....	5	.....	.....	....	18	.....	41	.....
Total (jails)	1,259	5,315	793	655	122	18	112	86	2,088	3,928	4,958	1,315
Hudson county penitentiary*	.....	336	170	413	35	.....	92	1	267	233	504	63
Essex county penitentiary†	.....	150	41	199	54	67	77	10	194	20	384	.....
Total (penitentiaries)	.....	486	211	612	89	67	169	11	461	253	888	63

* Partly included in Jersey City jail returns. † Included in Newark jail returns.

TABLE No. 9—*Continued.*

Terms of Sentences, Religious Persuasion, Habits, Education, &c.

Religious Persuasion.			Education.				Color.		Social Condition.				Previous Convictions.						
Protestant.	Catholic.	None or miscellaneous.	Cannot read.	Can read but cannot write.	Can read and write, fair education.	Well educated.	White.	Colored.	Single.	Widowed.	Married.	Divorced.	First time.	Once before.	Twice before.	Three times before.	Four times before.	Five times before.	Six or more times before.
49	9	....	3	3	49	4	43	15	34	1	23	....	9	1					
73	92	....	41	41	82	1	153	12	162	3	19								
250	390	97	220	250	344	26	806	33	315	40	477	....	110	170	300	211	37	8	2
617	588	....	72	146	854	135	1,048	139	506	186	473	38	199	188	144	169	109	105	120
8	5	....	.....	.....	13	....	12	1	8	....	3	....	5						
78	14	5	24	34	62	1	88	15	58	4	41	....	44	27	9	6	6	1	9
1,225	2,033	93	468	250	1,863	138	2,484	144	1,463	303	920	2	562	181	114	81	66	56	156
64	4	1	13	13	48	....	55	14	36	5	29	....	44	12	7	2			
808	1,352	7	311	303	1,704	50	2,252	16	732	80	1,278	7	.....	335	100	95	89	27	
148	118	69	18	7	308	2	196	2	121	12	48	1	60	95	68	65	33	7	
286	310	7	95	56	519	1	440	68	397	38	142	....	269	74	48	43	39	39	36
560	659	70	516	133	622	31	949	182	776	54	470	....	560	102	45	10	7	2	
129	128	....	56	.....	190	1	218	29	153	13	91	....	163	24	15	10	7	4	12
107	140	....	74	60	158	4	231	19	102	28	125	2	114	43	18	10	5	6	36
.....	.....	1	.....	.....	.....	....	1	....	.....	....	1								
496	505	....	315	168	411	7	874	27	496	19	386	....	562	71	52	43	18	23	62
27	4	3	9	2	17	....	20	15	21	....	14	....	19	6	....	....	....	....	2
48	50	....	27	11	49	3	90	8	62	1	34	....	11	8	4	1			
39	6	5	6	2	32	2	45	1	33	2	13	....	17	2	3	9			
200	328	....	133	.....	395	....	492	46	323	28	156	....	342	94	40	27	7	5	6
18	20	45	8	11	54	4	72	5	51	1	25	....	38	23	1	4			
5,230	6,755	403	2,409	1,490	7,775	410	10,569	795	5,849	818	4,768	50	3,128	1,456	968	786	423	283	441
255	784	8	139	29	874	4	1,037	54	633	99	275	....	210	179	89	49	38	15	35
189	406	3	71	117	418	2	561	37	503	10	85	....	27	41	16	30	30	21	21
444	1,190	11	210	146	1,292	6	1,598	91	1,136	109	360	....	237	220	105	79	68	36	56

OCCUPATION OF INMATES.

ATLANTIC COUNTY.

Moulder, 1; bartenders, 2; waiter, 1; painter, 1; salesmen, 3; detective, 1; laborers, 17; engraver, 1; sailor, 1; barbers, 2; bootblack, 1; teamster, 1; cigar maker, 1; cook, 1; brick maker, 1; no occupation, 8.

BERGEN COUNTY.

Polisher, 1; blacksmiths, 2; laborers, 154; machinist, 1; weaver, 1; tailor, 1; nailor, 1; butchers, 2; musician, 1; clerk, 1.

BURLINGTON COUNTY.

Shoemakers, 5; carpenters, 18; masons, 27; tailors, 3; tinsmiths, 55; sailors, 15; moulders, 8; boatmen, 35; laborers, 190; tramps, 298; vagrants, 110; harness makers, 7; blacksmiths, 7; mill hands, 20; plasterers, 2; goldsmiths, 2; painters, 5.

CAMDEN COUNTY.

Carpenters, 62; ship carpenters, 2; shoemakers, 72; blacksmiths, 28; weavers, 17; watermen, 6; farmers, 11; laborers, 234; tinkers, 94; domestics, 138; tramps, 485; machinists, 15; painters, 12; brick makers, 16; dyers, 4; physician, 1; tailor, 1; brush makers, 2.

CAPE MAY COUNTY.

Peddlers, 2; housekeeper, 1; laborers, 7; farmers, 2; carpenter, 1.

CUMBERLAND COUNTY.

Domestic, 1; laborers, 49; painters, 3; mason, 1; carpenter, 1; tailors, 2; gatherers, 3; can maker, 1; nailor, 1; helper, 1; baker, 1; oystermen, 3; school teacher, 1; shoemakers, 3; moulders, 2; no trade, 3; farmers, 2; blacksmiths, 2; butcher, 1; huckster, 1; salesman, 1; plasterer, 1; barbers, 3; bookbinders, 2; weavers, 4; glass workers, 5; waiters, 2; well digger, 1; brass finisher, 1.

ESSEX COUNTY.

Brokers, 2; laborers, 433; blacksmiths, 27; engineers, 9; coopers, 7; carpenters, 38; painters, 24; speculators, 7; stamper, 1; locksmiths, 4; jewelers, 16; iron turners, 3; nickel platers, 3; steel engravers, 6; shoemakers, 63; silk weavers, 14; cigar makers, 9; carman, 1; japanners, 26; morocco dressers, 20; teamsters, 52; agents (book), 10; carriage makers, 9; brass finishers, 2; express drivers, 7; cooks, 7; tinsmiths, 23; zinc workers, 2; well diggers, 3; hatters, 255; tailors, 35; sewing machine makers, 6; polishers of metals, 47; hostlers, 19; house servants, 60; grinders, 11; glue makers, 2; hucksters, 35; chemical workers, 2; gardeners, 27; bakers, 32; peddlers, 24; oystermen, 3; cloth weaver, 1; malster, 1; tanners, 7; porter, 1; horse clipper, 1; clerks, 21; rubber worker, 1; justice of peace, 1; loom fixers, 3; contractors, 4; horse trainer, 1; scale maker, 1; stair builder, 1; laundrymen, 10; paper makers, 6; cabinet makers, 7; plumbers, 10; caster maker, 1; musicians, 3; sailors, 6; ice dealers, 5; scissor makers, 2; candy makers, 3; janitors, 4; ship builder, 1; horseshoers, 8; bartenders, 11; printers, 22; satchel makers, 19; horse-car conductors, 6; spring maker, 1; bottlers, 2; frame maker, 1; wood turner, 1; trunk makers, 2; counter sinkers, 1; telegraph operators, 2; linen finisher, 1; 'longshoremen, 3; saloon keepers, 8; firemen, 5; dyers, 7; hatchet makers, 1; gas-house men, 2; bookbinder, 1; harness makers, 15; brush makers, 6; druggist, 1; brakemen, 3; merchants, 1; boatmen, 7; charcoal peddlers, 2; stone cutters, 14; barbers, 7; riveters, 2; shot makers, 2; silver platers, 17; brass bedstead maker, 1; galvanizer, 1; sawyers, 4; glass blowers, 3; brass filers, 3; potters, 14; moulders, 27; cotton spinners, 3; button makers, 29; coachmen, 5; expressmen, 3; waiters, 7; tailoresses, 2; machinists, 39; curriers, 19; upholsterers, 5; drivers, 2; umbrella makers, 2; farmers, 10; brewers, 7; cider-press builders, 1; bookkeepers, 15; dress makers, 2; milliner, 1; foundrymen, 3; junk dealers, 12; edge-tool makers, 3; masons, 29; clothing dealers, 1; salesmen, 3; roofers, 3; cloth presser, 1; box makers, 6; butchers, 13; brick makers, 3; ship rigger, 1; wood finishers, 2; quarrymen, 5; trunk makers, 9; saddlery-hardware makers, 5; kettle-top makers, 1; varnish maker, 1; florist, 1; corset maker, 1; undertaker, 1; horse-collar maker, 1; finishers, 4; miller, 1; stamper, 1; boot-

black, 1; weavers, 2; nailors, 2; chemist, 1; water-pipe layer, 1; drop-press makers, 2; hosier, 1; solderers, 3; surgeon, 1; artist, 3; cutter, 1; fruit dealer, 1; detective, 1; no occupation, 316.

GLOUCESTER COUNTY.

Glass workers, 3; painters, 5; laborers, 52; carpenter, 1; pattern maker, 1; shoemakers, 3; ship carpenter, 1; farmers, 3.

HUDSON COUNTY (JERSEY CITY.)

Laborers, 709; domestics, 127; weavers, 24; shoemakers, 21; painters, 64; barbers, 9; butchers, 27; cigar makers, 18; cooks, 12; tinsmiths, 8; boiler makers, 14; peddlers, 9; machinists, 22; carpenters, 56; bakers, 14; tailors, 22; tailoresses, 2; blacksmiths, 17; coopers, 13; moulders, 29; drivers, 19; miscellaneous, 153; housekeepers, 18; servants, 8; merchants, 5; sailors, 8; cabinet makers, 4; brick makers, 5; plumbers, 6; clerks, 55; jewelers, 1; upholsterers, 2; roofers, 3; hatters, 11; masons, 22; sailors, 12; firemen, 7; sponger, 1; engineers, 15; engravers, 2; dyers, 3; merchants, 3; druggist, 1; liquor dealers, 4; bankers, 3; no occupation, 674.

HUDSON COUNTY (SNAKE HILL.)

Laborers, 524; barbers, 15; clerks, 20; shoemakers, 19; painters, 29; coopers, 13; carpenters, 18; servants, 119; tailors, 18; machinists, 9; housekeepers, 56; lithographer, 1; salesmen, 4; no occupation, 92; sailors, 12; masons, 11; blacksmiths, 4; teamsters, 13; carpenters, 6; upholsterers, 4; factory-boys, 18; weighmaster, 1; moulders, 22; gardeners, 5; cigars, 5; engineers, 13; butchers, 10; cooks, 9; steamfitter, 1; bookbinders, 6; school teacher, 1; bakers, 14; jewelers, 2; boilers, 3; caulker, 1; carmen, 5; expressman, 1; dock-builders, 4; tinsmiths, 7; telegraph, 1; boatmen, 6; hatters, 5; hostlers, 3; stonecutters, 5; gasfitters, 3; merchants, 4; artists, 3; polishers, 2; dressmakers, 3; druggist, 1; printers, 4; steel-melter, 1; wire-worker, 1; driver, 1; plumbers, 2; laundress, 4; fur cutter, 1; chemists, 2; wheelwrights, 2; bricks, 1; florists, 2; stable-boys, 2; junkmen, 3; peddler, 1; brakeman, 1; factory-girl, 1; glass, 2; coppersmith, 1; bartender, 1.

HUNTERDON COUNTY.

Farmers, 2; laborers, 27; tramps, 294; storekeepers, 3; barber, 1; carpenters, 2; bartender, 1.

MERCER COUNTY.

Shoemakers, 11; laborers, 362; clerks, 2; tailors, 2; domestics, 66; iron-workers, 21; chair makers, 6; telegraphers, 2; no occupation, 14, engineers, 3; cigars, 4; blacksmiths, 4, weavers, 7; potters, 37; tinsmiths, 2; painters, 7; masons, 6; glass, 4; huckster, 1; waiters, 2; carpenters, 8; coopers, 2; stone cutter, 1; peddler, 1; printers, 11; moulders, 3; upholsterers, 2; plumbers, 2; turner, 1; brusher, 1; decorator, 1; paper-hanger, 1; barbers, 2; pump maker, 1; cook, 1; farmer, 1; peddler, 1; slater, 1; butchers, 2; insurance agent, 1; spinner, 1.

MIDDLESEX COUNTY.

Laborers, 676; peddlers, 20; housekeepers, 173; gardener, 1; engineers, 6; book agent, 1; machinists, 33; bakers, 13; vagrants, 206; masons, 10; farmers, 5; carpenters, 21; physician, 1; butchers, 9; stone cutters, 4; engravers, 7; tailors, 10; boatmen, 18; blacksmiths, 9; potters, 8; moulders, 12; tinkers, 8; barbers, 6; weavers, 6; students, 2; brick makers, 7; cutter, 1; cook, 1; shoemakers, 3.

MONMOUTH COUNTY.

Shoemaker, 1; laborers, 200; mechanics, 21; masons, 3; painters, 3; blacksmith, 1; carpenters, 3; machinists, 2; cabinet maker, 1; bookkeeper, 1; bakers, 2; salesmen, 2; farmers, 2; painters, 3; engineer, 1; artist, 1.

MORRIS COUNTY.

Minstrels, 2; laborers, 150; brass finisher, 1; plumber, 1; saloon keepers, 18; harp maker, 1; brush maker, 1; blacksmiths, 8; millers, 4; cabinet makers, 2; butchers 3; shoemakers, 5; carpenters, 4; tinners, 2; farmers, 3; weavers, 2; cook, 1; barbers, 3; silver plater, 1; mer-

chants, 3; book binder, 1; wire drawer, 1; hatter, 1; housekeeper, 1; tramps, 2; stone cutters, 2; iron moulder, 1; slaters, 3; boiler maker, 1; puddlers, 4; painters, 3; no trade, 2; baker, 1; miner, 1; moulder, 1; printers, 3; harness maker, 1; cook, 1; dress makers, 2.

PASSAIC COUNTY.

Blacksmiths, 26; cigars, 9; cook, 1; engineers, 6; hackler, 1; loom makers, 6; machinists, 24; moulders, 16; masons, 10; plumbers, 16; painters, 11; weavers, 89; dyers, 15; turners, 5; no occupation, 897; school teacher, 1; patterns, 14; book-keepers, 4; farmers, 5; mason, 1; shoemakers, 10; laundresses, 10; carpenters, 20; tailors, 4; boiler makers, 4; file maker, 1; tinsmiths, 2; lawyers, 2; flax dressers, 2; stone cutters, 7; silk winders, 2; gardeners, 4; chair maker, 1; book agent, 1; baker, 1; printer, 1; bridge builder, 1; puddlers, 13.

SOMERSET COUNTY.

Laborers, 28; saloon keepers, 2; blacksmith, 1; mill hands, 11; brick mason, 1; housekeepers, 4; no occupation, 15; carriage-body maker, 1; carpenter, 1; bootblack, 1; painter, 1; servants, 2; weavers, 2; teamster, 1; tinsmith, 1; shoemakers, 2; baker, 1; salesmen, 2; boatman, 1; seaman, 1; farmer, 1.

UNION COUNTY.

Laborers, 229; mechanics, 90; servants, 30; wines, 28; painters, 7; carpenters, 8; shoemakers, 9; waiters, 10; boys, 36; printers, 9; boatmen, 11; bakers, 5; clerks, 5; barbers, 2; butchers, 2; harness, 4; bartenders, 3; farmers, 6; hatters, 3; dyer, 1; telegrapher, 1; collector, 1; tailors, 5; peddlers, 5; book agent, 1; actor, 1; book-keeper, 1; moulders, 4; tinker, 1; cordage, 1; cooper, 1; police officer, 1.

SALEM, SUSSEX AND WARREN COUNTIES.

Laborers, 124; lawyer, 1; agents, 3; rigger, 1; moulder, 1; waiters, 2; miller, 1; upholsterer, 1; currier, 1; puddlers, 2; weaver, 1; blacksmith, 1; painter, 1; soldier, 1; tramp, 1; no occupation, 2.

PART VI.

PAUPERISM.

STATISTICS SHOWING ITS EXTENT, AND SUGGESTIONS FOR ITS SUPPRESSION.

PAUPERISM.

In every community there exists a class of persons obtaining their subsistence, either wholly or partially, through public relief, who are classed under the general name of paupers, a term which has become one of reproach and is associated with moral and social degradation. The best method of repressing pauperism, this loathsome disease and disgrace of our civilization, continues to excite the interest of the benevolent, the thought of the political economist and the consideration of the legislators of all organized governments. In our country, the question has not yet become a grave one, and attention hardly has been called to it. It is not yet, as in England and Europe, the darkest cloud on the political horizon. But even now the matter of relieving the poor and distressed by public aid is one of the most intricate and perplexing social problems, whose solution will require a higher class of statesmanship than is generally to be met with in our local governments. Pauperism is a social evil and a sign of moral weakness; and a time will come when the causes which have produced it in Europe will operate with hardly less intensity here. Unless checked, it will swell to dangerous proportions and poison the life of our body politic.

It is generally admitted that our indigent class is disgracefully large, but how numerous, or at what rate it is increasing, is unknown. Few reliable statistics are available, and none of any importance for our State. The returns of the late United States census give the aggregate number of paupers in the United States at 88,665,* of whom 67,067 are reported to be inmates of alms-houses, and 21,598 out-door paupers. The alms-house inmates are classified: Males, 35,952; fe-

*According to a writer in Appleton's Enclycopædia (1874), the total pauper expenditure in the United States in 1870 "may be estimated at $15,000,000, and the average number of poor relieved, 225,000." The census of 1880, in addition to the pauper population credited to the States, gives the following figures regarding the defective classes: Insane, 91,959; idiotic, 76,895; blind, 48,928; deaf-mute, 33,878. Many of these are generally classed with paupers.

males, 31,115; native, 44,106; foreign, 22,961; white, 61,310; colored, 5757. These figures, *if correct*, would not be very serious, showing only about one pauper to every five hundred inhabitants. According to an authority on this point, the smallest pauper population in Europe is in Prussia and Austria, then comes France, then Great Britain and Switzerland, while the small states of Holland and Belgium have the largest. Holland has one pauper to every seven inhabitants; France, one in twenty-nine and a half; Great Britain, one in twenty-two; Germany and Austria together, one in thirty.

That the United States census figures are far below the actual, and do not even show the correct pauper population for a single day, is proved by comparison of the returns made to the boards of charities in certain States, with those reported by the census officials. The Massachusetts statistics of pauperism for the years 1864, 1874 and 1882 were:

	Fully supported in alms-houses.*	Fully supported out of alms-houses.*	Partially supported.*
1864	9,830	1,540	21,000
1874	8,306	2,629	35,074
1882	†10,213	‡4,973	⧫48,760

* State and town poor.

† Total expense, $613,423; average weekly cost, $2.11.

‡ Total expense, $594,974; average weekly cost, $3.34.

⧫ Total expense, $1,464,353.

The average number of paupers in Massachusetts on July 1st, 1881 and 1882, was 23,863, or 1 to every 76 inhabitants. The aggregates for 1880 were: Fully supported, 13,688, of whom 8188 were alms-house poor, 4332 in lunatic hospitals, and 1330 elsewhere; partially supported, 58,916, of whom 25,353 were males, and 33,563 females. The census figures for Massachusetts show: Aggregate, 5423; of these the inmates of alms-houses numbered 4469, of whom there were: Males, 2460; females, 2009; native, 2971; foreign,

1498; white, 4392; colored, 77; out-door paupers, 954. In New Jersey, according to the census, we had, in 1880, only 2981 paupers,* of whom 519 were out-door poor, and 2462 in alms-houses. Of the latter class there were: Males, 1393; females, 1069; native, 1526; foreign, 936; white, 2291; colored, 171. These figures are valueless, except as showing the proportion between the sexes, &c., which is, presumably, correct.

The following extract from the "New York Herald," December 30th, 1883, will be interesting in this connection. It shows that in New York city there were spent over $5,000,000 in charity, or $4 a head for every man, woman and child.

New York has long enjoyed the reputation of being a most charitable city, but the real extent of her charity is known only to those who have made a special study of the subject. The State Board of Charities has been collecting some figures appertaining to the public and private charities in New York and Brooklyn, which, when put in a tabulated form, is an astonishing exhibit. The tables were made up for the years 1879, 1880, 1881 and 1882, and in some instances, where reports could not be obtained, the expenditures were estimated. No less than $5,348,223 were expended in various forms of charity by the city of New York in 1882. In 1881 the amount expended was even greater, but for the two years preceding 1881 the expenditures were only upward of $4,000,000. A comparison of these figures with the expenditures for public and private charities in Kings county, for the same year, is very suggestive. New York's population in 1880 was 1,206,577. The population of Kings county at the same time was 599,549, or considerably over one-third as much. New York expended in 1880 for public and private charities $4,340,701, and Kings county expended in the same year only $936,711. While the proportion of population was less than three to one, the proportion of expenditure was nearly five to one. The following table is one prepared by the society of the expenditures in New York city:

THE OUTLAY FOR THREE YEARS.

	1880.	1881.	1882.
Orphan asylums, homes and hospitals	$2,632,141	$3,516,450	$3,627,577
Dispensaries	78,664	148,464	74,820
Private out-door relief societies	396,520	390,000	390,000
City institutions	1,112,937	1,254,840	1,120,518
City out-door relief	60,000	65,000	65,000
Paid State institutions by city	60,439	66,315	70,308
Totals	$4,340,701	$5,441,069	$5,348,223

*Also, the following number of defective classes: Insane, 2405; idiotic, 1056 blind, 829; deaf mutes, 527.

Some readers will doubtless note with surprise the small proportion of the total expenditure borne by private out-door relief societies, and the surprise may increase upon remembering the large number of these societies which are engaged in the distribution of less than $400,000 annually. There was expended for buildings and investments by the orphan asylums, homes and hospitals $895,193 in 1879, $982,427 in 1880, $1,769,313 in 1881, and $1,814,206 in 1882. Money was spent in a similar manner by the dispensaries and the city institutions, making the total expenditure for buildings and investments $1,028,263 in 1879, $1,165,219 in 1880, $2,092,141 in 1881, and $1,834,633 in 1882. The increase for 1881 in the amount expended for buildings and investments will account for the excess of the total expenditures of that year over those of 1882.

BROOKLYN'S CHARITIES.

The table made of the total expenditures in Kings county reads as follows:

	1879.	1880.	1881.	1882.
Orphan asylums, homes and hospitals	$481,494	$599,526	$574,725	$985,771
Dispensaries	16,381	23,904	19,892	29,974
Private out-door relief societies	47,779	41,171	46,367	45,695
County institutions	257,210	247,937	295,306	313,463
Paid State institutions by county	23,805	24,173	22,600	23,255
Totals	826,669	$936,711	$958,890	$1,398,158

The total amount expended for buildings and investment in Kings county by the orphan asylums, homes, hospitals, dispensaries and county institutions was $134,438 for 1879, $231,530 for 1880, $224,009 for 1881, and $551,877 for 1882. There was no kind of out-door relief in Brooklyn corresponding to the city out-door relief in New York. Whereas the total expenditure in New York was as nearly five to one for Brooklyn, it will be noted that the out-door relief societies of New York expended last year $390,000, against only $45,695 expended by the private out-door relief societies of Kings county—a proportion of nearly nine to one. The only item of expenditure in which a proportion is preserved commensurate with the respective populations of New York and Kings county is that of money paid to the State institutions, a matter which is of course regulated by law.

THE DEPENDENT CLASSES IN NEW JERSEY.

For the purpose of obtaining at least approximately correct statistics of the New-Jersey poor, and some information about their condition and treatment, the Bureau sent out, during the year, appropriate blanks to, and corresponded with, about three hundred officials—overseers of the poor, stewards of poor-houses, and other persons

having the care of the poor, or control over money expended in public charity. The result of our efforts is shown in the following pages. As no attempt had hitherto been made to collect such statistics, few of the officials were perpared to give any accurate details concerning the persons whom they had in charge or had relieved, many having kept no books of record whatever. The returns presented in the tables given at the close of this chapter must, therefore, of necessity be imperfect and crude. Nevertheless, they are a great step in advance of anything which has yet been obtained, and will at least give the public an idea of the extent of pauperism in this State.

The local governments of our State provide for the support of not less than 16,000 * in and out-door paupers (exclusive of indigent insane and vagrants or tramps.) The cost of maintenance is over $443,000. There are about 2000 indigent insane in the State. In the two State and seven county lunatic asylums there were 1949 patients, which cost the State $121,887.50. For the 240 deaf and dumb, blind and feeble-minded pupils educated out of the State there were paid $70,454, and for the 68 pupils in the new deaf-mute asylum at Trenton, $13,500. For care of the 680 patients in the Home for Disabled Soldiers the State expended $30,239.21, and for pensions, (10,) $3,830.64. This would make the total expenditures in the State for the dependent and indigent, supported out of the public funds, in round numbers, $783,000, which cannot be below the actual amount. According to these figures there were nearly 19,000 persons belonging to this class in New Jersey, or about one to every sixty of our population. The average number cannot be so large; besides, these figures include about 1000 individuals not generally classed with paupers, who, probably, do not *average* over 15,000.† This would give

* The returns foot up 15,009 poor persons relieved; but a number of overseers have made no reports at all, while many of those received were more or less inaccurate. Of 5648 individuals reported, 2650 were males and 2998 females. In many of the returns (including those of Jersey City, Newark and the Hudson county alms-house) the number of children relieved was not given, consequently it must be much larger than 1292, the total of our returns. For the same reason the number of children bound out must be in excess of that given in our tables, viz., 67 males and 38 females.

† Our figures give the *whole number* of persons, but this number, for obvious reasons, is always too large. Many persons are counted several times, having been relieved at different dates and by different methods. On this account the English plan of counting at different dates has been adopted in Massachusetts, and some other States, where the data are officially and regularly collected. These dates generally are, January 1st, April 1st and July 1st, and the average is calculated accordingly.

about one to seventy-six inhabitants—the same proportion as in Massachusetts. When we remember that this does not include the many thousands of indigent persons who do not seek aid or are relieved through private charity, it is evident that the proportion is disagreeably large.

From the official reports made to us by those in charge of the forty-one poor-houses in this State, the following summary has been calculated: Whole number of inmates, 4661;* males, 1057; females, 913; children under ten years (27 poor-houses), 289; infants (18), 48; insane (9), 162; imbecile and idiotic, (21), 116; American birth, 2493; foreign birth, 1652; permanent paupers (29), 748; births, (20), 67; deaths (32), 336. Total cost of maintenance of 33 poor-houses, $196,608.69.

In forty townships there were reported to be "boarded out," 428 paupers. Of 380 individuals there were, males, 150; females, 130. In this number were included 48 children, 2 infants and 23 insane and imbecile poor. Of 354 persons, 279 were American and 75 foreign. There were 7 births and 63 deaths. For further particulars reference should be made to our tables and to the following summary. It may be observed, that in nearly every case those who have been fully supported, either in poor-houses or elsewhere, were reported more or less completely disabled by sickness, infirmity, old age or some other visitation.

SUMMARY BY COUNTIES.

ATLANTIC COUNTY.

Returns received from Mr. James W. Moore, the steward of the county poor-house, at Smith's Landing; also from the overseers of the poor of Atlantic city, Egg Harbor city, Egg Harbor township and town of Hammonton and from the clerk of the town of Absecon.

Mr. Moore reports:

"The townships of Buena Vista, Mullica, Weymouth, Galloway, Egg Harbor and Hamilton and the town of Absecon own the alms-

* In some cases (including Hudson county) all of these data were not reported, which accounts for the apparent discrepancies between them and the total number.

house. The money for their temporary or out-door relief probably amounts to $1000. Atlantic City, Egg Harbor City and the town of Hammonton have nothing to do with the alms-house, but support their own poor. * * * We have no insane department in the alms-house; but the county has some twelve or fifteen insane persons at Trenton. * * * In making out the total cost of the inmates of the poor-house, all salaries, fees and expenses are included.

"I think I am safe in saying that, during the twelve years during which I have been in charge of this institution, seventy-five per cent. of its inmates have come here directly or indirectly through rum and laudanum. At the present time there are more laudanum than rum-drinkers. * * * Most of the inmates are old and crippled, so that they are not able to work."

The report of the alms-house committee for the year ending March 30th, 1883, shows:

Whole cost for house	$1,614 62
" " " farm	189 92
" " " implements	93 21
" " " committee's expenses	64 88
Total	$1,962 63
Cost per week for each inmate	$1 98¾
Value of goods and chattels—house	802 93
" " " —farm	1,514 50
Total value	$2,317 43
Number of deaths during year	1
" births " "	—
" bound out " "	—
Average number of inmates	19

We, the undersigned, members of the alms-house committee, beg leave to submit the above report, and to further say that, upon close observation and examination, we find that the county farm, buildings, wards thereof, agricultural implements, stock, &c., were never before in so flourishing a condition; that the inmates of the institution, being well cared for, are satisfied and comfortable; for all which the thanks of the county, and of this board especially, are due and hereby tendered, per the committee, to the faithful and very efficient steward and stewardess, Mr. and Mrs. James W. Moore.

[Attest]: S. D. HOFFMAN, *Clerk.*

JOS. STEELMAN,
A. CORDERY,
JAMES E. STRICKLAND, } *Alms-house Committee.*

Probably there are 100 paupers in the county. The cost of maintaining them does not exceed $4500.

BERGEN COUNTY.

In this county there are two poor-houses. One is supported by ten townships, (Washington, Ridgewood, Franklin, Harrington, Union, Midland, New Barbadoes, Hohokus, Saddle River and Lodi,) and is under the control of the Board of Chosen Freeholders. Three trustees have oversight of it, and make annual reports. Mr. David P. Pulis is the steward. It is located at Oradell, Midland township. We have been unable to obtain information as to the total number of permanent and temporary inmates. As will be seen from the report of the trustees, the number of inmates during each of the twelve months only is given. How many have been recounted in the totals for the different months is not stated. That this was done in a number of cases is very probable; at all events, it is highly improbable that 462 individuals were supported during the year. Probably 100 would be nearer the true figure.

To the Board of Chosen Freeholders of the county of Bergen:—Your committee on alms-house beg leave to submit the following report for the year 1882, and ending with the meeting of April 30th, 1883:

From the annexed statement of monthly expenditures, (already passed upon by your honorable body,) it is shown that the gross expenditures for the year have been the sum of $4768.57, as against the sum of $3686.41 for the year 1881.

This increase is accounted for by the purchase of new horses for use on the farm, and the amount expended by your committee in the construction of a large cistern to increase the water supply for the use of the poor-house buildings, and in placing a tank, with hot and cold water attachment, and a bath-tub in the paupers' apartment.

This is a permanent improvement to the building, and will prove, as your committee have every reason to believe, of great advantage to the inmates.

The sanitary condition of the buildings has also been materially improved by the construction of new drains, with a large cesspool, 125 feet from the main buildings.

The cost of these improvements has been the sum of $750.88, and that of the stock for the farm, the sum of $631, making together the sum of $1381.88.

The number of inmates provided for during the year has been 462, making a monthly average of 38½.

The general health of the inmates for the past year has generally been very good, the prevailing sicknesses being those consequent upon the infirmities of old age.

There are a very few of the male inmates that are able to be of any material assistance in cultivating the farm, they for the most part being too old and infirm, or else crippled.

The receipts from various farm sources for the year amount to the sum of $294.46, which includes the sum of $115 realized from the sale of a yoke of oxen.

The committee respectfully report that there is at present on hand for consumption and use a supply of groceries, which at a low estimate is valued at the sum of $350; of dry goods, the sum of $450; besides 10 tons of hay, 3 tons of straw, 50 bushels of potatoes, and about 1 ton of feed for cattle, worth about the sum of $400.

All which is respectfully submitted.

Dated April 30th, 1883.

JOHN F. FEITNER, *Chairman.*
THOMAS ECKERSON,
N. R. VOORHIS, *Trustees.*

INMATES.

1882: On June 3d there were 37; July 1st, 37; August 5th, 36; September 2d, 35; September 30th, 38; November 4th, 38; December 2d, 37. 1883: January 6th, 39; February 3d, 40; March 3d, 40; March 31st, 41; April 30th, 44. Total for the year, 462; monthly average, 38½.

Average cost per pauper per day in 1881 ..... .27 9/10

1882.

Total expenses	$4,768 57
" receipts	294 46
Net expenditures	$4,474 11
Improvements and stock	1,381 69
	12)3,092 42
	30)257 70
	38½)8 59
Cost per pauper per day exclusive of improvements to farm and stock	22 9/10

Net expenditures	12)4,474 11
	38½)372 84¼
	30)9.684
Cost per pauper per day including improvements to farm and stock	.32 28/100

The itemized expenditures for the year 1882 were:

	Mileage.	Seamstress and labor.	Groceries, provisions, meat and fish.	Coal.	Stock for farm.	Feed.	Pipes and tobacco.	Dry goods.	Hardware, tinware, woodenware.
Total for year	$22 08	$226 01	$1284 14	$199 00	$631 00	$132 70	$80 80	$100 88	$92 83
Average per month	1 84	18 83	107 01	16 58	52 58	11 06	6 73	8 41	7 73

	Freight.	Doctor.	Steward and trustees.	Hats and clothing.	Improvements to buildings and farm.	Manure and seeds.	Blacksmith.	Sundries.	Total.
Total for year	$23 79	$260 00	$466 00	$65 65	$750 88	$385 86	$22 60	$24 35	$4768 57
Average per month	1 99	21 66	38 83	5 47	62 55	32 15	1 84	2 03	397 38

The poor-house located in Englewood township, is supported by the three townships of Englewood, Palisades and Ridgefield, and is in charge of Mr. Levi Holmes, steward, who reports that all the inmates, who are able, work on the farm. Of the 19 inmates, Englewood contributed 5, Palisades 5, and Ridgefield 9. Old and infirm, 9; sickness, 6; infant, 1; children, whose parents are unable to maintain them, 3. Total cost of maintenance of inmates, $1000; average daily cost of each inmate, 21 cents.

In Bergen county there is expended annually about $7000 in support of the public poor, who, we do not think, exceed 300.

BURLINGTON COUNTY.

The poor of the townships are maintained at the county alms-house, situated two and a half miles from Pemberton. Mr. Theodore B. Gaskill is the steward, who reported the average number of inmates for the year at 325. Total cost of maintenance: Drawn from county treasurer, $8130.51; received from State an allowance of $1 per week for lunatics in asylum, $3292; profits of farm are supposed to be worth $3000. This includes all expenses of institution—salaries, labor and improvements. Other poor bills (cost of removal to alms-house, &c.), $1054.83.

The amount expended in pauper relief, by county and township authorities, amounted to $16,200. The overseer of Burlington city reports 600 persons relieved during the year, but how many of these were transient (tramps) is not stated. Including these figures, there were 1200 paupers in the county during the past year. Considering the amount of money expended for pauper relief, this number seems to be far too large for resident poor, who probably did not exceed 700.

CAMDEN COUNTY.

The county alms-house is situated at Blackwoodstown, the steward being Mr. Alfred Haines, who reported the number of inmates on November 12th, 1883, at 121 (57 males, 41 females and 23 children), the smallest number ever present. According to the county collector's report there were sent to the alms-house during the year 225 paupers from the different townships. As there were 131 paupers on April 30th, 1882, at the close of the previous fiscal year, the total number in the house during the year 1882–1883 was 356. There were drawn from the county collector $19,797.27 for alms-house expenses, and $1500.90 by overseers of the poor for fees and expenses for removal of paupers to the house. During the previous year the county collector reported expenditures: For alms-house, $27,151.03, of which a considerable amount was used for repairs and improvements, and for removal of paupers, &c., $589.12.

The actual cost of maintaining the alms-house can be judged better from the following extracts from the steward's annual report for the year ending April 30th, 1882, the report for 1883 not having been received by us:

SOURCES OF REVENUE.

Appropriations made by the board, $19,000; received from insane asylum for produce, $2087.52; for coal, delivered, $951.50; received for cash sales of farm, $430.85. Total, $22,469.87.

EXPENDITURES.

For groceries and provisions, $1589.37; lumber, &c., $20.10; flour and feed, $909.70; boots and shoes, $403.59; dry goods and clothing, $1672.62; beef, pork, &c., $2649.32; wages and salary, $2832.67; hardware and implements, $315.60; wood and coal, $1802.65; repairs and expenses, $3479.47; stock, $2866.31; tobacco, insurance, $383.62; wheelwright and blacksmith, $72.52; coffins, $89; sundries and

seed, $1457.95; medicine, $490.79; household goods, &c., $1311.56. Total, $22,-346.84.

INVENTORY TAKEN MAY 1ST, 1882.

Department of the house, steward's office, $189.50; hall and stairway, $244; store-room, first floor, $658; first floor, dining-room, $294; kitchen, $238; bed-room, $369; store-room, second floor, $560; sewing-room, $112; steward's cellar, $534; alms-house, $2203; kitchen, $195; pork cellar, $1492.50; smoke-house, $432; engine-room, $35; wood and coal shed, $345; farm live stock, $1886; harness, $200; implements, $755; barn stock, $735; miscellaneous articles not previously mentioned, $399; hospital and receiving ward, $506; hospital, doctor's office and drug store, $1343; permanent repairs to building and stock, $2798.72; stock and crops, $1000. Total, $17,512.72.

Estimated amount of inventory of 1880 and 1881, $35,000. Increase of inventory during the year, $14,012.72. Actual cost of alms-house for the year, $8334.12. Total, $22,346.84.

Average cost *per capita* for the year, $26.12½; average cost *per capita* for each week, 0.50\frac{2}{10}$.

Few returns show the number of persons relieved temporarily, (out-door relief,) by the townships. This has been the case in all counties where there are county alms-houses, to which all the poor who can be transported are sent; and, therefore, comparatively little out-door relief, except in the cities, is given. Gloucester City expended for this purpose, during the year, $585.92, and Camden, $2522.64, the latter sum not including that paid for medical assistance. The overseer of Haddon township writes on this point: "Last year we were not called on by any family living in the township for relief. The $30 reported were expended in feeding and lodging tramps." The first ward of Camden reports 29 relieved; the fourth, 14; the third, 4. There are eight wards in the city, but we have received no returns from the others.

We estimate the number of poor relieved in the county at 550. The amount expended reached $24,200.

CAPE MAY COUNTY.

The county poor-house is located at Cape May Court-House, and is in charge of the steward, Mr. Joseph Iszard. The number of inmates reported was 29, and the total cost $2686.04, of which $1108.80 was expended in salaries. None of the inmates are employed in productive labor.

Four thousand dollars is probably expended in maintaining the poor in the whole county. Estimated number, 100.

CUMBERLAND COUNTY.

Mr. Ebenezer Whitecar, the steward of the county poor-house, situated near Bridgeton, in Hopewell township, reports the number of inmates at 80, and the total cost of maintenance $9964.40, of which $1650 were expended in salaries. He writes that the poor are mostly relieved by the county, very few at the expense of the townships. The county collector's report shows that $257.75 were expended by the county for pauper relief outside of the poor-house, 12 of whose inmates are employed. The cause of pauperism is stated to be "mostly old age."

Altogether, about $12,200 are expended in support of the poor in this county, which number in the neighborhood of 250.

ESSEX COUNTY.

There are no county, but only city and township poor-houses, of which there are seven. The city alms-house of Newark is located on Elizabeth avenue, adjoining the salt meadows, and at the extreme end of the city. There are about thirteen acres of ground, which are used mostly for trucking. The building is constructed of brick, was originally erected in about 1840, and rebuilt and enlarged in 1868. Inmates are required to work on the farm and premises. The value of farm products, including milk, pork, &c., is estimated at $1587. In 1880 the steward reported to the Secretary of the State Board of Health that during the preceding five years the average yearly number had been 200. During the past year the number of inmates was 264, of whom 150 were permanent. Children are sent to the public school near by, and are apprenticed when places can be found. The cost of maintenance of the alms-house was $10,401.90. As the total cost of maintaining the poor of the city (including the salary account, which amounted to $7831.99,) is reported to have been $35,674.49, there must have been expended in out-door relief about $17,240. In regard to the latter, the overseer states that the monthly average relieved was 717, "representing three to a family." Ninety per cent. of the pauperism was caused by intoxicants; "ten per cent. is result of infirmities of old age."

From the Comptroller's report it appears that there is also ex-

pended, in Newark, for hospitals, $15,500, and for the "City Home," a reformatory institution for children, $18,000.

Orange city expended in support of poor during the year $7048.44, of which $1200 went for salaries. Total number of poor relieved, 153. The city poor-house is situated on South Orange avenue, (Mr. Fred'k Helmlinger, steward.) Expenses of poor house, $1722.69, or 20 cents per day a person. Number of inmates, 40, of whom 4 are employed. Causes of pauperism, "sick and helpless."

Belleville township has a poor-house, 30 by 50 feet, two stories and cellar. It is a brick structure with slate roof, and contains sixteen rooms. There is also a hospital connected with the house, size 16 by 40 feet, one and a half stories, and contains six rooms. The two acres of land constituting the farm are cultivated mainly by inmates, potatoes and vegetables being raised. The overseer of the poor, Mr. Abraham J. Joraleman, has charge of the premises. Total poor relieved, 82; in poor-house, 10. Total cost, $1515.75. Cost of maintaining poor-house, $608.50 or $18^{73}/_{100}$ cents per person daily. "Causes of pauperism are of so general a character that they cannot be specified."

Bloomfield township has a poor-farm, under charge of the overseer of poor, in the northern part of the township. Total cost of relieving poor, $2557.93, of which the salary account was $325. Total relieved, 150; in poor-house, none.

Millburn township has a poor-farm, on which the poor are kept and do light work. The superintendent is Mr. Caleb Van Wirt, the overseer of the poor, who gets $300 salary. The total cost of poor was $860.02. Of the four on poor-farm, one has a sore leg; the others came there "through the effects of rum."

Montclair township. Poor-house east of Maple avenue; in charge of Mr. Samuel King. Inmates, 10. Cost of maintenance, $2000, or 30 cents per person daily. Total cost of poor support, as given in Comptroller's report, $3174.27. Total number of poor relieved, 30. Causes of pauperism, alcohol, old age, accident, sickness.

South Orange. Poor-house in charge of the overseer of the poor, Mr. Jeremiah Meeker, who employs a man to work the place. Inmates, 5, the cause of whose pauperism is: Intemperance, 3; old age and infirmities, 2. Total number relieved, 16. Cost of poor, $1430,

The other townships have no poor-houses, and the poor are either

"boarded out" or otherwise provided for, (see remarks, Table No. 3.) The causes of pauperism are stated to be: Livingston, "unknown;" Franklin, "old and infirm, or ophan children;" Caldwell, "imbecility 5, young children 5;" Clinton, "dissipation 5, from various reasonable causes 7;" West Orange, "drunkenness 5, old age 3, sickness 10, widows 3."

In Essex county there are expended not less than $58,600 in public charity. From the data reported we have estimated the total number of paupers at 3100.

GLOUCESTER COUNTY.

Gloucester county has a poor-house to which the township poor are taken. It is located near Clarksboro. Number of inmates, 61. Cost of maintenance, $5622.60; including cost of transportation, $6234.22. In Woodbury, where the poor are reported to be "mostly aged people," the outdoor relief is provided from an annual appropriation ($397.93) and interest on bequest of $2000. There are about 150 paupers in the county, supported at an estimated public expense of $8200.

HUDSON COUNTY.

The county alms-house, to which all the poor of the county, except those provided for by out-door relief, are removed, is situated at Snake Hill with the other county institutions. Thomas Coughlin is the warden. The total expense of this institution to the county was $54,102.54, of which $7729.55 was paid in salaries. The three county institutions, penitentiary, asylum and alms-house, cost for maintenance during the year, $137,724.15. The number of paupers maintained at the poor-house was 2250, at a daily expense of 19½ cents per person. Employed, 50; value of services not estimated. The warden reports the "predominating cause of pauperism" to be intemperance. In his annual report for the year 1882–1883 to the Board of Chosen Freeholders, he gave the following facts: Total cost for the year, $54,001.54; average monthly cost, $4500.12; average number of inmates monthly, 743; average cost per inmate monthly, 5.92^{5}/_{12}$.

In Jersey City the out-door poor relieved number "768 families, consisting of 3147 persons," at a cost of $14,000. We have estimated

that the number in the county is 5850; and expense of support, $75,200.

HUNTERDON COUNTY.

In this county the poor are generally boarded out with private parties. Only one township, Raritan, seems to own a poor-farm, which is situated near Clover Hill, in charge of A. K. Rittenhouse. There are a few private poor-houses in the county, at which several of the townships board their poor, viz., Lambertville city and Delaware township, at George P. Wilson's house, located in the latter township; Holland township, with William B. Mettler, Little York; and East Amwell, with Preston Crosedale, near Woodsville. The poor of most of the townships are placed with parties who will keep them at the least cost to the respective townships (see Table No. 3.)

The overseer of East Amwell writes:

"The poor of the township are kept by Preston Crosedale, Woodsville. They eat at the same table with his family and are provided with as good quarters. They are well looked after by the overseer of the poor. A preacher is paid to preach to them once a month and to bury the dead. They are old and feeble and unable to do hard work, the oldest being 92 and the youngest 75 years of age. Causes of pauperism: Intemperance, 6; old age, &c., 3."

Tewksbury. "We have no poor-house and keep our poor with families in the township at a certain sum per week. For children under 10 years we generally pay from $40 to $60 per year. Some of the older paupers are kept for a small sum, the party boarding them having the benefit of their labor. The price paid for boarding adults averages from 75 cents to $4 per week. We have but one who costs us the latter figure. It is our endeavor to place them with their friends or where they will receive humane treatment."

The clerk of this township, Mr. Wm. Craig, thinks a poor-house would be more economical and that "there is room for improvement in taking care of our poor properly as well as economically." Causes of pauperism: "Indolence, old age, drinking habits and want of good sense."

Union. "The keeping of our poor is contracted out every year to the party who will agree to maintain all for the smallest sum. Mr. Daniel Bellis contracted to provide for all the poor in the township,

in 1883, for $425.50. None have been kept by him at his own house this year, but their friends or relatives have supported them and have been paid for this by the contractor. The principal causes of pauperism are old age, sickness or illegitimate and orphan children. My authority only extends to seeing that the township provides only for the poor properly belonging to it, and that good care is taken by the contractor of those in his charge. At my last visit I found all well provided for. All but one child are with their relatives or friends."

The following are the answers which some of the other overseers gave to the question, "State the causes of pauperism?"

"In some cases, drinking habits." "Idiotic, 5; deserted by her husband and left helpless, 1; too lazy to work, 1." "Old age, misfortune and intemperance." "In my judgment two-thirds of our pauperism has been the result of too much strong drink." "Rum is the direct cause of the pauperism of the two males reported." "Idiots, 4; too young to support themselves, 18; unknown causes, 15." "Principally rum." "Blind, 1; hard drink, 2." "Because destitute." "Old age and poverty."

The estimated number of paupers is 336; cost of maintenance, $24,800.

MERCER COUNTY.

The county does not support an alms-house, but the city of Trenton and three of the townships have poor-houses. In many of the townships the poor are boarded out. The steward of the Trenton alms-house is Mr. Thomas E. Boyd, who reported 70 inmates, 60 having been the average. The cost of maintenance was $8000, or 30 cents daily per pauper. Amount paid in salaries, $850. As in Newark, Paterson and Elizabeth, there are separate departments for out-door and in-door relief. The former is under the charge of the overseer of the poor, who relieved 100 families during the year. The cost of out-door relief was $7500; salaries, $800.

Princeton township has a poor-farm located in the northeast corner of the township. J. V. H. Quick is the steward. The expenses of the poor-farm, on which 12 paupers were supported during the year, were $1092.68, or 25 cents daily per pauper. The resident poor cost $1946; transient poor, $768.73; salaries, $951.66. Total number

relieved, 83, which does not include transient poor, who numbered 1435. Causes of pauperism of those on poor-farm: Old age, 7; cripples, 2; blind, 1; consumption, 1; fits, 1.

The poor of Hamilton township are boarded either at the poor-farm, or at other places, by the overseer of the poor. John Moon is the steward of the poor-farm, situated near Newtown, on the road from Yardville. There were kept on the farm 11 paupers; the rest at other places, at $1 per week. Total relieved, 24. Cost, $1821.61. Causes of pauperism: Age and disease; none from intemperance. None are employed.

Hopewell township has a poor-farm in the northern part of the township, on which 12 paupers were supported at a cost of $714.46, or 18 cents daily per pauper. Total number relieved, 38. Total expense of maintenance, $1622.46; salaries, $767.33. Causes of pauperism: "Intemperance, self-abuse and causes beyond their control." None employed.

The other townships have no poor-houses.

The causes of pauperism are stated to be sickness, debility, intemperance, and desertion of wives by husbands, the use of rum. The overseer of Ewing township writes: "The pauperism here is chiefly due to sickness of heads of families, and consequent inability to work, and to the fact that we have some poor widows with families of small children."

Total poor dependent on public charity, in Mercer county, 600. Expense of maintenance, $32,300.

MIDDLESEX COUNTY.

The city of New Brunswick has a poor-farm, on which 45 paupers were kept during the year, at a cost of $2700. All who are able to work are employed. The total cost of supporting the city poor is $6500; salaries, $1830. The farm is located in North Brunswick township, a few miles outside of the city. The out-door poor numbered about 150. Alderman Van Doren, chairman of the poor committee, wrote concerning the latter class: "We have given help principally to aged people and invalids during the year, so that, while the amount seems large, the number relieved is in reality small. The same persons have been helped right along through the year.

The number is only an estimate. The number of orders for relief, according to overseer's report, was 3901, amounting to $3258.50. The orders for lodging to tramps are not included."

At Perth Amboy city the poor are maintained on orders and at the poor-house, in charge of Mrs. Elizabeth McNaier. The inmates numbered 14. In regard to temporary and out-door relief, the overseer reports: "I have held the office only for six months, and cannot answer your request exactly. There may have been some few cases; judging from the number thus relieved during my term, I would say about 6, making 20 city poor in all." None of the poor-house inmates are employed.

Piscataway township has a poor-farm located about one mile north of Stelton, Philip Hummer being steward. Inmates, 9. Total poor relieved, 35. Cost of maintenance, $1622.15, which is exclusive of farm products used on farm. Salaries, $606. None of the poor are employed.

Woodbridge township supports a farm near Iselin, on which the average number of poor has been 12. Total number of poor relieved, 19. Cost of maintenance, $2785.33. Overseer's fees, $82. Salaries, $694.35.

In Monroe township* the overseer takes the poor to his own residence, at which the number was 7. Average number relieved, 9. Cost of maintenance, $900. Salary, $100. Causes of pauperism: Old age, 4; sickness, 5.

In the other townships the poor are boarded out under supervision of the overseer. In no case do any seem to be employed. The overseer of South Brunswick gives the causes of pauperism of the poor

* The following is the report of the overseer of the poor of the township of Monroe for the year ending February 20th, 1884:

Number of permanent poor, 3 old persons and 1 colored baby, 23 months old; two are sick, under care of physician.

Transient poor within the township who have received aid, 9; and of that number 4 received medical attendance; none have died during the year; two persons have been sent to the lunatic asylum; one person has been relieved by the Presbyterian church of Jamesburg; one removed by marriage, (colored); one family was taken to Atlantic township, Monmouth county; buried one child belonging to another township; assisted a family of 7 persons at Freehold; we are now relieved of them by their removal out of the State; one colored person at Allentown still a charge. The number chargeable to the township averages 10 persons. The amount allowed by the township committee for keeping the poor is $838.

under his charge as follows: Old age, 6; sickness, 4; paralysis, 1; fits, 1; children, 5; temporary causes, 20.

Estimated number of paupers in the county, 500; expense of maintenance, $26,200.

MONMOUTH COUNTY.

There were expended in this county in public charity $25,150, the poor relieved numbering 475. There are two public poor-houses, the so-called "county" and "town" houses, and two private poor-houses; to these the poor of all but seven townships are sent when necessary. In the latter townships the poor are boarded out or relieved by orders. The following are the causes of pauperism as given by the overseers: "Old age;" "old age, ill health and inability to support themselves;" "intemperance, 2; sickness and misfortune, 21; desertion of husband, 3; laziness, 4;" "shattered, 1; idiotic, 1; orphan boy, 1;" "old age, 5; the rest, sickness and widows;" "old age, 6; the rest, from chronic rheumatism, cripples, &c.;" "sickness, 20; old age, 12; blind, 1." The overseer of Shrewsbury township, who reports 76 relieved, thinks that in the majority of cases rum was the cause. The overseer of Howell township writes that one-half are paupers "through vice and immorality, the rest from natural causes." Of the two permanent paupers of Wall township, its overseer reports that one is feeble minded and one was born in the poor-house and always lived there.

Prof. Charles F. Richardson, of Freehold, who visited the poor-houses in this county and collected the pauper statistics for the Bureau from a number of the townships, made the following special reports:

Eatontown township. The number receiving aid is generally greater during the winter than in the warmer season. During the latter part of October but one or two were receiving aid from the town, but more applications were expected shortly.

In Manalapan township there is a private poor-house, called Thompson's house, kept by Frank P. Thompson, at which some of the poor of the township are boarded; during the year, 4, at a cost of $2 per week. The others are given an allowance, at their homes, varying from $1 to $2 weekly. The causes of pauperism are old age and ill

health, except a woman and her three children, the head of the family being in State Prison.

Benjamin King, who has been overseer of the poor of Ocean township since 1852, with exception of one or two years, keeps a private poor-house, a part of his residence, in the southwestern part of the township. Number of inmates, 15. Causes of pauperism, old age, except 3 children, one a colored deaf mute; some of the adults, old age and intemperance. The part of the house occupied by the poor is neat and clean. Bedsteads good, with plenty of whole covering, quilts, &c. The rooms were well warmed, and the inmates as tidy as the average of their age.

The following information concerning the "town-house," owned by Raritan, Holmdel and Matawan townships, and situated at the extreme northern end of Raritan township, was obtained from the books of the steward, D. E. Close, prior records, before his time, being unintelligible:

The expense was greater than usual for the term ending August 30th, as a large amount of supplies have been bought, which will not appear in the next quarter's statement. From the figures at hand, the average daily expense per pauper for the year was estimated at $22\frac{1}{8}$ cents, or $755.04 in all. From February 1st, 1883, to April 30th, 1883, date of audit and settlement, paid for board, $139.08; for house expenses, $43.43; total for all expenses, $224.77, of which Matawan's share was $65.61; Raritan's, $64.05; Holmdel's, $95.11. This includes the items of clothing and shoes. From May 1st to August 30th, 1883, the total expense was $215.67—board, $142.65; house expenses, $56; clothes, $4.02; nursing, $13. Of the total, Holmdel paid $83.87; Matawan, $85.17; Raritan, $46.63. The total includes $25, steward's fee.

Average number of paupers in town-house, 8; Holmdel, 2; Matawan, 4; Raritan, 2.

The matron of the house, Mrs. Susan J. Luyster, reported the number of inmates at 9; none employed in productive labor.

The following is a special report on "county-house," near Shark river:

The "county-house," so called, is on a farm of $725\frac{39}{100}$ acres in the southern part of Neptune township, bordering some three miles on Shark river, part of which is a beautiful bluff. It was erected about

ninety years ago by an association of townships in Monmouth county, but now owned by the following only: Ocean county—Dover and Brick townships; Monmouth county—Middletown, Atlantic, Howell and Wall townships. Each township sends its poor to it, shares one-sixth of the $450 paid keeper and his wife for services, and has a quarterly settlement of affairs.

The year's crops have not been as large as usual, and such as are not consumed in the house are sold to maintain the establishment. Mr. J. Newman, the steward, furnished the following figures: 200 acres cultivated, the rest woodland; 100 bushels wheat, 100 bushels rye, 500 bushels shelled corn, 200 barrels potatoes, 200 bushels oats, no live stock, and enough garden vegetables to supply the demands of the establishment.

The buildings may be described as follows: A two story frame house, with stone basement and a garret. There are halls through the centre of the house on each floor and basement, with rooms on each side. The house fronts south. Entering the basement, the room on the right is the dining-room, with an immense fire-place, burning logs of wood eight feet long On the left are the store-rooms. On the first floor, to the right, are the rooms for the men; to the left, for the women. These rooms are about twenty feet square, with large windows and doors. The floors were clean; the walls had been whitewashed within a few weeks of the visit; while the beds and bedding were in fair condition. Upstairs are more rooms, used when needed. Adjoining the house, but with no door between, was the residence of the keeper and of the men employed on the farm.

The Inmates.—On the day of visitation there were 26 inmates, 10 males and 16 females, including two under three years and one between three and ten years; 23 may be classed as permanent, 3 temporary; no insane, 1 imbecile; 24 American birth, 2 foreign; 1 married, 22 single adults; 2 births since April 1st, when the present steward took charge, and seven deaths; average daily cost is $35\frac{5}{7}$ cents each. The first quarter's expense, independent of proceeds of farm, $599.84; second quarter, $528.86, which gives probable annual cost, of say, $2257.40, independent of products of the farm. None of the labor of the paupers amounts to enough to be classed as productive.

Causes of pauperism: Old age and poor health, with no friends to

care for them, 20; children, 3; paralysis and rheumatism, 2; imbecile or foolish, 1. One old lady, nearly 100 years old, mentally very bright, was formerly in Ohio with early settlers, and walked to New Jersey some years ago to reach friends. One old lady, badly deformed from rheumatism, moves from bed to chair and back. Imbecile woman has babe from former colored inmate; babe about three weeks old. One man in bed, can only feed himself; has been there over four years. One man almost dead, entirely helpless from old age and injuries.

The inmates seem to be fairly treated, and can have no just cause of complaint, though some modern improvements would render the place more convenient.

The general feeling in the various townships visited favors the poor-house as a last resort, when temporary relief fails, as once in the poor-house they, the poor, lose all energy and make no efforts for self-support.

MORRIS COUNTY.

All the poor in the county able to be removed are supported at the county poor-house. Temporary cases are cared for by the overseers of the poor of the different townships. So far as the number of paupers relieved is concerned, we have returns only from the county poor-house and five townships. From Morristown, which embraces nearly all of Morris township, only a statement has been received from the city clerk, giving the items of expense of the local board of health, which looks after the indigent sick and poor within the corporate limits. Many of these are sent to the county poor-house by the township (Morris) overseer. The common council annually appropriates money to the board of health for poor purposes. The appropriation for the year was $825. This includes five-sixths of the poor-tax raised in the township and paid over to the city treasurer, amount for the year, $250; salaries paid: city physician, $300; clerk of board of health, $50; inspector, $50.

From all the data available we have estimated the total pauper population of the county at 400, and the cost of maintenance, $14,-450. The overseer of Chatham township states the causes of the pauperism of those under his charge (58) to be "infirmity and old age;" while the Rockaway paupers (32) are reported to have become such

"mostly by liquor." On this point, the steward of the county poor-house, Mr. Luther Skellenger, writes: "A large majority from intemperance, the balance from sickness and old age. With the information at our command, it is impossible to be exact."

The whole number of poor supported from funds furnished by the county collector was 247. The total expense was $11,146.47, which includes $2366.67 paid to the Morris County Children's Home for support of the county's pauper children between 3 and 16 years of age, and $664.54 expended for relief of paupers unable to be removed to the county-house. The amount spent in salaries was $1513.

The total cost of maintaining the inmates of the poor-house was $4965.53, or $11^{8}/_{10}$ cents daily for each person. Total number of inmates, 171; employed, 5 or 6. It is situated two miles from Boonton, the county owning a farm of 240 acres. The building is of wood, and, in 1880, Dr. Hunt, Secretary of the State Board of Health, reported as follows concerning it:

The main part is old, and, though in good condition outwardly, the walls and floor are poor. There is a new building, perhaps 75 feet from the main building, and this serves as a dormitory for the men. Iron bedsteads are used. A portable bath-tub is in use for inmates, who are fed at a common table. Cellars are under nearly the whole building. Three ward-rooms have fire places. Heating is done by steam. No regular diet list is had, but a change is provided. There are five insane paupers and eleven demented or foolish. All are considered harmless, and they are not kept separate, but the steward thinks they should be. Male and female are locked in separate apartments at night, but mingle freely together during the day. Steward believes this should be different, and that they should be kept separate at all times; but he could not well do this in the present building. Inmates are required to work on farm and garden when able. Tobacco is furnished to about 30. Kerosene lamps are used for lighting. No register is kept as to habits, cause of dependence, mental condition, &c.

The children are taught by a pauper in the building, and they are bound out as soon as places can be had. The attending physician states that they have had "no diseases for many years directly traceable to sanitary defects."

In February, 1882, all the children over three years of age in the alms-house were transferred, with consent of the Board of Chosen Freeholders, to the Morris County Children's Home, which is located in Parsippany. It is under the auspices of the Morris County Charities Aid Association. The secretary, Rev. John P. Appleton, wrote concerning the Home:

"It is a chartered institution. A law was passed about two years

ago enabling Boards of Chosen Freeholders to board pauper children in any incorporated non-sectarian institution. Our Board consented to give us their children and pay $1.50 per week for each child boarded. The children, of course, may be bound out at any time by the Board. We think that it has been a great success. The interest taken in the children by the county has been very great, and the improvement over their forlorn condition in the poor-house is almost immeasurable. * * * Children in the house at date of first report, November 8th, 1882, 31; received during year, 19; discharged, 9; number in home at date of second annual report, 41. Of those discharged there were returned to parents, 5; sent to places, 3; adopted, 1.

"I do not know of any similar home in the State. The Sussex county plan, I am told, is simply to keep the children separate in the county alms-house. This has been tried in some counties in New York State but abandoned, because it does not free the children from depraving pauper influences. It has been found that all connection with the county-house must be broken off or many of the children will eventually return to the poor-house. The plan which we have adopted from Westchester and Ulster counties, New York, is, it is thought, altogether the best, as the officials of the poor-house have nothing whatever to do with the children. Our institution is managed by two boards of ladies and gentlemen, and there is a most cordial co-operation between them and the Board of Chosen Freeholders." On account of the importance of this subject we have referred to it at length in another part of this chapter.

OCEAN COUNTY.

Returns have been received from all but Plumsted township. From these we have placed the number of the paupers in the county at 125; cost of support, $5800. There are neither county nor township poor-houses, but five of the townships send some of their poor to the Shark-river house, in Monmouth county. The other poor are provided for either by a weekly allowance of money or by boarding them out, generally with the person who will take them for the least money. The causes of pauperism are stated to be: "Poverty and old age, 1; imbecile, 1;" "born an idiot, 1;" "old age and helplessness, 4; idiot, 1;" "sickness, 3; old age 2." The overseer of Union

township writes: "We have at present a mother sick, with two illegitimate children (relief, $2 a week); a widow unable to work, $2; one man pauper, $1.50; a girl 6 years old, illegitimate, $1.50, and another girl, $1.75, whose order has just been revoked. These are all provided with board by parties who will take charge of them. Have none indentured; tried to, but no one would take them. Money appropriated this year by special tax, $350, so I think the township will probably be in debt."

PASSAIC COUNTY.

There is no county-house in this county and only two public poor-houses—the city alms-houses of Paterson and Passaic. The overseer of the poor of Little Falls has a private poor-house. In Paterson the poor are under the charge of two bureaus—out-door and in-door (alms-house) relief. The out-door relief cost $11,537.57; salaries, $700; number relieved, 461. Cost of maintaining poor in alms-house, $12,792.03; salaries, $2576; number of inmates, 173, of whom 6 are employed. Total expense of poor in Paterson, $27,605.60. The alms-house is under charge of Cornelius L. Petry and is located on Redwoods avenue.

In Passaic city, the out-door poor are paid a weekly allowance each Monday; when circumstances require they are placed in the alms-house, located on Second street. Total relieved, 112; inmates of alms-house, 20. Expense of maintenance at the alms-house, $912, or 12½ cents daily per pauper. Total cost of poor, $3094.61, of which $309.90 was paid in salaries.

Returns have been received from every township except Manchester. Estimated number of paupers in the county, 820; cost, $35,200.

In Passaic city the causes of pauperism are reported to be: Old age, 4; too young to support themselves, 3; balance get free rent, and do what they can to support themselves. West Milford: Old age, 9; sickness, 14. Acquackanonck: Ill health. Little Falls: Old age, 2; abandoned by parents, 1.

SALEM COUNTY.

The county poor-house is situated near Woodstown, (D. M. Baker, steward,) to which most of the poor that can be moved are taken;

a few receive pensions at their homes. The relief given by the different townships seems to be comparatively small. On this point the overseer of Mannington township reports: "Our township raises by tax from $100 to $200 annually for the relief of those not able to be removed to the county-house. A very small amount has been used this year; less than usual—not over $10, besides that which has been expended in burying the dead."

The whole number of paupers in the county, including those in the poor-house, probably does not exceed 125; cost of support, $9200. In the poor-house there were 71 inmates; the total expenditures amounted to $7378.60. None of the inmates are employed. Two-thirds are said to come to the alms-house through rum, directly or indirectly. The alms-house report of the trustees for the past fiscal year shows the items of expenses, products of the farm, &c., viz.:

EXPENDITURES.—Painting and paint, $33.57; bricks, $56.40; lumber, $91.87; coopering, $8.50; lime and cement, $112.84; provisions, $155.14; stock, $430.70; water-pipes, $42.49; sundries, $164.13; gravel, $8.20; labor and material for repairs on the house, $350; insurance, $7.20; iron bedsteads, $54; feed-mill, $33.34; potatoes, $44; pump, $6.95; freight, $2.30; chairs, $71; pensions, $1441; ice-box and cans, $21; clover seed, $45 25; wood, $15.50; rails, $45; clerk's salary, $15; treasurer's salary, $25; coal, $367.46; dry goods, $312.30; groceries, $621.31; printing, $31.32; blacksmithing, $98.83; drugs, $166; shoes, $119.70; tobacco, $89.30; flour, $106.25; harness, $21.37; hardware, &c., $172.51; orders, $21.25; undertakers, $118.44; doctors, $140; carpenter work, $20.93; fertilizers, $93.78; steward's salary, $500; trustees' fees, $193; overseers of poor, $78.63; labor on farm, in the house and repairs, $811.97; earthenware, $13.77. Total, $7378.60.

PRODUCTS OF FARM.—87 loads of hay; 160 bushels potatoes; 80 loads corn; 156 bushels oats; 672 bushels wheat.

STOCK KILLED FOR HOUSE.—19 sheep; 5 beeves, weight 3596 lbs.; 1 calf, weight 200 lbs; 32 hogs, weight 9505 lbs.

SOMERSET COUNTY.

The pauper relief in this county costs $15,700, while the total number of paupers is not far from 225. There is no county alms-house, but four of the townships have poor-farms. In five townships the poor are kept where they can be boarded most economically. In Bedminster two of the paupers are insane. The overseer of Hillsborough states the causes of pauperism to be: Idiotic, 3; old age and

infirmity, 4; living beyond their means, 3; illegitimate, 3; one male and two females being employed, but get nothing for their labor.

The township poor-farm expenses of Hillsborough, on which there are 16 paupers, amount to $1399.97, which includes $400, amount of steward's salary, and $31, cost for lodging and feeding 402 tramps, one meal each. The out-door poor cost $737.50. The poor-farm is located near the village of Neshanic; John Woodruff, steward. It contains 120 acres of land, and good, suitable buildings for use of the poor, together with stock and farming utensils worth $12,000.

Bridgewater township owns a poor-farm of 160 acres, and good, substantial buildings for use of the poor, together with stock and farming utensils, worth $16,000. It is situated near the centre of the township, the steward being Cornelius Van Cleef. Number of permanent inmates, 5; employed, 2. About $2000 is expended for the poor-house. Total number relieved in the township, 20; also a great number of tramps. Total expense of maintenance, $3500; salaries, $700.

On the poor-farm of Franklin township, of which Abraham Voorhees is steward, there were 15 paupers. Total poor relieved, 40; cost, $2025.

J. H. Schomp, the overseer, has charge of the poor-farm of Montgomery township. Total relieved, 15; on farm, 4. Cost of maintenance, $766.35; salaries, $425.

SUSSEX COUNTY.

The county poor-house is located near Branchville, in Frankford township, Edward C. Maines being steward. Number of inmates, 120; cost of maintaining house, $6316.75, of which $839 is for salaries. The county collector's report places the amount paid for alms-house, by order of the Board of Chosen Freeholders, at $7759.66. Of the latter amount, there were expended for groceries and provisions, $3299.19; dry goods, &c., $690.70; general merchandise, $954.99; salaries and labor, $1127.18; medicine and attendance, $173.22; liquors, $16.70; coal account, $761.52; horses and cattle, $648.21.

The average daily cost for each pauper is stated at 14 cents. Two of the inmates are employed; value of services, $100 per year. There

do not seem to be many poor relieved separately by the townships, and our estimate of the total number of paupers in the county is 200; cost of support, $9500.

UNION COUNTY.

There is no county-house. Elizabeth city has an alms-house, and Rahway city a poor-farm. In the other townships, and Plainfield, the poor are either boarded out or relieved by regular allowance. The cost of pauper relief is not less than $26,200, while the number of poor relieved exceeds 700.

The causes of pauperism of the Elizabeth poor are stated to be sickness, disability and old age, equal in number. Summit—"Almost wholly to be attributed to liquor;" Cranford—"Often owing to accident, and sometimes, as in a case last year, to drunkenness;" Fanwood—"Old age, 2;" Union—"Mostly from use of liquor."

In Plainfield there are 25 adults regularly relieved, and 14 occasionally; also, at least 46 children. In Elizabeth, the number of out-door poor relieved averages 143 heads of families monthly, the superintendent estimating the number of individuals at probably 450. Cost of out-door relief, $8547.32; attending to out-door relief, $920. In the alms-house there were remaining, at the beginning of the year, 47; admitted during the year, 54; discharged, 59. This would make the number of inmates 101 for the year; the number during each month was as follows, viz.:

Month.	Men.	Women.	Children.
January	23	14	18
February	23	14	19
March	18	12	18
April	17	10	18
May	19	11	19
June	15	12	18
July	14	9	11
August	16	10	16
September	15	12	18
October	16	14	14
November	20	12	19
December	21	15	19

The cost of maintenance at the alms-house was $3820, exclu-

sive of salary of superintendent, $600. Number of paupers employed, 6; value of labor, $5 per month each.

Dr. Hunt, in the report of the Board of Health for 1880, has the following concerning the Elizabeth city alms-house:

It is situated on the border of the salt meadows, just out of Elizabeth city limits. It is built of stone and brick walls are hard finished. Most of the children are vaccinated, but it is not seen that they are vaccinated when they are brought in. Iron bedsteads are in use. Bath-rooms are provided for inmates. Sewage runs in pipes and empties about 200 feet from building, on the salt meadows. Buckets are in use in case of sickness. Water-supply is by well and cistern.

The average number last year was forty. There are three insane paupers. An inmate's arm was broken a couple of years since by an insane pauper. As far as possible the sexes are kept separate. Medicines are kept in the house, and a physician visits them every two days. Tobacco is furnished to those that use it.

No arrangements are made for schooling children. As soon as old enough they are put in the various asylums. Kerosene oil is used for lighting. No register is kept as to habits, cause of dependence, &c. Over one-half are foreign born.

Heating is by hot-air furnaces, and ventilation is through windows and doors. The house, at time of my visit, was certainly not crowded, and air of apartments was pure, so far as sense of smell was concerned.

Paupers are required to work on the farm and garden when able. The institution is reported healthy.

WARREN COUNTY.

In this county, as in a number of other counties, the poor, if able to be removed, are sent to the county poor-house. About $7600 are spent by the public authorities for relief of paupers, who number, if our reports from the townships making returns are correct, probably 400.

H. R. Tunison, the steward of the poor-house, reported 134 inmates, of whom about an average of 10 females are employed in housework and 8 males on the farm. In regard to the cost of maintenance he writes:

"I cannot give you the average daily cost of each pauper, as we do not keep a daily record, and all our expenses of running the farm are included in our report. Our drafts on the county treasury for the year were $4350, exclusive of officers' salaries, which were $650. Three-fourths of our paupers came here, directly or indirectly, through use of strong drink; nine-tenths of the males, directly."

Dr. Hunt, in 1880, among other things gave the following information about this poor-house in the report of the State Board of Health:

This is situated on the road leading from Hackettstown and Port Murray to Belvidere. There is a large farm, which is worked by pauper labor principally. The building is old, having been built many years ago. Some 100 feet from the main building there is a two-story building of more recent construction, which serves as a dormitory for some of the men.

The inmates in the summer get reduced to less than 90. In the winter they are added to until over 120 have to be accommodated. It will accommodate 80 or 90 inmates quite comfortably, but as built and arranged, it is not adapted to hold over seventy-five. * * * I was attending physician for two years. * * * The mortality to children was great during my attendance. * * *

The children are sent to school at the public school about a mile distant. Places are found for them as fast as possible. The arrangement of the building and its overcrowded condition make it impossible to separate the sexes entirely. Every effort possible is made to keep them apart, but they succeed in getting together at times. The following tells its own story:

Deaths: From June, 1878, to January, 1880, 16; those having one or both parents paupers, 6. Births: Number of births from June 1st, 1878, to January 1st, 1880, 6; number of births conceived in the house, 3. Statistics of whole number in the house: at present in the house, 113; conceived and born there, 8; born there, 16; having pauper parents, one or both, 32; foreign born (Ireland, 25; Scotland, 2; England, 2; Germany, 5), 34; native born, 79. Statistics of adults in the house: Adults in the house, 84; adults conceived and born there, 2, (in addition to this there are a number of doubtful cases); adults having pauper parents, one or both, 6. Statistics of children in the house: Number of children in the house, 29; number of children born there, 14; number of children having pauper parents, one or both, 26; number whose parents are both there now, 11; number of children conceived there, 6; number of children of illegitimate birth, 12; percentage of children to whole number of inmates, 25.66; percentage of children conceived there, 20.68; percentage of children that had pauper parents, one or both, 89.65; percentage of children that are illegitimate, 41.371; percentage of births in house, illegitimate, 16.66.

CAUSES AND PREVENTION OF PAUPERISM.

Pauperism, as Prof. Faucett, in his celebrated work,* issued a few years ago, in England, well observed, is a production of artificial conditions rather than of inevitable necessity. A poor people may have very little of it.† In fact, the facility of getting help is a productive

* Pauperism; its Causes and Remedies.

† One person in every twenty is a pauper in England. In Scotland the proportion is one in twenty-three. In Ireland—a poorer country, where the work-house test is more strictly enforced—the proportion is one in seventy-four.

cause of pauperism, which increases in proportion to the means provided for its extirpation. This consideration has led some to advocate the total abolition of out-door public relief—a heroic treatment, which, probably, will never be followed, for there is too much resemblance in it to that provision of the Roman Code, which held that "it is better that vagabonds should be left to die of hunger than that they should be supported in begging." Then, too, it must be remembered that we have two forms of pauperism to deal with—one the result of imprudence, the other of providential visitation. To the alleviation of both attention should be directed. But both economy and humanity require that the relief and supervision of the poor should be well ordered and well guarded. *

PAUPERISM IN ENGLAND.

In the early period of English history, the trouble of poverty and mendicancy prevailed to a grievous extent. The legislators of that time assumed that the best cure for the malady was forcible repression, and for centuries carried out this practice. But

Towards the close of the eighteenth century," says Mackenzie, in his History of the Nineteenth Century, "a change came over the spirit in which the poor-law had been administered. There set in, with much energy, a reaction against the old severities, and a dangerous relaxation of strictness. It came to be understood that the poor were suffering, and were, in consequence, discontented. To avert the probable results of their dissatisfaction, an act was passed enlarging the powers of magistrates, and ordaining that relef should be given in such manner as would make the condition of the paupers comfortable. The law was construed with dangerous liberality. The able-bodied laborer who sought relief was no longer obliged to enter the poor-house; money was given to him at his own home; insufficient wages were supplemented from the rates; the lowest class of persons obtained relief with such unwholesome facility that the condition of the pauper became more desirable than that of self-supporting labor. The cost of the system became intolerable. In 1801, four millions sterling were expended in relief of the poor of England and Wales. In 1818, the amount

* "The cost of relieving the poor," said the Massachusetts Commissioners of Charity, in 1880, "has increased within the past quarter of a century out of proportion to the increase in their number. The tendency to increase the average cost of relieving a given amount of poverty has been observed of late years, under other governments, and often remarked upon by persons concerned in poor-law administration. It does not necessarily indicate extravagance, but better care, more thorough classification and a more exact knowledge of the poor than formerly existed; while, in some cases, also, it is due to want of care in dispensing public charity."

had grown to nearly eight million. * * * The evils of pauperism had become unendurable, and it was felt that some attempt to remedy them could no longer be delayed. An investigation by a Parliamentary committee revealed a system 'destructive to the industry, forethought and honesty of the laborers; to the wealth and morality of the employers of labor, and of the owners of property, and to the mutual good-will and happiness of all.' The enormous cost was not by any means its most serious aspect. It was achieving, with appalling rapidity, the utter demoralization of the English peasantry. Already the wholesome repugnance to accept the pauper's dole had become extinct. Relief was demanded as a right, and in some counties was avowedly given to all who applied. Pauperism had become hereditary. Once conceded to the applicant, the privilege was continued during life, and transmitted to his idle and debased progeny. Money thus acquired was spent freely in vicious indulgence. So deeply were these evils felt that some voices were raised for the total abolition of poor-laws as the only cure.

Parliament enacted (1834) that out-door relief of the able-bodied, except in cases of emergency, should cease. Henceforth the pauper would not ordinarily receive money to be expended at his discretion; he would receive food and lodging, in order to obtain which he must accept the restraints of a strictly-governed work-house. The supplementing of wages from the rates was forbidden. A central board with large powers was appointed to direct the administration of the law. A vast and most beneficent change in the condition of the English peasantry takes its date from that day. Two years after, wages had risen; the able-bodied paupers had found employment, and were self-supporting. The rates had diminished forty per cent. There was gradually a marked change for the better in the habits of the working people, and a marked decrease of illegitimate births. But this amelioration has not been progressive—indeed, it has not been permanent. In the course of years the practice of giving out-door relief once more became so habitual, that now only about one-ninth of the paupers enter the work-house. One person in every twenty is a pauper. The annual cost of pauperism in England and Wales exceeds £7,000,000.*

*The official returns for England and Wales of the Registrar, (see "Financial Reform Almanac for 1884," page 114,) show a decrease in the number of adult able-bodied in-door paupers, and also in the same class of out-door paupers, but an increase in all other paupers, (exclusive of vagrants,) since 1849.

Adult able-bodied in-door paupers in 1849	28,123
" " " " " 1883	24,867
Decrease in 1883	3,256
Adult able-bodied out-door paupers in 1849	173,521
" " " " " 1883	80,490
Decrease in 1883	93,031
All other paupers, (exclusive of vagrants):	
In-door paupers in 1849	91,252
" " " 1883	165,519
Increase in 1883	74,267

OUT-DOOR RELIEF.

Out-door relief should not be granted, except in cases of sudden and pressing necessity, and not without careful investigation into the circumstances and character of the applicant. A large number of persons, naturally idle and improvident, will be trained and educated for the poor-house by out-door relief, continually and prodigally administered. "Once a pauper, always a pauper," is said to be an axiom of the poor-law. Hence, there is great need of effecting practical co-operation between the managers of public and private charity. In many of the larger cities there are bureaus of charity, which seek to connect the two systems of public and private charity, so that all the indigent may be judiciously aided.* "In the matter of the associated charities in cities," observed the New-Jersey delegates to the National Conference of Charities and Corrections, (1882,) "we were much im-

Out-door paupers in 1849	641,523
" " " 1883	528,420
Decrease in 1883	113,103

The population of England and Wales in 1849 was 17,564,656; in 1883 it was 26,700,000.

The criminal returns of 1849 and 1882, (the year 1883 is not yet given,) were in England and Wales as follows:

Committals in 1849	27,816
" " 1882	15,260
Decrease in 1882	12,556

* "I take the applications here," said Mr. William Blake, the superintendent of the out-door poor, in New York city, as he sat behind his enormous desk at the office at Eleventh street and Third avenue. "Whoever wants coal from the city must first come here and ask me for it. I know a great many who ask, of course. Many of them are shiftless and worthless, and unfit objects of charity. Many pretend poverty when they are able to buy coal. They come here simply because they think they can get it for nothing.

"All such I refuse if I know them. If I think the case is worthy or doubtful, I take their names and addresses. These are made up into lists for our visitors. The visitor goes to the house or room, and investigates the case. If he reports favorably, he writes 'worthy' opposite the name on the list, and at the same time gives a card to the applicant. This card is to be given to the cart-driver when he brings the coal. Then we fill in another card here, which is the order of the contractor to furnish the coal. He sends it, and has to return both cards to us in order to get his pay."—*Newspaper report.*

pressed with the wisdom of such organizations as within the past few years have been established, securing in large towns the central registration of all requests for personal or family relief, and a consultation as to the best mode of securing it. 'Not alms, but a friend,' has been a motto in these organizations, and their working has in many instances been most beneficent." In our State, such associations exist in Newark and Salem, and, perhaps, other localities.*

OUR ALMS-HOUSES.

The improper administration of our alms-houses also contributes, in no small degree, to propagate a race of paupers. If the poor once get as far as the poor-house, it is our interest and duty, humanity requires, that they shall be relieved thoroughly and efficiently, in order, if possible, to return the inmates to society, so that they may again become honorable and active members of it. To this end frequent visitations and inspections by State officers are necessary, for experience teaches that little attention is paid by the public to the condition of the average country poor-house inmate. Concerning this subject some one has correctly said: "Commonly, his misfortunes or his vices are stowed away in a remote poor-hou-e on a muddy road. Politicians do not concern themselves with his fate, for he has no vote; benevolent people have their hands full in helping the poor who are not yet sunk into paupers; the very newspapers seek him only when his woful lot has acquired the lurid attraction of 'a horror.'"

In our State there are 41 poor-houses, of a public nature. Of these 12 are county alms-houses, owned by the counties and supported by a county tax. In 29 townships, which are not interested in the county-houses, are township poor-houses, a few of which are private, owned by the respective overseers of the poor. Generally, where there are no poor-houses, the poor are boarded with private families, or "farmed out," "sold," as many of the overseers called it, to the lowest bidder. There are 196 townships interested in poor-houses,

* That system which economists praise as the most deserving of imitation has been adopted at Elberfeld, Westphalia. It embraces a careful system of house-to-house visitation among the city poor, who are then aided with the public money, or by private contribution under official management.

either public or private, while in 71 there are none. How are the poor "stowed" away in those localities where there are no poor-houses? What is the condition of the inmates of our 41 poor-houses?

We quote below from a newspaper published in Middlesex county, an extract which shows a disgusting state of affairs in at least one locality in that county; and how many places like it are there in our State? It is safe to say that this case is not a solitary exception, and is, perhaps, a fair specimen of the way our township paupers are "cared for:"

The editor of the New Brunswick "Fredonian," having heard rumors that cruelties and inhuman treatment were being practiced in the ——— poor-house, sent a reporter to investigate the matter. The reporter discovered a state of intense indignation among the surrounding farmers, who were convinced that the man now in charge of the poor-house was an unfeeling brute, who treated the unfortunates under his charge with stolid and murderous cruelty. It seems that up to the 27th of last March the poor-house was under the charge of Capt. George Peterson, who was very kind and generous to the inmates. But on that day a change was made, and a German butcher, named ———, was placed in charge. This is the man who is alleged to have applied to the poor creatures under his care less consideration than he would bestow upon his hogs and beeves.

The "Fredonian's" account continues as follows:

On the porch of the ——— hotel stood a rough-looking, but evidently kind-hearted old farmer, who ripped out an oath a yard long when asked how the poor were kept at the ——— place.

"Kept? Why ——— my eyes, they hain't kept for nothin'! Them as knows says as how there is one old codger up there who is just rottin' away. ——— is paid $2.25 a week to feed each of his men, but I'll bet my hopes of a full crop agin a dead crow that it don't cost him that much to feed the whole ——— caboodle of 'em!"

Not elegant language, to be sure, but forcibly expressed. The farmer said further that a native of the township had been sent to the poor-farm mentioned. He had a sore on one of his legs which needed the attention of a surgeon. The poor fellow was placed in an attic room, without fire, in the middle of winter. Here he was most brutally treated. Nothing sheltered him but the roof and thin weather-boards from the cold blasts, and snow would sift into the attic from the outside. In rags, and with slight bed-clothing the man was left to get well! The sore on his leg grew worse, and it began to fester. The man was slowly dying. Dr. John Thompson, of Washington, had called at ———'s, examined the man and left in disgust. He had stated that the sick there would die or soon starve to death.

In a few moments later the house of ——— was reached. A hairless individual, whose peculiar malady had deprived him of all the hair on his head, the latter shining in the sun like a billiard ball, strode out from behind a pile of wood which he had been chopping, and began singing a song about "Napoleon and his bunch of roses." He was one of the inmates of the poor-house, and was as crazy as could well

be imagined. Passing him and going toward the house, the reporter was met by ———, a six-foot German of most repulsive bearing.

Spying a physician's gig in the lane, the reporter made an excuse by inquiring "whether the doctor was in?"

"Yas, he ish oop stairs mit der sick. Coom oop mit me!"

Entering the house, the writer was conducted up a narrow flight of stairs and ushered into an attic. His nostrils were immediately assailed with a horrible stench, in comparison to which the odors arising from a vitriol factory were as the perfumes of the tropics. ——— did not seem to mind it much—he was evidently used to it—but for the moment we imagined ourselves suddenly transported into a vault among decomposing bodies. On a cot scarcely two and a half feet wide, standing under the eaves of the roof, reclined a man probably seventy years of age. His name was ascertained to be Abraham Selover. On a chair at the head of the cot stood a bowl of some sort of liquid, which was called coffee by courtesy. On its surface had gathered a thick scum, denoting that it had stood there for some time. A dry crust decorated the side of the chair nearest the bed. Bending over the invalid was Dr. Disbrow, of Old Bridge.

"Now, here is a case for you!" exclaimed the latter. "This man became afflicted with a white swelling some years since, and if then properly cared for he would have survived. He is now nearly dead. The swelling turned into a sore, which is eating and rotting the flesh away to the bone. The peculiar odor in this attic arises from that sore. Do you wish to see it?"

The reporter's nostrils had done duty for his eyes, and he declined. Going over to the cot the sick and almost dying man said to us:

"Have you come to take me away? Oh, I want to go back to Peterson's again! They used to feel for a man there, and I was able to walk about and sit in the sunshine. All night long I lie on this narrow bed—afraid to move for fear I will fall out on the floor. I suffered for a fire—they gave me none. I have been chilled to the marrow, but blankets are scarce. The sore has eaten into my bone—my flesh is rotting away. I want to die and end it all. The doctor says I am too weak to submit to amputation—that I will die. I will die soon anyhow, but I might have been a well man to-day if they had only allowed me to remain with Capt. George!" Too weak to continue further, the poor man sank back on a very dirty pillow and moaned out his anguish.

In a corner, partitioned off from the main floor of the attic, was found another invalid, slowly approaching his end. The clothing on the bed where he lay was nauseatingly filthy, which, added to the poisoned atmosphere, was enough to encompass the death of a perfectly healthy man if endured for any considerable length of time.

Just one hundred years ago the English poet Crabbe wrote "The Village," in which is contained the following description of the "parish work-house." It would apply with startling accuracy to some of our New-Jersey institutions of the present time:

> Behold yon house that holds the parish poor,
> Whose walls of mud scarce bear the broken door;
> There, where the putrid vapors flagging play,
> And the dull wheel hums doleful throughout the day;

There children dwell, who know no parent's care;
Parents, who know no children's love, dwell there;
Heart-broken matrons, on their joyless bed,
Forsaken wives, and mothers never wed;
Dejected widows, with unheeded tears,
And crippled age, with more than childhood fears;
The lame, the blind, and, far the happiest they;
The moping idiot, and the mad-man gay.
Here, too, the sick their final doom receive,
Here, brought amid the scenes of grief, to grieve,
Where the loud groans from some sad chamber flow,
Mixed with the clamors of the crowd below;
Here, sorrowing, they each kindred sorrow scan,
And the cold charities of man to man,
Whose laws indeed for ruined age provide,
And strong compulsion plucks the scrap from pride
But still that scrap is bought with many a sigh,
And pride embitters what it can't deny.

* * * * * * *

Such is that room, which one rude beam divides,
And naked rafters form the sloping sides;
Where the vile bands that hold the thatch are seen,
And lath and mud are all that lie between,
Save one dull pane that, coarsely patched, gives way
To the rude tempest, yet excludes the day;
Here, on a matted flock with dust o'erspread,
The drooping wretch reclines his lanquid head;
For him no hand the cordial-cup applies,
Or wipe the tear that stagnates in his eyes;
No friends with soft discourse his pain beguile,
Or promise hope till sickness wears a smile.

* * * * * * *

He ceases now the feeble help to crave
Of man, and silent sinks into the grave.

The newspaper article quoted above is certainly a shameful disclosure for a civilized community; and a thorough inspection would probably demonstrate that the Middlesex place is only one of the many which require the missionary efforts of some of our Christian people, who do not seem to consider it part of their duty to visit their respective township poor-houses. In theory, the small, local poor-house is the best possible institution in which to place the poor; for there they are among their kindred and friends, and it is easier to reach them than when far removed from their homes to large county or State establishments. The churches, too, it may well be argued, will, or ought to,

see to it that the local poor, more or less connected with them, are well cared for in the institutions in their neighborhoods. But the fact is notorious that neither churches nor individuals interest themselves in this important matter. "Good citizens," recently observed a well-posted writer in a local newspaper, "generally avoid the poor-house and the jail. Not one in a hundred of those who live in the near neighborhood of either, takes the trouble to enter its doors, or to see whether its inmates are well or ill provided for. It is everybody's business, and therefore it is nobody's business. We put the poor and the criminal as far out of sight as possible." The tax-payer, too, is glad to have the poor-tax as low as it can be made, and the neglect of duty, or criminal conduct of the local poor-officer is fully condoned by the plausible excuse of economy. This knowledge makes it the interest of those who have charge of the poor, and whose popularity and office depend on it, to curtail expenses, even if the result be unkind treatment of their wards. Our township poor-officers, under our present system, are generally unfit to be trusted with the care of the poor, because of ignorance, indifference and incapacity on their part, and the absolute neglect of the people behind them. Actual circumstances are of more weight than abstract theories; and experience proves that large, central county or State establishments for the poor are preferable on the score of humanity and economy. At all events, it is high time for our Christian communities to see to it that their public charities are more carefully and thoughtfully managed. In every county in the State there should be an organization similar to "The Morris County Charities Aid Association," which a few public citizens of Morris county succeeded in establishing a few years ago. In response to a circular, bearing date January 27th, 1881, and signed by nine persons—four ladies and five gentlemen—which was distributed throughout Morris county, a meeting of citizens was held in the Lyceum building, Morristown, on February 9th. The circular stated:

It has seemed to a number of citizens that this county, as an enlightened Christian community, is not exercising that intelligent care and supervision which it ought over those thrown upon it for support. There is good reason to believe that, in its present condition, the alms-house is, unavoidably, productive of vice and of hereditary pauperism. There is no *effective* separation of the sexes. There are in the house, mingled with the adult paupers, from twenty-five to thirty children, whose characters cannot but be depraved by the influences surrounding them, who, it is

feared, are in a fair way of becoming paupers or criminals for life. And this state of things, in addition to the moral injuries resulting from it, must, in spite of the most economical management on the part of the Board of Freeholders, result in a large financial burden upon the county. There is need, moreover, of improved sanitary regulations.

The result of this meeting was the association mentioned above. Its objects are declared by the constitution to be:

First. To promote an active public interest in the alms-house of this county, with a view to the physical, mental and moral improvement of the pauper inmates.

Second. To make the present pauper system more efficient, and to bring about such reforms in it as may be in accordance with the most enlightened views of Christianity, science and philanthropy."

The association immediately set to work by suggesting to the Board of Chosen Freeholders certain reforms regarding the county alms-house. The report of the association states with what success: *

As a result of the suggestions made, a high fence has been built around the alms-house and between the two divisions of it, which, it is believed, effectually separates the sexes, thus removing one great moral evil, which was also the source of others. * * * But the effectiveness of this measure of the Freeholders is apparently proved, and no less the great necessity of it shown, by the fact that, since the sexes are thus separated, the number of paupers is largely diminished, the alms-house having ceased to be an attraction to the able-bodied, lazy class, who really have no right at all to be found within it. It is cause for congratulation if by so simple an expedient as the building of a fence so much can be done toward three reforms—the removal of a shameful blot and plague-spot, the lessening of the evil of hereditary pauperism, and the driving out, from the county's charities, of the idle and vicious tramp. The citizens should not, however, take it for granted that this remedy is all that is needed. Let them watch the matter closely, and see that the discipline of the alms-house is strictly enforced, and also that in the exercise of needed discipline, the committee of the Freeholders, as well as the steward of the alms-house, be upheld by public approval. The committee's other suggestion to the Board of Freeholders, in regard to the enforced labor of able-bodied paupers, has as yet brought forth no result. Assurances were given that steps would be taken to furnish to all paupers such work as each was capable of, and to compel the performance of the appointed task. As yet, however, nothing has been done. It is to be hoped that during the coming year efforts in this direction may be more successful.

THE CARE OF PAUPER CHILDREN.

But one of the most prolific causes of our increasing pauperism and

* The Morris County Children's Home was also organized, of which an account is given in another place. See pages 396 and 416.

crime and resulting high taxes, is our criminal neglect of our destitute and pauper children. The taxpayer should understand that it costs more in the long run to bring up a child as a pauper, in the poor-house or elsewhere, than at a good school. In the one case he is almost certain to perpetuate and increase the pauperism and crime which the community has to pay for; in the other he is being prepared to become a good citizen and to bear his share of the burdens of society. However much they may cost, schools and other methods to prevent the pauperism of children are far less expensive than the vast amount of money required for maintaining our expensive agencies for poor relief and for the detection, punishment or prevention of crime. The necessity of separting juvenile delinquents from older criminals, by placing them in reformatory institutions, has been recognized in this State. Why should not the idea be carried a little further and special attention be paid to the treatment of poor as well as criminal children? What is the best way of rescuing these poor little waifs and training them for decent homes and to become respectable citizens, may still be a question of details, but there can be none that they should be prevented from getting into the local poor-houses, where they will be reared in squalid vice, ignorance and even crime. Poor-houses are simply schools of pauperism for children; once there and all manliness of character is undermined and destroyed.

Mr. A. S. Meyrick, who has given this subject earnest attention, in his report as a delegate to the National Conference of Charities and Corrections, speaks favorably of a State institution, a plan adopted by the State of Michigan:

From the reports of the State of Michigan it appears that that State, a number of years ago, adopted the somewhat novel plan of gathering all her pauper and abandoned children into a single home, maintained at the expense of the State, and under the management of State officers. This institution, located at Coldwater, has fully demonstrated the wisdom of its designers. The children, whose parents have been unable or have failed to provide for them, instead of being left to the proverbial wretchedness of local poor-houses, have been brought to the home and carefully provided for; given a thorough common school education, and placed, at the proper age, in good families, among whom the watchful care of the officers still follows them, and guards their interests. Instead of increasing the expense of caring for the little waifs, the process actually diminishes it, the cost of maintenance in the home being considerably less than it was in the poor-houses, while between the accommodations furnished by the State and the local authorities, there is no comparison. On the one hand, the children are carefully clothed and fed, wisely and kindly trained, instructed

thoroughly in the rudiments of education, placed in carefully-selected homes, and put in the way of becoming good citizens. On the other, they are left to run wild in the company of the ignorant and degraded, with little or no schooling except in vice, and their initiation into criminal courses is nearly certain. The number of those who have received their first impulses in the ways of crime in county poor-houses, would be startling if we could realize its full magnitude. Dr. Elisha Harris, the late State agent for the aid of discharged prisoners in New York, took pains, some years since, to trace the descendants of a single poor-house child for six generations, in one of the river counties of that State, amounting to about 900 persons in all, the greater part of whom were idiots, drunkards, insane, beggars or prostitutes, while over 200 of them have been criminals. In a single generation of this unhappy race there were 20 children, 3 of whom died young, 8 were repeatedly inmates of poor-houses and jails, and 9 were sent to State prison, under sentences amounting in the aggregate to many years. The cost to the county and State of maintaining and punishing in public institutions these six generations of the descendants of one poor-house child, was more than enough to set up and put in thorough order a home for children of her class, sufficient for the needs of a State like New Jersey. This case may be considered extraordinary, but it is to be remembered that whether virtue reproduces itself or not, vice is certainly, and often abnormally, prolific. With the success of Michigan, and with such facts before their eyes, it is not wonderful that the people of other Western States have adopted her idea, and are carrying it into execution.

In Massachusetts the pauper children in care of the State are placed in private families. This plan is strongly advocated by the State Board of Health, Lunacy and Charity, which, in its report for 1882, asserts that—

The practice of paying board for children between two and ten years old has been sanctioned by legislation and approved by experience; it is, therefore, likely to continue and increase. * * * In nineteen years the children in the State establishments have diminished about 750, a very gratifying and noteworthy change. Even adding to the children now maintained in these establishments the number of motherless infants supported by the State in families, the aggregate would not much exceed 1000, while there were more than 1600 in 1863. * * * It is to be understood that these poor children of the State are by no means "farmed out" to the lowest bidder. They are all in respectable homes, well fed and cared for, visited by good women, the auxiliary visitors of this board. They have church and school near them, and seem to be in all respects on a par with the community in which they live. They have nearly all been personally visited by a member of this board during the past year, and all by the auxiliary visitors frequently. The boarding out of pauper children will always be attended with great risk without this safeguard—the assistance of officials by conscientious women working in their own vicinity. There is, however, equal risk in placing out or indenturing older children, such as are taken for their services in families; for these are liable to be overworked, poorly clothed, deprived of schooling and otherwise oppressed, even in families of respectable standing, unless protected by frequent visitation. The chil-

dren boarded out develop more rapidly, and become self-supporting at a much earlier age than those who are trained even in the best private institutions. All institution life is unnatural for children, and the best is a makeshift.

Prof. Fawcett, in his work already referred to, held that the boarding out of pauper children in families "is an encouragement to improvidence, to immorality, and to other social vices. It rewards the improvident at the expense of the thrifty; it will introduce far greater evils than it will cure, and it will exercise a demoralizing influence, which will most powerfully promote the future increase of pauperism. It places the orphan and deserted child in substantially a better position in life than the child of the laborer; it encourages by a pecuniary bribe the neglect of an important part of the obligations of parents to maintain and educate their children during their lives, and to make provision for them after their deaths; it encourages desertion of children born out of wedlock, by their mothers, and affords the strongest possible encouragement for desertion of legitimate children."

But all charity which relieves parents of their natural responsibilities has these results, to a greater or less extent. A writer in "The Century,"* therefore, advocates that the State should *punish* parents for not bringing up their children to habits of industry, and that it should also do its best to deprive them of excuse for their negligence.

It may seem a startling proposition, but it is nevertheless true, that if, instead of spending a quarter of a million dollars annually in the direct encouragement of illicit unions, the city of New York should spend the same sum in giving instruction in working in wood and metal, in cooking, in dressmaking, in drawing, even in washing and sewing, much more suffering would be prevented than is now relieved. But so long as the majority of our citizens are of the opinion that a foundling asylum is a more beneficent establishment than the Cooper Institute, there will be no surplus revenue to devote to such purposes.

We quote further:

There is probably no charity more widely known, or more generally beloved, than that conducted among the poor children of New York. It has undoubtedly saved thousands of children from death, and tens of thousands from degradation. * * * Thirty years ago the population of New York was about five-twelfths what it is now; that is, since that time it has somewhat more than doubled. The number of poor children sent out of the city in 1854 was about eight hundred; last year it was four

* D. McG. Means, on "The Suppression of Pauperism." See "The Century," March, 1884.

thousand. The expense of caring for poor children in 1854 was about $10,000; last year it was $236,000. What will these figures be thirty years hence? Noble as the aim of the society is, honorable as its management has been, and fruitful as are its labors, the evils with which it deals have a capacity of increase greater than any palliative agencies. The supply of friendless children will keep pace with the demand. As parents find that others will care for their children, if they do not, the sense of parental responsibility, already deplorably weakened, will still further diminish, and with it will disappear all those qualities that lift man above the brutes. * * * What maudlin charity is this that encourages parents to drop their helpless offspring into the cradle of a foundling hospital, to be cared for at the public expense? It is impossible to conceive a system more depraved than that which practically offers to parents who will desert their children a bounty of $10 a month, provided they again assume their care. Yet such is the system that now prevails in New York. A single institution, founded scarcely a dozen years ago, now draws from the public treasury about $240,000 per annum, has under its care about twenty-five hundred infants, and annually receives about three per cent. of all the children born in New York.

In our State, private charity has been very successful in organizing "homes" and orphan asylums for destitute and deserted children; but these institutions must, necessarily, be inadequate for the purpose. Most of them are, to a great extent, managed on systems in which the prejudices of the founders are visible. Then, there is no official public control. Many are sectarian, and, probably, will hesitate to receive the pauper child. These objections cannot be made against the Morris County Children's Home,* one of the results of the Morris County Charities Aid Association;† a work which the association may well regard with the greatest satisfaction. Several members, in the winter of 1880–81, procured the passage of a law (*Laws of* 1881, *ch.* 196,) authorizing Boards of Chosen Freeholders to commit pauper children to any unsectarian institution, and to pay for boarding such children a sum not exceeding $1.50 per week for each child. The home was incorporated December 6th, 1881, "for the purpose of the care, nur-

* In nearly every city in the State there are some of these institutions, one of the most successful being the Orange Orphan Home, at Orange, N. J., of which the twenty-eighth annual report was issued on July 11th, 1883. The number of children in the home at the close of 1882, was forty, of whom twenty-one were girls, and nineteen boys. During the year eight new inmates were admitted; three died; one was sent to the Industrial School for Girls; four to hospitals, and other charitable establishments, while "several girls have been placed in good families, and gratifying accounts of their good behavior and pleasant manners have been received." Seventeen in all were removed, and, with these exceptions, their friends have taken them. Receipts for the year, $6651.89; expenditures, $4925.44.

† See *supra*, page 411.

ture and maintenance of destitute children." It is managed* by two boards of twelve gentlemen (directors) and of thirty ladies, appointed by the directors from different parts of the county. We quote from the second annual report (1883):

The Board of Directors and the Board of Lady Managers at the close of the second year of the Home's existence are able to report, with thankfulness, substantial progress. The house and grounds in Parsippany, which were previously held on lease, have been purchased at a cost of $9000, $2000 of which have been paid, the remaining $7000 being left on bond and mortgage. The property is admirably adapted to the purpose, and some of the repairs and improvements that were urgently needed have been already made. * * * The children are instructed daily by the teacher in the ordinary English studies, and, what is of as much importance, they are taught to work according to their ability. Both boys and girls make beds, scrub floors, wash dishes, help in washing and ironing, prepare vegetables and assist in mending their clothes. Industrious habits are thus sought to be formed. The children learn to help themselves and are prepared to be useful as young servants or as inmates of households. * * * The treasurer's report† shows that the average weekly cost for the maintenance of each child has been $1.93. This would have been much greater but for the many gifts of food and clothing. * * * The Board of Directors regard the increase in the number of children thrown upon the county as a matter worthy of serious consideration. It was foreseen before the Home was established that a better provision for the children would very probably tend to increase the number to be cared for. Some parents, who have enough regard for their children's welfare to make them exert themselves to keep them out of the poor-house, are not unwilling to be rid of the labor and anxiety required for their support, when they know they will be well cared for by others. It is necessary to acknowledge this danger, and to endeavor to find the remedy for it. One remedy is in the hands of the overseers of the poor, who have the authority to commit to the poor-house. A stricter scrutiny should be exercised by them in the case of all children whose parents or guardians seek to impose them upon the county. None should be received excepting those really destitute. If the needed reform cannot be effected with existing laws, then it would seem that the laws might be so altered that some other check might be placed upon the power of committal. Another remedy would seem to be in more active efforts to procure places for the children and to bind them out. It might be hoped that lazy parents would be less eager to have their children enter the Home, if they realized that their stay there would be but short, and that as wards of the county they would soon be bound out to persons applying for them. The directors of the home have thought it both honest and expedient to speak frankly of this danger. Every charitable enterprise is beset with the possibility of being abused by the unworthy, and the blessings of this one seem so great, that every one

* Officers for the year 1883–4: President, Aurelius B. Hull, Morristown; Vice-President, Isaac L. Condit, Parsippany; Secretary, Rev. John P. Appleton, Boonton; Treasurer, George W. Jenkins, Boonton.

† Receipts, $6170.97; payments, $5836.02.

should do all that is in his power to remove any evil that accompanies it as a shadow, and which might be used as an argument against it.

PROGRESS AND POVERTY.

The line of discussion followed in the preceding pages is the one generally suggested by writers on the subject, that the suppression of pauperism can be accomplished only by preventing what are held to be its chief causes: the neglect of destitute and pauper children, the improper administration of our alms-houses, and indiscriminate charity. But it may well be doubted whether efforts in these directions would do more than alleviate the disease, whose germs must be sought for in our present industrial and social organization, a radical change in which will alone effect the final extinction of pauperism. Progress and poverty seem to be the concomitants of our civilization; and while the phrase, now so generally heard, that the rich are growing richer and the poor poorer, may not be strictly true, it is painfully evident that the advance in our social life, great as it has been during the past half century, bears no sort of proportion to the increase of wealth, knowledge and material appliances. Labor receives no fair share of these advantages, which bring out in strong relief the inequalities of our modern life. With the increase of palatial residences for the rich few, the tenement-hovels of the many poor increase. With the erection of costly church edifices and school-houses, comes the enlargement of our jails and alms-houses. The greed for gain, so characteristic of our age, makes the chief end of life the acquisition of wealth; and the increasing industrial competition is the plea by which the employing class seeks to justify the reduction of wages of the employe to the lowest possible level sufficient for bare subsistence. In periods of business depression, which so often recur, the wages cease entirely, and the wage-workers are left dependent on private or public charity; the great army of tramps and vagrants is recruited from unemployed workmen. During the late financial crisis the country was overrun with this more unfortunate than vagabond class. This made necessary increased poor and police appropriations, and consequent loud complaints were heard everywhere from the citizen, who was himself compelled to supplement low wages by a higher rate of taxes.

Insufficient compensation for labor brings on poverty, from which

result many of those moral evils productive of and associated with pauperism, which will certainly increase as soon as there is a serious interruption of industrial activity. *

As long as this state of affairs continues, it is idle to talk of any social improvement of the workman. For how can he who has been taken from school in his very infancy to work in a factory, to help to keep starvation from his parents' door, be refined or educated? How can he become virtuous, industrious and independent when all his surroundings have been destructive of morality? All our efforts materially to improve the condition of the poor will fail, if the fundamental causes of poverty be ignored. "I tell you," recently remarked an enthusiastic philanthropist in New York, "there is room for a new abolition movement here, as broad, as grand as that other which is just finished."

THE POOR-LAW OF NEW JERSEY.

The practice of administering relief to the poor varies in the different countries. In the United States, the State governments generally assume charge of the pauper defective classes, while the counties, cities and townships care for the other poor. It is the duty of the local governments to see to it that those poor who have acquired a settlement be relieved, for the poor are legally entitled to relief from their respective townships. This settlement is either original or derivative, and the manner of acquiring it is regulated by statutory law, and varies more or less in the different States. In New Jersey a legal settlement may be obtained either by birth, by acquisition of a freehold estate, and dwelling thereon for a year, by service under indenture, notice to overseer or emigration. The settlement of the husband and father is that of the wife and child. The settlement of

* We have no official data to show the poor expenditures of the various local governments prior to the year 1878–9, with which the financial panic closed. The Comptroller's report for that year first gives the "financial statements," which also show the amount of poor-relief afforded. The latter item of expenditures in the following five cities amounted in the year mentioned to: Jersey City (out-door relief) $20,000; Newark, $60,000; Paterson, $38,000; Elizabeth, $17,000; Perth Amboy, $4125. For the year 1882–3, according to the same authority, these expenditures were: Jersey City (out-door) relief), $13,000; Newark (including hospitals), $48,-500; Paterson, $30,138; Elizabeth, $13,715; Perth Amboy, $2500.

a bastard child is the last legal settlement of the mother; that of children born in a poor-house "shall be as though they had been born within the limits of the township from which their parents were legally entitled to relief." A year's residence is generally required to obtain a legal settlement. See sections 1 to 6 of "*An act for the settlement and relief of the poor*," approved March 27th, 1874, (*Revised Statutes, pages* 834, 835.)

Under "*An act incorporating the inhabitants of townships, designating their powers and regulating their meetings*," approved April 14th, 1846, and supplements thereto, the persons qualified to vote at town meetings shall have power to elect, in addition to other officers, one overseer of the poor, who shall give bonds for the faithful performance of his duties. The overseer's powers and duty as to granting relief are defined by the following sections of the act of 1874, (Revision,) above referred to:

9. When and so often as any poor person, belonging to any city, town corporate, township or precinct within this State, shall apply for relief to any overseer or overseers of such place where he or she may reside, the said overseer or overseers shall make application to a justice of the peace of any such township, or to a justice of the county to which any such township shall belong, which said justice and the overseer or overseers shall inquire into the state and circumstances of such person so applying as aforesaid; and if it shall appear to said justice that such person is in such poor circumstances as to deserve relief, then the said justice shall give an order in writing to the said overseer or overseers to make such allowance, weekly or otherwise, as they, in their discretion, shall think his or her necessities may or shall require; and the said overseer or overseers shall make no other or further allowance to such poor person than what, by the said order, shall be directed; which said order shall be a sufficient voucher for the payment or expending of so much money by the said overseer or overseers, and shall be allowed in adjusting his or their accounts.

10. The overseer and overseers of the town shall procure, at the public charge, a folio book, well bound, wherein the name and names of all the poor persons applying for relief, and being ordered the same as aforesaid, shall be registered, with the day and year when they were first admitted to have relief, the weekly or other sum or sums of money allowed by said order for their relief, and the occasion which brought them under that necessity; and no person or persons shall be entered into the poor's books, or receive relief from the overseer or overseers of the poor, without such order, procured as aforesaid; and in case any overseer or overseers shall enter into the poor's books, and relieve any such poor person or persons, without such order, he or they shall forfeit all such money and goods paid and distributed to such poor person or persons, nor shall any allowance be made unto him or them for the same in passing his or their account and accounts; and the said overseer and overseers are hereby ordered and required to enter, or cause to be entered, in the said poor's books, all moneys received, laid out and disbursed by him or them for

the use of the poor, and also all matters and things which shall be transacted by him or them relating to their said office; and the said overseer and overseers shall lay the said poor's books before the inhabitants at their annual town meeting, or any other of their meetings, that they may then examine and look into the state of the poor accounts, and make such further provision for them as they, upon such inspection, shall deem necessary.

Section 11 provides for the inventory and sale of goods of paupers receiving relief.

Section 12 provides for binding out of children, (males till twenty and females till eighteen,) by overseers, with the assistance and approbation of two justices of the peace.

Section 13 provides for seizing goods of absconding parents, and applying the proceeds from the sale thereof to the support of their families, left as a public charge.

Section 9, quoted above, is generally interpreted to apply only to cases of out-door relief. When further aid is required the overseer must proceed according to section 31, as amended by chapter 114, Laws of 1880, page 146. By this act, when application for relief is made, the overseer is required to go before *one* justice of the peace (the old provision required two justices), who shall issue his warrant to a constable to bring the poor person before him and examine him and other witnesses, if any there be, respecting the poor person's last legal settlement, which the justice shall determine; and if the same be within the county where the application for relief is made, and he believes that public relief is necessary, he shall make out an order for the removal of the poor person to the poor-house of the county; if there be none, then to the place of last legal settlement of such poor person.

Respecting the liability of relatives to maintain their poor, it is provided:

30. The father and grandfather, mother and grandmother, and the children and grandchildren, severally and respectively (of every poor, old, blind, lame and impotent person, or other poor person not able to work), being of sufficient ability, shall at his, her or their charges and expense, relieve and maintain every such poor person as aforesaid, in such manner as the Court of Quarter Sessions shall order and direct under the penalty of forfeiting and paying for each and every person so ordered to be relieved, for every week they shall neglect or refuse so to maintain and relieve such poor person or persons, any sum that said court may direct, not exceeding $6 per week, together with all reasonable costs incurred in making application to the court for such order of relief.

The following extracts from the opinions of our higher courts, relative to this subject, are appropriate in this connection:

No person is to be considered a pauper to receive support except such as a justice of the peace has by his order previously declared. 3 *Halsted* 166, 193. Justices cannot order an overseer of the poor to maintain a pauper, without an application made by the overseer for that purpose. *Pennington* 805. If an overseer grant relief without an order from a justice of the peace, he cannot recover from the township the amount expended. 5 *Dutcher* 299. A justice's order for relief is absolutely necessary to make the township liable on the contracts of an overseer for the support of a pauper, or to make the Board of Freeholders or trustees of the poor-house liable, where there is a county poor-house. 2 *Zab.* 343; 4 *Harr.* 52, 58. For a contract made for the maintenance of the poor, the inhabitants of the township are liable in their corporate capacity and not the overseers. 1 *Halsted* 115. A pauper cannot sue an overseer for his support. *Pennington* 805. An action may be maintained against an overseer to recover from him the expenses of supporting a pauper, who was legally entitled to relief, whom the overseer, after notice, neglected to relieve. 2 *Halsted* 435. The Quarter Sessions cannot order one to maintain a grandchild without notice and a hearing. *Pennington* 410. Overseers may bind a pauper to serve in another township or county. *Pennington* 442. Justices cannot order an overseer to maintain a pauper without an application made by the overseers for such purpose. *Pennington* 805. No pauper, idiot or insane person shall enjoy the right of an elector. Constitution, art. II. sec. 1.

Mr. R. Bingham, of Camden, is responsible for the following statement for Camden county, showing the relation of saloons to pauperism, crime and death:

	Persons.	Saloons.		Poor.		Arrests.		Deaths.	
		Total number.	Per one thousand population.	Total cost.	Per one thousand. population.	Total number.	Per one thousand population.	Total number.*	Per one thousand population.
Camden—First ward	6,362	20	3.12	$1,540 57	242.15	160	25.14	69	11.02
" —Second ward	6,060	12	1.88	1,202 01	214.85	87	14.35	122	20.13
" —Third ward	3,952	16	4.04	2,323 90	588.03	225	56.93	98	25.05
" —Fourth ward	6,935	13	1.87	1,089 62	157.11	88	12.68	46	6.63
" —Fifth ward	6,018	25	4.15	4,721 04	784.48	164	27.25	91	15.12
" —Sixth ward	3,728	15	4.03	1,208 87	324.96	265	71 08	120	32.25
" —Seventh ward	4,426	15	3.38	3,308 38	747.49	62	14.00	89	20.10
" —Eighth ward	4,186	10	2.39	2,124 14	507.48	60	14.33	96	22.92
" —First, Second, Fourth and Eighth	23,583	55	2.34	5,956 34	253.04	395	16.77	333	12.02
" —Third, Fifth, Sixth and Seventh	18,116	71	3.97	11,562 19	628.23	716	39 46	398	21.96
Centre township	1,538	1	0.65	1,050 91	68.28	23	14.95	39	39.2
Delaware township	1,481	2	1.35	.....	.....	4	2.70	23	64.3
Gloucester City	5,347	27	5.04	2,567 04	480 09	150	28.05	117	21.88
Gloucester township	2,527	3	1.18	1,050 21	419 55	3	1.18	77	32.8
Haddon township	2,551	.....	.....	700 00	274.40	11	4.31	52	49
Stockton township	3.532	4	1.13	4,550 91	1,288.47	251	71.06	77	45.8
Waterford township	2,149	2	0.93	350 07	162.81	12	5.58	35	61.4
Winslow township	2,158	2	0.92	350 07	162.18			37	58

* Only 11 months for Camden city. The Board of Health Report gives total deaths at 834; rate, 20.01.

TABLE No. 1.

NUMBER OF POOR RELIEVED.

Civil Divisions.	Population in 1880.	Total expended in maintenance of poor.	Amount paid for salaries and help.	Number of persons relieved. Total.	Males.	Females.	Children under 10.	Number children bound out. Males.	Females.	Number paupers maintained by contract, not under control of overseer.	Cost of maintenance.	Remarks.
Atlantic county	18,707											
Alms-house (county)	.....	$1,962 63	.....	19	8	11	.....	.....	.....	.....	.....	Most of paupers in poor-house are old and crippled and unable to work. The poor-house is maintained by townships of Buena Vista, Mullica, Weymouth, Galloway, Egg Harbor and Hamilton, and town of Absecon. Temporary relief given by overseers of poor cost, probably, $1000 for all. Atlantic City, Egg Harbor City and town of Hammonton support their own poor and have nothing to do with poor-house. The poor of the latter localities are generally maintained at their own residences.
Absecon town	* 507	8 00	.....	1								
Egg Harbor township	4,075	141 77	.....	3	2	1						
Atlantic City	5,477	1,032 27	$110 00	.....	.....	.....	.....	.....	.....	1	† $3 00	
Egg Harbor City	1,232	244 76	10 00	7	3	4						
Town of Hammonton	1,776	231 41	50 00	6	5	1						
Buena Vista township	885											
Galloway "	2,337											
Hamilton "	1,464											
Mullica "	717											
Weymouth "	741											
Bergen county	36,786											
Alms-house (county)	.....	4,768 57	.....	‡462	.....	.....	.....	.....		2	.....	This alms-house maintained by county by tax contributed by ten townships, who send their poor there. In addition to the money contributed for the poor-houses, the various townships in Bergen county expend more or less in out-door relief. This has only been reported in a few cases. The returns published in the comptroller's report for 1883 give the total poor tax at $7000. See Table No. 4.
Washington township	2,853	§ 406 41	.....	16	10	6	4					
Ridgewood "	1,478	§ 189 25	‖20 00	2	.....	2						
Franklin "	2,206	§ 279 35										
Harrington "	2,570	§ 324 05	‖30 00	10	8	2						
Union "	3,164	§ 293 00	‖120 73	20	16	3	1					
Midland "	1,591	§ 276 25	‖28 00	11	10	1						
New Barbadoes "	4,248	§ 358 90	‖280 47	43	18	25	14					
Hohokus "	2,920	§ 372 93										
Saddle River "	1,355	§ 167 98										
Lodi "	4,071	§ 236 88	‖154 60	17	10	7						
Alms-house (township)	.....	1,000 00	.....	19	13	6	4	.....	.....	.....	.....	This alms-house is supported by three townships, whose poor are sent there. The number from each township: Ridgefield, 9; Englewood, 5; Palisades, 5.
Englewood township	4,076	‖ 19 36	.....	a 6	.....	.....	.....	2				
Ridgefield "	3,952	.....	.....	6	3	3						
Palisades "	2,302	b 10 00	.....	5								
Burlington county	55,402											
Alms-house (county)	.....	8,130 49 c 1,054 83 d 3,292 00	.....	325	150	140	30	.....	.....	.....	.....	Profits of farm are supposed to be worth $3000. According to county auditor's report, $415 was also expended for "Burlington County Children's

Bass River township	1,006											Home." Small-pox cases were cared for outside of the almshouse by the overseers of poor of Burlington, Chesterfield and Springfield townships at a cost of about $700. The poor of the county are maintained at this house at county expense. The amounts given for the townships are for temporary relief The county contains 28 townships, of which only 14 have reported.
Beverly "	3,128	7 00	.....	19	17	1	1					
Burlington "	7,237	1,462 01	.....	e 600	250	350						
Chester "	2,855	112 24	44 42	9	2	7						
Cinnaminson "	2,184	40 00	.....	10								
Easthampton "	566	5 50	1 50	1	.....	1						
Bordentown "	5,334	1,350 00	150 00									
Evesham "	1,602	70 40	16 50	9	6	3	2					
Mansfield "	1,648	63 93	15 00	2	2							
New Hanover "	2,373	153 00	.....	17	9	6	2					
Northampton "	4,630	f 725 00	.....	g 106								
Shamung "	1,097	106 45	21 45	8	5	2	1					
Southampton "	2,269	530 00	.....	h 40	20	20						
Washington "	389	70 00	50 00	3	2	.....	3					
Chesterfield "	1,525											
Delran "	1,760											
Little Egg Harbor township	1,881											
Lumberton "	1,689											
Medford "	1,980											
Mount Laurel "	1,739											
Pemberton "	2,685											
Randolph "	428											
Springfield "	1,886											
Westhampton "	715											
Willingboro "	743											
Woodland "	325											
Camden county	62,942											
Alms-house (county)	.....	19,797 27 c 1,563 25	.....	l 131 j 121	67 57	64 41	23	.....	.....	.....	.....	The poor of the townships are removed to alms-house at Blackwoodstown at expense of county. The steward wrote, November 12th, 1883: "We have at present 121 inmates, the smallest number we have had." In his report for year ending April 30th, 1882, he states the number remaining January 1st, 1881, 168; received from overseers during year, 120; admitted on application, 30; received from asylum, 3; total, 319. Remaining April 30th, 1882, 131. During that year there were discharged, 115; eloped, 15; died, 58; births, 29. Of the 131 remaining, there were: Males, 67; females, 64; natives, 93; foreigners, 38. During the past year there were 225 paupers received from the different overseers. The number of these is given in our statement. Only a few overseers have made returns of the number temporarily relieved. The amounts expended for such relief are given.
Camden city	41,659	k 2,522 64 s 1,600 00	.....	m 118								
Gloucester City	5,347	585 92	.....	m 17								
Centre township	1,538	73 90 s 48 00	.....	m 11								
Delaware "	1,481											
Gloucester "	2,527	129 00	70 50	m 9								
Haddon "	2,551	40 00	10 00	m 6								
Stockton "	3,532	73 74	.....	m 47								
Waterford "	2,149	36 63	.....	m 3								
Winslow "	2,158	.....	.....	m 14								
Cape May county	9,765											
Alms-house (county)	.....	3,165 81	1,108 80	29	12	10	7	.....	.....	.....	.....	Alms-house at Cape May Court-House supported by county. Paupers sent to it by township overseers, who also grant temporary relief.
Cape May City	1,699	405 60	365 60	54	8	16	30					
Middle township	2,575	.....	.....	5	4	1						
Lower "	1,977	49 03	.....	2	.....	2						
Dennis "	1,812	160 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	No returns received.
Upper "	1,702	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	" " "

* Population included in Egg Harbor township. † Per week. ‡ Monthly average, 38½; lowest (September 2d, 1882), 35; highest (April 30th, 1883), 44. § Tax contributed to support of alms-house, and is included in total amount expended. ‖ Temporary relief included. a Families. b Temporary relief for three months. c Poor bills. d State allowance for lunatics in asylum. e The overseer reports "about 600" relieved. Whether this includes tramps is not stated. f Also interest on a fund of $10,000, a legacy left by J. W. Brown, is expended in relief of poor. g Families, mostly widows. h At an average of $26 per family. i In house on April 30th, 1882. j Remaining November 12th, 1883, see remarks. k Orders for out-door relief. m Sent to alms-house. s Medical attendance.

TABLE No. 1—*Continued.*

NUMBER OF POOR RELIEVED.

Civil Divisions.	Population in 1880.	Total expended in maintenance of poor.	Amount paid for salaries and help.	Number of persons relieved. Total.	Number of persons relieved. Males.	Number of persons relieved. Females.	Number of persons relieved. Children under 10.	Number children bound out. Males.	Number children bound out. Females.	Number paupers maintained by contract, not under control of overseer.	Cost of maintenance.	Remarks.
Cumberland county	37,687											
Alms-house	.....	$9,964 40	$16 50	100	.....	.....	.....	1	3	.....	.....	County alms-house situated in Hopewell township. Township poor mostly sent there. Employed in productive labor, 12. Outside and temporary relief by townships. It is stated that very few are relieved by townships, from which our reports are very unsatisfactory and incomplete. No reports from Fairfield township.
	.....	* 257 75										
Bridgeton city	8,722	217 75										
First ward	.....	78 00	.....	2	1	1						
	.....	20 00	.....	5	3	2						
Second ward	.....	.....	.....	5	1	4	1					
Third ward	.....	4 75	.....	2	2							
Millville city	7,660	405 27	.....	34								
First ward	.....	.....	.....	‖13	6	7						
Second ward	.....	.....	.....	‖10	1	9	4					
Third ward.												
Downe township	1,687	200 00	.....	5	3	2						
Deerfield "	1,643	71 82	8 00	8	5	3	4					
Greenwich "	1,245	32 67	12 00	5	.....	5						
Hopewell "	1,764	16 50	.....	2	1	1						
Landis "	6,005	430 68	100 00									
Maurice River "	2,374	121 62	15 00	10	6	4						
Stow Creek "	1,107	106 00	37 00	4	2	2						
Commercial "	2,265	313 60	77 60	26	13	13	7					
Fairfield "	3,215											
Essex county	189,929											
Newark.. Almshouse	136,508	35,673 49	7,831 49	264	140	124	74	.....	.....	.....	.....	Poor maintained in city alms-house and by out-door relief.
Newark.. Out-door relief				†717	.....	.....	.....	1	2			
Orange city.. Alms-house	13,307	7,048 48	1,200 00	40	28	12	10	.....	.....	.....	.....	Poor maintained in city alms-house and by out-door relief.
Orange city.. Out-door relief.				153	12	141	268					
Belleville township	3,004	1,515 75	457 75	82	40	42	30	.....	.....	.....	.....	Poor maintained in township poor-house and by out-door relief.
Bloomfield "	5,748	2,232 93	325 00	150	.....	.....	.....	.....	.....	.....	.....	Poor maintained in township poor-house and by out-door relief. Poor-house was reported to have no inmates.
Caldwell "	3,167	1,554 00	75 00	18	4	9	5	.....	.....	18	.....	No poor-house. Paupers maintained by contract with persons not under control of overseer.

Clinton "	2,742	777 75	150 00	12						3	494 00	No poor-house. Temporarily relieved, and maintained by contract; three permanent paupers.
East Orange "	8,349	2,981 13	300 00	43	‡8	‡26	9			5	§17 00	No poor-house. Relief given to widows and heads of fam lies; also rent paid. Three paupers in Newark alms-house; five children in Orange orphan asylum.
Franklin "	1,617	800 89	52 00	54	20	34	12					No poor-house. Paupers relieved by orders on stores and boarded out.
Livingston "	1,401	528 21	72 50	18	16	2	1					No poor-house. Paupers relieved by boarding them out with different parties.
Millburn "	1,743	860 02	300 00	5	4	1						Poor-farm, on which poor are kept and do light work.
Montclair "	5,147	2,500 80	500 00	30	11	19	4	1				Poor-house.
South Orange "	3,911	1,430 00	450 00	21	3	2	16					Poor-house.
West Orange "	3,385	662 59	200 00	22	8	14	7			5	§20 00	No poor-house. One pauper maintained by city of Newark at $2.50 a week; four by pastor of Catholic church, at $10 per month for all.
Gloucester county	25,886											
Alms-house (county)		6,374 44		64	36	28						Poor sent to county alms-house, located at Clarksboro. Cost of transportation and outside relief, $403.12, included in total expense as given.
Woodbury city	a 2,298	399 93		24	9	15						Mostly aged people, relieved by orders of overseer, $120; interest on a bequest is also expended in poor relief.
Clayton township	1,981			2	1	1						
Franklin "	2,480	75 40		2	1	1		2				
Logan "	1,765	10 00		2	2							Also sent 5 persons to county poor-house (4 males, 1 female.)
Mantua "	1,718	7 35		6		3	3					
Monroe "	1,858	174 24		11	5	4	2					
Washington "	1,366	13 00										
West Deptford "	1,399	140 50	24 50	11	9	2						Poor relieved by weekly allowance.
Woolwich "	1,974	27 50										
Deptford "	3,818											
Glassboro "	2,088											
Greenwich "	2,598											
Harrison "	2,841											
Hudson county	187,944											
Alms-house (county)		54,001 54	7,729 55	b2,250				44	22			County alms-house at Snake Hill, to which township send their poor. 50 employed.
Jersey City	120,722	14,000 00	1,000 00	c3,147								Out-door relief.
Hoboken	30,999	2,702 26	500 00	200	50	150						Out-door relief Sent to county poor-house, 138 (males, 42; females, 35; children, 61—American, 9; foreign, 129.)
Bayonne	9,372	2,094 80		27	1	26						Weekly relief. Others sent to Snake Hill.
Guttenburg, town	1,206	31 93	7 75	4	1	3						Cases of actual necessity relieved temporarily.
Harrison, "	6,898	750 00	50 00	98	10	40						Occasional railroad fares to tramps, and supplies of fuel to those not otherwise helped.
Union, "	5,849	300 00	15 00	27	10	17						
Kearny township	777	150 00	25 00	8	2	6						Occasional supplies of fuel, &c.
West Bergen "	4,268	149 00	60 00	7	5	2						
Union "	1,301	115 00	20 00	15	2	13						Temporary relief; besides 3 in county alms-house.
Weehawken "	1,102	390 00	50 00	26	3	9	24					Temporary relief; also expenses for straying children.
West Hoboken "	5,441	496 13	75 00	40	6	34	60					
Hunterdon county	38,570											
Alexandria township	1,324	1,000 00		9	8	1						Paupers put out by contract.
Bethlehem "	2,830	1,725 00	75 00	26	6	20	12					Paupers are kept by overseer, or put out by contract to lowest bidder, every spring.

* Paupers, relief, removal, &c. † Monthly average, representing 3 to a family. ‡ Heads of families and widows. No account is kept of children, except those in orphan asylum. § Per month for all. ‖ Included in total. a Population of Woodbury city included in that of Deptford township. b No record of males or females. c 768 families.

TABLE No. 1—*Continued.*

NUMBER OF POOR RELIEVED.

Civil Divisions.	Population in 1880.	Total expended in maintenance of poor.	Amount paid for salaries and help.	NUMBER OF PERSONS RELIEVED.				NUMBER CHILDREN BOUND OUT.		Number paupers maintained by contract, not under control of overseer.	Cost of maintenance.	Remarks.
				Total.	Males.	Females.	Children under 16.	Males.	Females.			
Hunterdon county—Contin'd.												
Clinton township	2,975	$2,631 61	$186 00	26	6	10	10	.....	.....	.....	.....	Overseer has paupers kept by friends as a general thing; two kept by strangers. Expense per pauper is from $6 to $8 per month; in one case, $25. Temporary relief cost $300.
Clinton borough *	.....	† 10 00	.....	1	.....	1	.....	.....	.....	.....	.....	Paupers hired out to lowest bidder.
Delaware township	3,092	1,108 00	184 00	10	6	4	1	.....	.....	.....	.....	Paupers maintained by contract with private parties.
East Amwell "	1,696	1,016 22	.....	9	5	4	.....	.....	.....	.....	.....	Paupers kept at one place, by contract, in manner satisfactory to overseer; beds furnished by township.
Franklin "	1,338	813 00	15 00	7	4	3	.....	.....	.....	7	.....	Town committee sells them to lowest bidder. Five unhired.
Frenchtown borough	1,039	255 28	22 00	6	2	4	5	.....	.....	.....	.....	Poor relieved by weekly allowance or kept by private parties.
High Bridge township	2,209	1,871 00	181 00	37	16	21	14	.....	.....	.....	.....	No poor-house; 24 Americans, 13 foreign, 4 imbecile, 1 birth, 3 deaths.
Holland "	1,886	810 00	60 00	18	10	2	6	.....	.....	15	‡ $3 50	Poor kept by private individuals as directed by township committee; also at poor-house in Alexandria township.
Kingwood "	1,649	1,070 70	130 00	10	8	2	2	.....	.....	10	940 00	Poor kept at private poor-house. Sold each year to lowest bidder.
Lambertville city	4,183	1,900 00	100 00	12	4	5	3	1	.....	.....	.....	Poor maintained by contract.
Lebanon township	2,699	1,868 00	163 00	34	5	29	3	.....	.....	.....	.....	Poor kept where the overseer can do best.
Raritan "	4,188	2,695 00	677 00	33	20	13	9	1	.....	.....	.....	Poor-farm, near Clover Hill.
Readington "	3,103	3,052 18	.....	52	17	21	14	.....	.....	.....	.....	Overseer grants a weekly allowance. No poor-house.
Tewksbury "	2,108	1,832 16	238 00	34	12	10	12	.....	1	.....	.....	Poor hired out by overseer, preference generally given to persons who will keep them at lowest rates, which vary from 75 cts. to $4 per week.
Union "	1,167	424 50	.....	7	4	3	2	.....	.....	.....	.....	Poor sold to lowest responsible bidder.
West Amwell "	1,039	700 00	50 00	5	4	1	.....	1	1	.....	.....	Lowest bidder has charge of poor.

Mercer county	58,061											
Trenton city	29,910											
Out-door relief	.....	8,300 00	800 00	§ 100	30	100	.....	.....	.....	.....	.....	One hundred families; males, 30; females, 100; children, unknown.
Alms-house	.....	8,500 00	850 00	70	45	25	2					
Chambersburg	5,437	1,102 00	200 00	.....	.....	.....	.....	.....	2	.....	.....	Overseer writes: "I cannot tell the number; they come and go." "Pay poor $1 to $2 per week, as case may be." "One in hospital."
East Windsor township	2,271	1,237 09	50 00	15	3	7	5	.....	.....	10	‡ 2 00	No poor-house. Ten paupers kept by private party at $2, and 5 children with parents, at $1 per week.
Ewing "	2,412	1,726 39	241 00	17	10	7	2	.....	.....	.....	.....	Board permanent paupers with private families.
Hamilton "	3,370	1,821 61	.....	24	13	9	2	.....	.....	.....	.....	Poor-farm, at which some (11) poor are kept; 18 also, with different parties. Total, 29.
Hopewell "	4,462	2,389 79	767 33	38	26	12	4	2	1	.....	.....	Poor-house in charge of township committee.
Lawrence "	3,174	433 00	173 00	4	.....	4	1	.....	.....	.....	.....	No poor-house.
Millham ‖ "	.....	479 99	150 37	11	7	4	2	.....	.....	6	180 32	Poor maintained by orders on store ($1 to $1.50 per week,) and by contract.
Princeton "	4,348	4,759 75	951 66	b 83	26	39	18	.....	.....	.....	.....	Poor-farm, where some poor are kept. Also relieved outside. Transient poor numbered 1435 and cost $768.73. Resident poor cost $1946. Poor-farm, $1092.68.
Washington "	1,281	800 50	100 10	11	8	3	2	.....	1	.....	.....	Paupers are "put out" by town committee.
West Windsor "	1,396	772 00	60 00	8	.....	.....	.....	.....	.....	.....	.....	The poor are boarded out by the week or month.
Middlesex county	52,286											
New Brunswick city	17,166	6,500 00	1,830 00	c 195	.....	.....	.....	.....	.....	.....	.....	City poor-farm and house, which contained 45 paupers; besides these, many aged persons and invalids received out-door relief right through the year. Also, lodgings to tramps.
Perth Amboy "	4,808	2,210 00	240 00	20	5	9	5	1	1	.....	.....	City poor-house. Number of poor temporarily relieved, about 6.
Cranbury township	1,599	674 00	74 00	7	4	1	.....	.....	.....	2	‡ 1 to 2	Two paupers are boarded out with persons not under control of overseer.
East Brunswick "	3,272	1,627 89	100 00	21	13	8	2	.....	.....	.....	.....	Poor maintained by weekly allowance or boarded out at discretion of overseer.
Madison "	1,662	800 00	100 00	10	7	3	.....	.....	.....	2	‡ 1 50	Poor are boarded out.
Monroe "	3,017	900 00	100 00	d 13	9	4	3	.....	.....	.....	.....	Overseer takes the poor to his own house.
North Brunswick "	1,251	804 68	50 00	15	11	4	.....	.....	.....	.....	.....	Poor boarded at various places; also temporarily relieved.
Piscataway "	3,242	e 2,228 15	606 00	35	10	25	.....	.....	.....	.....	.....	Poor maintained on poor-farm and temporary relief.
Raritan "	3,789	2,500 00	100 00	22	8	12	2	1	.....	.....	.....	Poor boarded out and maintained through outside relief.
Sayersville "	1,930	1,580 00	80 00	21	8	13	6	.....	.....	2	‡ 3 00	Poor temporarily relieved and boarded out.
South Brunswick "	2,803	1,295 50	175 75	39	22	17	5	.....	.....	.....	.....	Poor boarded out with relatives or friends by overseer.
South Amboy "	3,648	1,500 00	100 00	f 32	10	21	1	.....	.....	.....	.....	No poor-house.
Woodbridge "	4,099	3,561 33	776 35	19	10	9	.....	.....	.....	.....	.....	Poor kept at poor-farm and through outside relief.
Monmouth county	55,538											
Alms-house, (county)	.....	g 2,257 40	450 00	.....	.....	.....	.....	.....	.....	.....	.....	So-called county-house, owned jointly by Dover and Brick, of Ocean Co., and Atlantic, Holmdel, Middletown and Wall, of Monmouth Co. Located near Shark River. Expenses are estimated.

* Population included in Clinton township. † Exclusive of tramp bill. ‡ Per week. § Families. ‖ Included in Lawrence township before 1882. a All the poor. b Not including transient poor. c Number of out-door poor relieved about 150, most of them during the whole year. One third probably males. There were 3901 orders ($3358.50) issued, not including lodging tickets for tramps, &c. d Average number, 9. e Exclusive of farm products used on farm. f Exclusive of transient poor. g Exclusive of products of farm. The data here given for the county-house are included in those given for the different townships owning it.

TABLE No. 1—*Continued.*

NUMBER OF POOR RELIEVED.

Civil Divisions.	Population in 1880.	Total expended in maintenance of poor.	Amount paid for salaries and help.	Number of persons relieved.				Number children bound out.		Number paupers maintained by contract not under control of overseer.	Cost of maintenance.	Remarks.
				Total.	Males.	Females.	Children under 16.	Males.	Females.			
Monmouth county—Continued												
Town-house	.....	* $755 04	.....	.....	.....	.....	.....	.....	.....	.....	.....	Poor-house owned jointly by Holmdel, Matawan and Raritan. Located in Raritan township. Expense is estimated.
Holmdel township	1,575	850 00	$150 00	11	5	6						
Matawan "	2,699	1,988 60	94 88	40	8	32	.....	.....	.....	5	† $1 25	Poor maintained at town-house and by out-door relief. In poor-house—Matawan, 5 ($266.69); Raritan, 3; Holmdel, 2.
Raritan "	3,891	1,774 16	258 14	30	12	18	.....	.....	.....	.....	.....	
Atlantic "	1,743	526 60	24 75	10	3	7	1	.....	.....	.....	.....	Some poor maintained at home, but mostly at county-house.
Howell "	3,374	1,950 00	150 00	21	13	8	4	2	.....	.....	.....	Joint interest in county-house (9 inmates.)
Middletown "	5,059	1,963 00	163 00	27	18	9	5	.....	.....	.....	.....	Some poor maintained at home, the rest at county-house (4.)
Wall "	3,829	800 00	110 00	18	6	14	4	.....	.....	.....	.....	Relief, more or less temporary, granted at home; occasionally sent to county-house (2.)
Manalapan "	2,175	1,000 00	30 00	14	6	8	3	.....	.....	.....	.....	Poor maintained at home, at a cost of $1 to $2 weekly, or at Thompson's poor-house, at $2 per week. Poor cost between $1000 and $2000 yearly.
Ocean "	6,027	3,700 00	40 00	60	31	29	15	.....	.....	.....	.....	Poor temporarily relieved or kept at overseer's private poor-house (King's)
Eatontown "	2,642	1,160 00	60 00	19	15	4	1	.....	.....	.....	.....	Some are boarded at King's house, others at home. No poor-house.
Neptune "	4,187	763 45	27 50	‡ 22	.....	.....	.....	.....	.....	1	† 2 00	No poor-house; 3 permanent paupers.
Freehold "	4,302	1,938 26	178 30	32	15	18	.....	.....	.....	.....	.....	No poor-house.
Marlboro "	2,193	1,002 00	72 00	14	9	5	.....	.....	.....	.....	.....	Poor boarded out where they can be kept the cheapest.
Millstone "	2,080	830 10	65 00	12	12	.....	.....	2	.....	.....	.....	Poor kept wherever most economical.
Shrewsbury "	6,526	3,200 00	.....	76	.....	.....	.....	.....	.....	.....	.....	No poor-house. Poor maintained by weekly allowance.
Upper Freehold "	3,236	1,680 99	50 00	23	8	15	.....	.....	.....	.....	.....	Poor boarded out with private families or with overseer himself.

Morris county	50,861											
Almshouse (county)	.....	§11,146 47	1,530 00	247	148	99	59	.....	1	.....	.....	The alms-house is located near Boonton, and to it the poor of the different townships are generally sent Children between 3 and 16 years of age are kept at the Children's Home, at Parsippany. The county pays $1.50 per week for each pauper-child sent by order of Board of Freeholders On November 8th, 1882, there were 31 children in the Home; 19 have been since received and 9 discharged; number November 14th, 1883, 41.
Boonton township	2,682	45 00	.....	1	1							
Chatham "	4,276	580 00	60 00	58	7	23	15					
Morris "	c 6,837	48 00										
Morristown	c 5,418	‖825 00	400 00									
Mendham township	1,526	125 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	Where only little relief is required, the townships provide it; otherwise, supported by the county. Reports from the townships, except in a few cases, are wanting.
Passaic "	1,896	42 75	37 75	1	1							
Randolph "	7,700	300 00	.....	29	11	8	8	4				
Rockaway "	7,366	208 13	.....	32	18	14	7					
Chester "	2,337	47 84										
Montville "	1,270	64 30										
Washington "	2,681	95 50										
Roxbury "	2,139											
Hanover "	4,138											
Jefferson "	1,792											
Mount Olive "	1,982											
Pequannock "	2,239											
Ocean county	14,445											
Berkley township	683	250 00	50 00	5	5	.....	.....	.....	.....	.....	.....	Send some poor to Shark River (Monmouth county) poor-house (2.)
Brick "	2,990	1,151 30	44 58	17	12	5	.....	.....	.....	.....	.....	Send some poor to Shark River (Monmouth county) poor-house.
Dover "	2,439	800 00	100 00	15	7	7	1	.....	.....	.....	.....	Send some poor to Shark River (Monmouth county) poor-house (1.)
Eagleswood "	592	498 00	3 50	5	4	1	.....	.....	.....	3	a 4 50	Poor maintained by weekly allowance; some boarded with lowest bidder.
Jackson "	1,803	386 00	19 00	5	3	2	.....	.....	.....	.....	.....	Sold by committee to lowest bidder.
Lacey "	814	150 00	10 00	10	4	6	.....	.....	.....	.....	.....	Poor supported by store orders and at Shark River house (1.)
Manchester "	1,057	286 92	50 00	35	20	15	8	.....	.....	.....	.....	Poor supported by store orders and at Shark River house (3.)
Ocean "	482	75 00	.....	2	1	.....	1	.....	.....	.....	.....	No overseer was elected during the year.
Plumsted "	1,561	b 1,500 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	No report received.
Stafford "	1,008	400 00	.....	5	3	2	.....	.....	.....	1	a 2 00	Poor put out by the week.
Union "	1,024	314 40	14 40	6	2	4	1	.....	.....	.....	.....	Poor boarded out and relieved on orders.
Passaic county	68,860											
Paterson city	51,031											
Alms-house	.....	15,268 03	2,576 00	173	92	87	36	.....	.....	.....	.....	Poor relieved by two bureaus, in-door (alms-house) and out-door.
Outdoor relief	.....	12,237 57	700 00	461	179	282						
Passaic city	6,532	3,094 61	309 90	112	17	36	59	.....	.....	1	1 62	Poor maintained by weekly allowance and in poor-house.
Acquackanonck township	1,781	59 83	.....	2	.....	.....	.....	.....	.....	.....	.....	No poor-house.
Little Falls "	1,404	525 00	25 00	6	2	4	.....	.....	.....	1	a 2 00	Private poor-house kept by overseer.
Manchester "	1,513	258 67	.....	.....	.....	.....	.....	.....	.....	.....	.....	No report received.
Pompton "	2,251	1,124 30	79 55	19	8	11	4	.....	.....	.....	.....	No poor-house; poor are boarded out.
Wayne "	1,757	1,083 00	75 00	14	10	4	1	.....	.....	14	a 1 25-3	Paupers boarded out with different persons.
West Milford "	2,591	1,400 00	160 00	23	13	8	2	.....	.....	.....	.....	Poor kept by private families, who are paid weekly, pay being according to disability of pauper.

* Exclusive of products of farm. The data here given for the county-house are included in those given for the different townships owning it. † Per week. ‡ Families. Several hundred dollars are annually contributed by people of Ocean Grove and Asbury Park. § Included $664.54 paid for support of paupers unable to be removed to alms-house, and $2366.67 to Children's Home. ‖ Includes bills of board of health. a Per week for all. b Tax 1881. c Population of Morristown included in Morris township.

TABLE No. 1—*Continued.*

NUMBER OF POOR RELIEVED.

Civil Divisions.	Population in 1880.	Total expended in maintenance of poor.	Amount paid for salaries and help.	Number of persons relieved.				Number children bound out.		Number paupers maintained by contract, not under control of overseer.	Cost of maintenance.	Remarks.
				Total.	Males.	Females.	Children under 16.	Males.	Females.			
Salem county	24,579											
Alms-house (county)	.....	$7,378 60	$680 00	71	41	30	11	.....	.....	.....	.....	The poor are maintained at expense of county, if able to be removed to alms-house, located near Woodstown. A few, unable to be removed, receive a small pension.
Elsinboro township	570	185 00	25 00	5	1	4						
L. A. Creek "	1,373	5 00	.....	1	1							
Mannington "	2,230	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A very small part of appropriation voted has been used during the year.
Pittsgrove "	1,778	142 89	.....	.....	.....	.....	.....	.....	.....	.....	.....	Poor receive relief from township (Pittsgrove) until removed to alms-house.
Quinton "	* 6,646	120 00	20 00	13	6	2	5	.....	.....	.....	.....	By help from township.
Salem city	* 5,056	272 08	.....	6	.....	.....	.....	.....	.....	.....	.....	Poor maintained by city and county and organized charity.
U. A. Creek township	1,917	43 00	2 00	3	1	2	2	.....	.....	.....	.....	Township supports poor unable to be removed.
U. P. Neck "	3,361	46 75	.....	.....	.....	.....	.....	.....	.....	.....	.....	Poor sent to county-house.
U. Pittsgrove "	2,073	.....	.....	1	1							
L. P. Neck "	1,334											
Pilesgrove "	3,497											
Somerset county	27,162											
Bedminster township	1,812	1,583 16	107 00	53	23	33	21	1	.....	.....	.....	No poor-house. Poor kept wherever most economical.
Bernards "	2,622	1,600 00	150 00	29	16	13	1	.....	.....	.....	.....	No poor-house. Poor kept wherever most economical.
Branchburg "	1,316	750 00	150 00	6	1	5	1	.....	.....	.....	.....	No poor-house. Kept with private parties.
Bridgewater "	7,997	4,200 00	700 00	20	10	10	.....	.....	.....	.....	.....	Poor-house.
Franklin "	3,818	2,025 00	525 00	40	20	17	3	.....	.....	.....	.....	Poor-house.
Hillsborough "	3,248	2,137 47	622 50	28	16	12	6	1	.....	.....	.....	Poor-house near Neshanic.
Montgomery "	1,928	1,191 35	425 35	15	4	5	6	.....	.....	.....	.....	Poor kept on poor-farm.
North Plainfield "	3,217	1,434 74	.....	18	5	13	.....	.....	.....	.....	.....	Some are boarded out with private families, others given orders on grocery stores.
Warren "	1,204	760 83	.....	† 14	6	5	3	.....	.....	.....	.....	The poor are boarded out.
Sussex county	23,539											
Alms-house (county)	.....	6,316 75	839 00	120	50	70	15	.....	.....	.....	.....	County poor-house, to which the poor from townships, in cases of necessity, are sent. Located in Frankford township (Branchville.)

Byram township	1,406	250 00		‡ 12	4	3	5					If able to be removed, poor sent to county-house; otherwise, kept where they are.
Frankford "	1,682	214 00	63 33									
Hardyston "	2,645	149 22										If $5 or $10 will support a pauper during the year, it is paid him by township; otherwise removed to county poor-house.
Lafayette "	781											Temporary aid given by township committee. No applicants during the year.
Montague "	1,022	71 12										
Newton "	2,513	350 00	50 00	30	10	20	6		1			
Hampton "	895	47 00	37 00									
Sparta "	2,274	134 04										
Stillwater "	1,502	150 00										
Vernon "	1,811	69 75										
Walpack "	575	2 50										Tramps only cost. It is very seldom the township has any charge.
Wantage "	3,361	§ 276 65		3	1	2						
Andover "	1,150											
Green "	727											
Sandyston "	1,195											
Union county	55,571											
Elizabeth city	28,229											
Alms-house		4,420 64	600 00	‖ 101	23	14	18			a 7	$1 75	Poor maintained in alms-house, by out-door relief and orphan asylum.
Out-door relief		9,467 32	920 00	b 143								
Plainfield city	8,125	2,500 00	200 00	79	21	18	40					No poor-house. Poor maintained by temporary and regular relief. Twenty-five of latter class.
Rahway "	6,455	4,000 00	600 00	17	5	12	3					Poor-farm.
Clark township	353	211 63	59 25	6	4	2	2			1	148 00	No poor-house.
Cranford "	1,184	266 91	46 80	5	2	3						No poor-house. Poor mostly transient. Only one, an aged Frenchman, who receives regular aid.
Fanwood "	1,167	347 00	35 00	2	1	1						
Linden "	1,889	1,300 00	155 00	12	7	5						
New Providence township	781	585 00	60 00	6	2	4						Poor boarded wherever they can be kept to best advantage.
Springfield "	844	623 65	52 00	9	5	4	3	1				Boarded out at private houses.
Summit "	1,910	522 85	46 00	20	9	8	3					
Union "	2,418	859 85	100 00	16	12	4	1					Poor boarded out; also supported by weekly allowance.
Westfield "	2,216	1,100 00	100 00	10	1	9	4					
Warren county	36,589											
Alms-house (county)		5,047 50	650 00	134	79	55	6					County poor-house, located in Mansfield township, near Townsbury. Temporary relief, when necessary, is given by townships.
Allamuchy township	648	1 50		1								
Blairstown "	1,458	40 73	9 25	7								
Belvidere town	1,773	363 76	30 00	13	11	2						
Franklin township	1,529	106 65		1			1					
Frelinghuysen township	1,042	40 00		1	1							
Greenwich "	2,554	197 75	63 00	24	11	5	8					
Hackettstown "	2,502	183 00	63 00	2		2						
Hardwick "	583	40 58	25 58	3	1	2						
Harmony "	1,350	49 50										No cost but for removal to county-house.
Hope "	1,569	100 00		11	6	5	4					
Independence "	1,018	35 85		4	1	3						
Mansfield "	1,709	247 00		12	7	4	1					
Oxford "	c 6,367	174 00	150 00	d 45								No poor but those who take care of themselves.
Pahaquarry "	418											
Pohatcong e "		185 00	126 00	19	16	2	1					
Phillipsburg town	7,181	307 28	75 00	43	16	14	13					
Washington township	3,594	85 00		3	1	2						
Knowlton "	1,476											
Lopatcong "	1,591											

* Population of Salem city included in Quinton township. † Also 74 tramps. ‡ Also 15 tramps. § From Comptroller's report for 1882. ‖ Monthly average, 40. a Children in Elizabeth Orphan Asylum. b Monthly average. Heads of families. Probably 450 persons altogether. c Including Belvidere town. d Families relieved. e Part of Greenwich before 1881.

TABLE No. 2.

POOR IN ALMS-HOUSES.

Location. County.	City or township.	County or township-house.	Total.	Males.	Females.	Children under 10 years.	Infants.	Permanent inmates.	Temporary inmates.	Insane.	Idiotic or imbecile.	American birth.	Foreign birth.	Married.	Single or divorced.	Births during year.	Deaths during year.	Average daily cost per inmate, (cents.)	Total cost.	Remarks.
Atlantic.....	Smith's Landing...	County	19	8	11	..	..	19	6	....	....	12	7	2	17	..	1	28¼	$1,962 63	Maintained by townships of Buena Vista, Mullica, Weymouth, Galloway, Egg Harbor and Hamilton, and town of Absecon. Most of inmates old and crippled, and unable to work.
Bergen	Oradell.....	County	*462	12	18	10	4	40	....	....	1	25	15	....	....	1	4	32¼	†4,474 11	Supported by ten townships: Washington, Ridgewood, Franklin, Harrington, Union, Midland, New Barbadoes, Hohokus, Saddle River and Lodi.
"	Englewood.....	Township..	19	13	6	4	1	13	6	....	1	12	7	4	15	..	2	21	1,000 00	Belongs to townships of Englewood, Ridgefield and Palisades. All who are able, work on farm.
Burlington...	Pemberton	County	325	150	140	30	5	....	....	66	6	265	60	....	....	2	33	.....	11,414 99	Alms-house situated two and a half miles from Pemberton. Profits of farm supposed to be worth $3000, which is not included in cost as given; $8130.59 drawn from county treasury and $3292 received as State allowance for lunatics.
Camden	Blackwoodstown..	County ..	‡356	....	....	..	..	....	....	....	....	.....	....	....	....	..	....	.....	19,797 27	During 1882, the total expenditures, including inventory, were $22,469.87; the net expenditures or actual cost of running the alms-house were $8334.12 or 50⅔ cents per week. Also, see Table No. 1.
			§121	57	41	23														
			‖131	67	64	..	..	....	....	....	....	43	38	....	....	..	....	.....	a 22,346 84	
Cape May ...	Cape May C. H....	County	29	12	10	7	..	29	....	....	3	27	2	1	28	..	6	25	2,686 04	None employed in productive labor.
Cumberland.	Bridgeton	County	80	....	....	..	..	....	....	11	....	.....	....	....	....	3	9	27	9,964 40	Twelve inmates are employed. Most of them are aged people.
Essex	Newark	City.....	264	140	124	74	..	150	114	....	25	61	203	....	....	4	25	.....	10,401 90	Farm products, including milk, pork, &c., estimated at $1587. All the labor performed on premises is done by inmates.
"	Orange city.....	City.....	40	28	12	10	2	16	24	....	.. .	8	16	13	11	3	4	20	1,722 69	Four inmates are employed. Most of them are sick and helpless.
"	Belleville.....	Township..	10	5	5	..	..	10	....	....	2	2	8	1	9	..	....	18¾	608 50	Potatoes and vegetables raised on land (two acres,) connected with poor-house, and cultivated mainly by inmates.
"	Millburn.....	Township..	4	....	....	..	..	4	....	....	....	3	1	....	....	..	1	.....	860 02	Poor-farm, on which the poor do light work.
"	Montclair.....	Township..	10	6	4	5	..	8	2	....	....	7	3	1	3	..	2	30	2,000 00	
"	South Orange.....	Township..	5	3	2	..	..	5	....	....	....	2	3	2	3	..	....	.....	.....	Overseer of poor employs a man to work the place.

"	Bloomfield	Township	....	....	....	..	..	....	....	....	....	....	....	....	....	..	....	....	....	"None" was the answer to question "Number of inmates in poor-house?"
Gloucester	Clarksboro'	County	61	34	27	..	..	....	....	....	....	....	....	....	....	..	....	....	5,622 60	Three paupers (two old soldiers and wife of one of them) are temporarily relieved outside; $611.62 also spent in improvements.
Hudson	Snake Hill	County	2,250	....	....	..	..	....	770	14	....	1,345	905	....	....	26	127	19½	54,002 54	No record of males, females, &c., was kept by predecessor of present steward. Fifty inmates employed.
Hunterdon	Clover Hill	Township	9	5	4	2	..	9	....	1	1	9	....	....	9	..	1	....	1,700 00	Raritan township poor-farm.
Mercer	Trenton	City	70	45	25	2	..	50	20	....	2	23	37	....	....	3	5	30	8,060 00	Average number of inmates 60.
"	Hamilton	Township	11	4	7	1	..	11	....	....	....	10	1	....	5	..	2	....	1,821 61	Some kept at poor-farm, some boarded out (18.)
"	Hopewell	Township	13	8	4	2	1	....	1	....	2	....	2	....	1	..	3	18	714 46	
"	Princeton	Township	12	6	3	2	1	7	5	....	....	8	4	1	2	1	2	25	1,092 68	
Middlesex	New Brunswick	City	45	13	21	5	1	30	15	3	2	9	36	2	43	1	2	20	2,700 00	Those who are able to work on farm are employed.
"	Perth Amboy	City	14	....	....	..	..	14	....	....	....	9	5	1	13	..	1	....	....	None employed.
"	Woodbridge	Township	12	9	3	..	..	....	....	....	....	3	9	....	....	..	4	....	....	None employed.
"	Piscataway	Township	9	2	5	2	..	....	....	....	....	....	....	....	....	..	1	....	....	None employed.
Monmouth	Shark River	Township	26	10	16	4	1	23	3	....	1	24	2	1	22	2	7	35¾	b 2,257 40	Old "county house," owned jointly by townships of Middletown, Atlantic, Holmdel and Wall, of Monmouth Co., and Dover and Brick, of Ocean Co.
"	Hazlet	Township	9	....	....	4	1	9	....	....	....	4	5	....	4	1	2	22½	b 755 04	"Town-house," owned jointly by Raritan, Holmdel and Matawan townships. Average number of inmates: Holmdel, 2; Matawan, 4; Raritan, 2—total, 8.
"	Eatontown	Township	15	8	7	3	..	10	* 5	....	1	11	4	....	12	..	2	50	3,700 00	King's house. A private poor-house, Ocean township.
"	Englishtown	Township	4	1	3	..	..	4	....	....	....	3	1	....	4	..	....	21½	....	Thompson's house. A private poor-house, Manalapan township.
Morris	Boonton	County	171	109	62	..	13	c 82	....	12	12	119	52	27	144	1	10	11¾	4,965 53	Children between 9 and 16 kept at Children's Home, Parsippany, at cost of $1 50 per week. Total cost per year, $2365.67. Whole number in home, 41.
Passaic	Paterson	City	173	92	87	36	..	....	....	38	10	91	100	20	170	4	21	....	15,368 03	Inmates employed, 6.
"	Passaic city	City	20	5	15	2	1	9	11	....	....	2	18	4	7	1	1	12½	912 50	
Salem	Woodstown	County	71	41	30	11	5	....	....	9	6	56	15	4	3	3	18	....	7,378 60	
Somerset	Bridgewater	Township	5	....	....	2	1	5	....	....	....	5	....	....	....	..	....	....	2,000 00	Employed, 2.
"	Franklin	Township	15	8	7	3	1	15	6	....	6	15	....	....	....	2	....	....	....	
"	Neshanic	Township	18	6	7	3	2	13	5	....	3	15	3	2	11	1	3	22	987 76	Employed, 4.
"	Montgomery	Township	4	2	2	..	..	4	....	....	....	4	....	2	2	..	2	....	....	Also 11 temporary inmates.
Sussex	Branchville	County	120	50	70	15	..	120	....	8	7	100	20	10	65	3	18	14	6,316 75	Inmates employed, 2; cost per year, $100.
Union	Elizabeth	City	d 55	23	14	18	4	....	....	....	2	22	19	10	30	2	7	26	4,420 64	Employed, 6; value of labor, $5 per month for each.
"	Rahway	City	9	4	5	3	1	9	....	....	3	3	6	1	5	..				
Warren	Townsbury	County	134	79	55	6	3	70	64	....	20	87	47	6	128	3	13	....	5,000 00	An average of 10 females work in the house and 8 males on the farm.

* Monthly average, 38½. Lowest (Sept. 2d, 1882,) 35; highest (April 30th, 1883,) 44. The number given above is taken from the report of trustees. † Total expenses, $4768.57. Receipts from farm sources, &c., $294.46, and improvements and addition to stock, $1381.69. Cost of pauper per day, exclusive of improvements to farm and stock, 22.9 cents. ‡ Probable number in alms-house during the year. § Number Nov. 12th, 1883. ‖ Number April 30th, 1882. a For 1882. b This is estimated and is exclusive of products of farm. c Average. d In January, 1883. Number during year 1883, 101. Monthly average, 40.

TABLE No. 3.

POOR BOARDED OUT.*

LOCATION. County.	City or Township.	Total.	Males.	Females.	Children under 10.	Infants.	Permanent paupers.	Temporary paupers.	Insane.	Idiotic or imbecile.	American birth.	Foreign birth.	Married.	Single or divorced.	Births during year.	Deaths during year.	Average daily cost per pauper (cents.)	Total cost.	Remarks.
Essex county	Caldwell	18	4	9	5	....	18	.....	....	5	17	1	1	5	.....	2	23	$1,478 50	Poor maintained by persons not under control of overseer.
	Clinton	3	1	2	.....	....	.....	.....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	Poor placed out by contract.
	East Orange	8	1	2	5	....	.....	.....	....	....	.....	.....	.....	.....	.....	1	.....	.....	Three in Newark almshouse. Five children in Orange Orphan Asylum.
	Franklin	33	.....	.....	12	....	7	26	....	....	6	20	10	16	.....	5	.....	.....	Boarded and relieved by orders.
	Livingston	2	2	.....	.....	....	2	.....	....	....	2	.....	2	.....	.....	1	50		
Hunterdon county	Alexandria	8	.....	.....	.....	....	8	.....	1	....	8	.....	.....	.....	.....	1			
	Bethlehem	5	.....	5	1	....	4	1	....	1	5	.....	.....	12	.....	3	.....	1,650 50	
	East Amwell	9	5	4	.....	....	.....	.....	....	....	8	1	5	4	.....	3			
	Holland	18	10	2	6	....	3	.....	....	1	3	.....	2	1	.....	.....	.....	.....	Fifteen boarded. Three kept at poor-house in Alexandria township.
	Kingwood	10	8	2	2	....	5	5	....	....	10	.....	1	9	.....	3	.....	940 00	Kept at private poor-house.
	Lambertville	12	4	5	3	....	.....	.....	....	....	6	6	1	7	.....	1	.....	1,800 00	
	West Amwell	5	4	1	.....	1	5	.....	....	....	4	1	5	.....	.....	.....	50	700 00	Two employed.
	Delaware	10	.....	.....	.....	....	.....	.....	....	....	8	2	.....	.....	.....	.....	30⅓		
	Clinton	26	.....	.....	.....	....	.....	.....	....	....	24	2	.....	16	.....	2			
Mercer county	East Windsor	10	3	7	.....	....	2	.....	....	....	.....	.....	.....	.....	.....	1			
	Lawrence	4	.....	4	1	....	.....	.....	....	....	3	7	.....	4					
	Washington	11	8	3	2	....	7	.....	....	....	6	2	.....	.....	.....	4	30	800 50	
	West Windsor	8																	
Middlesex county	Cranbury	2	.....	.....	.....	....	2												
	Madison	10	7	3	.....	....	2	8	1	....	10	.....	3	7	.....	5	.....	700 00	
	Monroe	7	4	3	.....	....	7	.....	....	....	6	1	.....	7	1	6	30	900 00	Overseer takes poor to his own house.
	North Brunswick	9	6	3	.....	....	9	.....	2	1	9	.....	5	4	.....	3	33.3	763 26	
	Raritan	.....	.....	.....	.....	....	.....	.....	....	....	17	5	.....	.....	.....	5			
	South Brunswick	17	.....	.....	.....	....	17	.....	....	....	.....	.....	.....	.....	.....	3			
Monmouth county	Upper Freehold	12	.....	.....	.....	....	12	.....	....	3	.....	.....	.....	.....	1	3			
Ocean county	Jackson	5	.....	.....	.....	....	2	.....	....	1	1	.....	.....	1	.....	1	24	386 00	
	Union	2	1	1	.....	....	2												

Passaic county	Little Falls	3	2	1	.....	....	1	2	....	....	1	2	2	1	.....	1	64⅓	100 00	Private poor-house by overseer.
	Pompton	5																	
	Wayne	14	10	4	1	....	10	4	....	2	13	1	5	.....	1				
	West Milford	23	.....	.....	.....	....	.....	8	....	....	21	2	7	14	3	1			
Somerset county	Bedminster	37	10	27	8	1	37	.....	2	1	37	.....	8	12	1	3			
	Bernards	29	16	13	1	....	18	11	....	....	27	2	5	7	.....	3			
	Branchburg	6	1	5	1	....	5	1	....	1	5	1	.....	6	.....	1	.....	600 00	
Union county	Fanwood	2	1	1	.....	....	2	.....	....	....	2								
	Linden	8	3	5	.....	....	8	.....	....	1	1	7	2	6					
	New Providence	6	2	4	.....	....	6	.....	....	....	6	.....	2	4	.....	1			
	Springfield	6	2	1	3	....	6	.....	....	....	6								
	Summit	14	4	7	3	....	14	.....	....	....	2	12							
	Westfield	11	1	6	4	....	11	.....	....	....	5	6							

* So far as reported for forty townships. In many instances no information was given as to this point.

TABLE NO. 4.

Expenditures for Poor Relief.

ATLANTIC COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Alms-house	† $300 00 1,962 63	$2,300 00	$1,962 63
Absecon	4 00	7 90	8 00
Atlantic City	921 37	600 00	1,032 27
Buena Vista	92 71	21 90	
Egg Harbor City	234 76	292 25	244 76
Egg Harbor township	273 01	110 38	141 77
Galloway	.....	86 35	
Hamilton			
Hammonton	210 74	292 17	231 41
Mullica			
Weymouth	100 00	39 50	

BERGEN COUNTY.‡

Englewood	$903 62	$659 52	
Palisades	411 27	419 26	
New Barbadoes	654 07	c 453 90	
Midland	467 00	276 25	
Ridgefield	682 11	568 73	
Hohokus	639 54	675 27	
Franklin	493 18	279 35	
Union	492 81	542 27	
Lodi	386 99	236 88	
Ridgewood	321 11	204 17	
Washington	696 20	406 41	
Saddle River	295 40	167 98	
Harrington	553 70	324 05	

BURLINGTON COUNTY.

Alms-house	$9,600 41	.....	$9,195 32
Bass River	26 50		
Beverly city	.....	$100 00	
Beverly township	.....	26 00	7 00
Bordentown	.....	1,811 21	1,350 00
Burlington city	235 19	131 18	
Burlington township	§ 2,162 01	1,345 70	1,462 01
Chester	b 139 00	135 20	112 24
Chesterfield	.....	23 33	
Cinnaminson	.....	59 00	40 00
Delran	53 00		
Eastampton	.....	43 08	5 50
Evesham	94 68	26 50	70 40
Florence			
Little Egg Harbor	103 04	150 00	
Lumberton	.....	268 64	
Mansfield	75 00	100 00	63 93
Medford	.....	309 30	
Mt. Laurel	16 24	40 75	
New Hanover	264 42	270 95	133 00
Northampton	1,030 09	125 00	a 725 00
Pemberton	.....	451 33	
Randolph	.....	5 05	
Shamong	116 45	62 41	106 45
Southampton	200 00	200 00	530 00
Springfield	.....	212 60	
Washington	.....	d 50 00	
Willingboro	10 00		
Woodland	57 58	60 00	
Westampton	30 00	23 80	

* And previous years. † County physician. ‡ Poor tax is here given. § Including physician's salary.
a Also interest on $10,000 legacy. b Includes constable's fees. c Township poor, $20.60. d Tax.

TABLE No. 4—*Continued.*

Expenditures for Poor Relief.

CAMDEN COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Alms-house	$21,359 62	$22,346 84	$21,359 62
Camden city	785 50	3,096 74	‡ 4,122 64
Gloucester City	285 92	.....	585 92
Haddon	115 18	.....	40 00
Centre	178 16	.....	121 90
Delaware	.....	99 52	
Gloucester	.....	76 40	129 00
Waterford	66 63	85 92	36 63
Stockton	73 74	103 78	73 74
Winslow	.....	† 100 00	.....

CAPE MAY COUNTY.

Alms-house	$3,165 81	$3,030 00	$3,165 81
Dennis	160 50	220 44	160 50
Lower	.....	100 00	49 03
Middle	.....	† 200 00	
Upper	.....	64 90	
Cape May City	.....	400 00	405 60

CUMBERLAND COUNTY.

Alms-house	$9,540 00	$8,406 00	$10,222 11
Bridgeton	217 75	148 00	217 75
Millville	500 00	† 500 00	405 27
Commercial	.....	150 00	313 60
Deerfield	.....	64 51	71 82
Downe	200 00	† 200 00	200 00
Fairfield	.....	76 36	
Greenwich	32 67	100 00	32 67
Hopewell	.....	200 00	16 50
Landis	430 68	428 93	430 68
Maurice River	121 62	83 00	121 62
Stow Creek	100 00	50 00	106 00

ESSEX COUNTY.

Newark	§ $15,500 00 33,000 00	$36,000 00	$35,673 49
Orange	7,048 44	5,650 34	7,048 48
Bloomfield	2,557 93	2,440 04	2,232 93
Franklin	748 89	548 37	800 89
Belleville	1,627 07	1,552 51	1,515 75
Caldwell	1,500 00	1,456 96	1,554 00
Livingston	.....	468 82	528 21
Clinton	.....	1,321 36	777 75
Millburn	860 02	1,334 07	860 02
East Orange	2,681 13	2,334 50	2,981 13
West Orange	461 09	636 47	662 59
South Orange	‖ 2,416 33	1,287 96	1,430 00
Montclair	3,174 27	3,546 69	2,500 00

* And previous years. † Tax. ‡ Includes dispensary expenditure. § Hospitals. ‖ Including poor-farm bond ($1000.)

TABLE No. 4—*Continued.*

Expenditures for Poor Relief.

GLOUCESTER COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Alms-house (county)	$6,374 44	$6,741 52	$6,374 44
Woodbury	397 93	400 00	397 93
Clayton.			
Deptford	†100 00	48 00	
Franklin	75 40		
Glassboro.			
East Greenwich.			
Greenwich	124 00	32 00	
Harrison	†300 00	305 98	
South Harrison	†200 00		
Logan	†200 00	145 73	10 00
Mantua	†25 00	100 00	7 35
Monroe	†150 00	40 25	174 24
Washington	.....	.....	13 00
West Deptford	128 50	61 76	140 50
Woolwich	27 50	58 50	

HUDSON COUNTY.

Alms-house (county)	$54,601 54	.....	$54,001 54
Jersey City	12,999 96	$12,999 96	14,000 00
Hoboken	2,202 26	2,497 08	2,702 26
Bayonne	2,094 80	629 13	2,094 80
North Bergen	.....	.....	149 00
West Hoboken	496 13	351 08	496 13
Town of Union	281 78	292 67	300 00
Union	†100 00	93 36	115 00
Guttenberg	31 93	24 60	31 93
Weehawken	127 00	300 00	390 00
Harrison	683 18	1,000 00	750 00
Kearny	.....	38 35	150 00

HUNTERDON COUNTY.

Alexandria	$850 00	$700 00	$1,000 00
Bethlehem	†1,700 00	2,500 00	1,725 00
Clinton borough	†200 00	93 85	10 00
Clinton	1,500 00	2,000 00	2,631 61
Delaware	1,164 60	1,078 93	1,108 00
East Amwell	1,016 22	1,021 70	1,016 22
Franklin	.....	1,000 00	813 00
Frenchtown	.....	‡54 01	255 28
High Bridge	1,890 61	1,656 64	1,871 00
Holland	†1,000 00	745 00	810 00
Kingwood	774 95	1,016 43	1,070 70
Lambertville	1,548 65	1,635 00	1,900 00
Lebanon	1,705 23	1,894 92	1,868 00
Raritan	500 00	†500 00	2,695 00
Readington	†2,500 00	3,289 83	3,052 18
Tewksbury	1,914 16	1,608 45	1,833 16
Union	.....	814 00	424 50
West Amwell	461 41	374 79	700 00

* And previous years. † Tax. ‡ 1879.

TABLE No. 4—*Continued.*

Expenditures for Poor Relief.

MERCER COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Ewing	$1,626 39	$1,669 26	$1,726 39
Lawrence	† 400 00	1,168 67	433 00
Hopewell	2,573 93	1,877 37	2,389 79
Princeton	3,451 66	3,608 61	4,759 75
East Windsor	† 1,000 00	.....	1,237 09
West Windsor	† 800 00	840 00	772 00
Washington	† 800 00	878 74	800 50
Hamilton	† 1,400 00	1,462 15	1,821 61
Millham	426 32	.....	479 98
Chambersburg	.....	700 20	1,102 00
Trenton	11,738 15	13,355 36	16,800 00

MIDDLESEX COUNTY.

New Brunswick	$6,451 67	$6,449 89	$6,500 00
South Brunswick	1,285 50	1,108 85	1,295 50
East Brunswick	1,629 97	1,496 28	1,627 89
North Brunswick	683 00	804 68	804 68
Cranbury	.....	400 00	674 00
Monroe	900 00	900 00	900 00
Madison	.....	.....	800 00
Sayersville	.....	1,200 00	1,580 00
South Amboy	1,500 00	1,500 00	1,500 00
Perth Amboy	2,186 89	1,716 05	2,210 00
Woodbridge	3,339 15	2,166 26	3,561 33
Piscataway	2,169 00	2,292 24	2,228 15
Raritan	2,674 34	2,450 54	2,500 00

MONMOUTH COUNTY.

Atlantic	$562 53	$602 19	$526 60
Eatontown	.....	1,500 00	1,160 00
Freehold	1,938 26	1,785 14	1,938 26
Holmdel	.....	406 45	850 00
Howell	.....	2,328 96	1,950 00
Manalapan	1,000 00	1,100 00	1,000 00
Marlboro	† 1,000 00	† 1,000 00	1,002 00
Matawan	.....	1,500 00	1,988 60
Middletown	.....	1,800 00	1,963 00
Millstone	1,400 00	1,300 00	830 10
Neptune	.....	500 00	763 45
Ocean	.....	4,000 00	3,700 00
Raritan	† 1,500 00	1,754 06	1,774 16
Shrewsbury	.....	2,910 03	3,200 00
Upper Freehold	1,555 29	1,521 46	1,680 99
Wall	.....	.....	800 00

* And previous years. † Poor tax.

TABLE No. 4—*Continued.*

Expenditures for Poor Relief.

MORRIS COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Alms-house (county)	$11,146 47	$7,906 39	$11,146 47
Boonton	45 00	50 00	45 00
Chatham	† 500 00	† 500 00	580 00
Chester	47 84	44 33	873 00
Hanover	.....	26 08	
Jefferson	.....	16 25	
Morris	† 300 00	300 00	
Montville	64 30		
Mendham	† 125 00	125 00	125 00
Mount Olive	.....	† 200 00	
Passaic	.....	60 50	42 75
Pequannock	† 300 00		
Randolph	186 55	243 90	300 00
Roxbury	† 100 00		
Rockaway	208 10	208 34	208 13
Washington	95 50		

OCEAN COUNTY.

Berkeley	$189 84	$266 06	$250 00
Brick	.....	800 00	1,151 30
Dover	.....	700 00	800 00
Eagleswood	† 600 00	† 300 00	498 00
Jackson	382 00	495 35	386 00
Lacey	† 300 00	† 300 00	150 00
Manchester	.....	265 62	286 92
Ocean	.....	150 00	75 00
Plumsted	.....	† 1,500 00	
Stafford	.....	800 00	400 00
Union	.....	390 79	314 40

PASSAIC COUNTY.

Paterson	‡ $30,138 16	‡ $26,168 33	$27,605 60
Passaic	2,737 60	2,887 24	3,094 61
Acquackanonk	59 83	51 13	
Wayne	1,004 08	934 39	1,083 00
Pompton	1,134 30	588 34	1,124 30
Manchester	258 67	147 12	258 67
West Milford	.....	1,000 00	1,400 00
Little Falls	888 50	.....	525 00

SALEM COUNTY.

Alms-house (county)	$6,850 00	$5,118 52	$7,378 60
Salem	272 08	154 81	272 08
Mannington	† 300 00	420 92	
Pilesgrove	.....	515 60	
Upper Alloways Creek	.....	.....	43 00
Lower Alloways Creek	.....	.....	5 00
Upper Penn's Neck	46 75	52 10	
Oldmans.			
Lower Penn's Neck.			
Elsinboro	.....	.....	185 00
Upper Pittsgrove	.....	162 33	
Pittsgrove	183 95	113 67	142 89
Quinton	73 60	.....	120 00

* And previous years. † Tax. ‡ Charities and corrections.

TABLE No. 4—*Continued.*

Expenditures for Poor Relief.

SOMERSET COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Bedminster	$1,583 16	$1,237 78	$1,583 16
Bernards	1,600 00	† 1,600 00	1,600 00
Branchburg	941 34	1,160 93	750 00
Bridgewater	4,587 23	† 3,500 00	4,200 00
Franklin	† 1,500 00	1,212 09	2,025 00
Hillsborough	1,360 95	1,341 01	2,137 47
Montgomery	† 400 00	636 00	1,191 35
North Plainfield	1,434 74	1,181 35	1,434 74
Warren	† 500 00	207 00	760 83

SUSSEX COUNTY.

Alms-house (county)	$7,759 66	.....	$6,316 75
Andover	.....		
Byram	200 00	$300 00	250 00
Frankford	182 20	412 79	214 00
Green.			
Hampton	.....	.....	47 00
Hardyston	170 20	150 00	149 22
Lafayette.			
Montague	71 12	71 12	71 12
Newton	297 71	643 41	350 00
Stillwater	150 00	† 150 00	
Sparta	134 04	237 55	
Sandyston	.....	5 00	
Vernon	69 75	141 80	
Wantage	.....	276 65	
Walpack	.....	5 30	2 50

UNION COUNTY.

Elizabeth	$7,283 51	$7,481 61	$13,887 96
Plainfield	.....	2,538 55	2,500 00
Rahway	2,094 03	2,256 13	4,000 00
Clark	300 00	200 95	211 63
Cranford	326 96	249 39	266 91
Fanwood	242 19	255 70	347 00
Linden	1,300 00	1,297 87	1,300 00
New Providence	421 57	633 99	585 00
Springfield	623 05	1,017 60	623 65
Summit	.....	531 50	522 85
Union	834 83	990 68	859 85
Westfield	1,100 25	1,168 90	1,100 00

* And previous years. † Tax. ‡ Charities and corrections.

TABLE No. 4—*Continued.*

Expenditures for Poor Relief.

WARREN COUNTY.

Counties, Cities and Townships.	1883. Comptroller's Returns.	1882.* Comptroller's Returns.	1883. Bureau Returns.
Alms-house (county)	$5,047 50 † 1,190 61	$5,423 75 † 488 83	$5,047 50
Allamuchy	80 00	130 00	1 50
Blairstown	.....	‡ 100 00	40 73
Belvidere	333 76	223 59	363 76
Franklin	106 65	227 75	106 65
Frelinghuysen	42 50	127 33	40 00
Greenwich	197 75	127 33	197 75
Hackettstown	200 00	200 00	183 00
Hardwick	.....	5 50	40 58
Harmony	60 50	61 50	49 50
Hope	‡ 50 00	‡ 50 00	100 00
Independence	.....	‡ 50 00	35 85
Knowlton	.....	‡ 150 00	
Lopatcong	‡ 200 00	43 75	
Mansfield	.....	150 00	247 00
Oxford	.....	500 00	174 00
Phillipsburg	.....	.....	307 28
Pahaquarry.			
Pohatcong	179 91	.....	185 00
Washington	1,300 00	300 00	85 00
Washington borough	.....	124 27	

* And previous years. † Repairs. ‡ Tax.

PART VII.

LABOR LEGISLATION.

LABOR LEGISLATION.

CHAPTER XXXVIII.

An act to provide for the formation and regulation of co-operative societies of workingmen.

1. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey,* 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 the powers incident thereto.

2. *And be it enacted,* 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 installments 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. *And be it enacted*, 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 of 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. *And be it enacted*, 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 in the by-laws thereof.

5. *And be it enacted*, 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. *And be it enacted,* 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 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* 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 the number of shares held by each, the amount and character of the property of the society and of its debts and liabilities; and that 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 offence 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* That any member of such society, by a 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 neice 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 sales by will or otherwise, subject to the consent of the board of directors.

16. *And be it enacted,* That any such society may be dissolved in the manner in which any other corporation may be dissolved under existing laws.

17. *And be it enacted,* 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. *And be it enacted*, 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.

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

Approved March 10th, 1884.

CHAPTER LVII.

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. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey*, 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. *And be it enacted*, 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 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 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. *And be it enacted*, 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. *And be it enacted*, 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 offence 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 offence, 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. *And be it enacted*, 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. *And be it enacted*, 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 not more than five hundred dollars shall be expended by him in any one year.

7. *And be it enacted*, That all fines collected under this act shall enure to the benefit of the school fund of the district where the offence has been committed.

8. *And be it enacted*, That all acts and parts of acts inconsistent with the provisions of this act are hereby repealed, and that this act shall take effect immediately.

Approved March 5th, 1883.

A supplement to an act 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," approved March fifth, one thousand eight hundred and eighty-three.

1. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey,* 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 provisions 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 violations 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* 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. *And be it enacted,* That section four of the act to which this is a supplement shall be amended to read as follows:

[4. *And be it enacted,* 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 liable to a penalty of fifty dollars for each offence, 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 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 endorse 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; 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. *And be it enacted,* That section six of the act to which this is a supplement, be amended to read as follows:

[6. *And be it enacted,* 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. *And be it enacted,* That all acts or parts of acts inconsistent with this act, be and are hereby repealed.

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

CHAPTER XII.

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. BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey,* That it shall be unlawful for the principal keeper, supervisor and board of inspectors of the state prison of this state, in anywise to contract for the labor of the prisoners confined in said prison, or for any portion thereof.

2. *And be it further enacted,* 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 anywise to contract for the labor of the inmates of any such prison, penitentiary, jail or public reformatory institution.

3. *And be it further enacted,* 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. *And be it further enacted,* 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.

5. *And be it further enacted,* That this act shall be a public act, and shall take effect immediately.

Approved February 21st, 1884.

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