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THIRTY-FOURTH ANNUAL REPORT

OF

The Bureau of Statistics

OF

Labor and Industries

OF

NEW JERSEY

For the year ending October 31st

1911

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CAMDEN, N. J.  
SINNICKSON CHEW & SONS COMPANY  
1912



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STATE OF NEW JERSEY,  
OFFICE OF THE BUREAU OF STATISTICS,  
TRENTON, October 31, 1911.

*To His Excellency Woodrow Wilson, Governor:*

SIR: In accordance with the provisions of Chapter 105, Laws of 1878, and the several supplements thereto, I have the honor of submitting to the Senate and General Assembly through you, the thirty-fourth annual report of the Bureau of Statistics of New Jersey.

WINTON C. GARRISON,

*Chief.*



## INTRODUCTION.

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The several lines of investigation carried on by the Bureau during the year 1911 are shown in this, the thirty-fourth of the series of annual reports issued by this office since its organization in 1878, and all are in strict accordance with the letter and spirit of the act by which it was created. The duties of the Bureau as as defined by this statute are:

“To collect, assort, systematize and present in annual reports to the legislature, statistical details relating to all departments of labor in the State, *especially in relation to the commercial, industrial, social, educational and sanitary condition of the working classes*, and in all suitable and lawful ways to foster and encourage our manufacturing and every other form of productive industry, with a view to their permanent establishment on a prosperous basis for both employers and wage earners.”

The duties devolving upon the Bureau under the comprehensive terms of this law are not exceeded in importance by those of any other department, as none others are so closely related to conditions affecting the fundamental well-being of the great majority of our people.

Through perseveringly keeping this in view, the Bureau is, and for years back has been, a great clearing house for information relating to New Jersey in all the various interests referred to in the act, and its records are freely drawn upon by persons interested in the industrial, commercial and sociological affairs of the State. Answering the correspondence on these and kindred topics involves an amount of work equal at least to that required by the investigations and inquiries, the results of which appear in the annual reports.

The tremendous increase in volume of manufacturing industry each year naturally brings about a corresponding enlargement of the work of the Bureau. Between the years 1904 and 1909, the value of our output of manufactured goods increased 48 per cent., or from \$774,369,000 to \$1,145,529,000. This gain in industry was exceeded by only two States—Ohio and Michigan—which experienced increases of 50 and 60 per cent. respectively. In the matter of population, New Jersey, with an increase of 34.6 per cent. during the decade between 1900 and 1910, leads all States east of the Rocky Mountains, with the single exception of Florida.

New Jersey is still the sixth among the States in the Union in the value of manufactured goods, but if no interruption occurs in our steadily maintained advance, we may reasonably expect to occupy the fifth or even the fourth place in the list of great industrial commonwealths within a few years.

This year's report of the Bureau is divided into three parts, namely—Part One: The Statistics of Manufactures, which covers the operations of our factories and workshops for the year 1910. Part Two: Employment, Working Hours and Wages on Steam Railroads of New Jersey; Cost of Living; Statistics of the Fruit and Vegetable Canning Industry, and the Industrial Insurance System of Germany. Part Three: Industrial Chronology of New Jersey, which contains the year's record of Accidents to Workmen While on Duty, Changes in Working Hours and Wages, the Loss of Factory Property Through Fire, New Manufacturing Plants Started During the Year, and the Enlargement of Establishments Already in Existence, Strikes and Lockouts, and the Organization of New Trades Unions.

During the year 1911, three co-operative societies were organized under the general co-operative act of 1884, and their certificates filed in this Bureau as required by law. These organizations were formed for the purpose of conducting co-operative stores for the sale of food supplies, clothing, etc.

The larger part of the work performed by the Bureau during the year is of a character that cannot be shown in the annual reports, consisting, as it does, of furnishing information on industrial and sociological topics in answer to inquiries from persons within and without the State who are interested in such matters. During the year, upwards of fifteen hundred letters of that character were received, a very large proportion of which required replies extending to the dimensions of an ordinary essay. A considerable part of this correspondence was with manufacturers outside of the State who wished to find satisfactory locations for their works in New Jersey.

The fourth revision of the Industrial Directory has been carried so far toward completion during the year, that the 1912 edition of this most important compendium of information relating to the State, its cities, towns, villages and industries, will be ready for publication at an early date. It is pleasing to know that this volume has done so much toward increasing a knowledge of our State and its resources, both at home and abroad, that similar publications are now being prepared by several of the principal manufacturing States.

As each of the subjects treated in this report is prefaced by its own introduction and analysis, there is no occasion for further comment here.

It is, perhaps, not inappropriate to bestow a word of well deserved praise on the office force, whose interest in the work of the Bureau and whose zeal and intelligence displayed in the performance of their several duties entitle them collectively and severally to the highest commendation in my power to bestow.

WINTON C. GARRISON,  
*Chief, Bureau of Statistics of New Jersey.*



## PART I.

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**Statistics of Manufactures in New Jersey.**

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**Capital Invested, Number of Operatives Employed.**

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**Cost Value of Material Used.**

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**Selling Value of Goods Made.**

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**Average Working Hours.**

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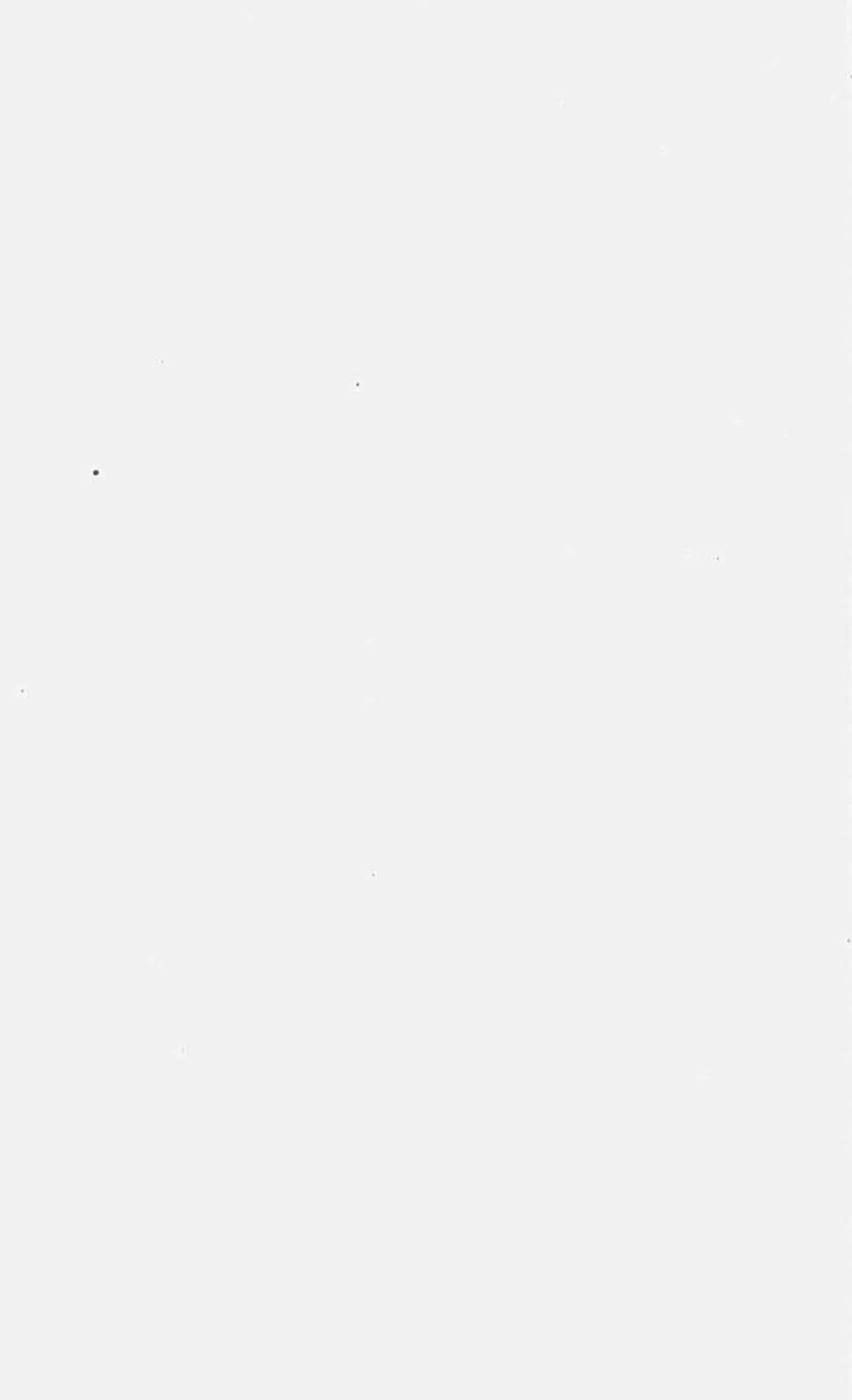
**Classified Weekly Wages.**

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**Average Yearly Earnings of Labor.**

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## **Statistics of Manufactures of New Jersey for the Twelve Months Ending December 31, 1911.**

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The statistical presentation which follows is based on full and complete statements, from all manufacturing establishments in the State that are operated on the factory system, and that are in a position to furnish, from their records, the several varieties of information required for these reports.

The law under which this system of annual statistics of manufactures was established did not contemplate a compilation each year similar to that of the United States Census Bureau, which includes absolutely every form of productive industry, great and small, permanent and temporary, that is found to be in existence at the time the canvass is made; even if such a course were practicable with the resources at the Bureau's command, which is far from being the case, the results, as indicating the trend of industry in the State, would be less satisfactory than those produced by our own plan of including in the presentation only the large and permanent establishments in which that numerous and important part of our population engaged in factory and workshop occupations find steady and permanent employment. It is in such establishments only that records are kept from which data of the kind required for these statistics can be drawn.

The chief concern of the State is to know from year to year whether its manufacturing interests are growing or declining in the number and size of permanent plants, the number of persons employed, the economic conditions of wage earners, and the value of each variety of manufactured product; these and other facts relating to the subject can be ascertained with at least equal accuracy and at far less expense by confining the annual inquiry to establishments of standard character operated on the factory system, and comparing the data thus obtained with those of the immediately preceding year.

The "Statistics of Manufactures" is not a census of absolutely all the industries of the State, and it never was intended that they should be so regarded; the compilation is, however, a complete

census of the real factory industries, and to show how comparatively unimportant are the establishments excluded from the canvass, it is only necessary to point out the fact that in the 8,817 separate plants embraced in the United States Census of 1909, the average number of persons employed is reported at 326,102, while in the 2,423 establishments included in this compilation of the Statistics of Manufactures, the greatest number of persons employed at any one time during the year 1910 is 321,552, and the average for the entire year, 302,265, or approximately 97 per cent. of the total reported by the Federal Census. An equally large proportion of all the other elements compared with the census figures will be found in the various tables of the compilation, a brief analytical review of which is here presented.

The 2,423 establishments reporting are divided into eighty-nine general industry classifications, each of them covering a number of individual plants ranging from three, in the case of straw hat manufacture, to 210 in the silk goods industry; in addition to these, there is one large group under the heading "unclassified," which contains 97 establishments that, because of the nature of the lines of business carried on in them, cannot be classified with any of the other industry groups. Separate classifications cannot be given to these plants for the reason that in no case is there among them more than two establishments engaged in the same line of production and to give headings indicative of the character of business followed by these might possibly lead to an exposure of the business followed by either one to the other; the rule therefore of compiling not less than three establishments under one heading is never departed from. The tables as published are in the form of abstracts, containing only the totals relating to each industry and the figures reported by any one establishment cannot by any possible means be separated from those of the industry group with which it is merged.

The presentation follows the form of previous years, that is say, there are ten general tables showing for each industry. First, the character of management; second, the total amount of capital invested, and the various purposes for which it was employed; third, the cost value of all stock or material used in manufacture, and the selling value of all goods made; fourth, the greatest, least and average number of persons employed; fifth, the average number of persons employed, by months; sixth,

corporate form of management during the year is therefore 1.3 per cent. In 1908, the percentages of private and corporate management of industry were 35.7, and 64.3 respectively, which shows that during the past three years corporate management has grown and private management diminished to the extent of 4.2 per cent., or an average of 1.4 per cent. for each year. In fact, each year since the commencement of these annual Statistics of Manufactures shows the same steadily maintained movement toward the corporate form of business organization, which, under our laws, limits the liability of investors to the par value of stock held in the enterprise, besides promoting efficiency and economy of administration and operation by bringing ample capital and the highest degree of technical skill to the prosecution of the work in hand. Another important merit of the system is that under it, both the risks and advantages of business, its losses and profits, are distributed among so many that individual stockholders are not as a rule either impoverished by occasional reverses or very greatly enriched by success. The force of this statement will be recognized when the actual number of persons sharing in the ownership of establishments under both forms of organization is considered. The number of partners and individual owners concerned in the 764 establishments under non-corporate ownership is 1,337, or 1.7 persons for each establishment, while the stockholders in the 1,659 plants under corporate management reaches the impressive total of 103,815, which is an average of nearly 63 for each establishment. This exhibit of comparative popularity in the management of industry should interest all who do not look with favor on centralization of authority, whether the same being commerce, finance, or industry; for each establishment under non-corporate management, there are a fraction less than two owners who assume all the risks and enjoy all the profits of the business, while under corporate management, the same liabilities and advantages are divided among an average of 63 persons for each establishment.

As stated above, the total number of stockholders in corporations is 103,815; of these, 63,520, or 61.2 per cent. are men; 34,978, or 33.7 per cent. are women; 5,317, or 5.1 per cent. are banks and trustees acting for the estate of minors, who, in most cases, are orphans.

Of the partners (1,337), in non-corporate establishments, 1,264, or 94.6 per cent. of the total number, are men; 46, or 3.4 per cent. are women; and 27, or 2 per cent. are either banks or special partners.

The aggregate number of persons—stockholders and partners—having between them the ownership of the entire 2,423 establishments included in the compilation, is 105,152. In 1909, the number was 105,137, an increase of only 15, which occurred among the partners of private firms exclusively.

The following table shows the data relating to management of all industries for the years 1909 to 1910.

	1909.	1910.
Number of establishments owned by individuals or partnerships..	751	764
Number of individual owners or partners.....	1,313	1,337
Average number of owners per establishment.....	1.7	1.7
Number of establishments owned by corporations.....	1,540	1,659
Number of stockholders.....	103,824	103,815
Average number of stockholders per establishment.....	67.4	62.6
Aggregate number of partners and stockholders.....	105,137	106,152

Of the eighty-nine general industries, there are, as shown by the table, eight that are operated under corporate management exclusively; these are: high explosives, mining iron ore, oil refining, pig iron, roofing metal and tar, smelting and refining gold, silver and copper; cotton and linen thread, and the manufacture of typewriters and supplies.

Unquestionably no other business interest in the State equals the manufacturing industries in the number of persons directly interested in their welfare, both as employers and wage earners; of the former there are as shown by these statistics, 105,152, and of the latter, the average number employed throughout the year in all the establishments considered, is 302,265, making a grand total of 407,417 persons, or nearly 16 per cent. of the total population of the State, whose incomes are derived in whole or in part from the products of manufacturing industry.

Table No. 2 shows the aggregate amount of capital invested in the establishments grouped under each industry, and also the total for all industries considered. The capital appears on the table under three distinct divisional headings, viz.: the amounts representing the value of "land and buildings;" of "machinery, tools and implements," and that which is reported in the form of "bills receivable," "stock in process of manufacture," or "cash

on hand or in bank" at the time the establishments reports were filled out.

The total capital invested in all industries is shown by the table to be \$779,490,692, not including that of two establishments engaged in the production of "wire and wire cloth," and one establishment under "electrical appliances;" no report of capital invested was made by the managers of these plants. The capital invested in "land and buildings" is \$191,502,005, or 20.5 per cent. of the total; the capital invested in "machinery, tools and implements," is \$178,948,302, or 22.9 per cent. of the total, and the capital represented in "bills receivable," "stock in process of manufacture," cash on hand, etc., is \$409,040,385, or 56.6 per cent. of the total capital invested in all industries.

In previous reports attention has been called to the fact that the value of land and buildings in use for manufacturing purposes is reported only by such industrial corporations or firms as own the property which they occupy, while no report on the subject is made by the large number of establishments holding such property under lease or rental. The aggregate value of land and buildings in actual use for manufacturing purposes that for this reason is omitted from the compilation, is very large, particularly in the principal cities and towns where many medium-sized concerns are found renting the spaces which they require in one large building. The lessees or tenants are not in a position to place a valuation on property which is not theirs, and the actual owners, or their agents when found, are, as a rule, not disposed to give any information on the subject, apparently suspecting that the purpose behind the inquiry is in some way inimical to their interests. In the absence of definite authority to insist on such valuations being furnished, the industries of the State must continue to show by official figures a much lower capitalization than that which is actually invested with all leased and rented factory property included.

In 1909 the capital invested in "land and buildings" was \$186,105,365; in 1910 it is, as shown by the table, \$191,502,005, an increase of \$5,396,642, or a small fraction less than 3 per cent. In "machinery, tools and implements," the capital invested during 1909 was \$167,762,724; in 1910 it is \$178,948,302, an increase of 6.6 per cent. In the several forms of capital invested represented by "bills receivable, stock in process of manufacture, and

cash on hand or in bank," the amount reported for 1909 was \$362,058,181; in 1910 it is \$409,040,385, an increase of \$46,982,204, or a small fraction less than 13 per cent. For the twelve months between 1908 and 1909, that is to say, the year immediately preceding that covered by this report, the increase in the value of "land and buildings" was 9.5 per cent.; in "machinery, tools and implements," 10 per cent.; and in "bills receivable, stock in process of manufacture, cash on hand, etc.," 10.7 per cent. Thus the normal ratio of increase in the three classes of capital invested has shown no material variation from those figures for ten years previous to 1910, and the comparatively slight increase shown by the first and second subdivisions, with the abnormally large increase of the third, seems to point to conditions in manufacturing industry during 1910 that were not quite as satisfactory as those of previous years.

In the table which follows, comparisons are made of the total capital invested in twenty-five of the leading industries of the State, which show the increases or decreases, numerically and by percentages, that have taken place in 1910, as compared with 1909; the same tables give a comparison of the aggregate totals of "other industries," that is to say, those not included in the twenty-five leading classifications, and a similar comparison is made of the totals of "all industries," including the entire number of establishments reporting for both years.

INDUSTRIES.	Number of Establishments.	Capital Invested.		Increase (+) or Decrease (-) in 1910 as compared with 1909.		
		1909.	1910.	Amount.	Percentage.	
Artisans' tools .....	44	\$4,447,143	\$4,462,278	+	\$15,135	+ 0.3
Boilers (steam) .....	16	10,754,654	11,530,009	+	775,355	+ 7.2
Brewery products .....	37	34,901,378	37,322,869	+	2,421,491	+ 6.9
Brick and terra cotta.....	74	19,641,447	21,927,240	+	2,285,793	+ 11.6
Chemical products .....	69	31,322,270	37,096,101	+	5,773,831	+ 18.4
Cigars and tobacco.....	35	11,625,173	11,147,957	-	477,216	- 4.1
Drawn wire and wire cloth.....	14	4,463,195	5,216,210	+	753,015	+ 16.9
Electrical appliances .....	36	19,549,965	19,081,086	-	468,879	- 2.4
Furnaces, ranges and heaters.....	16	7,074,973	7,664,717	+	589,744	+ 8.3
Glass (window and bottle).....	22	5,597,577	5,830,898	+	233,321	+ 4.2
Hats (fur and felt).....	43	4,240,192	4,488,496	+	248,304	+ 5.9
Jewelry .....	107	8,856,559	8,676,928	-	179,631	- 2.0
Leather (tanned and finished).....	82	16,705,936	17,133,095	+	427,159	+ 2.6
Lamps (electric and other).....	9	5,260,742	7,356,256	+	2,095,514	+ 39.8
Machinery .....	140	46,982,028	50,899,725	+	3,917,697	+ 8.3
Metal goods .....	81	12,461,227	14,271,612	+	1,810,385	+ 14.5
Oils .....	19	59,860,848	70,704,966	+	10,844,118	+ 18.1
Paper .....	44	11,553,796	11,143,506	-	410,290	- 3.6
Pottery .....	51	8,763,754	9,795,610	+	1,031,856	+ 11.8
Rubber products (hard and soft).....	51	25,633,889	28,902,913	+	3,269,024	+ 12.8
Shipbuilding .....	17	16,382,755	24,242,344	+	7,859,589	+ 48.0
Silks (broad and ribbon goods).....	210	34,203,395	36,705,225	+	2,501,830	+ 7.3
Steel and iron (structural).....	26	15,684,677	9,043,705	-	6,640,972	- 42.3
Steel and iron (forging).....	13	14,687,167	15,502,559	+	815,392	+ 5.6
Woolen and worsted goods.....	25	35,518,940	39,993,786	+	4,474,846	+ 12.6
Twenty-five industries .....	1,281	\$466,173,620	\$510,140,091	+	\$43,966,471	+ 9.4
Other industries .....	1,142	249,762,648	269,350,601	+	19,587,953	+ 7.8
All Industries .....	2,423	\$715,926,268	\$779,490,692	+	\$63,564,424	+ 8.9

As shown by the above table, five of the twenty-five selected industries show decreases in capital invested, four of which are quite small in amounts; the fifth, "structural steel and iron," shows a very large falling off, 42.3 per cent., due to the bankruptcy of one of the largest establishments and its subsequent reorganization with a capitalization much below what it had previously been. The shrinkage of capital in this case does not therefore indicate anything like a corresponding falling off in the operations of the industry.

All others of the twenty-five selected industries show increases, the largest being "shipbuilding," 48.0 per cent.; "lamps—electric and other," 39.8 per cent.; chemical products, 18.4 per cent.; and the refining of "oils," 18.1 per cent. As shown by the table, several of the industries report increases so small as to indicate a practically stationary condition of capital invested during the year 1910.

Considering the "twenty-five selected industries" together, the table shows the capital invested in the 1,281 establishments in-

cluded in them to have been \$446,173,620 in 1909, and \$510,140,091 in 1910. The increase in this group of industries is therefore \$43,966,471, or 9.4 per cent. In "other industries," which includes 1,142 establishments, the capital invested in 1909 was \$249,752,648; in 1910 it was \$269,350,601, an increase of \$19,597,953, or 7.8 per cent. For "all industries," that is to say, the entire 2,423 establishments included in the compilation, an increase of capital invested is shown, amounting to \$63,564,424, or 8.9 per cent.

Some understanding of the magnitude of the industrial establishments considered in these statistics will be obtained from the following table, which gives the average amount of capital invested *per establishment* for the "twenty-five selected industries" which appear on the previous table, and which, by the way, are used all through this analytical review for the purpose of comparison, and also for "other industries" and for "all industries." The table presents the figures for 1910 in comparison with 1909, increases and decreases being noted in absolute amounts and by percentages.

INDUSTRIES.	Number of Establishments.	Average Amount of Capital Invested per Establishment.		Increase (+) or Decrease (-) in 1910 as compared with 1909.	
		1909.	1910.	Amount.	Percentage.
Artisans' tools .....	44	\$103,422	\$101,415	-	\$2,007 - 1.9
Boilers (steam) .....	16	768,189	720,625	-	47,564 - 6.2
Brewery products .....	37	943,280	1,008,726	+	65,446 + 6.9
Brick and terra cotta .....	74	265,425	296,314	+	30,889 + 11.6
Chemical products .....	69	474,690	537,624	+	63,044 + 13.3
Cigars and tobacco .....	35	322,921	318,513	-	4,408 - 1.4
Drawn wire and wire cloth .....	14	371,933	372,586	+	653 + 0.2
Electrical appliances .....	36	574,999	530,030	-	44,969 - 7.8
Furnaces, ranges and heaters .....	16	544,228	479,044	-	65,184 - 12.0
Glass (window and bottle) .....	22	243,373	265,041	+	21,668 + 8.9
Hats (fur and felt) .....	43	108,723	104,383	-	4,340 - 4.0
Jewelry .....	107	88,566	81,093	-	7,473 - 8.4
Leather (tanned and finished) .....	82	216,960	208,940	-	8,020 - 3.7
Lamps (electric and other) .....	9	657,593	817,362	+	159,769 + 24.3
Machinery .....	140	345,456	363,569	+	18,113 + 5.2
Metal goods .....	81	175,510	176,193	+	683 + 0.4
Oil refining .....	19	3,521,226	3,721,314	+	200,088 + 5.7
Paper .....	44	262,585	253,261	-	9,324 - 3.6
Pottery .....	51	178,862	192,071	+	13,219 + 7.4
Rubber products (hard and soft) .....	51	534,039	566,724	+	32,685 + 6.1
Shipbuilding .....	17	963,691	1,426,020	+	462,329 + 48.0
Silks (broad and ribbon goods) .....	210	187,930	174,787	-	13,143 - 7.0
Steel and iron (structural) .....	26	681,942	347,834	-	334,108 - 49.0
Steel and iron (forging) .....	13	1,223,930	1,192,604	-	31,426 - 2.6
Woolen and worsted goods .....	25	1,420,758	1,599,751	+	178,993 + 12.6
Twenty-five Industries .....	1,281	\$387,832	\$398,236	+	\$10,404 + 2.7
Other Industries .....	1,142	229,342	235,859	+	6,517 + 2.8
All Industries .....	2,423	\$312,495	\$321,705	+	\$9,210 + 2.9

The above comparison shows that twelve of the twenty-five selected industries had experienced a reduction in the average capitalization per establishment, ranging from 1.4 per cent. in the manufacture of "steam boilers," to 49.0 per cent. in "structural steel and iron." With the exception of this latter falling off in capital, the cause of which is explained in the foregoing pages, the reductions shown by the other eleven industries are very slight, none of them reaching 9 per cent. On the other hand, the increases are quite large, so that for the "twenty-five selected industries" the net increase in capital invested per establishment is \$10,404, or 2.7 per cent.; for "other industries" the increase is \$6,517, or 2.8 per cent., while for "all industries," the increase per establishment is \$9,210, or 2.9 per cent.

The average capitalization per establishment in the twenty-five selected industries for 1910 is \$398,236; for the establishments included in "other industries" the average is \$235,859, and for "all industries," that is to say, the entire 2,423 industrial plants included in the compilation, the average capital invested per establishment is \$321,705.

That seven of the industrial groups showing decreases in the above comparison appear on the next preceding table with total capitalization exceeding that of the previous year, is explained by the fact that one or more new establishments not included in the compilation of 1909 were merged with them in 1910, and while the capital thus added swelled the totals of these industries beyond the figures of 1909, the divisions of the same by an increased number of plants results in showing a lower average capitalization per establishment for 1910.

Among the "twenty-five selected industries," there is one, "oil refining," which shows an average capitalization of more than \$3,700,000 for each of the nineteen plants included in that group. "Woolen and worsteds" shows an average approximating \$1,600,000 for each of the twenty-five establishments engaged in producing these goods, and three others—"brewery products," "shipbuilding," and "steel and iron forgings"—show average capital invested ranging from \$1,000,000 to very nearly \$1,500,000 per establishment included in these three industry groups. Many other industries show capitalizations ranging between \$300,000 and \$800,000 per establishment.

The data relating to capital invested as presented on this table strikingly illustrates the vast scale on which modern manufacturing industry is carried on, and the immense sums of money which its promoters must be prepared to invest before entering the competition for business and profits.

The industry showing the lowest capitalization per establishment is "jewelry," in which line of production 107 firms are engaged, all located in the city of Newark. The average capital invested is \$81,093 per establishment; as at least 90 per cent. of these firms rent their factories, about that same proportion of the value of land and buildings which they occupy is, as before explained, lost to the total aggregate capital invested which should appear for the industry.

Table No. 3 shows the cost value of all "material used" in manufacture, and also the selling value of all "goods made or work done" for each of the eighty-nine industry groups, the "unclassified" industries, and for "all industries" combined. Included in the totals of "material used" are the cost values of such material as has been worked into and become a part of the finished products of each industry, together with articles such as oils, fuel, waste, packing cases, lighting, and all other merchandise that has been consumed in the processes of manufacture. The figures showing these cost values for 1910 are placed in comparison with those of 1909 in the following table. Separate comparisons are made only with the "twenty-five selected industries;" the aggregate totals of "other industries," and "all industries" are compared separately.

INDUSTRIES.	Number of Establishments.	Value of Stock Used.		Increase (+) or Decrease (-) in 1910 as compared with 1909.		
		1909.	1910.	Amount.	Percentage.	
Artisans' tools .....	44	\$1,306,246	\$1,385,294	+	\$80,048	+ 6.1
Boilers (steam) .....	16	2,344,310	3,232,673	+	888,363	+ 37.9
Brewery products .....	37	5,070,676	5,965,556	+	225,880	+ 4.4
Brick and terra cotta .....	74	2,802,471	2,922,273	+	119,802	+ 4.3
Chemical products .....	69	16,052,501	18,469,281	+	2,416,780	+ 15.1
Cigars and tobacco .....	35	11,156,398	11,344,624	+	188,226	+ 1.7
Drawn wire and wire cloth .....	14	20,271,338	25,145,306	+	4,873,968	+ 24.0
Electrical appliances .....	36	8,414,297	9,775,022	+	1,360,725	+ 16.2
Furnaces, ranges and heaters .....	16	2,764,715	3,518,217	+	753,502	+ 27.3
Glass (window and bottle) .....	22	1,912,563	2,323,366	+	410,802	+ 21.5
Hats (fur and felt) .....	43	4,398,307	5,089,723	+	691,416	+ 15.7
Jewelry .....	107	5,784,225	6,244,217	+	459,992	+ 8.0
Leather (tanned and finished) .....	82	19,798,197	20,215,588	+	417,391	+ 2.1
Lamps (electric and other) .....	9	2,155,928	2,972,448	+	816,520	+ 37.9
Machinery .....	140	12,126,685	16,828,375	+	4,701,690	+ 38.8
Metal goods .....	81	8,506,257	9,581,722	+	1,075,465	+ 12.6
Oil refining .....	19	59,372,306	60,716,766	+	1,344,460	+ 2.3
Paper .....	44	7,255,994	7,784,926	+	528,932	+ 2.3
Pottery .....	51	2,397,358	2,558,366	+	161,008	+ 6.7
Rubber products (hard and soft) .....	51	19,049,186	23,647,377	+	4,598,191	+ 24.1
Shipbuilding .....	17	3,995,284	4,341,484	+	346,200	+ 8.7
Silks (broad and ribbon goods) .....	210	28,894,619	29,115,893	+	221,274	+ 0.8
Steel and iron (structural) .....	26	5,029,832	6,209,434	+	1,179,602	+ 23.5
Steel and iron (forging) .....	13	3,172,769	4,111,706	+	938,937	+ 29.6
Woolen and worsted goods .....	25	23,088,901	21,290,115	-	1,798,786	- 7.3
Twenty-five industries .....	1,281	\$277,121,363	\$304,121,751	+	\$27,000,388	+ 9.7
Other industries .....	1,142	225,849,869	258,414,123	+	32,564,254	+ 14.4
All industries .....	2,423	\$502,971,232	\$562,535,874	+	\$59,564,642	+ 11.8

As shown by the above table, the cost value of every variety of stock or material used by the "twenty-five selected industries" in 1909 was \$277,121,363; in 1910 the value was \$304,121,751, which is an increase of \$27,000,388, or 9.7 per cent. "Other industries" consumed stock or material to value of \$225,849,869 in 1909; in 1910 the value was \$304,121,751, an increase of \$32,564,254, or 14.4 per cent. In "all industries," which includes the entire 2,423 establishments considered, the cost value of all material used in 1909 was \$502,971,232; in 1910, the bill for material had risen to \$562,535,874, which was an increase of \$59,564,642, or 11.8 per cent.

Only one of the twenty-five selected industries—the manufacture of worsted and woolen goods—shows a decrease in the expenditures for material in 1910; all the others show increases, many of them quite large. Steam boilers and lamps show in-

creases of 37.9 per cent. each, and the machinery industry, with 140 establishments reporting, shows an increase in the value of material used amounting to \$4,701,690, or 38.8 per cent. Eleven of the twenty-five selected industries show increases ranging from 0.8 per cent. in the case of "silk goods," to 8.7 per cent. in the "shipbuilding" industry; four industries show increases ranging from 12.6 per cent. in "metal goods," to 16.2 per cent. in "electrical appliances," and nine industries show increases ranging from 21.5 per cent. in "glass—window and bottle," to 38.8 per cent. in "machinery." The industries showing the largest expenditures on account of stock or material used during 1910 are: "Oil refining," \$60,716,766; "silk goods," \$29,115,893; "drawn wire and wire cloth," \$25,145,306, and "leather—tanned and finished," \$20,215,588. The average expenditure per establishment for stock or material in the oil refining industry was \$3,195,615; in the manufacture of drawn wire and wire cloth, the average consumption of material per establishment was \$1,796,093; in the leather industry the average was \$246,531 per establishment, and in the silk goods industry it was \$138,647 per establishment. In "all industries" the material used shows an average of \$232,990 for each of the 2,423 establishments reporting.

The selling value of "goods made or work done" is also given on Table No. 3 for each industry group, and for all industries. In the following table these selling values are given for each of the "twenty-five selected industries," for "other industries" and for "all industries;" the data for 1910 is compared with those of 1909, and the increases or decreases are shown both in absolute amounts and by percentages.

INDUSTRIES.	Number of Establishments.	Value of Goods Made.		Increase (+) or Decrease (-) in 1910 as compared with 1909.	
		1909.	1910.	Amount.	Percentage.
Artisans' tools .....	44	\$3,585,276	\$3,693,983	+	\$108,707 + 3.0
Boilers (steam) .....	16	4,062,696	5,983,356	+	1,920,660 + 47.3
Brewery products .....	37	19,363,854	20,449,978	+	1,086,124 + 5.6
Brick and terra cotta.....	74	8,690,903	9,679,494	+	988,591 + 11.4
Chemical products .....	69	31,307,198	35,657,246	+	4,350,048 + 13.9
Cigars and tobacco.....	35	23,606,489	24,535,026	+	928,537 + 3.9
Drawn wire and wire cloth.....	14	30,236,929	39,150,336	+	8,913,407 + 29.5
Electrical appliances .....	36	15,649,742	20,165,077	+	4,515,335 + 28.9
Furnaces, ranges and heaters.....	16	5,324,512	6,670,737	+	1,346,225 + 25.3
Glass (window and bottle).....	22	4,965,024	5,490,066	+	525,042 + 10.8
Hats (fur and felt).....	43	9,073,186	10,503,020	+	1,429,834 + 15.7
Jewelry .....	107	10,853,360	11,223,541	+	370,181 + 3.5
Leather (tanned and finished).....	82	28,525,433	29,359,572	+	834,139 + 2.9
Lamps (electrical and other).....	9	6,617,777	7,277,276	+	659,499 + 9.9
Machinery .....	140	30,817,937	36,718,446	+	5,900,509 + 19.1
Metal goods .....	81	15,540,670	18,446,264	+	2,905,594 + 18.7
Oil refining .....	19	70,131,795	70,720,942	+	589,147 + 0.8
Paper .....	44	12,230,863	13,363,369	+	1,132,506 + 9.3
Pottery .....	51	7,370,398	8,340,246	+	969,848 + 13.2
Rubber products (hard and soft).....	51	30,616,077	34,733,592	+	4,117,515 + 13.4
Shipbuilding .....	17	8,680,592	8,765,216	+	84,624 + 0.9
Silks (broad and ribbon goods).....	210	53,763,579	52,572,837	-	1,190,742 - 2.2
Steel and iron (structural).....	26	8,395,601	10,935,411	+	2,539,810 + 30.3
Steel and iron (forging).....	13	6,078,708	7,636,544	+	1,557,836 + 25.6
Woolen and worsted goods.....	25	33,200,409	30,754,104	-	2,446,305 - 7.4
Twenty-five industries .....	1,281	\$478,679,008	\$522,825,679	+	\$44,146,671 + 9.2
Other industries .....	1,142	345,539,788	391,947,131	+	46,407,343 + 13.4
All industries .....	2,423	\$824,218,796	\$914,772,810	+	\$90,554,014 + 11.0

As shown by the above table, the total selling value of all goods made or work done was \$914,772,810 for "all industries" in 1910; in 1909 the total value was \$824,218,796, an increase in 1910 of \$90,554,014, or a small fraction less than 11.0 per cent. The foot notes on Table No. 3 show that eight establishments, distributed among seven of the general industries, failed to report the selling value of products for 1910, which means that the actual value of goods made during that year was several millions of dollars greater than that indicated on the table.

Of the twenty-five selected industries that are compared for both years, twenty-three show increases in the value of products ranging from 0.8 per cent. in "oil refining," to 47.3 per cent. in "steam boilers." Other large increases are shown in "structural steel and iron," 30.3 per cent.; "drawn wire and wire cloth," 29.5 per cent.; "electrical appliances," 28.9 per cent.; "steel and

iron forgings," 25.6 per cent.; and "furnaces, ranges and heaters," 25.6 per cent. Only two industries, "silk goods, broad and ribbon," and "woolen and worsted goods," show a falling off in the value of products; the decline in both cases is small, being only 2.2 and 7.4 per cent. respectively. The 1,281 establishments included in the twenty-five selected industries show an increase of 9.2 per cent. in products as compared with 1909, and the 1,142 establishments grouped under "other industries" are shown by the comparison to have increased 13.4 per cent. As stated before, the increase for "all industries" embracing the entire 2,423 establishments reporting, is 11.0 per cent.

An examination of the foregoing table will show that the oil refining industry leads all others in the value of products, which, for 1910, reached the enormous total of \$70,720,942; the silk industry comes next, with a total value of \$52,572,837. In the case of the oil refining industry, the aggregate total represents the products of only 19 establishments, while that of the silk industry is drawn from the reports of 210 separate manufactories of these goods. Other industries showing value of products running into very large sums are "drawn wire and wire cloth," \$39,150,336; "machinery," \$36,718,446; "chemical products," \$35,657,246; "rubber products," \$34,733,592; and the woolen and worsted industry, \$30,754,104. The average value of product per establishment for the entire 2,423 concerns included in the compilation is \$377.537.

Table No. 4 shows for each industry and for all industries, the greatest, smallest, and average number of persons employed, the employes being classified as—men, 16 years old and over; women, 16 years old and over, and young persons of either sex below the age of 16 years. As the minimum age at which children may be employed in factories and workshops under the laws of New Jersey is fourteen years, it is assumed that none of these are below that limit. A comparison of the figures representing the greatest and smallest number of persons employed will show the amount of idleness or unemployment experienced by each industry and by all industries during the year. To illustrate just what is meant by the term "unemployment," it will be assumed that a certain industry or establishment employs during its busy season five hundred persons, and in comparatively slack times, during the same year, only four hundred persons; under such cir-

circumstances there would be one hundred wage earners, or 20 per cent. of the greatest number of persons employed who suffered the consequences of irregular employment during some part of the year. The excess of greatest over least number of persons employed is given numerically and by percentages for each industry and for all industries.

The table shows the greatest number employed at any time during the year to have been 321,552; the least number 277,319, and the average number, 302,265; the difference between the two extremes is 44,233, or 13.8 per cent. of the greatest number, whose employment for one or another reason had not been continuous during the entire year. Something more than 22 per cent. of this interruption of steady employment is chargeable to the custom which prevails in the "brick and terra cotta" industry of closing down almost entirely during the winter months, and in the glass industry during the summer months of July and August. There are other seasonal industries that employ extra help at certain periods of the year, but these two employing between them approximately 16,000 men are much the largest among them all. The year 1910 was an unusually prosperous one in the matter of employment, and outside of the customary slackness of the seasonal occupations, the fluctuations of employment were very slight. The figures below show the state of employment in 1910 compared with 1909.

	1909.	1910.	Increase.	
			Number.	Per Cent
Greatest number employed.....	304,067	321,552	17,485	5.7
Least number employed.....	252,836	277,319	24,483	9.6
Average number employed.....	279,351	302,265	22,914	8.2

As shown above, the increase during the year in the "greatest number employed," was 5.7 per cent.; in the "least number employed," 9.6 per cent., and in the average number employed, 8.2 per cent. Of the aggregate average number of persons employed in "all industries," (302,265), the table shows that 233,633, or 74.0 per cent. are men 16 years of age and over; 72,712, or 24.0 per cent. are women 16 years of age and over; and 5,920, or 2.0 per cent. are young persons of either sex who are less than 16 years old. The percentages of each of these three classes of

labor, and also the proportion of unemployment or temporary idleness is given below for 1910 in comparison with 1909.

CLASSIFICATION OF EMPLOYEES.	Percentages.		Increase (+) Decrease (-)
	1909.	1910.	
Men 16 years old and over.....	72.6	74.0	+ 1.4
Women 16 years old and over.....	25.2	24.0	- 1.2
Children under 16 years old.....	2.2	2.0	- .2
Temporary idleness or unemployment.....	16.8	13.8	- 3.0

As shown by the above percentages, a most decided increase has taken place during the year in the proportion of men employed as compared with women and children. The tendency for several years back has been almost uniformly in that direction, but the ratio has never heretofore shown an advance of more than a small fraction of one per cent. in any one year, but in the labor force employed in 1910, the proportion of men shows the remarkable increase of 1.4 per cent. As a matter of course the number of women and children employed shows together exactly the same proportionate decline—the women, 1.2 per cent., and the children, 0.2 per cent. The proportion of temporary idleness was, as shown by the above figures, 3.0 per cent. lower in 1910 than it was in 1909.

The following table shows all the industries—sixty-six in number—in which the labor of women or children is utilized in the processes of manufacture; the actual number of men, women and children employed, with their corresponding percentages, is given for each occupation.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Number of Persons Employed.				Percentage of		
			Men 16 Years and Over.	Women 16 Years and Over.	Children Under 16 Years.	Total.	Men 16 Years and Over.	Women 16 Years and Over.	Children Under 16 Years.
2	Artisans' tools .....	44	2,473	78	30	2,581	95.82	3.02	1.16
3	Art tile .....	9	582	272	40	894	65.10	30.43	4.47
5	Boxes (wood and paper) .....	52	1,159	1,413	133	2,705	42.85	52.23	4.92
7	Brick and terra cotta.....	74	7,463	6	35	7,504	99.45	.08	.47
8	Brushes .....	14	279	93	2	374	74.60	24.87	.53
9	Buttons (metal) .....	9	423	437	41	901	46.95	48.50	4.55
10	Buttons (pearl) .....	26	933	391	49	1,383	72.72	23.46	3.82

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Number of Persons Employed.				Percentage of		
			Men 16 Years and Over.	Women 16 Years and Over.	Children Under 16 Years.	Total.	Men 16 Years and Over.	Women 16 Years and Over.	Children Under 16 Years.
11	Carpets and rugs.....	7	689	206	21	1,016	67.81	30.12	2.07
13	Chemical products.....	69	6,111	2,012	105	8,228	74.27	24.46	1.27
74	Cigars and tobacco.....	35	1,892	7,037	521	9,430	40.06	74.41	5.53
15	Clothing.....	14	498	692	2	1,192	21.78	58.05	.17
16	Confectionery.....	9	199	312	36	547	36.38	57.04	6.58
18	Corsets and corset waists.....	10	181	2,045	109	2,335	7.75	87.58	4.67
19	Cutlery.....	14	1,059	148	28	1,245	85.06	11.89	3.06
20	Cotton goods.....	33	1,699	4,663	331	6,693	25.38	69.67	4.96
21	Cotton goods (finishing and dyeing)	19	3,261	693	45	3,999	81.55	17.33	1.12
22	Drawn wire and wire cloth.....	14	8,208	767	1	8,976	91.44	8.55	.01
23	Electrical appliances.....	36	6,283	1,054	30	7,367	85.29	14.31	4.0
24	Embroideries.....	23	295	559	46	900	32.78	62.11	5.11
26	Food products.....	32	2,717	618	42	3,377	80.46	18.30	1.24
27	Foundry (brass).....	21	1,408	41	10	1,459	96.50	2.81	.69
28	Foundry (iron).....	57	9,736	111	23	9,870	98.64	1.13	.23
29	Furnaces, ranges and heaters.....	16	1,880	112	3	1,995	94.24	5.61	.15
30	Gas and electric light fixtures.....	13	456	54	2	492	92.68	6.91	.41
31	Glass (cut tableware).....	8	296	37	23	356	83.15	10.39	6.46
32	Glass (window and bottle).....	22	5,740	109	255	6,104	94.04	1.79	4.17
33	Glass mirrors.....	4	121	18	22	161	75.16	11.18	13.66
34	Graphite products.....	7	968	1,127	75	2,170	44.61	51.94	3.45
35	Hats (fur and felt).....	43	4,311	1,357	21	5,689	75.78	23.85	.37
36	Hats (straw).....	3	255	397	8	660	38.64	60.15	1.21
37	High explosives.....	9	2,125	70	7	2,202	96.50	3.18	.32
39	Jewelry.....	107	2,622	919	95	3,636	72.11	25.28	2.61
40	Knit goods.....	24	1,005	1,370	120	2,495	40.28	54.91	4.81
41	Leather.....	82	5,946	77	27	6,050	98.28	1.27	.45
42	Leather goods.....	19	662	391	32	1,085	61.01	36.04	2.96
43	Lamps.....	9	1,437	3,325	75	4,837	29.71	68.74	1.55
45	Machinery.....	140	21,879	719	33	22,631	96.68	3.18	.14
46	Mattresses and bedding.....	9	503	65	5	573	87.79	11.34	.87
47	Metal goods.....	81	6,281	1,790	169	8,240	76.23	21.72	2.05
48	Metal novelties.....	25	1,002	282	59	1,343	74.61	21.00	4.39
50	Musical instruments.....	17	1,628	331	13	1,972	82.56	16.78	.66
51	Oil cloth (floor and table).....	9	2,231	18	8	2,257	98.85	.80	.35
52	Oils.....	19	7,255	19	53	7,327	99.02	.26	.72
53	Paints.....	17	1,177	110	27	1,314	89.57	8.37	2.06
54	Paper.....	44	3,044	324	43	3,411	89.24	9.60	1.26
56	Pottery.....	51	4,512	785	62	5,359	84.20	14.05	1.15
57	Printing and bookbinding.....	21	1,166	579	12	1,757	66.36	32.96	.68
60	Rubber goods (hard and soft).....	51	7,111	1,237	111	8,459	84.06	14.63	1.31
62	Saddlery and harness hardware.....	11	643	111	42	796	80.78	13.94	5.28
63	Scientific instruments.....	21	4,628	744	65	5,437	85.12	13.68	1.20
65	Shoes.....	28	2,464	1,504	94	4,062	60.66	37.03	2.31
66	Shirts.....	24	684	2,680	124	3,488	19.61	76.83	2.56
67	Shirt waists (women's).....	5	14	632	31	677	2.07	93.35	4.58
69	Silk (broad and ribbon).....	216	10,441	10,676	628	21,745	48.02	49.10	2.88
70	Silk dyeing.....	24	5,006	519	15	5,540	90.36	9.37	.27
71	Silk throwing.....	35	552	888	134	1,574	35.07	56.42	8.51
72	Silk mill supplies.....	17	501	139	50	690	72.61	20.14	7.25
73	Silver goods.....	19	1,041	265	13	1,319	78.92	20.09	.99
75	Soap and tallow.....	18	1,664	508	45	2,217	75.06	22.91	2.03
79	Textile products.....	16	896	514	97	1,477	58.63	34.80	6.07
80	Thread.....	6	1,713	3,220	550	5,483	31.24	58.73	10.03
82	Trunk and bag hardware.....	10	1,222	432	72	1,726	70.80	25.03	4.17
84	Underwear (women's & children's)	25	148	1,839	76	2,063	7.17	89.14	3.69
86	Watches, cases and material.....	11	1,486	707	56	2,249	66.07	31.44	2.49
89	Woolen and worsted goods.....	25	6,133	6,628	608	13,369	45.87	49.58	4.55
90	Unclassified.....	97	6,663	1,215	113	7,991	83.38	15.21	1.41
	Sixty-six industries.....	2,067	189,030	71,461	5,863	266,354	70.97	26.83	2.20
	Other industries.....	356	34,603	1,251	57	35,911	96.36	3.48	.16
	All industries.....	2,423	223,633	72,712	5,920	302,265	73.99	24.06	1.95

The sixty-six industries, for which the data relating to the three classes of labor employed is presented in the above table, includes all but 356 of the total number of establishments considered, and the figures relating to these are given in one line opposite the title—"other industries." In the sixty-six industries employing the labor of women or children, the total average number of persons employed is shown to be 266,354, of which 189,030, or 70.97 per cent. are men; 71,461, or 26.83 per cent. are women; and 5,863, or 2.20 per cent. are children below the age of 16 years. As the employment of women, and, but in a lesser degree, of children also, is a distinguishing characteristic of this large group of industries, it follows that as a matter of course the proportions of these two classes of labor as shown on the table is much greater than those shown in the averages for all industries. In the 356 establishments included under "other industries," 96.36 per cent. of the wage earners are men, 3.48 per cent. are women, and only 0.16 per cent. are children. This table is a most accurate chart of employment by sexes and ages in the factory industries of New Jersey, which shows the occupations in which women and children are employed in the regular processes of manufacture. Among the sixty-six industries appearing on this table are many in which the proportions of these two classes of labor are very small, but in order to complete the list of occupations employing women and children to even the slightest extent it is necessary that they should be included. The feature of greatest sociological interest is the opportunity afforded by this particular table to compare the standing of women and children in these industries from year to year. The totals of these sixty-six industries show that of every 1,000 wage earners employed, approximately 710 were men, 16 years of age and over; 268 were women, 16 years of age and over; and 22 were children of either sex below the age of 16 years. The number of men, women and children per 1,000 persons employed is given below for 1910 in comparison with 1909.

CLASSIFICATIONS OF WAGE EARNERS.	Number per 1,000 Wage Earners in		Increase (+) Decrease (-)	
	1909.	1910.	Number.	Per Cent.
Men, 16 years old and over.....	693	710	(+) 17	2.4
Women, 16 years old and over.....	283	268	(-) 15	5.3
Children, under 16 years of age.....	24	22	(-) 2	8.3

The balance of labor indicated by the above table seems to lean decidedly toward the increased employment of men with a corresponding displacement of women and children, and each succeeding presentation of these statistics has shown a slight tendency in that direction; the change, however, is due to a very large extent to the fact that the greater number of new industrial establishments that are included in these statistics for the first time are what may be termed "men's industries," such as foundries, machine shops, structural iron works, etc., in which women are not employed except as stenographers and clerks. The large increase in the number of men employed per 1,000 wage earners, as shown by the foregoing table, is due entirely to this cause. As a matter of fact the absolute number of women employed in the industrial establishments of the State is 2,112 greater in 1910 than it was in 1909, but the number of children is 126 less.

In thirty-eight of these selected industries, the number of women employed is not in excess of 25 per cent. of the total number of wage earners; in twelve industries the proportion ranges from twenty-five to fifty per cent.; and in sixteen industries, the proportion of women employed is in excess of fifty per cent. Any further analysis of these sixty-six occupations must necessarily take the form of merely repeating the figures which appear on the table, without in any way adding to their significance. Those who are interested in the subject have here prepared for their inspection a complete list of the industries carried on in New Jersey that utilize the labor of women and children, on which the number of either, or both, employed in each and all of them can be seen at a glance.

Returning to the consideration of wage earners without reference to sex or age, the number employed in each of the "twenty-five selected industries," the number employed in "other industries," and also in "all industries," are shown in the following table for 1910 in comparison with 1909; the increases and decreases are given numerically and also by percentages.

INDUSTRIES.	Number of Establishments.	Average Number of Persons Employed by Industries.		Increase (+) or Decrease (-) in 1910 as compared with 1909.	
		1909.	1910.	Number.	Percentage.
Artisans' tools .....	44	2,429	2,581	+	152 + 6.3
Boilers (steam) .....	16	1,456	1,968	+	512 + 35.2
Brewery products .....	37	2,173	2,262	+	89 + 4.1
Brick and terra cotta.....*	74	7,093	7,504	+	411 + 5.8
Chemical products .....	69	7,316	8,228	+	912 + 12.6
Cigars and tobacco.....	35	9,195	9,430	+	235 + 2.6
Drawn wire and wire cloth.....	14	9,482	8,976	-	506 - 5.3
Electrical appliances .....	36	6,010	7,367	+	1,357 + 22.6
Furnaces, ranges and heaters.....	16	1,794	1,995	+	201 + 11.2
Glass (window and bottle).....	22	5,423	6,104	+	681 + 12.6
Hats (fur and felt).....	43	4,556	5,689	+	1,133 + 24.9
Jewelry .....	107	3,501	3,636	+	135 + 3.9
Leather (tanned and finished).....	82	5,801	6,050	+	249 + 4.3
Lamps (electrical and other).....	9	4,573	4,857	+	284 + 5.8
Machinery .....	140	18,161	22,631	+	4,470 + 24.6
Metal goods .....	81	7,464	8,240	+	776 + 10.4
Oil refining .....	19	7,153	7,327	+	174 + 2.4
Paper .....	44	3,083	3,411	+	328 + 10.6
Pottery .....	51	5,069	5,359	+	290 + 5.7
Rubber products (hard and soft)....	51	7,450	8,459	+	1,009 + 13.5
Shipbuilding .....	17	4,380	5,408	+	1,028 + 23.5
Silks (broad and ribbon goods).....	210	22,807	21,745	-	1,062 - 4.7
Steel and iron (structural).....	26	2,784	3,269	+	485 + 17.4
Steel and iron (forging).....	13	2,837	3,296	+	468 + 16.1
Woolen and worsted goods.....	25	12,582	13,369	+	787 + 6.3
Twenty-five industries .....	1,281	164,572	179,140	+	14,568 + 8.9
Other industries .....	1,142	114,779	123,125	+	8,346 + 7.3
All industries .....	2,423	279,351	302,265	+	22,914 + 8.2

As shown by this table the average number of persons employed in the "twenty-five selected industries" in 1909, was 164,572; in 1910 the number was 179,140, an increase of 14,568, or 8.9 per cent. "Other industries," that is to say, those not included in the twenty-five selected for direct comparison, show an increase in the number of wage earners employed in 1910 of 7.3 per cent. as compared with 1909; for "all industries" combined, the average number of persons employed in 1909 was 279,351, against 302,265 in 1910, showing an increase during the latter year of 22,914, or 8.2 per cent. in the number of wage earners.

The only industries showing decreases among the twenty-five that are directly compared are "drawn wire and wire cloth," and "silk goods," which show a falling off in the number of wage earners employed of 5.3 per cent., and 4.7 per cent., respectively. The increases, which are for the most part large, go to show that

the year 1910 was a prosperous one for these, the principal industries of the State.

Table No. 5 shows the average number of persons employed by months, classified as men, women and young persons under 16 years of age. The number of these employed each month of the calendar year is given separately for each one of the eighty-nine industries, and also for all industries, including the entire 2,423 establishments considered. The purpose of this table is to show such fluctuations in employment as occur in each industry, and to do so in a manner that indicates the periods of greatest and least activity in each industry group. The industries are arranged in alphabetical order, and the seasons of greatest and least activity are shown by the months during which, respectively, the greatest and least number of persons were employed.

The last subdivision of the table is a summary in which the aggregate number of persons employed—men, women and children—is given by months for the entire 2,423 establishments included in all industries. Employment in factory industries throughout the State is shown by this table to have been lowest during the mid-summer months of July and August, and almost equally low during the mid-winter months of January and February. In July and August, the average number of persons employed was 292,435, and 298,007, respectively, and in January and February, the average number was 294,551 and 298,398, respectively. During the other eight months of the year the average number employed ranged from 301,511 in September, to 309,032 in November, which is thus shown to have been the month of greatest activity in all industries. This statement of months of greatest and least activity holds good for the three classes of wage earners, men, women and children.

Table No. 6 shows the total amount paid in wages by each of the eighty-nine industry groups, and also the total aggregate amount paid by all industries included in the compilation. This table also shows the average yearly earnings per individual wage worker for each industry and the average for all industries.

The aggregate amount paid in wages for labor during the year 1910 is \$160,785,912, and the average earnings per year for all industries, is \$531.94. These figures relate only to actual wage workers, and do not include salaries of officials, managers, superintendents, foremen, bookkeepers, clerks, salesmen, etc., who

are paid yearly salaries that are not subject to deduction on account of absence from duty through sickness or from any other cause. All such officials are classed in these statistics as non-producers, in that while their services are indispensable in factory organization and business management, they are yet not directly applied to the process of manufacture by which finished products are evolved from raw material. It should be borne in mind that the average earnings shown on this table are arrived at by combining the earnings of men, women and children together, and also that the averages are not calculated on the basis of any given weekly or daily wage rate, but on the actual amounts paid to wage earners, whether day workers or piece workers, after all deductions on account of lost time or other causes had been made.

The industries showing the highest average earnings are, of course, those in which men only are employed. Chief among these is "brewery products," which shows average earnings of \$901.40. The high standard of earnings in this class of labor is not approached by that of any other industry in the entire compilation, which is probably due, at least to some extent, to the influence of the workmen's organizations. Other distinctively men's occupations showing yearly earnings much above the average are: "Cornices and skylights," \$780.60; "furnaces, ranges and heaters," \$760.00; "pottery," \$719.93; "shipbuilding," \$700.40; "silver goods," \$713.38; "structural steel and iron," \$721.06; and "varnishes," \$797.66. Fourteen of the industries show average yearly earnings that are more than \$600.00, but less than \$700.00; thirty-seven show average yearly earnings that are more than \$500.00, but less than \$600.00; nineteen show average yearly earnings that are more than \$400.00, but less than \$500.00; ten industries show average yearly earnings of more than \$300.00, but less than \$400.00, and one industry alone—the manufacture of women's shirtwaists, shows average yearly earnings that are under \$300.00.

In the industries reporting average yearly earnings of less than \$500.00, the labor employed is largely that of women and children, and in those reporting less than \$400.00 a year comparatively few men are employed. This will be seen by referring to the table of industries employing the labor of women and children to a greater or less extent which appears on pages 19 and 20.

The following table shows yearly earnings per employee for 1910, in comparison with the same data for 1909. The "twenty-five selected industries" are compared, as are also "other industries," and "all industries." The increases and decreases are entered in absolute numbers and by percentages.

INDUSTRIES.	Number of Establishments.	Average Yearly Earnings per Employee.		Increase (+) or Decrease (-) in 1910 as compared with 1909.	
		1909.	1910.	Amount.	Percentage.
Artisans' tools .....	44	\$593 37	\$612 41	+	\$19 04 + 3.2
Bollers (steam) .....	16	674 91	652 86	-	22 05 - 3.2
Brewery products .....	37	912 08	901 40	-	10 68 - 1.2
Brick and terra cotta.....	74	484 27	520 70	+	36 43 + 7.5
Chemical products .....	69	525 67	531 90	+	6 23 + 1.2
Cigars and tobacco.....	35	323 54	329 92	+	6 39 + 2.0
Drawn wire and wire cloth.....	14	383 90	439 74	+	55 84 + 14.6
Electrical appliances .....	36	609 66	598 56	-	11 10 - 1.8
Furnaces, ranges and heaters.....	16	722 77	760 00	+	37 23 + 5.2
Glass (window and bottle).....	22	589 35	583 13	-	6 20 - 1.1
Hats (fur and felt).....	43	642 59	559 77	-	82 82 - 12.9
Jewelry .....	107	661 19	669 00	+	7 81 + 1.2
Leather (tanned and finished).....	82	585 94	595 07	+	9 13 + 1.6
Lamps (electrical and other).....	9	425 61	466 14	+	40 53 + 9.5
Machinery .....	140	611 76	633 18	+	21 42 + 3.5
Metal goods .....	81	483 49	514 48	+	30 99 + 6.5
Oil refining .....	19	667 40	682 52	+	15 12 + 2.4
Paper .....	44	529 64	556 58	+	26 94 + 5.1
Pottery .....	51	700 29	719 93	+	19 64 + 2.8
Rubber products (hard and soft).....	51	510 08	514 96	+	4 88 + 0.9
Shipbuilding .....	17	700 43	700 46	-	03 - ...
Silks (broad and ribbon goods).....	210	485 07	484 11	-	97 - 0.2
Steel and iron (structural).....	26	678 60	721 09	+	42 46 + 6.3
Steel and iron (forging).....	13	658 94	687 60	+	28 66 + 4.3
Woolen and worsted goods.....	25	411 00	406 73	-	4 27 - 1.0
Twenty-five industries .....	1,281	\$538 25	\$554 14	+	\$15 89 + 3.0
Other Industries .....	1,142	485 47	499 64	+	14 17 + 2.9
All industries .....	2,423	\$516 57	\$531 94	+	\$15 37 + 3.0

Seventeen of the industries appearing on the above comparison table show increases of yearly earnings ranging from 0.9 per cent. in "rubber products," to 14.5 per cent. in "drawn wire and wire cloth." Numerically, the increases range from \$4.88 in the first, to \$55.84 in the last named industry. Seven industries show decreases ranging from \$0.97, or 0.2 per cent. in "silk goods," to \$82.82, or 12.9 per cent. in "hats, fur and felt."

The average yearly earnings for the twenty-five selected industries are shown by the table to have been \$554.14 in 1910, and \$538.25 in 1909; the increase is therefore \$15.89, or 3.0

per cent. Earnings in "other industries" are shown by the table to have been \$14.17, or 2.9 per cent. greater in 1910 than they were in 1909, and for "all industries," including the entire 2,423 establishments reporting, the increase in 1910 over 1909 was \$15.37, or almost exactly 3 per cent.

Table No. 7 shows the weekly earnings of men, women and children for each industry and for "all industries."

The figures given indicate the actual number of wage earners, who, during the week of highest employment in each of the establishments considered, received either one of the several amounts appearing in the classification, beginning with "under \$3.00 per week," and advancing one dollar or more through the various grades up to \$25 per week and over. The industries follow each other in alphabetical order, and as the table shows the actual number of persons—men, women and children—whose weekly earnings are in each class, the subject cannot be made clearer by any further analysis.

The final division of this table is a summary in which the classification of weekly earnings is given for "all industries," in the same form as that employed for each of the individual industrial groups. This condensed presentation shows the range of weekly earnings in the factory industries of the State, dividing as it does the entire force of operatives into thirteen groups, each of which includes only those men, women and children whose earnings are practically the same. The means are thus provided for determining at a glance the number of wage earners in "all industries" receiving any of the given amounts of weekly compensation, which is a much more accurate method of presenting the subject than by the use of averages.

The total number of wage earners for which classified weekly earnings are reported in this summary of all industries is 329,826, of which 243,753 are men, 79,497 are women, and 6,576 are children. A calculation based on this summary shows the average weekly earnings of men to have been approximately \$12.90; women, \$7.46; and children, \$4.19, after all deductions on account of lost time had been made.

The percentages of each of the three classes of wage earners who received the various specified wage rates are given for all industries in the following table.

CLASSIFICATION OF WEEKLY EARNINGS.	Percentage of Wage Earners Receiving Specified Rates.			
	Men.	Women.	Children.	Total.
Under \$3.00 .....	0.4	1.6	8.2	0.8
\$3.00 but under \$4.00 .....	0.7	1.7	35.5	2.4
4.00 but under 5.00 .....	1.8	11.4	31.5	4.7
5.00 but under 6.00 .....	3.1	17.4	18.2	6.8
6.00 but under 7.00 .....	4.0	18.3	5.1	7.5
7.00 but under 8.00 .....	5.0	15.2	1.0	7.4
8.00 but under 9.00 .....	8.4	10.5	0.5	8.7
9.00 but under 10.00 .....	12.6	7.7	.....	11.2
10.00 but under 12.00 .....	17.8	7.1	.....	14.8
12.00 but under 15.00 .....	17.5	4.6	.....	14.1
15.00 but under 20.00 .....	18.6	1.4	.....	14.1
20.00 but under 25.00 .....	6.4	0.1	.....	4.8
25.00 and over .....	3.7	.....	.....	2.7
Total .....	100.0	100.0	100.0	100.0

The above table shows that while only 23.4 per cent. of the men 16 years old and over are in the earning classes who receive less than \$9.00 per week, 79.1 per cent. of the total number of women 16 years old and over are found in the same classes, which also includes the entire number of children. The largest number of men—18.6 per cent. of the total—is found in the group which includes all who receive \$15, but under \$20; the largest percentage of women, 18.3, is found in the group receiving \$6, but under \$7 per week, and the largest group of children 35.5 per cent. is found in the classification receiving \$3, but under \$4 per week.

Table No. 8 gives for each of the eighty-nine industries and also for "all industries," the average number of days in operation during the year; the average daily and weekly working hours of employes; the number of establishments reporting overtime, and the number of extra hours worked by each industry and by "all industries."

The aggregate average number of days in operation during the year 1910 is shown by the table to have been 288.10; for 1909, the average was 287.38; the increase in 1910 is therefore 0.72 per cent. The industries that worked nearest to full time, which, deducting all the legal and customary holidays, is placed at 306 days, were: "smelting and refining precious metals," 331.40 days; "oil refining," 312.13 days; "high explosives," 308.66 days; "carriage and wagons," 306.55 days; "mining iron ore," 305.66 days; and "graphite products," "chemical products," "soap and tallow,"

"paints," "mattresses and bedding," and the manufacture of "straw hats," work between 300 and 303 days respectively. The industries showing the lowest number of days in operation are the manufacture of "brick and terra cotta," and the manufacture of "glass, window and bottle," which worked 235.84, and 238.05 days respectively; as already explained, these two industries are of the seasonal character, and find it necessary to close—the one during the summer and the other during the winter months. Eighteen of the eighty-one general industries report having been in operation during the year for 300 days and over, and seventy-one report working time which shows averages ranging from 235.84 in the case of "brick and terra cotta," to 299.43 in "foundry, brass." The 97 establishments grouped under "unclassified," show an average of 287.67 days of active operation during the year.

The aggregate average number of working hours per day is shown by the table to have been 9.71, which is exactly the same as it was in 1909. Average working hours per day as they appear on this table should not be regarded as applying to Saturday, it being apparent from the average working hours per week as reported, 55.54, that in a large majority of the establishments considered, the Saturday half-holiday is now firmly established throughout the entire year. Seventeen industries, including 291 establishments, in which 53,414 wage earners are employed, work ten hours or over per day, but with a few exceptions the working hours per week are from 55 to 56 hours. In "mining iron ore," the working hours are 11.33 per day, and 67.16 weekly; in the "pig iron" industry, the working hours are 12 per day and 77.50 per week, which must, as a matter of course, include some part of Sunday; in "smelting the precious metals," the working time is 10.70 hours per day and 64.30 per week. The average working hours for all industries being, as before stated, 9.71 per day, it follows that leaving out the Saturday half-holiday, which is now almost universally observed, the factory and workshop industries of the State are still a very long way from the realization of the ideal working day of eight hours.

Overtime, as reported on this table, is computed on the basis of the actual number of hours worked, multiplied by the number of wage earners who were so employed. By this method, if one hundred operatives in an establishment worked one hour beyond

the customary time, the overtime credited to that plant would be 100 hours; if the same number of men performed two hours extra duty, the credit of extra work to the establishment in which they were employed would be 200 hours. The overtime credited to each industry, and of course, to "all industries" also, represents therefore the labor of one individual wage earner for the number of hours indicated on the table. Sixty-four of the general industries report overtime as having been resorted to during some part of the year by 388 of their component establishments. The overtime ranges from 27 hours reported by one "carpet and rug factory," to 399,219 hours reported by 39 plants out of 140 engaged in the production of machinery. The industries reporting the greatest quantity of overtime are those in which the labor of men is employed almost exclusively. The industries in which the wage earners are largely women or children report comparatively little extra work.

The total overtime reported for "all industries" is 2,148,838 hours. Only 16 of the general industries report no overtime.

Table No. 9 shows the average "proportion of business done" for each of the eighty-nine industries, and the same for "all industries." The purpose of this table is to show how nearly the actual operation of each industry and each establishment, measured by the volume of products reported, approached its full productive capacity—full capacity being indicated by 100 per cent.—and also to show the amount of productive power not called into activity by the business demands of the year. The "proportion of business done" is reported by each of the 2,423 establishments considered, on the basis of its actual output of goods for the year compared with what it might have been had all the existing facilities of the plant been called into use.

The aggregate average "proportion of business done" by "all industries" during the year was 74.92 per cent., which is 25.08 per cent. below full capacity. In 1909 the proportion reported was 74.38, which was 0.54 per cent. lower than that for the year 1910. These figures are interesting as showing that our already enormous output of manufactured goods could have been increased by more than 25 per cent. had the demand warranted such a course, without making any addition whatever to existing facilities for manufacture. As a matter of fact, there are many establishments in each of the eighty-nine industrial groups that were

operated to their full capacity; all such plants reported the "proportion of business done" at 100 per cent., but the larger number fell far enough below full capacity to produce the averages shown on the table.

In the following table comparisons are made of the "proportion of business done" in 1910 and 1909, by the "twenty-five selected industries," and also by "other industries," and by "all industries."

INDUSTRIES.	Number of Establishments.	Average Proportion of Business Done. Per Cent.		Increase (+) or Decrease (—) in 1909 as compared with 1909.	
		1909.	1910	Per Cent.	
Artisans' tools .....	44	63.25	75.11	+	11.86
Boilers (steam) .....	16	69.28	75.94	+	6.66
Brewery products .....	37	75.15	74.52	—	.63
Brick and terra cotta.....	74	71.62	76.23	+	4.61
Chemical products .....	69	78.00	78.84	+	.84
Cigars and tobacco.....	35	79.00	80.14	+	1.14
Drawn wire and wire cloth.....	14	82.31	81.92	—	.39
Electrical appliances .....	36	64.26	70.42	+	6.16
Furnaces, ranges and heaters.....	16	71.92	74.69	+	2.77
Glass (window and bottle).....	22	74.00	77.50	+	3.50
Hats (fur and felt).....	43	62.37	66.51	+	4.14
Jewelry .....	107	69.64	69.07	—	.57
Leather (tanned and finished).....	82	76.75	75.48	—	1.27
Lamps (electrical and other).....	9	73.12	67.22	—	5.90
Machinery .....	140	66.76	68.40	+	1.64
Metal goods .....	81	71.93	73.06	+	1.13
Oil refining .....	19	81.92	83.00	+	1.08
Paper .....	44	85.75	88.12	+	2.37
Pottery .....	51	77.09	78.18	+	1.09
Rubber products (hard and soft).....	51	77.39	77.89	+	.41
Shipbuilding .....	17	65.12	71.18	+	6.06
Silks (broad and ribbon goods).....	210	76.23	73.65	—	2.58
Steel and iron (structural).....	26	67.83	64.42	—	3.41
Steel and iron (forging).....	13	69.58	74.23	+	4.65
Woolen and worsted goods.....	25	84.38	76.40	—	7.98
<b>Twenty-five industries .....</b>	<b>1,281</b>	<b>73.10</b>	<b>74.00</b>	<b>+</b>	<b>.90</b>
<b>Other industries .....</b>	<b>1,142</b>	<b>76.30</b>	<b>76.14</b>	<b>—</b>	<b>.16</b>
<b>All industries .....</b>	<b>2,423</b>	<b>74.38</b>	<b>74.92</b>	<b>+</b>	<b>.54</b>

The above table shows an increase in the proportion of business done by 17 of the twenty-five selected industries in 1910 as compared with 1909, and a decrease for the remaining eight. A net increase of 0.90 per cent. is shown for the entire twenty-five. The 1,142 establishments included in "other industries" show a net decrease of 0.16 per cent., and for "all industries," including

the entire 2,423 establishments reporting, the net increase in the "proportion of business done" is 0.54 per cent. The largest increases—11.86 per cent., and 6.66 per cent.—are shown respectively by the manufacture of "artisans' tools," and "steam boilers;" the largest decreases shown by the table appear in "woolen and worsted goods," 7.98 per cent., and "lamps—electric and other," 5.90 per cent.

Table No. 10, the last of the series into which these statistics of manufactures are divided, shows the power in use during the year 1910, in the factories and workshops of New Jersey; the several varieties of power are shown on the table, together with the quantity of each kind in use, measured by horse-power units; the several varieties of power reported are: Steam engines, gas and gasoline engines, turbine and other water wheels, electric motors, and other motors operated by compressed air.

A comparison is made in the following table of the power used in 1910 and 1909, showing such increases or decreases as have occurred during 1910.

CHARACTER OF POWER.	Number of Motors.		Horse Power.		Increase (+) or Decrease (-) in 1910.	
	1909.	1910.	1909.	1910.	Motors.	Horse Power.
Steam engines .....	4,629	4,422	555,859	467,252	- 207	- 88,607
Gas and gasoline engines.....	304	340	9,999	12,682	+ 36	+ 2,683
Water wheels (turbine).....	150	150	10,130	9,118	.....	- 1,012
Water motors .....	14	6	315	19	- 8	- 296
Electric motors .....	10,893	13,034	129,968	151,306	+ 2,141	+ 21,338
Compressed air motors.....	71	51	4,558	4,486	- 20	- 72
Totals .....	16,061	18,003	710,819	644,863	+ 1,942	- 65,956

As shown by the above table, the total number of power producing motors of all kinds in use in 1909 was 16,061; in 1910 the number is 18,003, which is an increase of 1,942. The increase in motors is due almost entirely to the greater number of electric motors in use, which was 2,141 in excess of the number reported in 1909. Steam engines show a most remarkable decline, both in the number in use and also the horse-power. The net decrease in the number of motors in use, is, as before said, 1,942, and the decrease in horse-power reaches the striking total of 65,956. Considering that the record of industry throughout the

State for 1910 is one which shows a general increase in volume equal to that which it has enjoyed annually for the past ten years, the falling off in horse-power in use can be accounted for only on the theory that the extensive change to electricity from other forms of power has brought it about without in any way checking the operations of industry.

TABLE No. 1.—Private Firms and Corporations, Partners and Stockholders.—By Industries, 1910.

Office Numbers.	INDUSTRIES.	Number of Establishments Considered.	Number of Private Firms.	Proprietors and Firms. Members.					Number of Corporations.	Stockholders.				Aggregate. Partners and Stockholders.
				Males.	Females.	Special.	Estates.	Total.		Males.	Females.	Banks and Trustees.	Total.	
1	Agricultural machinery and implements.....	7	3	4	.....	.....	.....	4	4	61	13	.....	74	78
2	Artisans' tools .....	44	21	27	4	.....	.....	21	23	205	80	.....	314	345
3	Art tile .....	9	1	.....	1	.....	.....	1	8	92	10	.....	102	103
4	Boilers .....	16	1	12	.....	.....	.....	12	9	340	216	29	585	597
5	Boxes (wood and paper).....	52	23	43	2	.....	1	46	19	83	17	3	103	149
6	Brewing (larger beer, ale and porter).....	37	1	1	.....	.....	.....	1	36	1,000	110	8	1,118	1,119
7	Brick and terra cotta.....	74	24	31	1	.....	1	33	50	1,957	748	57	2,762	2,795
8	Brushes .....	14	10	9	1	.....	1	11	4	17	.....	.....	17	28
9	Buttons (metal) .....	9	2	4	.....	.....	.....	4	7	35	5	.....	40	44
10	Buttons (pearl) .....	26	16	21	1	.....	.....	22	10	58	9	.....	67	89
11	Carpets and rugs.....	7	2	5	.....	.....	.....	5	5	27	12	.....	39	44
12	Carriages and wagons.....	29	17	22	.....	.....	.....	22	12	83	20	1	104	126
13	Chemical products .....	69	3	5	.....	1	1	7	68	2,197	1,713	261	4,171	4,178
14	Cigars and tobacco.....	35	17	20	.....	.....	.....	20	18	957	305	35	1,297	1,317
15	Clothing .....	14	12	17	1	.....	.....	18	2	6	.....	.....	6	24
16	Confectionery .....	9	2	5	.....	.....	1	6	7	69	7	3	79	85
17	Cornices and skylights.....	22	11	22	2	.....	.....	24	11	36	11	.....	47	71
18	Corsets and corset-waists.....	10	2	2	.....	.....	.....	2	8	46	12	2	60	62
19	Cutlery .....	14	1	12	.....	.....	.....	12	7	38	.....	3	48	60
20	Cotton goods .....	33	11	17	2	2	1	22	22	226	71	18	315	337
21	Cotton goods (finishing and dyeing).....	19	1	2	.....	.....	.....	2	18	644	349	124	1,117	1,119
22	Drawn wire and wire cloth.....	14	1	1	.....	.....	.....	1	13	243	154	25	422	423
23	Electrical appliances .....	36	6	8	.....	.....	.....	8	30	3,413	307	30	3,750	3,758
24	Embroideries .....	23	17	23	.....	1	1	25	6	26	3	.....	29	54
25	Fertilizers .....	11	3	6	.....	.....	.....	6	8	2,707	2,129	170	5,015	5,021
26	Food products .....	22	8	12	.....	.....	.....	12	27	2,709	1,041	8	3,758	3,771
27	Foundry (brass) .....	21	8	10	1	.....	.....	11	13	118	19	.....	137	148

28	Foundry (iron)	57	18	23	1	34	29	2,857	380	67	3,304	3,338
29	Furnaces, ranges and heaters	16	2	4	4	4	14	610	438	44	1,092	1,096
30	Gas and electric light fixtures	13	3	8	8	10	59	15	2	76	84	84
31	Glass (cut tableware)	3	3	5	5	5	5	38	15	53	58	58
32	Glass (window and bottle)	22	4	6	1	2	18	203	32	30	245	254
33	Glass mirrors	4	1	2	2	2	2	23	1	24	26	26
34	Graphite products	7	3	3	3	3	4	102	63	26	191	194
35	Hats (fur and felt)	43	19	41	1	42	24	216	74	3	293	335
36	Hats (straw)	3	1	2	2	2	2	26	2	28	30	30
37	High explosives	9	9	9	9	9	1,384	390	80	1,854	1,854	1,854
38	Inks and muclage	7	1	2	2	2	6	72	3	2	77	79
39	Jewelry	107	56	123	2	120	51	188	37	1	226	352
40	Knit goods	24	13	20	3	23	11	111	83	29	223	246
41	Leather	82	32	55	4	60	59	258	53	95	406	466
42	Leather goods	19	11	22	22	22	8	47	13	1	61	83
43	Lamps	9	1	2	2	2	8	4,830	4,129	657	9,616	9,618
44	Lime and cement	11	3	6	1	7	8	387	150	47	614	621
45	Machinery	140	33	45	2	2	107	4,348	853	152	5,354	5,403
46	Mattresses and bedding	9	1	2	2	2	8	46	15	61	63	63
47	Metal goods	81	16	25	25	25	65	1,327	632	155	2,114	2,139
48	Metal novelties	25	8	12	1	12	17	83	15	2	100	113
49	Mining (iron ore)	6	6	6	6	6	6	387	315	191	803	803
50	Musical instruments	17	2	3	3	3	15	112	18	6	136	139
51	Oilcloth (floor and table)	9	3	6	6	6	6	276	157	14	447	453
52	Oils	19	19	19	19	19	19	2,998	2,824	677	6,499	6,499
53	Paints	17	5	11	5	8	19	222	92	22	336	355
54	Paper	44	7	12	2	14	37	1,935	138	13	1,186	1,200
55	Pig iron	5	5	5	5	5	5	123	53	7	183	183
56	Pottery	51	8	11	2	13	43	402	202	36	640	653
57	Printing and bookbinding	21	6	8	1	9	15	112	23	1	136	145
58	Quarrying stone	18	4	6	6	6	14	82	9	42	42	48
59	Roofing (metal and tar)	8	8	8	8	8	8	46	10	2	58	58
60	Rubber goods (hard and soft)	51	1	1	1	2	59	4,869	2,985	203	8,048	8,050
61	Saddles and harness	5	2	4	4	4	3	8	1	9	13	13
62	Saddlery and harness hardware	11	5	6	6	6	6	32	15	47	53	53
63	Scientific instruments	21	3	6	6	6	18	287	49	15	351	357
64	Sash, blinds and doors	25	13	23	23	23	12	95	22	117	140	140
65	Shoes	28	12	25	25	25	16	67	16	4	87	112
66	Shirts	24	13	26	1	28	11	61	13	74	102	102
67	Shirtwaists (women's)	5	4	6	6	6	1	4	4	4	10	10
68	Shipbuilding	17	4	10	10	10	13	135	45	15	195	205
69	Silk (broad and ribbon)	210	81	140	1	141	129	622	114	29	765	906
70	Silk dyeing	24	6	7	7	7	18	163	26	3	192	199
71	Silk throwing	35	16	29	29	29	19	58	13	1	72	101
72	Silk mill supplies	17	12	22	22	22	5	18	7	25	47	47
73	Silver goods	19	5	11	11	11	14	89	49	8	146	157
74	Smelting and refining (gold, silver and copper, etc.)	11	11	11	11	11	11	2,503	1,910	310	4,723	4,723

TABLE No. 1.—Private Firms and Corporations, Partners and Stockholders.—By Industries, 1910.—(Continued).

Office Numbers.	INDUSTRIES.	Number of Establishments Considered.	Number of Private Firms.	Proprietors and Firms. Members.					Number of Corporations.	Stockholders.				Aggregate. Partners and Stockholders.
				Males.	Females.	Special.	Estates.	Total.		Males.	Females.	Banks and Trustees.	Total.	
75	Soap and tallow.....	18	4	8				8	14	3,066	18	2	3,086	3,094
76	Steel and iron (bar).....	6						6	6	42	5	1	48	48
77	Steel and iron structural.....	26		3				3	24	213	25	2	240	243
78	Steel and iron (forging).....	13		2			1	4	10	326	127	29	382	386
79	Textile products.....	19	1	2				2	9	62	31	2	95	97
80	Thread.....	5						5	6	*915	*901	*2	*1,818	1,818
81	Trunks and travelling bags.....	12	3	11				11	6	27	13	7	41	52
82	Trunk and bag hardware.....	10	3	7	1			8	5	36	5	2	43	51
83	Typewriters and supplies.....	5						5	4	37		1	38	38
84	Underwear (women's and children's).....	13	19	16				16	15	121	23	1	145	161
85	Varnishes.....	17	3	6				6	14	101	38	15	154	160
86	Watches, cases and material.....	11	3	8				8	6	159	114	24	297	315
87	Window shades.....	3	1	1				1	2	8	3		11	12
88	Wooden goods.....	33	17	23	1			24	21	109	25	3	137	163
89	Woolen and worsted goods.....	25	8	22				24	17	229	52	24	305	329
90	Unclassified.....	97	15	19	1		1	21	82	*5,812	*9,701	*1,543	*20,056	20,077
	All industries.....	1,433	764	1,264	46	7	30	1,337	1,639	62,520	34,978	5,317	103,815	105,352

\*Two establishments not reporting these items.  
 †One establishment not reporting these items.

TABLE No. 2.—Capital Invested.—By Industries, 1910.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Capital Invested in			Total Amount of Capital Invested.
			Land and Buildings.	Machinery and Tools.	Bills Receivable, Stock in Process of Manufacture, Cash on hand.	
1	Agricultural machinery and implements .....	7	\$309,175	\$418,238	\$3,161,983	\$3,889,396
2	Artisans' tools .....	44	1,108,049	1,354,873	1,999,356	4,462,278
3	Art tile .....	9	499,773	226,049	245,130	970,952
4	Bollers .....	16	2,663,636	1,563,667	7,302,706	11,530,009
5	Boxes (wood and paper).....	52	763,774	625,252	933,543	2,322,569
6	Brewing (lager beer, ale and porter) .....	37	11,600,251	5,921,866	19,800,752	37,322,869
7	Brick and terra cotta.....	74	10,979,967	3,374,553	7,572,720	21,927,240
8	Brushes .....	14	63,948	50,265	178,324	292,537
9	Buttons (metal) .....	9	198,554	488,072	728,364	1,414,990
10	Buttons (pearl) .....	26	205,000	376,770	641,918	1,123,688
11	Carpets and rugs .....	7	537,254	575,512	1,235,753	2,348,519
12	Carriages and wagons .....	29	597,369	281,767	940,937	1,820,078
13	Chemical products .....	69	9,658,331	10,119,722	17,318,048	37,096,101
14	Cigars and tobacco .....	35	2,337,400	1,585,904	7,224,653	11,147,957
15	Clothing .....	14	129,959	72,065	716,248	918,272
16	Confectionery .....	9	241,915	257,249	501,877	1,001,041
17	Cornices and skylights .....	22	191,907	121,629	395,022	708,558
18	Corsets and corset waists....	10	159,737	187,582	1,409,379	1,717,698
19	Cutlery .....	14	270,530	263,803	788,346	1,322,679
20	Cotton goods .....	33	2,694,917	2,749,753	4,084,556	9,529,226
21	Cotton goods (finishing and dyeing) .....	19	2,777,944	3,328,190	2,141,665	8,247,799
22	Drawn wire and wire cloth. ....	14	912,777	1,378,225	2,925,208	5,216,210
23	Electrical appliances .....	36	2,646,854	3,955,637	12,478,595	19,081,086
24	Embroideries .....	23	211,217	392,222	325,629	929,068
25	Fertilizers .....	11	756,800	613,087	4,263,286	5,633,173
26	Food products .....	32	3,672,997	2,533,319	5,460,232	11,666,548
27	Foundry (brass) .....	21	809,348	484,104	1,423,633	2,717,085
28	Foundry (iron) .....	57	5,388,694	3,369,699	11,403,575	20,161,968
29	Furnaces, ranges & heaters. ....	16	1,790,894	536,045	5,337,778	7,664,717
30	Gas and electric light fixtures .....	13	159,306	222,684	598,644	980,628
31	Glass (cut tableware) .....	8	36,573	52,290	243,244	332,107
32	Glass (window and bottle)....	22	1,800,011	963,593	3,947,384	6,710,988
33	Glass mirrors .....	4	80,000	70,500	290,000	440,500
34	Graphite products .....	7	418,000	539,842	1,402,837	2,360,679
35	Hats (fur and felt).....	43	1,238,269	727,367	2,522,860	4,488,496
36	Hats (straw) .....	3	151,000	140,029	320,000	611,029
37	High explosives .....	9	66,077,606	.....	3,079,712	9,157,317
38	Inks and muclage .....	7	193,673	110,427	292,796	696,895
39	Jewelry .....	197	460,500	895,951	7,320,477	8,676,928
40	Knit goods .....	24	582,274	1,342,024	1,657,009	3,681,307
41	Leather .....	82	4,324,423	1,855,516	10,953,156	17,133,095
42	Leather goods .....	19	292,188	123,539	608,911	1,024,638
43	Lamps .....	1	1,644,638	1,248,239	4,463,379	7,356,256
44	Lime and cement .....	9	3,129,289	6,862,892	1,854,788	11,846,969
45	Machinery .....	140	13,406,502	11,963,515	25,539,708	50,899,725
46	Mattresses and bedding .....	9	346,752	211,130	573,876	1,131,758
47	Metal goods .....	81	3,365,856	3,953,084	6,952,672	14,271,612
48	Metal novelties .....	25	365,623	550,843	980,850	1,897,316

TABLE No. 2.—Capital Invested.—By Industries, 1910.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Capital Invested in				Total Amount of Capital Invested.
			Land and Buildings.	Machinery and Tools.	Bills Receivable, Stock in Process of Manufacture, Cash on hand.		
49	Mining (iron ore).....	6	\$1,000,130	\$340,000	\$830,116	\$2,170,246	
50	Musical instruments.....	17	569,619	900,794	2,004,950	3,875,364	
51	Oldcloth (door and table)....	9	3,352,638	1,995,877	3,500,506	8,849,021	
52	Oils.....	19	2,023,224	20,678,417	41,006,325	70,704,966	
53	Paints.....	17	2,185,190	1,869,651	3,361,054	7,416,795	
54	Paper.....	44	3,291,505	4,455,971	3,366,299	11,113,775	
55	Pig iron.....	4	3,767,000	1,166,000	1,661,532	6,794,532	
56	Pottery.....	51	3,047,225	1,024,366	6,723,319	10,794,910	
57	Printing and bookbinding....	21	744,655	1,416,951	1,318,077	3,479,683	
58	Quarrying stone.....	18	309,437	332,999	722,089	1,366,525	
59	Roofing (metal and tar).....	8	715,204	894,647	462,105	2,072,056	
60	Rubber goods (hard & soft)....	51	5,121,006	5,188,675	18,593,232	28,902,913	
61	Saddlery and harness.....	5	8,000	10,900	24,914	43,814	
62	Saddlery and harness hard-ware.....	11	315,580	284,312	650,227	1,050,119	
63	Scientific instruments.....	21	2,427,080	1,613,850	4,421,008	8,461,938	
64	Sash, blinds and doors.....	23	412,193	258,124	1,297,309	1,978,286	
65	Shoes.....	28	388,700	635,003	1,361,384	3,006,147	
66	Shirts.....	24	264,547	191,072	2,399,050	2,855,228	
67	Shirt waists (women's).....	5	8,800	10,146	31,783	60,729	
68	Shipbuilding.....	17	4,912,442	3,476,204	15,853,598	24,242,244	
69	Silk (broad and ribbon).....	210	2,723,819	10,210,675	21,750,721	38,706,215	
70	Silk (cheviot and ribbon).....	24	2,510,885	3,006,052	7,657,850	13,294,888	
71	Silk (throwing).....	35	346,426	803,437	257,652	1,397,515	
72	Silk mill supplies.....	17	229,850	212,843	323,653	766,346	
73	Silver goods.....	19	231,064	530,724	1,521,863	2,443,651	
74	Smelting and refining (gold, silver, copper, etc.).....	11	4,125,953	4,190,102	9,552,964	17,869,021	
75	Soap and tallow.....	18	3,066,631	2,057,484	4,747,886	9,992,001	
76	Steel and iron (bars).....	6	772,648	890,883	1,009,860	2,771,391	
77	Steel and iron (structural)....	28	1,441,630	4,242,216	2,559,260	8,443,706	
78	Steel and iron (forging).....	13	6,290,667	6,227,430	2,984,472	15,502,569	
79	Textile products.....	10	648,829	658,879	1,657,673	3,122,290	
80	Thread.....	75	750,871	690,121	2,070,981	3,512,973	
81	Trunks and bag traveling bags.....	12	209,262	404,535	1,641,872	2,255,669	
82	Trunk and bag hardware.....	10	239,273	454,327	823,635	1,479,135	
83	Typewriters and supplies.....	6	172,318	172,318	890,381	1,378,301	
84	Underwear (women's and children's).....	25	139,490	166,638	960,293	1,266,426	
85	Varnishes.....	17	1,220,247	238,655	2,660,165	4,518,467	
86	Watch-cases and material.....	11	1,239,846	1,827,653	2,227,473	4,994,972	
87	Window shades.....	4	54,000	31,402	72,797	158,232	
88	Woolen goods.....	38	658,242	305,411	1,574,515	2,538,168	
89	Woolen and worsted goods....	25	8,222,654	10,031,677	21,729,445	39,983,776	
90	Unclassified.....	57	9,622,224	5,855,007	10,702,273	26,181,504	
	All industries.....	2,423	\$191,502,005	\$178,948,302	\$409,040,385	\$779,490,692	

a. Two establishments. Capital not reported.

b. One establishment. Capital not reported.

c. Three establishments. Capital not sub-divided.

d. One establishment. Capital not sub-divided.

e. Including machinery, tools and equipments.

f. Six establishments. Capital not sub-divided.

TABLE No. 3.—Stock or Material Used, Goods Made or Work Done.—  
By Industries, 1910.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Cost Value of Stock Used.	Selling Value at Manufactory of Goods Made.
1	Agricultural machinery and implements.....	7	\$576,605	\$2,199,761
2	Artisans' tools .....	44	1,386,294	3,693,983
3	Art tile .....	9	283,560	990,241
4	Bollers .....	16	3,232,673	5,983,356
5	Boxes (wood and paper).....	52	2,039,447	3,783,469
6	Brewing (lager beer, ale and porter).....	37	5,296,556	20,449,978
7	Brick and terra cotta.....	74	2,922,273	9,679,494
8	Brushes .....	14	226,677	509,873
9	Buttons (metal) .....	9	470,587	1,550,821
10	Buttons (pearl) .....	26	1,016,617	1,966,690
11	Carpets and rugs .....	7	947,458	1,992,179
12	Carriages and wagons .....	29	874,237	2,332,315
13	Chemical products .....	69	18,469,281	35,657,246
14	Cigars and tobacco .....	35	11,344,624	24,635,026
15	Clothing .....	14	1,548,928	2,366,934
16	Confectionery .....	9	1,145,447	1,705,641
17	Cornices and skylights .....	22	713,045	1,484,885
18	Corsets and corset waists .....	10	1,738,127	4,250,098
19	Cutlery .....	14	389,637	1,337,259
20	Cotton goods .....	33	8,789,670	13,276,028
21	Cotton goods (finishing and dyeing).....	19	4,874,259	8,127,525
22	Drawn wire and wire cloth .....	14	25,145,306	39,350,336
23	Electrical appliances .....	36	*9,776,022	*20,165,077
24	Embroideries .....	23	867,657	1,791,057
25	Fertilizers .....	11	5,830,746	7,822,742
26	Food products .....	32	27,173,023	33,747,182
27	Foundry (brass) .....	21	2,736,416	4,457,672
28	Foundry (iron) .....	57	9,730,568	18,024,835
29	Furnaces, ranges and heaters .....	16	3,518,217	6,670,737
30	Gas and electric light fixtures.....	13	451,892	995,696
31	Glass (cut tableware) .....	8	201,060	486,916
32	Glass (window and bottle) .....	22	2,323,365	*5,490,066
33	Glass mirrors .....	4	283,237	456,000
34	Graphite products .....	7	*707,906	*1,495,104
35	Hats (fur and felt) .....	43	5,089,723	10,503,020
36	Hats (straw) .....	3	782,843	1,243,266
37	High explosives .....	9	5,832,512	11,188,883
38	Hubs and mullage .....	7	200,967	541,019
39	Jewelry .....	107	6,244,217	*11,223,541
40	Knit goods .....	24	3,726,052	5,902,612
41	Leather .....	82	20,215,588	29,359,572
42	Leather goods .....	19	1,048,087	1,853,897
43	Lamps .....	9	2,972,448	7,277,276
44	Lime and cement .....	11	2,324,118	3,785,080
45	Machinery .....	140	16,828,375	36,718,446
46	Mattresses and bedding .....	9	988,907	1,793,574
47	Metal goods .....	81	9,581,722	18,446,264
48	Metal novelties .....	25	980,487	2,326,259
49	Mining (iron ore) .....	6	335,010	1,334,678
50	Musical instruments .....	17	1,596,035	4,077,539
51	Oilecloth (floor and table).....	9	8,007,506	11,441,076
52	Oils .....	19	60,716,766	70,720,942
53	Paints .....	17	6,616,018	9,834,134
54	Paper .....	44	7,784,926	13,363,369
55	Pig Iron .....	5	3,813,457	4,452,907
56	Pottery .....	51	2,568,366	8,340,246
57	Printing and bookbinding .....	21	1,473,620	3,703,384
58	Quarrying stone .....	18	420,726	1,524,941

TABLE No. 3.—Stock or Material Used, Goods Made or Work Done.—  
By Industries, 1910.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Cost Value of Stock Used.	Selling Value at Manufactory of Goods Made.
59	Rubber (metal and tar) .....	8	\$1,924,039	\$3,095,658
60	Rubber goods (hard and soft).....	51	23,647,377	34,733,532
61	Saddles and harness .....	5	42,200	94,830
62	Saddlery and harness hardware .....	11	578,527	1,182,834
63	Scientific instruments .....	21	6,807,615	11,073,685
64	Sash, blinds and doors .....	25	1,392,719	2,325,865
65	Shoes .....	28	4,142,900	7,251,783
66	Shirts .....	24	2,281,557	4,296,918
67	Shirt waists (women's) .....	5	156,347	478,970
68	Shipbuilding .....	17	4,341,484	8,766,216
69	Silk (broad and ribbon) .....	210	29,115,893	52,572,837
70	Silk dyeing .....	24	3,796,634	9,066,062
71	Silk throwing .....	35	258,005	940,437
72	Silk mill supplies .....	17	333,671	881,007
73	Silver goods .....	19	1,276,222	3,206,166
74	Smelting and refining (gold, silver, copper, etc.)..	11	43,225,326	54,115,231
75	Soap and tallow .....	18	17,280,403	23,681,502
76	Steel and iron (bars) .....	6	1,237,801	2,175,190
77	Steel and iron (structural) .....	26	*6,209,434	*10,935,411
78	Steel and iron (forging) .....	13	4,111,706	7,636,544
79	Textile products .....	10	2,545,387	3,664,412
80	Thread .....	6	*2,243,463	†3,185,553
81	Trunks and travelling bags .....	12	577,805	1,118,828
82	Trunk and bag hardware .....	10	1,024,992	2,557,549
83	Typewriters and supplies .....	6	354,613	885,807
84	Underwear (women's and children's) .....	25	1,567,603	3,050,757
85	Varnishes .....	17	2,322,549	4,407,766
86	Watches, cases and material .....	11	1,754,709	3,812,167
87	Window shades .....	3	195,802	329,159
88	Wooden goods .....	38	1,965,167	3,928,941
89	Woolen and worsted goods .....	25	21,290,115	30,754,104
90	Unclassified .....	97	*47,364,836	*58,856,888
	All industries .....	2,423	\$562,535,874	\$914,772,810

\*One establishment not reporting these items.

†Two establishments not reporting this item.

the wages and average yearly earnings of employes; seventh, the classified weekly earnings of all wage earners; eighth, the days in operation and average working time per day and per week; ninth, the proportion of business done, or the extent to which the operations of the various industries approached their full productive capacity, and tenth, the primary power used, and its aggregate horse power.

Incidental to the analysis of these tables, there are several shorter compilations in which the data for twenty-five selected industries are compared with those for 1909, and the increases or decreases duly noted as shown. These selected industries, twenty-five in number, are chosen for comparison, because they are the most important in the entire industry classification, in regard to the number of establishments, value of products, and number of wage earners employed.

The comparisons are very valuable, for although the totals for only twenty-five of the general industries are presented side by side, more than one-half of the number of establishments, and a much larger proportion of all the other totals included in the compilation are found among them. Besides this special comparison, the totals for all establishments included in the entire classification are compared for both years. In this way the trend of industrial activity from year to year is clearly shown, while the spaces occupied by the tables is less than one-half of what would be required if the comparisons were made in any other way.

Table No. 1 shows the character of the ownership of all establishments grouped under each industry heading, that is to say, the number controlled by corporations, by partnerships and by individual owners. The number of stockholders—male, female and trustees acting for minors—is given for corporations, and the number of partners, male, female and special, with the number of individual owners of establishments, are also shown.

Of the 2,423 establishments reporting, 1,659, or 68.5 per cent. of the total number are under corporate form of management, and 764, or 31.5 per cent., are under the control of partnerships individual owners, or other forms of non-corporate management. In the statistics of 1909 the proportion of establishments under private or partnership management was 32.8 per cent., and of those under corporate control, 67.2 per cent. The gain for the

TABLE No. 4.—Average, Greatest and Least Number of Wage Earners Employed.—By Industries, 1910.—  
Aggregates.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Number of Persons Employed.				Number of Persons Employed at Period of Employment of the		Excess of Greatest Over Least Number.	
			Men 16 Years and Over.	Women 16 Years and Over.	Children Under 16 Years.	Total.	Greatest Number.	Least Number.	Number.	Per Cent.
1	Agricultural machinery and implements.....	7	608	.....	3	611	726	529	208	28.4
2	Artisans' tools .....	44	2,473	.....	30	2,581	2,650	2,535	115	4.3
3	Art tile .....	9	582	.....	78	894	965	817	138	14.5
4	Boilers .....	16	1,968	.....	.....	1,968	2,245	1,781	464	20.7
5	Boxes (wood and paper).....	52	1,159	1,413	133	2,705	2,786	2,556	230	8.3
6	Brewing (lager beer, ale and porter).....	37	2,255	.....	7	2,262	2,359	2,132	227	9.6
7	Brick and terra cotta.....	74	7,463	.....	6	7,504	8,920	5,497	3,423	38.4
8	Brushes .....	14	379	.....	93	374	386	359	27	7.0
9	Buttons (metal) .....	9	423	.....	437	901	952	851	101	10.6
10	Buttons (pearl) .....	26	933	.....	301	1,233	1,379	1,148	231	16.8
11	Carpets and rugs.....	7	689	.....	306	1,016	1,956	956	99	9.4
12	Carriages and wagons.....	29	1,063	.....	.....	1,063	1,119	971	148	13.2
13	Chemical products .....	69	6,111	2,012	105	8,228	8,467	7,857	610	7.2
14	Cigars and tobacco.....	35	1,892	7,017	521	9,430	9,599	8,145	454	4.7
15	Clothing .....	14	498	.....	692	2,192	1,384	1,037	347	25.1
16	Confectionery .....	9	199	.....	312	517	708	456	252	35.6
17	Cornices and skylights.....	22	544	.....	.....	544	613	468	145	23.7
18	Corsets and corset waists.....	10	181	2,045	109	2,335	2,475	2,166	309	12.5
19	Cutlery .....	14	1,059	.....	148	1,245	1,277	1,215	62	4.9
20	Cotton goods .....	33	1,699	4,663	331	6,693	6,895	6,496	399	5.8
21	Cotton goods (finishing and dyeing).....	19	3,261	.....	693	3,999	4,162	3,585	577	13.9
22	Drawn wire and wire cloth.....	14	8,308	.....	767	8,976	9,314	8,593	721	7.7
23	Electrical appliances.....	36	6,233	1,054	30	7,367	7,736	7,136	600	7.8
24	Embroideries .....	23	295	.....	559	900	937	837	100	10.7
25	Fertilizers .....	11	1,356	.....	13	1,369	1,633	1,205	428	26.2
26	Food products .....	32	2,717	.....	618	3,377	3,691	2,976	715	19.4
27	Foundry (brass) .....	21	1,408	.....	41	1,459	1,494	1,419	75	5.0

TABLE No. 4.—Average, Greatest and Least Number of Wage Earners Employed.—By Industries, 1910.—  
Aggregate.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Number of Persons Employed.				Number of Persons Employed at Period of Employment of the		Excess of Greatest Over Least Number.	
			Men 16 Years and Over.	Women 16 Years and Over.	Children Under 16 Years.	Total.	Greatest Number.	Least Number.	Number.	Per Cent.
28	Foundry (iron) .....	57	9,736	111	23	9,870	10,202	8,926	1,276	12.5
29	Furnaces, ranges and heaters .....	16	1,880	112	3	1,995	2,107	1,708	399	18.9
30	Gas and electric light fixtures .....	12	456	34	2	492	514	457	57	11.1
31	Glass (cut tableware) .....	8	296	37	33	356	400	287	113	28.2
32	Glass (window and bottle)* .....	22	5,740	109	255	6,104	7,664	1,235	6,429	83.9
33	Glass mirrors .....	4	121	18	22	161	171	159	21	12.3
34	Graphite products .....	7	968	1,127	75	2,170	2,245	2,107	136	6.1
35	Hats (fur and felt) .....	43	4,311	1,357	21	5,689	5,992	5,428	563	9.4
36	Hats (straw) .....	3	255	397	8	660	882	399	483	54.8
37	High explosives .....	9	2,125	70	7	2,202	2,420	1,971	449	18.6
38	Inks and mucilage .....	7	91	5	.....	96	101	91	10	9.9
39	Jewelry .....	107	2,622	919	95	3,636	3,814	3,522	292	7.7
40	Knit goods .....	24	1,005	1,370	120	2,495	2,632	2,357	275	10.4
41	Leather .....	82	5,946	77	27	6,050	6,350	5,766	584	9.3
42	Leather goods .....	19	682	391	32	1,085	1,190	1,065	35	3.2
43	Lamps .....	9	1,437	3,325	75	4,837	5,646	4,512	1,134	20.1
44	Lime and cement .....	11	1,817	17	3	1,837	2,137	1,251	886	41.4
45	Machinery .....	140	21,879	719	33	23,631	23,320	21,243	2,075	8.9
46	Mattresses and bedding .....	9	503	65	5	573	612	526	86	14.1
47	Metal goods .....	61	6,281	1,790	169	8,240	8,593	7,835	668	7.9
48	Metal novelties .....	25	1,002	282	59	1,343	1,447	1,180	267	18.4
49	Mining (iron ore) .....	6	1,511	.....	.....	1,511	1,620	1,342	278	17.2
50	Musical instruments .....	17	1,628	331	18	1,972	2,042	1,925	122	6.0
51	Oilcloth (floor and table) .....	9	2,231	18	8	2,257	2,333	2,177	156	6.7
52	Oils .....	19	7,255	19	83	7,327	7,915	7,001	914	11.5
53	Paints .....	17	1,177	110	27	1,314	1,369	1,267	102	7.5
54	Paper .....	44	3,044	324	43	3,411	3,628	3,245	378	10.4

55	Pig iron .....	5	846	.....	.....	846	1,091	631	460	42.2
56	Pottery .....	51	4,512	785	62	5,359	5,445	5,127	318	5.8
57	Printing and bookbinding .....	21	1,166	579	12	1,767	1,918	1,638	280	14.6
58	Quarrying stone .....	18	1,116	.....	.....	1,116	1,289	900	389	30.2
59	Roofing (metal and tar).....	8	509	18	.....	527	556	478	78	14.0
60	Rubber goods (hard and soft).....	51	7,111	1,237	111	8,459	8,798	8,147	651	7.4
61	Saddles and harness.....	5	44	5	.....	49	55	46	9	16.3
62	Saddlery and harness hardware.....	11	643	111	42	796	816	756	60	7.4
63	Scientific instruments .....	21	4,628	744	65	5,437	6,011	4,922	1,089	18.1
64	Sash, blinds and doors.....	25	782	.....	.....	782	816	733	83	10.2
65	Shoes .....	28	2,464	1,504	94	4,062	4,207	3,947	260	6.2
66	Shirts .....	24	684	2,680	124	3,488	3,730	3,328	402	10.8
67	Shirt waists (women's).....	5	14	682	31	677	711	624	87	12.2
68	Shipbuilding .....	17	5,408	.....	.....	5,408	5,731	5,304	427	7.4
69	Silk (broad and ribbon).....	210	10,441	10,676	628	21,745	22,991	20,586	2,405	10.5
70	Silk dyeing .....	24	5,090	519	15	5,540	6,134	4,837	1,297	21.1
71	Silk throwing .....	35	552	888	134	1,574	1,781	1,336	445	25.0
72	Silk mill supplies.....	17	501	139	50	690	705	671	34	4.8
73	Silver goods .....	19	1,041	265	13	1,319	1,413	1,239	174	12.3
74	Smelting and refining (gold, silver, copper, etc.).....	11	4,302	3	.....	4,305	4,573	3,953	620	13.6
75	Soap and tallow.....	18	1,664	598	45	2,217	2,406	1,919	487	20.2
76	Steel and iron (bar).....	6	992	67	.....	1,059	1,149	888	161	14.0
77	Steel and iron (structural).....	26	3,268	.....	1	3,269	3,694	2,861	833	22.6
78	Steel and iron (forging).....	13	3,273	17	5	3,295	3,464	3,036	428	12.4
79	Textile products .....	10	866	514	97	1,477	1,525	1,445	80	5.2
80	Thread .....	5	1,713	3,220	550	5,483	5,513	5,358	160	2.9
81	Trunks and traveling bags.....	12	483	25	4	512	536	474	62	11.6
82	Trunk and bag hardware.....	10	1,232	432	72	1,726	2,110	1,547	563	26.7
83	Typewriters and supplies.....	6	281	50	5	336	344	315	29	8.4
84	Underwear (women's and children's) .....	25	148	1,839	76	2,063	2,163	1,967	196	9.1
85	Varnishes .....	17	309	13	.....	323	332	314	18	5.4
86	Watches, cases and material.....	11	1,486	707	56	2,249	2,452	2,048	404	16.5
87	Window shades .....	3	73	1	.....	74	80	67	13	16.2
88	Wooden goods .....	38	1,714	17	29	1,760	1,841	1,691	150	8.1
89	Woolen and worsted goods.....	25	6,133	6,628	608	13,369	13,773	12,866	907	6.6
90	Unclassified .....	97	6,663	1,215	113	7,991	8,308	7,535	773	9.3
	All industries.....	2,423	223,633	72,712	5,920	302,265	321,552	277,319	44,233	13.8

\*Closing down for the months of July and August is an established practice in all glass factories.

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.

## AGRICULTURAL MACHINERY AND IMPLEMENTS—SEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	569	....	4	573
February .....	568	....	4	572
March .....	666	....	4	670
April .....	723	....	3	726
May .....	679	....	3	682
June .....	637	....	3	640
July .....	591	....	1	592
August .....	570	....	1	571
September .....	556	....	1	557
October .....	519	....	1	520
November .....	598	....	1	599
December .....	630	....	1	631

## ARTISANS' TOOLS—FORTY-FOUR ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	2,434	77	25	2,536
February .....	2,454	72	28	2,554
March .....	2,456	77	26	2,559
April .....	2,472	74	29	2,575
May .....	2,476	75	23	2,574
June .....	2,467	77	30	2,574
July .....	2,426	77	32	2,535
August .....	2,481	79	33	2,593
September .....	2,484	82	38	2,604
October .....	2,478	80	36	2,594
November .....	2,512	81	29	2,622
December .....	2,529	85	36	2,650

## ART TILE—NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	524	252	41	817
February .....	543	248	49	840
March .....	555	255	41	851
April .....	561	262	40	863
May .....	557	268	40	865
June .....	577	265	43	885
July .....	611	271	36	918
August .....	614	277	41	932
September .....	604	284	38	926
October .....	625	289	39	953
November .....	616	300	39	955
December .....	594	291	35	920

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## BOILERS—SIXTEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	1,781	....	....	1,781
February .....	1,782	....	....	1,782
March .....	1,808	....	....	1,808
April .....	1,799	....	....	1,799
May .....	1,881	....	....	1,881
June .....	1,916	....	....	1,916
July .....	1,891	....	....	1,891
August .....	2,104	....	....	2,104
September .....	2,188	....	....	2,188
October .....	2,245	....	....	2,245
November .....	2,154	....	....	2,154
December .....	2,070	....	....	2,070

## BOXES (WOOD AND PAPER)—FIFTY-TWO ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	1,073	1,358	125	2,556
February .....	1,173	1,392	123	2,687
March .....	1,171	1,455	128	2,754
April .....	1,189	1,474	123	2,786
May .....	1,142	1,437	125	2,704
June .....	1,082	1,395	125	2,602
July .....	1,198	1,321	136	2,655
August .....	1,194	1,404	143	2,741
September .....	1,183	1,405	144	2,732
October .....	1,182	1,439	145	2,766
November .....	1,169	1,447	142	2,758
December .....	1,149	1,428	141	2,718

## BREWING (LAGER BEER, ALE AND PORTER)—THIRTY-SEVEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	2,145	....	9	2,154
February .....	2,125	....	7	2,132
March .....	2,154	....	6	2,160
April .....	2,207	....	5	2,212
May .....	2,215	....	5	2,220
June .....	2,296	....	6	2,302
July .....	2,342	....	8	2,350
August .....	2,350	....	9	2,359
September .....	2,341	....	8	2,349
October .....	2,315	....	7	2,322
November .....	2,294	....	7	2,301
December .....	2,281	....	7	2,288

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## BRICK AND TERRA COTTA—SEVENTY-FOUR ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	5,476	....	21	5,497
February .....	5,506	....	22	5,528
March .....	6,158	....	23	6,181
April .....	7,156	9	41	7,206
May .....	8,281	9	51	8,341
June .....	8,524	9	51	8,584
July .....	8,714	9	51	8,774
August .....	8,860	9	51	8,920
September .....	8,651	9	36	8,696
October .....	8,178	9	31	8,218
November .....	7,425	3	21	7,449
December .....	6,627	....	26	6,653

## BRUSHES—FOURTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	281	91	2	374
February .....	286	93	2	381
March .....	289	95	2	386
April .....	288	89	2	379
May .....	285	94	2	381
June .....	281	90	2	373
July .....	276	88	2	366
August .....	280	90	2	372
September .....	274	96	2	372
October .....	273	100	2	375
November .....	270	100	2	372
December .....	272	86	1	359

## BUTTONS (METAL)—NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	446	461	45	952
February .....	439	469	44	942
March .....	410	462	45	917
April .....	416	445	38	899
May .....	415	462	38	915
June .....	413	432	36	881
July .....	412	399	52	863
August .....	409	398	44	851
September .....	432	411	35	878
October .....	434	462	40	936
November .....	425	430	35	891
December .....	427	423	33	883

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## BUTTONS (PEARL)—TWENTY-SIX ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	984	284	51	1,319
February .....	1,014	304	60	1,378
March .....	1,011	315	53	1,379
April .....	973	304	42	1,319
May .....	942	299	45	1,286
June .....	918	297	40	1,255
July .....	833	287	49	1,169
August .....	823	280	45	1,148
September .....	915	312	52	1,279
October .....	924	312	53	1,289
November .....	939	314	54	1,307
December .....	918	302	50	1,270

## CARPETS AND RUGS—SEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	712	276	13	1,001
February .....	711	309	17	1,037
March .....	712	318	24	1,054
April .....	717	316	22	1,055
May .....	683	311	23	1,017
June .....	696	306	22	1,024
July .....	689	321	20	1,030
August .....	701	314	26	1,041
September .....	630	292	22	944
October .....	642	293	21	956
November .....	666	302	23	991
December .....	704	315	21	1,040

## CARRIAGES AND WAGONS—TWENTY-NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	971	....	....	971
February .....	1,034	....	....	1,034
March .....	1,067	....	....	1,067
April .....	1,096	....	....	1,096
May .....	1,073	....	....	1,073
June .....	1,119	....	....	1,119
July .....	1,109	....	....	1,109
August .....	1,100	....	....	1,100
September .....	1,060	....	....	1,060
October .....	1,006	....	....	1,006
November .....	1,004	....	....	1,004
December .....	1,014	....	....	1,014

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## CHEMICAL PRODUCTS—SIXTY-NINE ESTABLISHMENTS.

Months.	Men		Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	16 years and over.	under 16 years.	
January .....	5,819	1,961	77	77	7,857
February .....	5,898	2,011	90	90	7,999
March .....	6,113	2,073	88	88	8,274
April .....	6,118	2,068	90	90	8,276
May .....	6,094	2,100	85	85	8,279
June .....	6,181	2,067	99	99	8,337
July .....	6,304	2,050	113	113	8,467
August .....	6,173	1,935	123	123	8,231
September .....	6,054	1,539	120	120	8,113
October .....	6,161	1,960	122	122	8,268
November .....	6,202	2,017	128	128	8,347
December .....	6,214	1,947	128	128	8,289

## CIGARS AND TOBACCO—THIRTY-FIVE ESTABLISHMENTS.

Months.	Men		Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	16 years and over.	under 16 years.	
January .....	1,881	6,832	432	432	9,145
February .....	1,948	6,764	443	443	9,155
March .....	1,957	7,105	487	487	9,549
April .....	1,920	7,006	496	496	9,422
May .....	1,912	6,968	513	513	9,393
June .....	1,935	7,123	531	531	9,589
July .....	1,854	7,013	534	534	9,401
August .....	1,839	7,108	536	536	9,483
September .....	1,839	7,081	566	566	9,486
October .....	1,853	7,053	552	552	9,458
November .....	1,867	7,164	578	578	9,599
December .....	1,911	6,979	586	586	9,476

## CLOTHING—FOURTEEN ESTABLISHMENTS.

Months.	Men		Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	16 years and over.	under 16 years.	
January .....	439	598	....	....	1,037
February .....	470	601	2	2	1,073
March .....	494	666	3	3	1,163
April .....	515	676	2	2	1,193
May .....	499	682	4	4	1,185
June .....	559	719	4	4	1,282
July .....	577	734	2	2	1,312
August .....	596	783	4	4	1,382
September .....	579	766	3	3	1,348
October .....	354	702	1	1	1,057
November .....	437	689	1	1	1,127
December .....	458	683	....	....	1,141

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## CONFECTIONERY—NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	217	283	43	543
February .....	200	263	35	498
March .....	187	264	31	482
April .....	178	258	29	465
May .....	173	263	30	466
June .....	169	287	31	487
July .....	163	265	28	456
August .....	187	300	32	519
September .....	205	355	33	593
October .....	226	388	41	655
November .....	252	404	52	708
December .....	228	418	50	696

## CORNICES AND SKYLIGHTS—TWENTY-TWO ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	511	....	....	511
February .....	468	....	....	468
March .....	472	....	....	472
April .....	496	....	....	496
May .....	525	....	....	525
June .....	553	....	....	553
July .....	545	....	....	545
August .....	594	....	....	594
September .....	564	....	....	564
October .....	599	....	....	599
November .....	613	....	....	613
December .....	585	....	....	585

## CORSETS AND CORSET WAISTS—TEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	179	1,880	107	2,166
February .....	182	1,955	108	2,245
March .....	182	2,028	108	2,313
April .....	186	2,054	107	2,347
May .....	184	2,044	108	2,336
June .....	183	2,036	109	2,327
July .....	180	2,041	111	2,332
August .....	179	2,083	110	2,372
September .....	181	2,111	110	2,402
October .....	185	2,179	111	2,475
November .....	183	2,179	111	2,473
December .....	162	1,957	113	2,232

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## CUTLERY—FOURTEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total
	16 years and over.	16 years and over.	under 16 years.	Number Employed.
January .....	1,033	144	38	1,215
February .....	1,032	152	35	1,219
March .....	1,064	151	37	1,252
April .....	1,062	157	41	1,260
May .....	1,050	159	39	1,248
June .....	1,033	150	43	1,226
July .....	1,049	142	37	1,228
August .....	1,045	142	38	1,225
September .....	1,030	146	38	1,214
October .....	1,030	148	38	1,216
November .....	1,091	149	37	1,277
December .....	1,086	143	33	1,262

## COTTON GOODS—THIRTY-THREE ESTABLISHMENTS.

Months.	Men	Women	Children	Total
	16 years and over.	16 years and over.	under 16 years.	Number Employed.
January .....	1,715	4,643	322	6,680
February .....	1,729	4,678	324	6,731
March .....	1,745	4,707	316	6,768
April .....	1,771	4,700	328	6,799
May .....	1,758	4,803	334	6,895
June .....	1,656	4,610	316	6,582
July .....	1,638	4,577	332	6,547
August .....	1,630	4,540	326	6,496
September .....	1,608	4,700	324	6,632
October .....	1,696	4,720	347	6,763
November .....	1,712	4,678	349	6,739
December .....	1,729	4,594	359	6,682

## COTTON GOODS (FINISHING AND DYEING)—NINETEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total
	16 years and over.	16 years and over.	under 16 years.	Number Employed.
January .....	3,375	699	44	4,118
February .....	3,363	757	42	4,162
March .....	3,390	733	39	4,162
April .....	3,352	713	41	4,106
May .....	3,224	671	41	3,936
June .....	3,147	690	44	3,881
July .....	2,926	623	36	3,585
August .....	3,206	682	45	3,935
September .....	3,235	672	46	3,953
October .....	3,228	686	50	3,964
November .....	3,315	697	50	4,062
December .....	3,368	694	57	4,119

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## DRAWN WIRE AND WIRE CLOTH—FOURTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	8,470	794	1	9,265
February .....	8,509	804	1	9,314
March .....	8,166	764	1	8,931
April .....	8,338	803	1	9,142
May .....	8,349	821	1	9,171
June .....	8,357	813	1	9,171
July .....	8,139	789	1	8,939
August .....	7,948	695	1	8,644
September .....	7,896	697	1	8,593
October .....	8,183	715	2	8,900
November .....	8,141	724	2	8,867
December .....	8,002	772	3	8,777

## ELECTRICAL APPLIANCES—THIRTY-SIX ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	6,115	1,047	33	7,195
February .....	6,106	1,021	31	7,158
March .....	6,112	991	33	7,136
April .....	6,366	962	39	7,367
May .....	6,550	1,055	43	7,648
June .....	6,534	1,167	35	7,736
July .....	6,515	1,059	27	7,601
August .....	6,333	1,090	32	7,455
September .....	6,102	1,038	29	7,169
October .....	6,141	1,015	24	7,180
November .....	6,238	1,113	20	7,371
December .....	6,231	1,090	22	7,333

## EMBROIDERIES—TWENTY-THREE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	278	519	40	837
February .....	292	546	46	884
March .....	291	590	44	896
April .....	294	555	45	894
May .....	294	543	46	883
June .....	288	522	44	854
July .....	290	573	51	923
August .....	287	561	51	899
September .....	301	576	50	927
October .....	302	579	46	928
November .....	305	587	45	937
December .....	310	581	45	936

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## FERTILIZERS—ELEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,189	16	....	1,205
February .....	1,330	16	....	1,346
March .....	1,549	18	....	1,567
April .....	1,615	18	....	1,633
May .....	1,306	13	....	1,319
June .....	1,304	12	....	1,316
July .....	1,362	10	....	1,372
August .....	1,342	6	....	1,348
September .....	1,383	12	....	1,395
October .....	1,336	13	....	1,349
November .....	1,272	14	....	1,286
December .....	1,278	12	....	1,290

## FOOD PRODUCTS—THIRTY-TWO ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	2,591	507	56	3,154
February .....	2,610	607	50	3,267
March .....	2,654	559	43	3,256
April .....	2,598	591	42	3,231
May .....	2,572	609	33	3,214
June .....	2,615	602	29	3,246
July .....	2,538	466	32	2,976
August .....	2,698	607	40	3,345
September .....	3,045	847	47	3,939
October .....	2,891	753	47	3,691
November .....	2,892	668	44	3,604
December .....	2,897	655	44	3,596

## FOUNDRY (BRASS)—TWENTY-ONE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,413	42	11	1,466
February .....	1,386	44	11	1,441
March .....	1,461	44	12	1,467
April .....	1,365	41	13	1,419
May .....	1,379	39	11	1,429
June .....	1,416	39	12	1,467
July .....	1,427	37	10	1,474
August .....	1,419	38	9	1,466
September .....	1,446	40	8	1,494
October .....	1,418	40	9	1,467
November .....	1,403	42	8	1,453
December .....	1,428	41	8	1,477

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## FOUNDRY (IRON)—FIFTY-SEVEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	9,409	120	26	9,555
February .....	9,591	114	26	9,731
March .....	9,837	110	13	9,960
April .....	9,964	107	11	10,082
May .....	10,069	106	27	10,202
June .....	9,996	101	24	10,121
July .....	9,788	100	23	9,911
August .....	9,944	106	23	10,073
September .....	8,790	111	25	8,926
October .....	9,946	124	23	10,093
November .....	9,803	124	25	9,952
December .....	9,691	111	28	9,830

## FURNACES, RANGES AND HEATERS—SIXTEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	1,768	109	3	1,880
February .....	1,887	110	3	2,000
March .....	1,899	117	3	2,019
April .....	1,904	119	3	2,026
May .....	1,859	116	3	1,978
June .....	1,861	115	3	1,979
July .....	1,589	116	3	1,708
August .....	1,928	115	3	2,044
September .....	1,984	111	3	2,098
October .....	1,996	109	2	2,107
November .....	1,981	103	2	2,086
December .....	1,906	104	1	2,011

## GAS AND ELECTRIC LIGHT FIXTURES—THIRTEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	440	31	....	471
February .....	419	35	3	457
March .....	449	33	2	484
April .....	450	37	2	489
May .....	461	41	3	505
June .....	471	37	3	511
July .....	470	36	2	508
August .....	445	31	1	477
September .....	447	29	....	476
October .....	469	31	....	500
November .....	480	33	1	514
December .....	475	32	1	508

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## GLASS (CUT TABLEWARE)—EIGHT ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	332	37	24	393
February .....	333	37	30	400
March .....	332	36	25	393
April .....	302	35	30	368
May .....	290	35	25	350
June .....	338	35	14	387
July .....	242	33	20	295
August .....	346	36	18	399
September .....	294	38	19	351
October .....	292	42	23	357
November .....	317	42	25	384
December .....	333	41	17	391

## GLASS (WINDOW AND BOTTLE)—TWENTY-TWO ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	7,138	115	320	7,573
February .....	7,226	116	322	7,664
March .....	7,119	127	306	7,552
April .....	7,080	143	315	7,538
May .....	6,983	126	308	7,417
June .....	6,562	131	305	6,998
July .....	1,684	95	22	1,801
August .....	1,169	51	15	1,235
September .....	3,216	59	182	3,457
October .....	6,455	108	293	6,856
November .....	7,041	118	337	7,496
December .....	7,205	122	336	7,663

## GLASS MIRRORS—FOUR ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	125	30	15	160
February .....	127	18	22	167
March .....	125	30	26	171
April .....	121	18	18	157
May .....	112	19	25	156
June .....	112	17	21	150
July .....	114	17	22	153
August .....	117	17	28	162
September .....	119	18	22	159
October .....	128	17	21	166
November .....	129	17	20	166
December .....	126	17	20	163

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## GRAPHITE PRODUCTS—SEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	964	1,122	70	2,156
February .....	964	1,150	74	2,188
March .....	985	1,140	77	2,202
April .....	985	1,168	77	2,230
May .....	984	1,149	79	2,212
June .....	994	1,163	86	2,243
July .....	950	1,100	81	2,131
August .....	969	1,171	73	2,213
September .....	981	1,072	75	2,128
October .....	976	1,073	78	2,122
November .....	932	1,105	70	2,107
December .....	929	1,113	70	2,112

## HATS (FUR AND FELT)—FORTY-THREE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	4,529	1,441	22	5,992
February .....	4,426	1,426	22	5,874
March .....	4,399	1,387	19	5,805
April .....	4,303	1,338	18	5,659
May .....	4,102	1,308	19	5,429
June .....	4,158	1,304	19	5,481
July .....	4,182	1,299	20	5,501
August .....	4,297	1,338	22	5,657
September .....	4,348	1,360	23	5,731
October .....	4,337	1,357	23	5,717
November .....	4,390	1,360	22	5,772
December .....	4,364	1,362	21	5,747

## HATS (STRAW)—THREE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	257	436	14	707
February .....	310	448	14	772
March .....	263	505	14	882
April .....	347	496	14	857
May .....	237	419	14	670
June .....	167	319	....	486
July .....	168	231	....	399
August .....	209	280	1	490
September .....	231	366	4	601
October .....	252	400	5	657
November .....	267	432	5	704
December .....	255	429	6	690

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## HIGH EXPLOSIVES—NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,920	46	5	1,971
February .....	1,956	54	5	2,015
March .....	2,029	49	6	2,084
April .....	2,051	52	6	2,109
May .....	1,952	52	6	2,010
June .....	2,024	52	8	2,084
July .....	2,207	37	9	2,302
August .....	2,252	34	9	2,345
September .....	2,191	33	7	2,281
October .....	2,319	96	5	2,420
November .....	2,281	91	6	2,378
December .....	2,324	32	6	2,412

## INKS AND MUCILAGE—SEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	87	5	....	92
February .....	87	4	....	91
March .....	87	4	....	91
April .....	89	5	....	94
May .....	93	5	....	98
June .....	94	5	....	99
July .....	94	5	....	99
August .....	95	6	....	101
September .....	94	5	....	99
October .....	92	5	....	97
November .....	92	4	....	96
December .....	93	4	....	97

## JEWELRY—ONE HUNDRED AND SEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	2,563	331	91	3,535
February .....	2,588	393	91	3,572
March .....	2,576	378	90	3,544
April .....	2,532	396	89	3,567
May .....	2,570	390	99	3,559
June .....	2,556	392	91	3,539
July .....	2,527	388	97	3,522
August .....	2,643	901	98	3,642
September .....	2,634	954	104	3,742
October .....	2,733	979	97	3,809
November .....	2,722	996	96	3,814
December .....	2,726	966	95	3,787

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## KNIT GOODS—TWENTY-FOUR ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	957	1,300	100	2,357
February .....	978	1,301	107	2,386
March .....	977	1,332	110	2,419
April .....	992	1,323	117	2,432
May .....	987	1,331	114	2,432
June .....	998	1,345	120	2,463
July .....	1,002	1,397	129	2,528
August .....	1,021	1,393	134	2,548
September .....	1,036	1,432	124	2,592
October .....	1,046	1,461	125	2,632
November .....	1,087	1,438	125	2,609
December .....	1,031	1,388	129	2,548

## LEATHER—EIGHTY-TWO ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	6,026	78	26	6,130
February .....	6,088	75	29	6,192
March .....	6,183	75	24	6,282
April .....	6,260	73	27	6,360
May .....	6,241	84	25	6,350
June .....	6,083	79	28	6,200
July .....	5,786	83	30	5,909
August .....	5,661	79	26	5,766
September .....	5,702	77	27	5,806
October .....	5,733	76	26	5,835
November .....	5,743	75	26	5,844
December .....	5,824	67	28	5,919

## LEATHER GOODS—NINETEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	670	396	26	1,092
February .....	664	399	29	1,091
March .....	666	395	31	1,092
April .....	659	389	26	1,074
May .....	661	388	25	1,074
June .....	661	388	30	1,079
July .....	651	386	28	1,065
August .....	665	396	39	1,100
September .....	665	391	42	1,098
October .....	664	392	38	1,094
November .....	667	387	36	1,090
December .....	652	383	32	1,067

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## LAMPS—NINE ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	1,390	3,259	70	4,719
February .....	1,379	3,128	65	4,572
March .....	1,386	3,068	65	4,519
April .....	1,404	3,043	65	4,512
May .....	1,402	3,091	70	4,563
June .....	1,503	3,169	75	4,747
July .....	1,358	3,152	82	4,592
August .....	1,383	3,219	81	4,683
September .....	1,422	3,457	88	4,967
October .....	1,439	3,613	83	5,135
November .....	1,515	3,792	75	5,382
December .....	1,660	3,906	80	5,646

## LIME AND CEMENT—ELEVEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	1,359	15	2	1,376
February .....	1,232	17	2	1,251
March .....	1,783	20	3	1,806
April .....	1,873	20	3	1,896
May .....	1,867	20	3	1,890
June .....	1,971	17	3	1,991
July .....	2,117	17	3	2,137
August .....	2,115	14	3	2,132
September .....	2,062	14	3	2,079
October .....	1,973	17	3	1,993
November .....	1,821	15	3	1,839
December .....	1,636	14	3	1,653

## MACHINERY—ONE HUNDRED AND FORTY ESTABLISHMENTS

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	20,498	717	30	21,245
February .....	21,108	716	28	21,852
March .....	21,574	712	30	22,316
April .....	22,180	708	34	22,922
May .....	22,285	717	36	23,038
June .....	22,444	721	34	23,199
July .....	22,567	713	32	23,312
August .....	22,561	728	31	23,320
September .....	22,365	737	36	23,138
October .....	21,790	730	34	22,554
November .....	21,694	721	36	22,451
December .....	21,469	711	32	22,212

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## MATTRESSES AND BEDDING—NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	459	62	5	526
February .....	468	63	3	534
March .....	494	63	4	561
April .....	510	84	4	578
May .....	510	66	4	580
June .....	510	67	4	581
July .....	507	63	8	575
August .....	509	66	8	578
September .....	520	68	5	593
October .....	540	67	5	612
November .....	521	67	6	594
December .....	492	65	6	563

## METAL GOODS—EIGHTY-ONE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	5,940	1,734	161	7,835
February .....	6,050	1,705	170	7,925
March .....	6,233	1,739	163	8,135
April .....	6,395	1,775	168	8,338
May .....	6,352	1,763	154	8,269
June .....	6,415	1,774	175	8,364
July .....	6,308	1,810	159	8,277
August .....	6,326	1,830	175	8,331
September .....	6,375	1,871	171	8,417
October .....	6,465	1,865	173	8,503
November .....	6,339	1,809	178	8,326
December .....	6,173	1,804	179	8,156

## METAL NOVELTIES—TWENTY-FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	911	217	52	1,180
February .....	933	240	53	1,226
March .....	966	244	57	1,267
April .....	949	260	61	1,270
May .....	982	268	60	1,310
June .....	1,011	298	55	1,364
July .....	1,017	322	65	1,404
August .....	1,027	297	57	1,381
September .....	1,023	289	68	1,380
October .....	1,068	321	57	1,446
November .....	1,065	318	64	1,447
December .....	1,064	311	62	1,437

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## MINING (IRON ORE)—SIX ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,618	....	....	1,618
February .....	1,620	....	....	1,620
March .....	1,612	....	....	1,612
April .....	1,562	....	....	1,562
May .....	1,504	....	....	1,504
June .....	1,505	....	....	1,505
July .....	1,485	....	....	1,485
August .....	1,372	....	....	1,372
September .....	1,342	....	....	1,342
October .....	1,485	....	....	1,485
November .....	1,498	....	....	1,498
December .....	1,527	....	....	1,527

## MUSICAL INSTRUMENTS—SEVENTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,599	319	12	1,930
February .....	1,563	345	12	1,920
March .....	1,607	331	12	1,950
April .....	1,619	338	13	1,970
May .....	1,671	321	16	2,008
June .....	1,690	330	12	2,032
July .....	1,609	327	16	1,952
August .....	1,615	324	12	1,951
September .....	1,600	324	15	1,939
October .....	1,630	327	12	1,969
November .....	1,651	345	11	2,007
December .....	1,652	346	14	2,042

## OILCLOTH (FLOOR AND TABLE)—NINE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	2,196	16	5	2,217
February .....	2,225	16	5	2,246
March .....	2,248	17	5	2,270
April .....	2,276	17	5	2,298
May .....	2,225	20	4	2,249
June .....	2,278	21	4	2,303
July .....	2,266	21	5	2,292
August .....	2,193	21	7	2,221
September .....	2,145	21	11	2,177
October .....	2,155	21	14	2,190
November .....	2,267	21	15	2,303
December .....	2,296	21	16	2,333

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## OILS—NINETEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	6,940	19	42	7,001
February .....	6,992	19	42	7,053
March .....	7,104	19	42	7,165
April .....	7,136	17	43	7,196
May .....	7,040	17	52	7,109
June .....	7,120	19	68	7,205
July .....	7,329	19	66	7,414
August .....	7,280	18	69	7,367
September .....	7,273	20	59	7,352
October .....	7,368	19	51	7,438
November .....	7,638	19	53	7,710
December .....	7,837	20	58	7,915

## PAINTS—SEVENTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,135	107	25	1,267
February .....	1,153	107	27	1,287
March .....	1,157	111	26	1,294
April .....	1,215	111	25	1,351
May .....	1,196	112	23	1,331
June .....	1,146	116	29	1,291
July .....	1,159	110	29	1,298
August .....	1,168	108	29	1,305
September .....	1,170	113	27	1,310
October .....	1,224	116	29	1,369
November .....	1,203	106	29	1,338
December .....	1,261	98	30	1,329

## PAPER—FORTY-FOUR ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	3,033	345	40	3,418
February .....	3,060	337	43	3,440
March .....	3,079	354	43	3,476
April .....	3,005	328	43	3,376
May .....	3,033	292	46	3,371
June .....	2,932	268	45	3,245
July .....	2,976	289	43	3,308
August .....	2,945	291	43	3,289
September .....	3,080	339	43	3,462
October .....	3,107	341	43	3,491
November .....	3,047	346	43	3,436
December .....	3,228	352	43	3,623

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## PIG IRON—FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,091	....	....	1,091
February .....	1,088	....	....	1,088
March .....	1,054	....	....	1,054
April .....	1,033	....	....	1,033
May .....	953	....	....	953
June .....	763	....	....	763
July .....	744	....	....	744
August .....	718	....	....	718
September .....	689	....	....	689
October .....	696	....	....	696
November .....	694	....	....	694
December .....	631	....	....	631

## POTTERY—FIFTY-ONE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	4,329	732	66	5,127
February .....	4,451	765	63	5,279
March .....	4,523	812	53	5,388
April .....	4,564	820	61	5,445
May .....	4,552	814	58	5,424
June .....	4,505	773	60	5,338
July .....	4,488	760	67	5,315
August .....	4,530	756	68	5,354
September .....	4,520	777	61	5,358
October .....	4,544	811	67	5,422
November .....	4,579	804	62	5,445
December .....	4,559	791	60	5,410

## PRINTING AND BOOKBINDING—TWENTY-ONE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,109	520	9	1,638
February .....	1,127	506	12	1,645
March .....	1,181	558	13	1,752
April .....	1,167	520	13	1,700
May .....	1,181	570	14	1,765
June .....	1,183	583	15	1,781
July .....	1,159	583	14	1,756
August .....	1,126	573	12	1,711
September .....	1,152	596	16	1,764
October .....	1,186	640	15	1,841
November .....	1,233	674	11	1,918
December .....	1,187	620	10	1,817

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## QUARRYING STONE—EIGHTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	900	....	....	900
February .....	1,065	....	....	1,065
March .....	1,003	....	....	1,003
April .....	1,249	....	....	1,249
May .....	1,172	....	....	1,172
June .....	1,196	....	....	1,196
July .....	1,242	....	....	1,242
August .....	1,173	....	....	1,173
September .....	1,283	....	....	1,283
October .....	1,289	....	....	1,289
November .....	1,021	....	....	1,021
December .....	855	....	....	855

## ROOFING (METAL AND TAR)—EIGHT ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	476	17	....	493
February .....	461	17	....	478
March .....	526	17	....	543
April .....	539	17	....	556
May .....	521	17	....	538
June .....	515	18	....	533
July .....	515	18	....	533
August .....	489	17	....	497
September .....	493	19	....	511
October .....	532	19	....	551
November .....	533	19	....	552
December .....	516	18	....	534

## RUBBER GOODS (HARD AND SOFT)—FIFTY-ONE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	6,952	1,224	115	8,291
February .....	8,091	1,245	116	8,452
March .....	7,234	1,248	114	8,596
April .....	7,447	1,240	111	8,798
May .....	7,355	1,244	112	8,711
June .....	7,320	1,252	110	8,682
July .....	7,171	1,241	112	8,524
August .....	7,176	1,237	120	8,533
September .....	6,899	1,225	107	8,231
October .....	6,822	1,221	104	8,147
November .....	6,998	1,226	103	8,327
December .....	6,863	1,244	104	8,211

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## SADDLES AND HARNESS—FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	43	5	....	48
February .....	43	5	....	48
March .....	45	5	....	50
April .....	44	5	....	49
May .....	47	5	....	52
June .....	48	5	....	53
July .....	50	5	....	55
August .....	46	5	....	51
September .....	40	5	....	45
October .....	43	5	..	48
November .....	41	5	....	46
December .....	41	5	....	46

## SADDLERY AND HARNESS HARDWARE—ELEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	604	112	40	756
February .....	625	113	42	780
March .....	654	112	40	806
April .....	652	114	44	810
May .....	660	113	41	814
June .....	663	111	42	816
July .....	650	109	43	802
August .....	647	112	45	804
September .....	655	114	44	813
October .....	654	111	42	807
November .....	636	109	40	785
December .....	616	107	38	761

## SCIENTIFIC INSTRUMENTS—TWENTY-ONE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	4,865	777	59	5,701
February .....	4,936	783	62	5,781
March .....	5,149	788	74	6,011
April .....	4,933	777	75	5,785
May .....	4,309	742	59	5,110
June .....	4,127	729	66	4,922
July .....	4,296	724	62	5,082
August .....	4,242	684	59	4,985
September .....	4,403	667	62	5,132
October .....	4,662	724	66	5,452
November .....	4,750	763	68	5,581
December .....	4,869	770	69	5,708

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## SASH, BLINDS AND DOORS—TWENTY-FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	739	....	....	739
February .....	733	....	....	733
March .....	747	....	....	747
April .....	767	....	....	767
May .....	775	....	....	775
June .....	788	....	....	788
July .....	805	....	....	805
August .....	812	....	....	812
September .....	803	....	....	803
October .....	816	....	....	816
November .....	815	....	....	815
December .....	786	....	....	786

## SHOES—TWENTY-EIGHT ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	2,452	1,486	93	4,031
February .....	2,482	1,520	97	4,099
March .....	2,477	1,532	97	4,106
April .....	2,422	1,437	88	3,947
May .....	2,418	1,449	96	3,962
June .....	2,409	1,478	94	3,981
July .....	2,416	1,515	93	4,024
August .....	2,516	1,591	100	4,207
September .....	2,498	1,515	98	4,111
October .....	2,477	1,477	92	4,046
November .....	2,505	1,557	87	4,149
December .....	2,498	1,489	97	4,084

## SHIRTS—TWENTY-FOUR ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	886	2,722	122	3,730
February .....	687	2,726	115	3,528
March .....	674	2,737	121	3,532
April .....	684	2,748	121	3,553
May .....	689	2,702	130	3,521
June .....	676	2,674	142	3,492
July .....	654	2,601	142	3,397
August .....	654	2,532	142	3,328
September .....	647	2,652	116	3,415
October .....	668	2,664	110	3,442
November .....	643	2,706	117	3,466
December .....	648	2,691	115	3,454

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## SHIRT WAISTS (WOMEN'S)—FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed
January .....	15	620	23	678
February .....	15	656	34	705
March .....	14	656	35	705
April .....	13	662	36	711
May .....	13	626	32	671
June .....	12	589	23	624
July .....	12	596	25	633
August .....	11	596	23	630
September .....	14	643	29	686
October .....	14	635	32	681
November .....	14	652	34	700
December .....	14	642	37	693

## SHIPBUILDING—SEVENTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	4,793	....	....	4,793
February .....	4,951	....	....	4,951
March .....	5,304	....	....	5,304
April .....	5,326	....	....	5,326
May .....	5,446	....	....	5,446
June .....	5,589	....	....	5,589
July .....	5,419	....	....	5,419
August .....	5,533	....	....	5,533
September .....	5,605	....	....	5,605
October .....	5,537	....	....	5,537
November .....	5,661	....	....	5,661
December .....	5,731	....	....	5,731

## SILK (BROAD AND RIBBON)—TWO HUNDRED AND TEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed
January .....	10,645	10,792	605	22,042
February .....	10,548	11,007	615	22,170
March .....	10,696	10,982	616	22,294
April .....	10,530	10,808	620	21,958
May .....	10,166	10,315	610	21,091
June .....	9,892	10,122	572	20,586
July .....	9,896	10,218	600	20,714
August .....	10,025	10,267	620	20,912
September .....	10,256	10,511	637	21,404
October .....	10,638	10,787	679	22,104
November .....	10,857	11,123	689	22,674
December .....	11,143	11,170	678	22,991

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## SILK DYEING—TWENTY-FOUR ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	5,092	480	16	5,588
February .....	5,283	620	16	5,919
March .....	5,240	614	16	5,870
April .....	5,070	606	16	5,692
May .....	4,764	495	15	5,274
June .....	4,387	449	15	4,851
July .....	4,377	445	15	4,837
August .....	4,615	488	14	5,117
September .....	4,933	505	14	5,452
October .....	5,299	530	15	5,844
November .....	5,585	533	16	6,134
December .....	5,429	462	16	5,907

## SILK THROWING—THIRTY-FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	622	1,002	157	1,781
February .....	609	998	153	1,760
March .....	606	980	171	1,757
April .....	561	899	150	1,610
May .....	513	782	117	1,412
June .....	471	756	109	1,336
July .....	466	783	110	1,359
August .....	495	806	115	1,416
September .....	512	829	124	1,465
October .....	541	906	129	1,576
November .....	588	924	125	1,637
December .....	637	988	147	1,772

## SILK MILL SUPPLIES—SEVENTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	531	135	38	704
February .....	523	135	39	697
March .....	522	135	48	705
April .....	519	125	42	686
May .....	513	130	51	694
June .....	492	134	52	678
July .....	488	141	55	684
August .....	486	138	47	671
September .....	484	140	54	678
October .....	480	155	53	688
November .....	491	146	54	691
December .....	490	152	57	699

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## SILVER GOODS—NINETEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	998	262	10	1,270
February .....	1,038	264	10	1,312
March .....	1,022	270	11	1,303
April .....	1,050	262	12	1,324
May .....	983	245	11	1,239
June .....	1,026	263	12	1,301
July .....	997	261	13	1,271
August .....	1,025	266	12	1,303
September .....	1,057	270	16	1,343
October .....	1,121	273	15	1,409
November .....	1,115	283	15	1,413
December .....	1,056	265	16	1,337

## SMELTING AND REFINING (GOLD, SILVER, COPPER, ETC.)—ELEVEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	4,148	4	....	4,152
February .....	4,135	4	....	4,139
March .....	4,093	3	....	4,096
April .....	3,950	3	....	3,953
May .....	4,066	3	....	4,069
June .....	4,334	3	....	4,337
July .....	4,349	3	....	4,352
August .....	4,456	3	....	4,459
September .....	4,516	3	....	4,519
October .....	4,492	4	....	4,496
November .....	4,508	4	....	4,512
December .....	4,570	3	....	4,573

## SOAP AND TALLOW—EIGHTEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	1,421	449	49	1,919
February .....	1,551	465	46	2,062
March .....	1,547	479	45	2,071
April .....	1,600	477	43	2,120
May .....	1,574	494	40	2,108
June .....	1,682	500	44	2,226
July .....	1,718	532	47	2,297
August .....	1,778	580	48	2,406
September .....	1,751	565	46	2,362
October .....	1,801	549	46	2,396
November .....	1,775	531	44	2,350
December .....	1,736	474	44	2,254

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## STEEL AND IRON (BARS)—SIX ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	964	53	....	1,017
February .....	965	56	....	1,021
March .....	1,097	64	....	1,071
April .....	984	65	....	1,052
May .....	1,079	70	....	1,149
June .....	1,047	75	....	1,122
July .....	919	78	....	988
August .....	934	84	....	1,018
September .....	1,034	77	....	1,111
October .....	1,021	63	....	1,084
November .....	993	63	....	1,056
December .....	969	54	....	1,023

## STEEL AND IRON (STRUCTURAL)—TWENTY-SIX ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	2,904	....	....	2,904
February .....	2,861	....	....	2,861
March .....	2,864	....	....	2,864
April .....	2,974	....	....	2,974
May .....	3,228	....	....	3,228
June .....	3,366	....	....	3,366
July .....	2,536	....	2	2,538
August .....	3,616	....	2	3,618
September .....	3,692	....	2	3,694
October .....	3,546	....	3	3,549
November .....	3,473	....	2	3,475
December .....	3,152	....	3	3,155

## STEEL AND IRON (FORGING)—THIRTEEN ESTABLISHMENTS.

Months.	Men	Women	Children	Total Number Employed.
	16 years and over.	16 years and over.	under 16 years.	
January .....	3,244	19	4	3,267
February .....	3,309	20	5	3,334
March .....	3,363	22	7	3,392
April .....	3,369	22	7	3,398
May .....	3,435	22	7	3,464
June .....	3,331	22	6	3,359
July .....	3,360	19	5	3,384
August .....	3,429	16	4	3,449
September .....	3,256	12	4	3,272
October .....	3,130	11	4	3,145
November .....	3,026	11	3	3,040
December .....	3,022	10	4	3,036

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## TEXTILE PRODUCTS—TEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	854	527	98	1,479
February .....	858	536	101	1,495
March .....	901	523	101	1,525
April .....	866	521	101	1,488
May .....	859	509	98	1,466
June .....	874	517	96	1,487
July .....	857	524	101	1,482
August .....	868	508	105	1,481
September .....	855	509	98	1,462
October .....	863	508	88	1,459
November .....	864	492	89	1,445
December .....	878	493	86	1,457

## THREAD—SIX ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,700	3,217	550	5,467
February .....	1,703	3,212	551	5,466
March .....	1,709	3,229	551	5,489
April .....	1,707	3,219	550	5,476
May .....	1,716	3,240	547	5,503
June .....	1,729	3,239	546	5,514
July .....	1,725	3,236	557	5,518
August .....	1,730	3,228	555	5,513
September .....	1,730	3,225	558	5,503
October .....	1,718	3,210	555	5,483
November .....	1,724	3,228	553	5,505
December .....	1,675	3,154	529	5,358

## TRUNKS AND TRAVELING BAGS—TWELVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	446	23	5	474
February .....	462	24	5	491
March .....	493	24	4	521
April .....	501	25	4	530
May .....	507	25	4	536
June .....	504	25	4	533
July .....	468	25	5	498
August .....	501	24	4	529
September .....	499	26	5	530
October .....	493	26	4	523
November .....	469	26	5	500
December .....	447	28	5	478

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## TRUNK AND BAG HARDWARE—TEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,146	383	66	1,595
February .....	1,169	383	68	1,620
March .....	1,198	420	64	1,682
April .....	1,145	415	65	1,625
May .....	1,125	399	57	1,581
June .....	1,111	390	59	1,560
July .....	1,103	376	68	1,547
August .....	1,216	401	75	1,692
September .....	1,382	498	80	1,960
October .....	1,491	528	91	2,110
November .....	1,338	504	89	1,931
December .....	1,239	485	84	1,808

## TYPEWRITERS AND SUPPLIES—SIX ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	263	48	4	315
February .....	277	50	4	331
March .....	238	49	4	341
April .....	285	52	4	341
May .....	280	48	4	332
June .....	279	47	4	330
July .....	288	50	6	344
August .....	284	52	6	342
September .....	283	50	5	338
October .....	281	50	5	336
November .....	281	48	5	334
December .....	286	53	5	344

## UNDERWEAR (WOMEN'S AND CHILDREN'S)—TWENTY-FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	143	1,787	80	2,010
February .....	149	1,822	78	2,049
March .....	151	1,885	78	2,114
April .....	152	1,928	83	2,163
May .....	148	1,899	77	2,124
June .....	147	1,845	75	2,067
July .....	140	1,758	69	1,967
August .....	145	1,900	69	2,014
September .....	148	1,819	73	2,040
October .....	151	1,850	79	2,080
November .....	151	1,844	78	2,073
December .....	151	1,827	79	2,057

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## VARNISHES—SEVENTEEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	310	12	....	322
February .....	311	12	....	323
March .....	311	12	....	323
April .....	320	12	....	332
May .....	308	12	....	320
June .....	309	12	....	321
July .....	306	13	....	319
August .....	302	13	....	315
September .....	301	12	....	314
October .....	310	13	1	324
November .....	309	13	1	323
December .....	314	13	1	328

## WATCHES, CASES AND MATERIAL—ELEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,394	593	61	2,048
February .....	1,398	651	55	2,104
March .....	1,397	660	49	2,097
April .....	1,423	699	40	2,162
May .....	1,409	686	47	2,142
June .....	1,409	681	62	2,152
July .....	1,470	730	66	2,266
August .....	1,534	726	71	2,331
September .....	1,562	742	57	2,361
October .....	1,630	765	57	2,452
November .....	1,594	769	57	2,420
December .....	1,616	773	56	2,450

## WINDOW SHADES—THREE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	76	1	....	77
February .....	76	1	....	77
March .....	76	1	....	77
April .....	70	1	....	71
May .....	71	1	....	72
June .....	66	1	....	67
July .....	67	1	....	68
August .....	70	1	....	71
September .....	73	1	....	74
October .....	73	1	....	74
November .....	75	1	....	76
December .....	79	1	....	80

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

## WOODEN GOODS—THIRTY-EIGHT ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	1,681	17	34	1,732
February .....	1,748	16	36	1,800
March .....	1,764	16	36	1,816
April .....	1,803	17	21	1,841
May .....	1,767	16	20	1,803
June .....	1,707	15	25	1,749
July .....	1,642	16	33	1,691
August .....	1,684	17	32	1,733
September .....	1,649	17	29	1,695
October .....	1,669	18	27	1,714
November .....	1,722	18	29	1,769
December .....	1,728	17	32	1,777

## WOOLEN AND WORSTED GOODS—TWENTY-FIVE ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	6,242	6,878	591	13,711
February .....	6,285	6,832	619	13,736
March .....	6,305	6,868	600	13,773
April .....	6,311	6,751	581	13,643
May .....	6,220	6,589	588	13,397
June .....	6,130	6,284	568	12,982
July .....	6,088	6,216	562	12,866
August .....	5,987	6,379	602	12,968
September .....	6,008	6,564	639	13,211
October .....	6,022	6,685	638	13,345
November .....	5,981	6,689	655	13,325
December .....	6,015	6,794	658	13,467

## UNCLASSIFIED—NINETY-SEVEN ESTABLISHMENTS.

Months.	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	Total Number Employed.
January .....	6,270	1,171	94	7,535
February .....	6,327	1,284	96	7,707
March .....	6,637	1,313	109	8,059
April .....	6,849	1,255	113	8,217
May .....	6,711	1,255	114	8,080
June .....	6,747	1,140	118	8,005
July .....	6,719	1,141	120	7,980
August .....	6,996	1,184	128	8,308
September .....	6,856	1,216	127	8,199
October .....	6,754	1,226	119	8,099
November .....	6,662	1,221	109	7,992
December .....	6,432	1,172	112	7,716

TABLE No. 5.—Number of Wage Earners, Including Piece-Workers Employed by Industries, 1910.—Aggregates by Months.—(Continued).

ALL INDUSTRIES—TWO THOUSAND FOUR HUNDRED AND TWENTY-THREE ESTABLISHMENTS.

Months.	Men	Women	Children	Total
	16 years and over.	16 years and over.	under 16 years.	Number Employed.
January .....	217,037	71,789	5,725	294,551
February .....	219,863	72,696	5,839	298,398
March .....	224,278	73,540	5,833	303,651
April .....	226,147	72,951	5,837	304,935
May .....	225,698	71,998	5,831	303,527
June .....	225,200	71,222	5,829	302,251
July .....	219,361	67,390	5,684	292,435
August .....	220,946	71,241	5,820	298,007
September .....	222,441	73,035	6,035	301,511
October .....	227,629	74,137	6,159	307,925
November .....	227,828	74,977	6,227	309,032
December .....	226,229	74,133	6,254	306,616

TABLE No. 6.—Amount Paid in Wages, by Industries.—Average Yearly Earnings, per Employee, 1910.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Total Amount Paid in Wages or Earnings.	Average Yearly Earnings per Employee.
1	Agricultural machinery and implements.....	7	\$349,169	\$571 48
2	Artisans' tools .....	44	1,580,641	612 41
3	Art tile .....	9	419,090	468 78
4	Boilers .....	16	1,284,834	652 86
5	Boxes (wood and paper) .....	52	1,635,736	382 90
6	Brewing (lager beer, ale and porter).....	37	2,638,949	901 40
7	Brick and terra cotta .....	74	3,907,308	520 70
8	Brushes .....	14	145,072	387 90
9	Buttons (metal) .....	9	507,199	562 93
10	Buttons (pearl) .....	26	632,892	493 29
11	Carpets and rugs .....	7	476,592	469 09
12	Carriages and wagons .....	29	697,563	662 45
13	Chemical products .....	69	4,376,470	531 90
14	Cigars and tobacco .....	35	3,111,270	329 93
15	Clothing .....	14	528,117	443 06
16	Confectionery .....	9	195,654	357 69
17	Cornices and skylights .....	22	424,647	780 60
18	Corsets and corset waists .....	10	886,912	379 83
19	Cutlery .....	14	602,817	494 19
20	Cotton goods .....	33	2,332,685	348 53
21	Cotton goods (finishing and dyeing).....	19	2,047,943	512 11
22	Drawn wire and wire cloth .....	14	3,947,101	439 74
23	Electrical appliances .....	36	4,409,602	598 56
24	Embroideries .....	23	502,220	558 02
25	Fertilizers .....	11	790,548	577 46
26	Food products .....	32	1,779,091	526 83
27	Foundry (brass) .....	21	821,305	562 92
28	Foundry (iron) .....	57	5,001,222	506 71
29	Furnaces, ranges and heaters.....	16	1,516,207	760 00
30	Gas and electric light fixtures.....	13	290,405	590 25
31	Glass (cut tableware) .....	8	156,499	439 60
32	Glass (window and bottle) .....	22	3,559,431	583 13
33	Glass mirrors .....	4	85,072	528 46
34	Graphite products .....	7	892,595	411 80
35	Hats (fur and felt) .....	43	3,184,508	559 77
36	Hats (straw) .....	3	314,968	477 22
37	High explosives .....	9	1,298,113	589 52
38	Inks and muckage .....	7	65,259	679 78
39	Jewelry .....	107	2,432,491	969 00
40	Knit goods .....	24	970,709	389 06
41	Leather .....	82	3,600,183	595 07
42	Leather goods .....	19	460,168	424 12
43	Lamps .....	9	2,254,738	466 14
44	Lime and cement .....	11	1,182,162	643 53
45	Machinery .....	140	14,329,418	633 18
46	Mattresses and bedding .....	9	316,602	552 53
47	Metal goods .....	81	4,239,274	514 48
48	Metal novelties .....	25	704,549	521 61
49	Mining (iron ore) .....	6	718,226	475 33
50	Musical instruments .....	17	1,046,144	530 50
51	Oilcloth (floor and table) .....	9	1,160,310	514 09
52	Oils .....	19	5,008,121	683 52
53	Paints .....	17	774,604	589 50
54	Paper .....	44	1,898,490	556 58
55	Pig iron .....	5	505,216	597 18
56	Pottery .....	51	3,858,122	719 92
57	Printing and bookbinding .....	21	922,532	530 75
58	Quarrying stone .....	18	619,872	555 44

TABLE No. 6.—Amount Paid in Wages, by Industries.—Average Yearly Earnings, per Employee, 1910.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Total Amount Paid in Wages or Earnings.	Average Yearly Earnings per Employee.
59	Roofing (metal and tar) .....	8	\$325,519	\$617 68
60	Rubber goods (hard and soft).....	51	4,356,028	514 96
61	Saddles and harness .....	5	24,948	509 14
62	Saddlery and harness hardware .....	11	455,534	572 28
63	Scientific instruments .....	21	2,841,395	522 60
64	Sash, blinds and doors .....	25	488,985	625 30
65	Shoes .....	28	1,916,347	471 77
66	Shirts .....	24	1,284,336	368 22
67	Shirt waists (women's) .....	5	186,857	276 01
68	Shipbuilding .....	17	3,787,787	709 40
69	Silk (broad and ribbon) .....	210	10,526,801	484 10
70	Silk dyeing .....	24	3,100,006	559 57
71	Silk throwing .....	35	520,009	330 37
72	Silk mill supplies .....	17	328,790	476 46
73	Silver goods .....	19	940,956	713 38
74	Smelting and refining (gold, silver, copper, etc.).....	11	2,924,423	679 31
75	Soap and tallow .....	18	1,231,918	555 67
76	Steel and iron (bar) .....	6	575,052	543 01
77	Steel and iron (structural) .....	26	2,357,161	721 06
78	Steel and iron (forging) .....	13	2,265,640	687 60
79	Textile products .....	10	598,708	405 35
80	Thread .....	6	2,221,968	405 24
81	Trunks and traveling bags .....	12	311,629	608 65
82	Trunk and bag hardware .....	10	861,212	498 96
83	Typewriters and supplies .....	6	200,882	597 86
84	Underwear (women's and children's) .....	25	677,178	328 25
85	Varnishes .....	17	256,847	797 66
86	Watches, cases and material .....	11	1,288,043	572 72
87	Window shades .....	3	46,398	627 00
88	Wooden goods .....	38	967,613	549 78
89	Woolen and worsted goods .....	25	5,437,610	406 73
90	Unclassified .....	97	4,270,725	548 16
	All Industries .....	2,423	\$160,785,912	\$531 94

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## AGRICULTURAL MACHINERY AND IMPLEMENTS—SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	.....	.....	.....	.....
4 " " 5 .....	1	.....	2	3
5 " " 6 .....	4	.....	1	5
6 " " 7 .....	14	.....	.....	14
7 " " 8 .....	17	.....	.....	17
8 " " 9 .....	55	.....	.....	55
9 " " 10 .....	204	.....	.....	204
10 " " 12 .....	200	.....	.....	200
12 " " 15 .....	123	.....	.....	123
15 " " 20 .....	122	.....	.....	122
20 " " 25 .....	22	.....	.....	22
25 and over .....	13	.....	.....	13
Total .....	775	.....	3	778

## ARTISANS' TOOLS—FORTY-FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	1	1	5	7
\$3 but under \$4 .....	22	3	13	38
4 " " 5 .....	53	13	20	86
5 " " 6 .....	88	14	.....	102
6 " " 7 .....	112	16	.....	128
7 " " 8 .....	143	11	.....	154
8 " " 9 .....	165	9	.....	174
9 " " 10 .....	250	2	.....	252
10 " " 12 .....	373	.....	.....	373
12 " " 15 .....	547	3	.....	550
15 " " 20 .....	541	.....	.....	541
20 " " 25 .....	226	.....	.....	226
25 and over .....	89	.....	.....	89
Total .....	2,610	72	38	2,720

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## ART TILE—NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	8	13	....	21
\$3 but under \$4 .....	3	6	7	16
4 " " 5 .....	28	40	25	93
5 " " 6 .....	31	111	1	143
6 " " 7 .....	20	57	....	77
7 " " 8 .....	43	33	....	76
8 " " 9 .....	51	19	2	72
9 " " 10 .....	151	13	....	164
10 " " 12 .....	98	4	....	102
12 " " 15 .....	121	1	....	122
15 " " 20 .....	44	....	....	44
20 " " 25 .....	41	....	....	41
25 and over .....	17	....	....	17
Total .....	656	297	35	988

## BOILERS—SIXTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	20	....	....	20
\$3 but under \$4 .....	9	....	....	9
4 " " 5 .....	15	....	....	15
5 " " 6 .....	18	....	....	18
6 " " 7 .....	34	....	....	34
7 " " 8 .....	54	....	....	54
8 " " 9 .....	91	....	....	91
9 " " 10 .....	223	....	....	223
10 " " 12 .....	497	....	....	497
12 " " 15 .....	561	....	....	561
15 " " 20 .....	553	....	....	553
20 " " 25 .....	222	....	....	222
25 and over .....	56	....	....	56
Total .....	2,352	....	....	2,352

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## BOXES (WOOD AND PAPER)—FIFTY-TWO ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	7	42	14	63
\$3 but under \$4 .....	55	139	68	262
4 " " 5 .....	90	261	33	384
5 " " 6 .....	79	311	8	398
6 " " 7 .....	78	227	3	308
7 " " 8 .....	95	217	2	314
8 " " 9 .....	118	156	....	274
9 " " 10 .....	163	106	....	269
10 " " 12 .....	184	72	....	256
12 " " 15 .....	228	25	....	251
15 " " 20 .....	167	4	....	171
20 " " 25 .....	30	....	....	30
25 and over .....	17	....	....	17
<b>Total .....</b>	<b>1,309</b>	<b>1,560</b>	<b>128</b>	<b>2,997</b>

## BREWING (LAGER BEER, ALE AND PORTER)—THIRTY-SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	....	....	2
\$3 but under \$4 .....	4	....	....	4
4 " " 5 .....	5	....	....	5
5 " " 6 .....	15	....	5	20
6 " " 7 .....	12	....	1	13
7 " " 8 .....	6	....	4	10
8 " " 9 .....	24	....	....	24
9 " " 10 .....	28	....	....	28
10 " " 12 .....	65	....	....	65
12 " " 15 .....	276	....	....	276
15 " " 20 .....	1,567	....	....	1,567
20 " " 25 .....	300	....	....	300
25 and over .....	87	....	....	87
<b>Total .....</b>	<b>2,389</b>	<b>....</b>	<b>10</b>	<b>2,399</b>

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## BRICK AND TERRA COTTA—SEVENTY-FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	20	.....	.....	20
\$3 but under \$4 .....	39	.....	20	59
4 " " 5 .....	39	.....	15	54
5 " " 6 .....	75	9	5	89
6 " " 7 .....	132	.....	7	138
7 " " 8 .....	490	.....	1	491
8 " " 9 .....	1,271	.....	1	1,272
9 " " 10 .....	3,344	.....	.....	3,344
10 " " 12 .....	1,798	.....	.....	1,798
12 " " 15 .....	1,020	.....	.....	1,020
15 " " 20 .....	734	.....	.....	734
20 " " 25 .....	257	.....	.....	257
25 and over .....	102	.....	.....	102
Total .....	9,321	9	49	9,379

## BRUSHES—FOURTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	12	1	13
\$3 but under \$4 .....	4	16	.....	20
4 " " 5 .....	17	19	1	37
5 " " 6 .....	21	15	.....	36
6 " " 7 .....	28	18	.....	46
7 " " 8 .....	26	9	.....	35
8 " " 9 .....	34	8	.....	42
9 " " 10 .....	29	4	.....	33
10 " " 12 .....	34	4	.....	38
12 " " 15 .....	37	2	.....	39
15 " " 20 .....	40	1	.....	41
20 " " 25 .....	16	.....	.....	16
25 and over .....	6	.....	.....	6
Total .....	292	108	3	402

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## BUTTONS (METAL)—NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	4	3	7
\$3 but under \$4 .....	.....	12	21	33
4 " " 5 .....	17	67	17	101
5 " " 6 .....	19	88	6	113
6 " " 7 .....	34	106	.....	140
7 " " 8 .....	19	90	.....	109
8 " " 9 .....	15	44	.....	59
9 " " 10 .....	31	38	.....	69
10 " " 12 .....	40	33	.....	73
12 " " 15 .....	19	9	.....	58
15 " " 20 .....	109	.....	.....	109
20 " " 25 .....	61	.....	.....	61
25 and over .....	67	.....	.....	67
Total .....	461	491	47	999

## BUTTONS (PEARL)—TWENTY-SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	7	3	1	11
\$3 but under \$4 .....	9	23	31	63
4 " " 5 .....	52	35	26	113
5 " " 6 .....	57	47	.....	104
6 " " 7 .....	66	57	.....	123
7 " " 8 .....	67	65	.....	132
8 " " 9 .....	70	39	.....	109
9 " " 10 .....	103	29	.....	132
10 " " 12 .....	131	7	.....	138
12 " " 15 .....	216	5	.....	221
15 " " 20 .....	188	2	.....	190
20 " " 25 .....	45	.....	.....	45
25 and over .....	24	.....	.....	24
Total .....	1,035	312	58	1,405

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## CARPETS AND RUGS—SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men	Women	Children	
	16 years and over.	16 years and over.	under 16 years.	
Under \$3 .....	6	4	....	10
\$3 but under \$4 .....	14	33	11	58
4 " " 5 .....	24	30	9	63
5 " " 6 .....	32	44	....	76
6 " " 7 .....	56	37	....	93
7 " " 8 .....	60	57	....	117
8 " " 9 .....	49	49	....	98
9 " " 10 .....	73	32	....	105
10 " " 12 .....	99	40	....	139
12 " " 15 .....	97	9	....	106
15 " " 20 .....	109	....	....	109
20 " " 25 .....	18	....	....	18
25 and over .....	9	....	....	9
Total .....	646	335	20	1,001

## CARRIAGES AND WAGONS—TWENTY-NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men	Women	Children	
	16 years and over.	16 years and over.	under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	1	....	....	1
4 " " 5 .....	4	....	....	4
5 " " 6 .....	17	....	....	17
6 " " 7 .....	13	....	....	13
7 " " 8 .....	25	....	....	25
8 " " 9 .....	60	....	....	60
9 " " 10 .....	75	....	....	75
10 " " 12 .....	116	....	....	116
12 " " 15 .....	251	....	....	251
15 " " 20 .....	393	....	....	393
20 " " 25 .....	85	....	....	85
25 and over .....	25	....	....	25
Total .....	1,055	....	....	1,055

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## CHEMICAL PRODUCTS—SIXTY-NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are—			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	39	46	7	92
\$3 but under \$4 .....	25	59	41	125
4 " " 5 .....	78	322	40	440
5 " " 6 .....	113	473	21	607
6 " " 7 .....	178	389	15	582
7 " " 8 .....	286	340	5	631
8 " " 9 .....	415	310	6	731
9 " " 10 .....	736	135	....	871
10 " " 12 .....	1,892	78	....	1,970
12 " " 15 .....	1,307	23	....	1,330
15 " " 20 .....	1,263	16	....	1,279
20 " " 25 .....	256	1	....	257
25 and over .....	148	1	....	149
Total .....	6,736	2,193	135	9,064

## CIGARS AND TOBACCO—THIRTY-FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are—			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	25	263	82	370
\$3 but under \$4 .....	36	785	192	1,013
4 " " 5 .....	45	1,165	127	1,337
5 " " 6 .....	66	1,175	84	1,325
6 " " 7 .....	135	1,301	46	1,482
7 " " 8 .....	245	1,105	4	1,354
8 " " 9 .....	178	637	1	816
9 " " 10 .....	254	500	....	754
10 " " 12 .....	331	314	....	645
12 " " 15 .....	301	116	....	417
15 " " 20 .....	272	4	....	276
20 " " 25 .....	118	....	....	118
25 and over .....	32	....	....	32
Total .....	2,038	7,365	536	9,939

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## CLOTHING—FOURTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	..	4	6
\$3 but under \$4 .....	..	46	..	46
4 " " 5 .....	15	65	..	80
5 " " 6 .....	31	165	..	196
6 " " 7 .....	30	142	..	172
7 " " 8 .....	33	94	..	127
8 " " 9 .....	45	145	..	190
9 " " 10 .....	76	89	..	165
10 " " 12 .....	85	78	..	163
12 " " 15 .....	123	28	..	150
15 " " 20 .....	98	12	..	110
20 " " 25 .....	36	1	..	37
25 and over .....	19	..	..	19
Total .....	592	865	4	1,461

## CONFECTIONERY—NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	1	22	..	23
\$3 but under \$4 .....	2	33	14	49
4 " " 5 .....	8	89	31	128
5 " " 6 .....	23	63	4	90
6 " " 7 .....	19	84	2	105
7 " " 8 .....	25	62	..	87
8 " " 9 .....	39	28	..	67
9 " " 10 .....	23	20	..	43
10 " " 12 .....	26	9	..	35
12 " " 15 .....	38	2	..	40
15 " " 20 .....	27	2	..	29
20 " " 25 .....	5	1	..	6
25 and over .....	2	..	..	2
Total .....	238	415	51	704

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## CORNICES AND SKYLIGHTS—TWENTY-TWO ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	4	.....	.....	4
4 " " 5 .....	14	.....	.....	14
5 " " 6 .....	20	.....	.....	20
6 " " 7 .....	21	.....	.....	21
7 " " 8 .....	15	.....	.....	15
8 " " 9 .....	18	.....	.....	18
9 " " 10 .....	22	.....	.....	22
10 " " 12 .....	34	.....	.....	34
12 " " 15 .....	62	.....	.....	62
15 " " 20 .....	100	.....	.....	100
20 " " 25 .....	145	.....	.....	145
25 and over .....	67	.....	.....	67
Total .....	522	.....	.....	522

## CORSETS AND CORSET WAISTS—TEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	67	21	90
\$3 but under \$4 .....	3	120	53	176
4 " " 5 .....	6	176	27	209
5 " " 6 .....	11	239	8	258
6 " " 7 .....	12	295	2	309
7 " " 8 .....	13	320	.....	333
8 " " 9 .....	9	295	.....	304
9 " " 10 .....	6	257	.....	263
10 " " 12 .....	18	305	.....	323
12 " " 15 .....	33	121	.....	154
15 " " 20 .....	50	14	.....	64
20 " " 25 .....	19	2	.....	21
25 and over .....	8	.....	.....	8
Total .....	190	2,211	111	2,512

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## CUTLERY—FOURTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	18	2	2	22
\$3 but under \$4 .....	32	5	18	55
4 " " 5 .....	44	20	21	85
5 " " 6 .....	41	44	13	98
6 " " 7 .....	62	29	....	91
7 " " 8 .....	70	12	....	82
8 " " 9 .....	96	11	....	107
9 " " 10 .....	100	6	....	106
10 " " 12 .....	144	9	....	153
12 " " 15 .....	205	5	....	210
15 " " 20 .....	209	6	....	215
20 " " 25 .....	69	....	....	69
25 and over .....	22	....	....	22
Total .....	1,112	149	54	1,315

## COTTON GOODS—THIRTY-THREE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	26	70	47	143
\$3 but under \$4 .....	20	469	156	645
4 " " 5 .....	42	771	96	909
5 " " 6 .....	107	1,083	48	1,238
6 " " 7 .....	201	1,174	17	1,392
7 " " 8 .....	258	696	1	955
8 " " 9 .....	228	269	1	498
9 " " 10 .....	197	229	....	426
10 " " 12 .....	234	157	....	391
12 " " 15 .....	257	95	....	352
15 " " 20 .....	158	13	....	171
20 " " 25 .....	54	4	....	58
25 and over .....	37	....	....	37
Total .....	1,819	5,030	366	7,215

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## COTTON GOODS (FINISHING AND DYEING)—NINETEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	....	....	3
\$3 but under \$4 .....	4	2	....	6
4 " " 5 .....	66	125	22	213
5 " " 6 .....	208	320	21	549
6 " " 7 .....	212	227	1	440
7 " " 8 .....	644	76	....	720
8 " " 9 .....	850	8	....	858
9 " " 10 .....	570	4	....	574
10 " " 12 .....	272	6	....	278
12 " " 15 .....	302	7	....	309
15 " " 20 .....	214	5	....	219
20 " " 25 .....	66	....	....	66
25 and over .....	130	....	....	130
Total .....	3,541	780	44	4,365

## DRAWN WIRE AND WIRE CLOTH—FOURTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	2	1	6
\$3 but under \$4 .....	7	4	2	13
4 " " 5 .....	34	10	1	45
5 " " 6 .....	105	130	....	235
6 " " 7 .....	116	46	....	162
7 " " 8 .....	135	25	....	160
8 " " 9 .....	129	24	....	153
9 " " 10 .....	316	35	....	351
10 " " 12 .....	283	10	....	293
12 " " 15 .....	409	2	....	411
15 " " 20 .....	352	1	....	353
20 " " 25 .....	138	....	....	138
25 and over .....	48	....	....	48
Total .....	2,075	289	4	2,368

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## ELECTRICAL APPLIANCES—THIRTY-SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are—			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	79	43	....	122
\$3 but under \$4 .....	58	62	3	123
4 " " 5 .....	169	54	19	182
5 " " 6 .....	306	216	13	535
6 " " 7 .....	317	197	1	515
7 " " 8 .....	347	248	....	595
8 " " 9 .....	831	199	....	1,030
9 " " 10 .....	762	104	....	866
10 " " 12 .....	990	75	....	1,065
12 " " 15 .....	1,141	10	....	1,151
15 " " 20 .....	1,500	1	....	1,501
20 " " 25 .....	571	....	....	571
25 and over .....	277	....	....	277
Total .....	7,288	1,209	36	8,533

## EMBROIDERIES—TWENTY-THREE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are—			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	2	12	14
\$3 but under \$4 .....	16	50	25	91
4 " " 5 .....	10	67	10	87
5 " " 6 .....	22	131	2	155
6 " " 7 .....	4	66	1	71
7 " " 8 .....	10	66	....	76
8 " " 9 .....	11	67	....	78
9 " " 10 .....	7	58	....	65
10 " " 12 .....	17	78	....	95
12 " " 15 .....	25	17	....	52
15 " " 20 .....	40	4	....	44
20 " " 25 .....	43	....	....	43
25 and over .....	103	....	....	103
Total .....	318	606	50	974

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

FERTILIZERS—ELEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	.....	.....	3
\$3 but under \$4 .....	7	.....	.....	7
4 " " 5 .....	19	.....	.....	19
5 " " 6 .....	11	.....	.....	11
6 " " 7 .....	20	4	.....	24
7 " " 8 .....	17	4	.....	21
8 " " 9 .....	29	.....	.....	29
9 " " 10 .....	321	5	.....	326
10 " " 12 .....	1,061	.....	.....	1,061
13 " " 15 .....	187	6	.....	193
15 " " 20 .....	120	.....	.....	120
20 " " 25 .....	36	.....	.....	36
25 and over .....	18	.....	.....	18
Total .....	1,849	19	.....	1,868

FOOD PRODUCTS—THIRTY-TWO ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	26	8	31	65
4 " " 5 .....	35	113	18	166
5 " " 6 .....	38	294	4	336
6 " " 7 .....	73	344	.....	417
7 " " 8 .....	139	72	.....	211
8 " " 9 .....	214	44	.....	258
9 " " 10 .....	387	37	.....	424
10 " " 12 .....	1,005	13	.....	1,018
12 " " 15 .....	558	9	.....	567
15 " " 20 .....	682	2	.....	684
20 " " 25 .....	113	1	.....	114
25 and over .....	65	.....	.....	65
Total .....	3,335	937	53	4,325

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## FOUNDRY (BRASS)—TWENTY-ONE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	19	3	1	23
\$3 but under \$4 .....	38	4	2	44
4 " " 5 .....	82	6	4	92
5 " " 6 .....	86	8	1	95
6 " " 7 .....	88	5	....	93
7 " " 8 .....	110	2	....	112
8 " " 9 .....	136	2	....	138
9 " " 10 .....	221	4	....	225
10 " " 12 .....	196	7	....	203
12 " " 15 .....	183	....	....	183
15 " " 20 .....	234	....	....	234
20 " " 25 .....	85	....	....	85
25 and over .....	21	....	....	21
Total .....	1,499	41	8	1,548

## FOUNDRY (IRON)—FIFTY-SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	32	....	3	35
\$3 but under \$4 .....	83	15	11	109
4 " " 5 .....	115	25	9	149
5 " " 6 .....	158	20	3	181
6 " " 7 .....	510	16	....	326
7 " " 8 .....	425	11	....	436
8 " " 9 .....	792	5	2	799
9 " " 10 .....	1,819	5	....	1,824
10 " " 12 .....	1,588	17	....	1,605
12 " " 15 .....	1,530	5	....	1,535
15 " " 20 .....	1,932	....	....	1,932
20 " " 25 .....	563	....	....	563
25 and over .....	143	....	....	143
Total .....	9,490	119	28	9,637

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## FURNACES, RANGES AND HEATERS—SIXTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	....	1	4
\$3 but under \$4 .....	26	....	....	26
4 " " 5 .....	28	2	2	32
5 " " 6 .....	36	102	....	138
6 " " 7 .....	52	2	....	54
7 " " 8 .....	64	2	....	66
8 " " 9 .....	68	2	....	70
9 " " 10 .....	27	4	....	31
10 " " 12 .....	294	2	....	296
12 " " 15 .....	362	4	....	366
15 " " 20 .....	464	1	....	465
20 " " 25 .....	248	....	....	248
25 and over .....	233	....	....	233
Total .....	1,905	121	3	2,029

## GAS AND ELECTRIC LIGHT FIXTURES—THIRTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	13	11	3	26
4 " " 5 .....	17	13	1	31
5 " " 6 .....	30	4	1	35
6 " " 7 .....	27	3	1	31
7 " " 8 .....	41	4	....	45
8 " " 9 .....	53	2	....	55
9 " " 10 .....	34	....	....	34
10 " " 12 .....	69	1	....	70
12 " " 15 .....	83	1	....	84
15 " " 20 .....	98	....	....	98
20 " " 25 .....	43	....	....	43
25 and over .....	9	....	....	9
Total .....	516	39	6	561

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## GLASS (CUT TABLEWARE)—EIGHT ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	11	1	2	14
\$3 but under \$4 .....	18	3	14	35
4 " " 5 .....	27	12	8	47
5 " " 6 .....	32	7	2	41
6 " " 7 .....	29	6	....	35
7 " " 8 .....	29	3	....	32
8 " " 9 .....	27	3	....	30
9 " " 10 .....	24	....	....	24
10 " " 12 .....	38	4	....	42
12 " " 15 .....	55	....	....	55
15 " " 20 .....	64	1	....	65
20 " " 25 .....	6	....	....	6
25 and over .....	2	....	....	2
Total .....	362	40	26	428

## GLASS (WINDOW AND BOTTLE)—TWENTY-TWO ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	11	7	14	32
4 " " 5 .....	106	40	124	270
5 " " 6 .....	749	74	170	993
6 " " 7 .....	1,215	17	13	1,245
7 " " 8 .....	776	11	....	787
8 " " 9 .....	390	....	....	390
9 " " 10 .....	668	3	....	671
10 " " 12 .....	526	2	....	528
12 " " 15 .....	538	....	....	538
15 " " 20 .....	506	....	....	506
20 " " 25 .....	631	....	....	631
25 and over .....	1,607	....	....	1,607
Total .....	7,723	154	321	8,198

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## GLASS MIRRORS—FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	9	9
4 " " 5 .....	4	....	18	22
5 " " 6 .....	3	21	....	24
6 " " 7 .....	7	2	....	9
7 " " 8 .....	8	....	....	8
8 " " 9 .....	10	....	....	10
9 " " 10 .....	19	1	....	20
10 " " 12 .....	20	....	....	20
12 " " 15 .....	34	....	....	34
15 " " 20 .....	27	....	....	27
20 " " 25 .....	2	....	....	2
25 and over .....	3	....	....	3
Total .....	137	24	27	188

## GRAPHITE PRODUCTS—SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	3	3	6
\$3 but under \$4 .....	25	131	47	203
4 " " 5 .....	62	228	33	323
5 " " 6 .....	81	240	3	324
6 " " 7 .....	111	270	....	381
7 " " 8 .....	88	116	....	204
8 " " 9 .....	62	73	....	135
9 " " 10 .....	68	62	....	130
10 " " 12 .....	111	34	....	145
12 " " 15 .....	153	4	....	157
15 " " 20 .....	143	4	....	147
20 " " 25 .....	65	....	....	65
25 and over .....	25	....	....	25
Total .....	994	1,165	86	2,245

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## JEWELRY—ONE HUNDRED AND SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	22	26	14	62
\$3 but under \$4 .....	94	54	42	190
4 " " 5 .....	101	76	25	202
5 " " 6 .....	88	82	10	180
6 " " 7 .....	93	99	4	196
7 " " 8 .....	90	120	3	213
8 " " 9 .....	85	95	.....	180
9 " " 10 .....	80	150	.....	230
10 " " 12 .....	151	158	.....	309
12 " " 15 .....	337	134	.....	471
15 " " 20 .....	714	41	.....	755
20 " " 25 .....	539	3	.....	542
25 and over .....	407	2	.....	409
Total .....	2,801	1,040	98	3,939

## KNIT GOODS—TWENTY-FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	28	13	43
\$3 but under \$4 .....	5	63	44	112
4 " " 5 .....	34	192	22	248
5 " " 6 .....	51	191	21	263
6 " " 7 .....	53	294	6	353
7 " " 8 .....	50	236	2	288
8 " " 9 .....	59	202	1	262
9 " " 10 .....	91	138	.....	229
10 " " 12 .....	134	106	.....	240
12 " " 15 .....	200	48	.....	308
15 " " 20 .....	146	15	.....	161
20 " " 25 .....	68	.....	.....	68
25 and over .....	93	.....	.....	93
Total .....	1,046	1,513	109	2,668

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## LEATHER—EIGHTY-TWO ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	18	....	....	18
\$3 but under \$1 .....	14	11	12	37
4 " " 5 .....	31	15	15	61
5 " " 6 .....	148	26	2	176
6 " " 7 .....	265	16	....	221
7 " " 8 .....	243	6	....	249
8 " " 9 .....	434	9	....	443
9 " " 10 .....	712	3	....	715
10 " " 12 .....	1,251	3	....	1,254
12 " " 15 .....	1,490	3	....	1,493
15 " " 20 .....	1,133	2	....	1,135
20 " " 25 .....	481	....	....	481
25 and over .....	291	....	....	291
Total .....	6,421	94	29	6,544

## LEATHER GOODS—NINETEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	3	....	3
\$3 but under \$4 .....	46	58	30	134
4 " " 5 .....	80	84	5	169
5 " " 6 .....	54	84	1	139
6 " " 7 .....	63	79	....	142
7 " " 8 .....	43	34	....	77
8 " " 9 .....	40	18	....	58
9 " " 10 .....	21	12	....	33
10 " " 12 .....	79	12	....	91
12 " " 15 .....	126	6	....	142
15 " " 20 .....	72	3	....	75
20 " " 25 .....	26	....	....	25
25 and over .....	16	....	....	16
Total .....	676	398	36	1,104

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## LAMPS—NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men	Women	Children	
	16 years and over.	16 years and over.	under 16 years.	
Under \$3 .....	5	38	....	43
\$3 but under \$4 .....	7	50	....	57
4 " " 5 .....	9	124	....	133
5 " " 6 .....	26	644	....	670
6 " " 7 .....	60	600	....	660
7 " " 8 .....	70	620	....	690
8 " " 9 .....	194	670	....	864
9 " " 10 .....	249	577	....	826
10 " " 12 .....	292	595	....	887
12 " " 15 .....	364	162	....	526
15 " " 20 .....	389	14	....	403
20 " " 25 .....	124	....	....	124
25 and over .....	35	....	....	35
Total .....	1,824	4,094	....	5,918

## LIME AND CEMENT—ELEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men	Women	Children	
	16 years and over.	16 years and over.	under 16 years.	
Under \$3 .....	92	....	....	92
\$3 but under \$4 .....	35	....	....	35
4 " " 5 .....	18	....	....	18
5 " " 6 .....	45	6	1	52
6 " " 7 .....	43	13	1	57
7 " " 8 .....	108	....	....	108
8 " " 9 .....	242	1	1	244
9 " " 10 .....	591	....	....	591
10 " " 12 .....	472	....	....	472
12 " " 15 .....	369	....	....	369
15 " " 20 .....	286	....	....	286
20 " " 25 .....	82	....	....	82
25 and over .....	22	....	....	22
Total .....	2,405	20	3	2,428

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## MACHINERY—ONE HUNDRED AND FORTY ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	126	5	6	137
\$3 but under \$4 .....	275	17	10	302
4 " " 5 .....	387	62	34	483
5 " " 6 .....	432	193	18	643
6 " " 7 .....	427	131	12	570
7 " " 8 .....	745	103	9	857
8 " " 9 .....	1,445	98	....	1,543
9 " " 10 .....	1,932	64	....	1,996
10 " " 12 .....	3,020	68	....	3,088
12 " " 15 .....	4,591	36	....	4,627
15 " " 20 .....	7,652	4	....	7,657
20 " " 25 .....	2,045	1	....	2,046
25 and over .....	497	....	....	497
Total .....	23,575	782	89	24,446

## MATTRESSES AND BEDDING—NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	1	....	....	1
\$3 but under \$4 .....	....	....	4	4
4 " " 5 .....	20	4	....	24
5 " " 6 .....	32	18	....	50
6 " " 7 .....	30	9	1	40
7 " " 8 .....	45	7	....	52
8 " " 9 .....	41	6	....	47
9 " " 10 .....	79	9	....	88
10 " " 12 .....	81	7	....	88
12 " " 15 .....	107	6	....	113
15 " " 20 .....	58	2	....	60
20 " " 25 .....	31	....	....	31
25 and over .....	12	....	....	12
Total .....	537	68	5	610

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## METAL GOODS—EIGHTY-ONE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	56	11	5	72
\$3 but under \$4 .....	41	52	91	184
4 " " 5 .....	234	404	55	693
5 " " 6 .....	299	438	21	758
6 " " 7 .....	490	382	1	882
7 " " 8 .....	699	291	....	990
8 " " 9 .....	938	163	2	1,103
9 " " 10 .....	738	100	....	838
10 " " 12 .....	1,032	54	....	1,086
12 " " 15 .....	1,240	9	....	1,249
15 " " 20 .....	1,033	4	....	1,037
20 " " 25 .....	347	....	....	347
25 and over .....	188	....	....	188
Total .....	7,344	1,908	175	9,427

## METAL NOVELTIES—TWENTY-FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	4	3	3	10
\$3 but under \$4 .....	37	21	28	86
4 " " 5 .....	70	67	28	165
5 " " 6 .....	88	94	5	187
6 " " 7 .....	107	79	4	190
7 " " 8 .....	110	49	1	160
8 " " 9 .....	93	9	....	102
9 " " 10 .....	94	11	....	105
10 " " 12 .....	133	14	....	147
12 " " 15 .....	202	6	....	208
15 " " 20 .....	225	....	....	225
20 " " 25 .....	78	....	....	78
25 and over .....	21	....	....	21
Total .....	1,262	363	69	1,694

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## MINING (IRON ORE)—SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4.....	.....	.....	.....	.....
4 " " 5 .....	1	.....	.....	1
5 " " 6 .....	.....	.....	.....	.....
6 " " 7 .....	.....	.....	.....	.....
7 " " 8 .....	51	.....	.....	51
8 " " 9 .....	65	.....	.....	65
9 " " 10 .....	112	.....	.....	112
10 " " 12 .....	854	.....	.....	854
12 " " 15 .....	515	.....	.....	515
15 " " 20 .....	42	.....	.....	42
20 " " 25 .....	12	.....	.....	12
25 and over .....	2	.....	.....	2
Total .....	1,654	.....	.....	1,654

## MUSICAL INSTRUMENTS—SEVENTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	8	4	.....	12
\$3 but under \$4 .....	11	37	8	56
4 " " 5 .....	43	36	4	83
5 " " 6 .....	67	80	.....	147
6 " " 7 .....	112	51	.....	163
7 " " 8 .....	116	52	.....	168
8 " " 9 .....	137	41	.....	178
9 " " 10 .....	151	22	.....	173
10 " " 12 .....	278	12	.....	290
12 " " 15 .....	328	4	.....	332
15 " " 20 .....	344	4	.....	348
20 " " 25 .....	110	.....	.....	110
25 and over .....	53	.....	.....	53
Total .....	1,758	343	12	2,113

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## OILCLOTH (FLOOR AND TABLE)—NINE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	18	....	....	18
\$3 but under \$4 .....	1	....	3	4
4 " " 5 .....	35	....	....	35
5 " " 6 .....	27	1	1	29
6 " " 7 .....	42	....	....	42
7 " " 8 .....	79	....	....	79
8 " " 9 .....	150	16	....	166
9 " " 10 .....	809	4	....	813
10 " " 12 .....	575	....	....	575
12 " " 15 .....	297	....	....	297
15 " " 20 .....	202	....	....	202
20 " " 25 .....	63	....	....	63
25 and over .....	21	....	....	21
Total .....	2,319	21	4	2,344

## OILS—NINETEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	30	1	....	31
\$3 but under \$4 .....	29	....	....	29
4 " " 5 .....	54	1	33	88
5 " " 6 .....	71	5	17	93
6 " " 7 .....	171	4	7	182
7 " " 8 .....	106	2	....	108
8 " " 9 .....	236	1	1	238
9 " " 10 .....	524	4	....	528
10 " " 12 .....	2,256	1	....	2,257
12 " " 15 .....	1,724	....	....	1,724
15 " " 20 .....	2,097	....	....	2,097
20 " " 25 .....	555	....	....	555
25 and over .....	214	....	....	214
Total .....	8,067	19	68	8,144

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## PAINTS—SEVENTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	4	6	7	17
4 " " 5 .....	5	23	10	38
5 " " 6 .....	10	25	5	40
6 " " 7 .....	15	11	4	30
7 " " 8 .....	22	15	....	37
8 " " 9 .....	26	11	....	37
9 " " 10 .....	374	8	....	382
10 " " 12 .....	370	9	....	379
12 " " 15 .....	246	7	....	253
15 " " 20 .....	151	1	....	152
20 " " 25 .....	59	....	....	59
25 and over .....	17	....	....	17
Total .....	1,299	116	26	1,441

## PAPER—FORTY-FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	....	....	2
\$3 but under \$4 .....	1	5	6	12
4 " " 5 .....	32	62	1	95
5 " " 6 .....	64	116	22	202
6 " " 7 .....	181	105	27	313
7 " " 8 .....	186	28	4	218
8 " " 9 .....	292	22	....	314
9 " " 10 .....	855	9	....	864
10 " " 12 .....	543	7	....	550
12 " " 15 .....	507	1	....	508
15 " " 20 .....	534	3	....	537
20 " " 25 .....	174	1	....	175
25 and over .....	103	....	....	103
Total .....	3,294	359	60	3,713

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## PIG IRON—FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	.....	.....	.....	.....
4 " " 5 .....	.....	.....	.....	.....
5 " " 6 .....	.....	.....	.....	.....
6 " " 7 .....	3	.....	.....	3
7 " " 8 .....	154	.....	.....	154
8 " " 9 .....	72	.....	.....	72
9 " " 10 .....	230	.....	.....	230
10 " " 12 .....	337	.....	.....	337
12 " " 15 .....	240	.....	.....	240
15 " " 20 .....	57	.....	.....	57
20 " " 25 .....	16	.....	.....	16
25 and over .....	2	.....	.....	2
Total .....	1,111	.....	.....	1,111

## POTTERY—FIFTY-ONE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	39	32	10	81
\$3 but under \$4 .....	44	57	23	124
4 " " 5 .....	86	136	24	246
5 " " 6 .....	114	219	14	347
6 " " 7 .....	108	140	1	249
7 " " 8 .....	202	149	.....	351
8 " " 9 .....	254	80	.....	334
9 " " 10 .....	609	54	.....	663
10 " " 12 .....	611	28	.....	639
12 " " 15 .....	567	21	.....	588
15 " " 20 .....	789	1	.....	790
20 " " 25 .....	642	1	.....	643
25 and over .....	882	.....	.....	882
Total .....	4,947	918	72	5,937

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## PRINTING AND BOOKBINDING—TWENTY-ONE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	2	....	5
\$3 but under \$4 .....	2	13	9	24
4 " " 5 .....	41	84	5	130
5 " " 6 .....	78	82	....	160
6 " " 7 .....	49	78	....	127
7 " " 8 .....	50	84	....	134
8 " " 9 .....	50	72	....	122
9 " " 10 .....	62	43	....	105
10 " " 12 .....	92	56	....	148
12 " " 15 .....	172	39	....	211
15 " " 20 .....	215	12	....	227
20 " " 25 .....	196	5	....	195
25 and over .....	107	....	....	107
Total .....	1,111	570	14	1,695

## QUARRYING STONE—EIGHTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	1	....	....	1
\$3 but under \$4 .....	1	....	....	1
4 " " 5 .....	5	....	....	5
5 " " 6 .....	3	....	....	3
6 " " 7 .....	55	....	....	55
7 " " 8 .....	63	....	....	63
8 " " 9 .....	208	....	....	208
9 " " 10 .....	508	....	....	508
10 " " 12 .....	155	....	....	155
12 " " 15 .....	92	....	....	92
15 " " 20 .....	95	....	....	95
20 " " 25 .....	190	....	....	190
25 and over .....	111	....	....	111
Total .....	1,487	....	....	1,487

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

ROOFING (METAL AND TAR)—EIGHT ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	....	....
4 " " 5 .....	....	9	....	9
5 " " 6 .....	14	....	....	14
6 " " 7 .....	10	2	....	12
7 " " 8 .....	10	4	....	14
8 " " 9 .....	60	....	....	60
9 " " 10 .....	66	1	....	67
10 " " 12 .....	185	1	....	186
12 " " 15 .....	101	....	....	101
15 " " 20 .....	73	1	....	73
20 " " 25 .....	26	1	....	27
25 and over .....	23	....	....	23
Total .....	567	19	....	586

RUBBER GOODS (HARD AND SOFT)—FIFTY-ONE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	10	4	19	33
\$3 but under \$4 .....	33	34	23	90
4 " " 5 .....	120	73	20	213
5 " " 6 .....	241	187	57	485
6 " " 7 .....	356	375	8	739
7 " " 8 .....	406	282	2	690
8 " " 9 .....	912	190	....	1,102
9 " " 10 .....	1,398	110	....	1,508
10 " " 12 .....	1,789	74	....	1,863
12 " " 15 .....	1,504	20	....	1,524
15 " " 20 .....	824	6	....	830
20 " " 25 .....	177	....	....	177
25 and over .....	103	....	....	103
Total .....	7,873	1,355	129	9,357

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SADDLES AND HARNESS—FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	....	....
4 " " 5 .....	1	....	....	1
5 " " 6 .....	....	2	....	2
6 " " 7 .....	3	....	....	3
7 " " 8 .....	....	....	....	....
8 " " 9 .....	3	2	....	5
9 " " 10 .....	4	1	....	5
10 " " 12 .....	15	....	....	15
12 " " 15 .....	15	....	....	15
15 " " 20 .....	6	....	....	6
20 " " 25 .....	2	....	....	2
25 and over .....	1	....	....	1
Total .....	50	5	....	55

## SADDLERY AND HARNESS HARDWARE—ELEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	23	23
\$3 but under \$4 .....	1	....	21	22
4 " " 5 .....	35	30	....	65
5 " " 6 .....	60	20	....	80
6 " " 7 .....	41	22	....	63
7 " " 8 .....	38	16	....	54
8 " " 9 .....	59	10	....	69
9 " " 10 .....	67	7	....	74
10 " " 12 .....	100	6	....	106
12 " " 15 .....	124	3	....	127
15 " " 20 .....	106	....	....	106
20 " " 25 .....	49	....	....	49
25 and over .....	6	....	....	6
Total .....	686	114	44	844

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SCIENTIFIC INSTRUMENTS—TWENTY-ONE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	....	....	2
\$3 but under \$4.....	25	12	15	52
4 " " 5 .....	177	165	19	361
5 " " 6 .....	237	151	61	449
6 " " 7 .....	170	240	....	410
7 " " 8 .....	99	113	....	212
8 " " 9 .....	1,225	112	....	1,337
9 " " 10 .....	774	34	....	808
10 " " 12 .....	838	29	....	867
12 " " 15 .....	1,076	17	....	1,093
15 " " 20 .....	884	4	....	888
20 " " 25 .....	171	....	....	171
25 and over .....	69	....	....	69
Total .....	5,747	877	95	6,719

## SASH, BLINDS AND DOORS—TWENTY-FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	....	....
4 " " 5 .....	14	....	....	14
5 " " 6 .....	28	....	....	28
6 " " 7 .....	32	....	....	32
7 " " 8 .....	53	....	....	53
8 " " 9 .....	46	....	....	46
9 " " 10 .....	61	....	....	61
10 " " 12 .....	95	....	....	95
12 " " 15 .....	174	....	....	174
15 " " 20 .....	291	....	....	291
20 " " 25 .....	44	....	....	44
25 and over .....	11	....	....	11
Total .....	849	....	....	849

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SHOES—TWENTY-EIGHT ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	17	27	17	61
\$3 but under \$4 .....	4	87	44	135
4 " " 5 .....	82	168	31	281
5 " " 6 .....	190	236	15	381
6 " " 7 .....	138	212	3	353
7 " " 8 .....	172	235	....	407
8 " " 9 .....	193	186	....	379
9 " " 10 .....	188	155	....	343
10 " " 12 .....	386	176	....	562
12 " " 15 .....	516	106	....	622
15 " " 20 .....	487	33	....	520
20 " " 25 .....	173	2	....	175
25 and over .....	125	....	....	125
Total .....	2,611	1,623	110	4,344

## SHIRTS—TWENTY-FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	123	6	129
\$3 but under \$4 .....	12	148	105	265
4 " " 5 .....	20	329	27	376
5 " " 6 .....	46	455	....	501
6 " " 7 .....	38	402	....	440
7 " " 8 .....	25	456	....	481
8 " " 9 .....	37	258	....	295
9 " " 10 .....	49	298	....	347
10 " " 12 .....	130	266	....	396
12 " " 15 .....	182	77	....	259
15 " " 20 .....	149	13	....	162
20 " " 25 .....	12	1	....	13
25 and over .....	3	....	....	3
Total .....	703	2,826	138	3,667

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SHIRT WAISTS (WOMEN'S)—FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	31	17	48
\$3 but under \$4 .....	.....	61	19	80
4 " " 5 .....	.....	69	2	71
5 " " 6 .....	.....	86	.....	86
6 " " 7 .....	.....	134	.....	134
7 " " 8 .....	.....	103	.....	103
8 " " 9 .....	1	91	.....	92
9 " " 10 .....	.....	48	.....	48
10 " " 12 .....	1	34	.....	35
12 " " 15 .....	10	2	.....	12
15 " " 20 .....	8	3	.....	11
20 " " 25 .....	.....	.....	.....	.....
25 and over .....	1	.....	.....	1
Total .....	21	662	38	721

## SHIPBUILDING—SEVENTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	2	.....	.....	2
\$3 but under \$4 .....	8	.....	.....	8
4 " " 5 .....	71	.....	.....	71
5 " " 6 .....	22	.....	.....	22
6 " " 7 .....	86	.....	.....	86
7 " " 8 .....	237	.....	.....	237
8 " " 9 .....	1,234	.....	.....	1,234
9 " " 10 .....	112	.....	.....	112
10 " " 12 .....	762	.....	.....	762
12 " " 15 .....	944	.....	.....	944
15 " " 20 .....	1,821	.....	.....	1,821
20 " " 25 .....	548	.....	.....	548
25 and over .....	93	.....	.....	93
Total .....	5,940	.....	.....	5,940

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SILK (BROAD AND RIBBON)—TWO HUNDRED AND TEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	41	183	94	318
\$3 but under \$4 .....	151	395	376	922
4 " " 5 .....	368	811	160	1,339
5 " " 6 .....	444	1,165	72	1,681
6 " " 7 .....	508	1,631	18	2,157
7 " " 8 .....	584	1,971	2	2,557
8 " " 9 .....	704	1,402	1	2,107
9 " " 10 .....	948	1,045	....	1,993
10 " " 12 .....	1,936	1,323	....	3,259
12 " " 15 .....	2,999	1,765	....	4,764
15 " " 20 .....	2,505	545	....	3,050
20 " " 25 .....	654	49	....	703
25 and over .....	164	8	....	172
<b>Total .....</b>	<b>11,996</b>	<b>12,293</b>	<b>723</b>	<b>25,012</b>

## SILK DYEING—TWENTY-FOUR ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	5	4	....	9
\$3 but under \$4 .....	21	2	9	32
4 " " 5 .....	53	25	6	84
5 " " 6 .....	104	85	1	190
6 " " 7 .....	128	458	....	586
7 " " 8 .....	171	21	....	192
8 " " 9 .....	670	26	....	696
9 " " 10 .....	512	10	....	522
10 " " 12 .....	2,402	5	....	2,407
12 " " 15 .....	1,141	1	....	1,142
15 " " 20 .....	310	1	....	311
20 " " 25 .....	122	....	....	122
25 and over .....	107	....	....	107
<b>Total .....</b>	<b>5,746</b>	<b>638</b>	<b>16</b>	<b>6,400</b>

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SILK THROWING—THIRTY-FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	17	8	27	52
\$3 but under \$4 .....	46	47	69	162
4 " " 5 .....	49	49	34	132
5 " " 6 .....	100	124	16	240
6 " " 7 .....	76	166	....	242
7 " " 8 .....	68	583	....	651
8 " " 9 .....	102	97	....	199
9 " " 10 .....	114	2	....	116
10 " " 12 .....	39	3	....	42
12 " " 15 .....	37	4	....	41
15 " " 20 .....	72	7	....	79
20 " " 25 .....	9	....	....	9
25 and over .....	5	....	....	5
Total .....	734	1,090	146	1,970

## SILK MILL SUPPLIES—SEVENTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	1	1
\$3 but under \$4 .....	19	18	29	66
4 " " 5 .....	25	28	19	72
5 " " 6 .....	39	21	3	63
6 " " 7 .....	25	11	....	36
7 " " 8 .....	40	18	....	58
8 " " 9 .....	37	16	....	53
9 " " 10 .....	57	6	....	63
10 " " 12 .....	75	12	....	87
12 " " 15 .....	105	10	....	115
15 " " 20 .....	100	13	....	113
20 " " 25 .....	15	....	....	15
25 and over .....	8	....	....	8
Total .....	545	153	52	750

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SILVER GOODS—NINETEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	1	1	....	2
\$3 but under \$4 .....	15	6	9	30
4 " " 5 .....	56	35	17	108
5 " " 6 .....	32	35	....	67
6 " " 7 .....	42	56	1	99
7 " " 8 .....	44	37	....	81
8 " " 9 .....	45	39	....	84
9 " " 10 .....	37	22	....	59
10 " " 12 .....	45	21	....	66
12 " " 15 .....	136	26	....	162
15 " " 20 .....	398	10	....	408
20 " " 25 .....	185	3	....	189
25 and over .....	110	1	....	111
Total .....	1,147	292	27	1,466

## SMELTING AND REFINING (GOLD, SILVER, COPPER, ETC.)—ELEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	....	....
4 " " 5 .....	7	....	....	7
5 " " 6 .....	2	....	....	2
6 " " 7 .....	34	....	....	34
7 " " 8 .....	21	....	....	21
8 " " 9 .....	49	1	....	50
9 " " 10 .....	910	....	....	910
10 " " 12 .....	1,551	....	....	1,551
12 " " 15 .....	1,074	1	....	1,075
15 " " 20 .....	1,094	1	....	1,095
20 " " 25 .....	226	....	....	226
25 and over .....	58	....	....	58
Total .....	5,026	3	....	5,029

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## SOAP AND TALLOW—EIGHTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	1	1
\$3 but under \$4 .....	.....	33	3	36
4 " " 5 .....	37	73	2	112
5 " " 6 .....	166	100	43	309
6 " " 7 .....	97	95	.....	192
7 " " 8 .....	109	89	.....	198
8 " " 9 .....	113	97	.....	210
9 " " 10 .....	328	72	.....	400
10 " " 12 .....	321	75	.....	396
13 " " 15 .....	289	46	.....	335
15 " " 20 .....	199	7	.....	206
20 " " 25 .....	43	.....	.....	43
25 and over .....	43	.....	.....	43
Total .....	1,745	687	49	2,481

## STEEL AND IRON (BAR)—SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	.....	.....	.....	.....
4 " " 5 .....	26	43	.....	69
5 " " 6 .....	11	31	.....	42
6 " " 7 .....	11	4	.....	15
7 " " 8 .....	22	6	.....	28
8 " " 9 .....	237	.....	.....	237
9 " " 10 .....	181	.....	.....	181
10 " " 12 .....	204	.....	.....	204
12 " " 15 .....	152	.....	.....	152
15 " " 20 .....	134	.....	.....	134
20 " " 25 .....	41	.....	.....	41
25 and over .....	27	.....	.....	27
Total .....	1,046	84	.....	1,130

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## STEEL AND IRON (STRUCTURAL)—TWENTY-SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	.....	.....	3
\$3 but under \$4 .....	13	.....	1	14
4 " " 5 .....	35	.....	.....	35
5 " " 6 .....	22	.....	2	24
6 " " 7 .....	49	.....	.....	49
7 " " 8 .....	175	.....	.....	175
8 " " 9 .....	455	.....	.....	455
9 " " 10 .....	556	.....	.....	556
10 " " 12 .....	960	.....	.....	960
12 " " 15 .....	651	.....	.....	651
15 " " 20 .....	558	.....	.....	558
20 " " 25 .....	232	.....	.....	232
25 and over .....	222	.....	.....	222
Total .....	3,931	.....	3	3,934

## STEEL AND IRON (FORGING)—THIRTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified			Total Number Receiving Specified Amounts.
	Amounts who are			
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	44	.....	.....	44
\$3 but under \$4 .....	21	1	.....	22
4 " " 5 .....	26	2	.....	28
5 " " 6 .....	45	7	3	55
6 " " 7 .....	69	3	2	74
7 " " 8 .....	125	1	2	128
8 " " 9 .....	487	2	.....	489
9 " " 10 .....	621	4	.....	625
10 " " 12 .....	624	.....	.....	624
12 " " 15 .....	622	2	.....	624
15 " " 20 .....	734	.....	.....	734
20 " " 25 .....	214	.....	.....	214
25 and over .....	90	.....	.....	90
Total .....	3,722	22	7	3,751

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## TEXTILE PRODUCTS—TEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	4	2	12	18
4 " " 5 .....	8	41	95	144
5 " " 6 .....	108	183	1	292
6 " " 7 .....	73	126	....	199
7 " " 8 .....	115	79	....	194
8 " " 9 .....	121	84	....	205
9 " " 10 .....	168	17	....	185
10 " " 12 .....	113	5	....	118
12 " " 15 .....	88	1	....	89
15 " " 20 .....	86	....	....	86
20 " " 25 .....	18	....	....	18
25 and over .....	9	....	....	9
Total .....	911	538	108	1,557

## THREAD—SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	3	5	8
\$3 but under \$4 .....	2	3	7	12
4 " " 5 .....	16	98	191	305
5 " " 6 .....	69	384	218	671
6 " " 7 .....	98	917	111	1,126
7 " " 8 .....	81	612	15	708
8 " " 9 .....	158	337	4	499
9 " " 10 .....	181	140	....	321
10 " " 12 .....	297	28	....	325
12 " " 15 .....	315	4	....	319
15 " " 20 .....	343	....	....	343
20 " " 25 .....	79	....	....	79
25 and over .....	29	....	....	29
Total .....	1,668	2,526	551	4,745

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## TRUNKS AND TRAVELING BAGS—TWELVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	1	1
4 " " 5 .....	7	....	2	9
5 " " 6 .....	13	7	2	22
6 " " 7 .....	35	6	....	41
7 " " 8 .....	12	6	....	18
8 " " 9 .....	18	2	....	20
9 " " 10 .....	59	3	....	62
10 " " 12 .....	81	5	....	86
12 " " 15 .....	124	....	....	124
15 " " 20 .....	126	1	....	127
20 " " 25 .....	37	....	....	37
25 and over .....	19	....	....	19
Total .....	531	30	5	566

## TRUNK AND BAG HARDWARE—TEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	3	6	6	15
\$3 but under \$4 .....	15	24	15	54
4 " " 5 .....	46	81	27	154
5 " " 6 .....	87	87	9	183
6 " " 7 .....	107	68	5	180
7 " " 8 .....	87	63	5	155
8 " " 9 .....	103	73	13	189
9 " " 10 .....	140	81	....	221
10 " " 12 .....	208	71	....	279
12 " " 15 .....	301	16	....	317
15 " " 20 .....	292	8	....	300
20 " " 25 .....	91	....	....	91
25 and over .....	34	....	....	34
Total .....	1,514	578	80	2,172

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

TYPEWRITERS AND SUPPLIES—SIX ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	3	6	1	10
4 " " 5 .....	10	9	....	19
5 " " 6 .....	15	5	....	20
6 " " 7 .....	27	5	....	32
7 " " 8 .....	26	19	....	45
8 " " 9 .....	19	....	....	19
9 " " 10 .....	36	2	....	38
10 " " 12 .....	68	....	....	68
12 " " 15 .....	74	16	....	90
15 " " 20 .....	69	....	....	69
20 " " 25 .....	17	....	....	17
25 and over .....	1	....	....	1
Total .....	365	62	1	428

UNDERWEAR (WOMEN'S AND CHILDREN'S)—TWENTY-FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are—			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	59	37	96
\$3 but under \$4 .....	1	105	37	143
4 " " 5 .....	4	217	7	228
5 " " 6 .....	5	294	4	303
6 " " 7 .....	9	290	....	299
7 " " 8 .....	10	326	....	336
8 " " 9 .....	7	233	....	240
9 " " 10 .....	14	209	....	223
10 " " 12 .....	24	134	....	158
12 " " 15 .....	26	63	....	89
15 " " 20 .....	28	20	....	48
20 " " 25 .....	12	9	....	21
25 and over .....	12	4	....	16
Total .....	152	1,963	85	2,200

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## VARNISHES—SEVENTEEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	.....	.....	.....	.....
4 " " 5 .....	.....	.....	1	1
5 " " 6 .....	5	2	.....	7
6 " " 7 .....	10	1	.....	14
7 " " 8 .....	7	1	.....	8
8 " " 9 .....	18	1	.....	19
9 " " 10 .....	22	.....	.....	22
10 " " 12 .....	53	4	.....	57
12 " " 15 .....	90	.....	.....	90
15 " " 20 .....	66	4	.....	70
20 " " 25 .....	33	.....	.....	33
25 and over .....	21	.....	.....	21
Total .....	325	13	1	339

## WATCHES, CASES AND MATERIAL—ELEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	.....	.....	.....	.....
\$3 but under \$4 .....	4	13	14	30
4 " " 5 .....	16	42	25	83
5 " " 6 .....	44	89	20	153
6 " " 7 .....	56	154	3	213
7 " " 8 .....	61	144	.....	205
8 " " 9 .....	54	92	.....	146
9 " " 10 .....	89	109	.....	198
10 " " 12 .....	179	109	.....	288
12 " " 15 .....	295	37	.....	332
15 " " 20 .....	551	9	.....	560
20 " " 25 .....	212	.....	.....	212
25 and over .....	102	1	.....	103
Total .....	1,663	798	62	2,523

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## WINDOW SHADES—THREE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	....	....	....	....
4 " " 5 .....	1	....	....	1
5 " " 6 .....	....	....	....	....
6 " " 7 .....	....	....	....	....
7 " " 8 .....	....	....	....	....
8 " " 9 .....	2	....	....	2
9 " " 10 .....	2	1	....	3
10 " " 12 .....	6	....	....	6
12 " " 15 .....	13	....	....	13
15 " " 20 .....	52	....	....	52
20 " " 25 .....	3	....	....	3
25 and over .....	....	....	....	....
Total .....	79	1	....	80

## WOODEN GOODS—THIRTY-EIGHT ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	40	....	7	47
\$3 but under \$4 .....	29	....	28	57
4 " " 5 .....	53	....	16	69
5 " " 6 .....	60	1	9	70
6 " " 7 .....	96	2	....	98
7 " " 8 .....	119	2	....	121
8 " " 9 .....	116	4	....	120
9 " " 10 .....	239	3	....	242
10 " " 12 .....	276	....	....	276
12 " " 15 .....	364	2	....	366
15 " " 20 .....	407	....	....	407
20 " " 25 .....	79	....	....	79
25 and over .....	27	1	....	28
Total .....	1,905	15	60	1,980

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

## WOOLEN AND WORSTED GOODS—TWENTY-FIVE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	....	....	....	....
\$3 but under \$4 .....	13	112	330	455
4 " " 5 .....	320	1,054	269	1,643
5 " " 6 .....	484	1,719	75	2,278
6 " " 7 .....	656	1,501	4	2,161
7 " " 8 .....	632	968	9	1,609
8 " " 9 .....	784	655	....	1,439
9 " " 10 .....	967	432	....	1,339
10 " " 12 .....	1,046	435	....	1,481
12 " " 15 .....	962	160	....	1,122
15 " " 20 .....	635	80	....	715
20 " " 25 .....	235	1	....	236
25 and over .....	127	....	....	127
Total .....	6,801	7,117	687	14,605

## UNCLASSIFIED—NINETY-SEVEN ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	34	44	18	96
\$3 but under \$4 .....	59	131	41	231
4 " " 5 .....	111	252	61	424
5 " " 6 .....	237	323	10	570
6 " " 7 .....	292	292	3	587
7 " " 8 .....	309	164	....	473
8 " " 9 .....	406	82	....	488
9 " " 10 .....	1,138	86	....	1,224
10 " " 12 .....	1,778	64	....	1,842
12 " " 15 .....	1,589	50	....	1,639
15 " " 20 .....	1,059	11	....	1,070
20 " " 25 .....	495	2	....	497
25 and over .....	132	....	....	132
Total .....	7,639	1,501	133	9,273

TABLE No. 7.—Classified Weekly Earnings of Wage-Earners, by Industries, 1910.—(Continued).

ALL INDUSTRIES—TWO THOUSAND FOUR HUNDRED AND TWENTY-THREE ESTABLISHMENTS.

Classification of Weekly Earnings.	Number of Persons Receiving Specified Amounts who are			Total Number Receiving Specified Amounts.
	Men 16 years and over.	Women 16 years and over.	Children under 16 years.	
Under \$3 .....	997	1,261	542	2,800
\$3 but under \$4 .....	1,799	3,753	2,336	7,888
4 " " 5 .....	4,441	9,044	2,066	15,551
5 " " 6 .....	7,459	13,858	1,196	22,513
6 " " 7 .....	9,759	14,576	337	24,672
7 " " 8 .....	12,125	12,121	63	24,309
8 " " 9 .....	20,436	8,303	36	28,775
9 " " 10 .....	30,803	6,147	....	36,950
10 " " 12 .....	43,330	5,602	....	48,932
12 " " 15 .....	42,776	3,624	....	46,400
15 " " 20 .....	45,370	1,076	....	46,446
20 " " 25 .....	15,669	109	....	15,778
25 and over .....	8,789	23	....	8,812
Total .....	243,753	79,497	6,576	329,826

TABLE No. 8.—Number of Days in Operation, Number of Hours Worked per Day, Number of Hours Worked per Week and Overtime, 1910. Averages by Industries.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Number of Days in Operation During the Year.	Average Number of Hours Worked per Day (under Normal Conditions).	Number of Hours Worked per Week (under Normal Conditions).	Establishments that Worked Overtime During the Year.	
						Number of Establishments.	Aggregate Number of Hours.
1	Agricultural machinery and implements .....	7	312.28	9.85	58.14	1	104
2	Artisans' tools .....	44	283.52	9.70	55.63	4	343
3	Art tile .....	9	283.55	9.66	54.88	.....	.....
4	Boilers .....	16	285.09	9.56	55.50	5	276,430
5	Boxes (wood and paper).....	52	292.36	9.67	54.84	9	563
6	Brewing (lager beer, ale and porter) .....	37	292.71	8.71	52.35	12	24,441
7	Brick and terra cotta.....	74	235.84	9.71	56.72	11	10,381
8	Brushes .....	14	290.64	9.64	53.92	.....	.....
9	Buttons (metal) .....	9	286.00	9.55	55.11	1	200
10	Buttons (pearl) .....	26	286.42	9.88	56.07	.....	.....
11	Carpets and rugs .....	7	245.85	10.00	55.00	1	27
12	Carriages and wagons .....	29	306.55	9.69	56.31	3	202
13	Chemical products .....	69	304.34	10.02	57.61	9	63,172
14	Cigars and tobacco .....	35	292.65	9.11	52.28	6	2,530
15	Clothing .....	14	282.71	9.28	52.70	2	102
16	Confectionery .....	9	295.88	9.77	55.77	3	647
17	Cornices and skylights.....	22	288.54	8.41	47.41	.....	.....
18	Corsets and corset waists.....	10	300.77	9.55	52.66	1	120
19	Cutlery .....	14	278.86	9.14	55.86	1	60
20	Cotton goods .....	33	288.97	9.63	54.57	9	4,584
21	Cotton goods (finishing and dyeing) .....	19	279.53	9.89	57.74	7	1,955
22	Drawn wire and wire cloth.....	14	286.08	9.69	55.15	3	1,114
23	Electrical appliances .....	36	296.28	9.78	54.97	12	187,471
24	Embroideries .....	23	292.26	10.00	57.65	4	650
25	Fertilizers .....	11	281.00	9.64	57.18	1	11,286
26	Food products .....	32	281.15	10.00	58.25	7	25,177
27	Foundry (brass) .....	21	299.43	9.51	54.35	2	2,710
28	Foundry (iron) .....	57	287.24	9.42	55.65	11	94,776
29	Furnaces, ranges and heaters..	16	283.00	9.38	54.07	1	390
30	Gas and electric light fixtures..	13	293.39	9.39	52.93	1	78
31	Glass (cut tableware) .....	8	272.99	9.75	54.87	3	792
32	Glass (window and bottle) .....	22	238.05	8.85	51.30	1	140
33	Glass mirrors .....	4	291.25	9.50	54.15	.....	.....
34	Graphite products .....	7	304.14	10.43	59.86	3	3,953
35	Hats (fur and felt) .....	43	268.65	9.12	51.93	3	122
36	Hats (straw) .....	3	302.00	10.00	58.00	.....	.....
37	High explosives .....	9	308.66	10.22	59.77	3	171,596
38	Inks and mucilage .....	7	282.00	9.71	55.71	1	71
39	Jewelry .....	107	285.75	9.35	53.54	16	1,371
40	Knit goods .....	24	276.87	9.75	55.94	7	1,178
41	Leather .....	82	295.97	9.80	56.70	3	6,260
42	Leather goods .....	19	294.21	9.53	54.36	4	674
43	Lamps .....	9	284.66	9.66	55.33	2	72,060
44	Lime and cement .....	11	280.20	10.70	64.80	3	61,368
45	Machinery .....	140	294.72	9.68	65.89	39	399,219
46	Mattresses and bedding .....	9	302.77	9.77	55.77	.....	.....
47	Metal goods .....	81	292.55	9.76	55.83	21	28,359
48	Metal novelties .....	25	300.09	9.96	57.36	7	1,925
49	Mining (iron ore) .....	6	305.66	11.33	67.16	.....	.....
50	Musical instruments .....	17	296.35	9.70	55.41	5	664

TABLE No. 8.—Number of Days in Operation, Number of Hours Worked per Day, Number of Hours Worked per Week and Overtime, 1910. Averages by Industries.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Number of Days in Operation During the Year.	Average Number of Hours Worked per Day (under Normal Conditions).	Number of Hours Worked per Week (under Normal Conditions).	Establishments that Worked Overtime During the Year.	
						Number of Establishments.	Aggregate Number of Hours.
51	Oilcloth (floor and table) .....	9	299.22	9.77	57.11	1	1,000
52	Oils .....	19	312.13	9.73	57.40	4	1,270
53	Paints .....	17	302.53	10.00	55.23	2	13,100
54	Paper .....	44	283.55	10.37	64.62	4	711
55	Pig iron .....	5	297.00	12.00	77.50	.....	.....
56	Pottery .....	51	296.05	9.51	54.46	3	1,120
57	Printing and bookbinding .....	21	293.71	8.90	52.19	6	4,519
58	Quarrying stone .....	18	228.41	9.65	44.41	1	50
59	Roofing (metal and tar) .....	8	287.25	9.75	55.87	1	2,937
60	Rubber goods (hard and soft).....	51	284.42	9.94	57.26	17	186,653
61	Saddles and harness .....	5	297.40	9.20	52.00	.....	.....
62	Saddlery and harness hardware.....	11	300.27	9.91	56.45	.....	.....
63	Scientific instruments .....	21	300.62	9.76	55.19	4	7,379
64	Sash, blinds and doors .....	25	299.00	9.20	52.64	3	426
65	Shoes .....	28	281.07	9.93	54.32	3	219
66	Shirts .....	24	300.43	9.78	54.47	1	120
67	Shirt waists (women's) .....	5	289.00	9.60	52.00	1	36
68	Shybuilding .....	17	297.53	9.23	53.06	4	296,941
69	Silk (broad and ribbon) .....	210	287.50	9.51	55.00	17	3,270
70	Silk dyeing .....	24	266.21	9.95	55.37	3	14,940
71	Silk throwing .....	35	268.51	9.97	54.86	3	1,132
72	Silk mill supplies .....	17	294.41	9.94	54.34	2	125
73	Silver goods .....	19	286.95	9.74	55.53	7	763
74	Smelting and refining (gold, silver, copper, etc.) .....	11	331.40	10.70	64.30	1	74,550
75	Soap and tallow .....	18	303.78	9.78	55.89	3	2,004
76	Steel and iron (bar) .....	6	290.20	10.40	58.40	.....	.....
77	Steel and iron (structural).....	26	298.61	9.50	54.65	12	57,573
78	Steel and iron (forging).....	13	294.30	9.85	56.31	2	16,550
79	Textile products .....	10	280.10	9.70	54.50	.....	.....
80	Thread .....	6	286.17	10.00	55.83	.....	.....
81	Trunks and traveling bags.....	12	300.91	9.83	57.00	2	900
82	Trunk and bag hardware.....	10	300.00	10.00	56.70	2	182
83	Typewriters and supplies .....	6	278.50	9.50	53.67	1	18
84	Underwear (women's and children's) .....	25	284.41	9.45	52.91	4	611
85	Varnishes .....	17	293.58	9.41	54.24	1	170
86	Watches, cases and material.....	11	295.64	9.82	55.63	1	171
87	Window shades .....	3	288.33	9.33	54.67	.....	.....
88	Wooden goods .....	38	283.24	9.50	54.58	5	993
89	Woolen and worsted goods.....	25	284.00	10.00	57.48	1	742
90	Unclassified .....	97	287.67	9.86	56.43	18	8,398
	All industries .....	2,423	288.10	9.71	55.54	388	2,148,838

TABLE No. 9.—Average Proportion of Business Done, by Industries,  
1910.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Proportion of Business Done—Per- centage.
1	Agricultural machinery and implements.....	7	73.57
2	Artisans' tools .....	44	75.11
3	Art tile .....	9	71.67
4	Boilers .....	16	75.94
5	Boxes (wood and paper) .....	52	80.58
6	Brewing (lager beer, ale and porter).....	37	74.52
7	Brick and terra cotta .....	74	76.23
8	Brushes .....	14	82.50
9	Buttons (metal) .....	9	66.67
10	Buttons (pearl) .....	26	72.50
11	Carpets and rugs .....	7	60.71
12	Carriages and wagons .....	29	72.07
13	Chemical products .....	69	78.84
14	Cigars and tobacco .....	35	80.14
15	Clothing .....	14	82.14
16	Confectionery .....	9	72.22
17	Cornices and skylights .....	22	72.95
18	Corsets and corset waists .....	10	92.78
19	Cutlery .....	14	68.93
20	Cotton goods .....	33	78.94
21	Cotton goods (finishing and dyeing).....	19	71.05
22	Drawn wire and wire cloth.....	14	81.92
23	Electrical appliances .....	36	70.42
24	Embroideries .....	23	78.91
25	Fertilizers .....	11	74.55
26	Food products .....	32	81.56
27	Foundry (brass) .....	21	74.29
28	Foundry (iron) .....	57	73.07
29	Furnaces, ranges and heaters .....	16	74.69
30	Gas and electric light fixtures.....	13	74.62
31	Glass (cut tableware) .....	8	66.25
32	Glass (window and bottle) .....	22	77.50
33	Glass mirrors .....	4	72.50
34	Graphite products .....	7	90.71
35	Hats (fur and felt) .....	43	66.51
36	Hats (straw) .....	3	80.00
37	High explosives .....	9	76.67
38	Inks and mucilage .....	7	75.00
39	Jewelry .....	107	69.07
40	Knit goods .....	24	73.75
41	Leather .....	82	75.48
42	Leather goods .....	19	72.11
43	Lamps .....	9	67.22
44	Lime and cement .....	11	67.50
45	Machinery .....	140	68.40
46	Mattresses and bedding .....	9	70.56
47	Metal goods .....	81	73.06
48	Metal novelties .....	25	79.00
49	Mining (iron ore) .....	6	75.00
50	Musical instruments .....	17	82.06
51	Oilcloth (floor and table).....	9	91.10
52	Oils .....	19	83.00
53	Paints .....	17	87.35

TABLE No. 9.—Average Proportion of Business Done, by Industries, 1910.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Average Proportion of Business Done—Percentage.
54	Paper .....	44	88.12
55	Pig iron .....	5	81.25
56	Pottery .....	51	78.18
57	Printing and bookbinding .....	21	69.76
58	Quarrying stone .....	18	56.47
59	Roofing (metal and tar) .....	8	71.25
60	Rubber goods (hard and soft) .....	51	77.80
61	Saddles and harness .....	5	59.00
62	Saddlery and harness hardware .....	11	70.91
63	Scientific instruments .....	21	71.90
64	Sash, blinds and doors .....	25	74.80
65	Shoes .....	28	85.00
66	Shirts .....	24	88.48
67	Shirt waists (women's) .....	5	70.00
68	Shipbuilding .....	17	71.18
69	Silk (broad and ribbon) .....	210	73.65
70	Silk dyeing .....	24	77.37
71	Silk throwing .....	35	68.57
72	Silk mill supplies .....	17	77.94
73	Silver goods .....	19	74.73
74	Smelting and refining (gold, silver, copper, etc.) .....	11	88.50
75	Soap and tallow .....	18	79.44
76	Steel and iron (bar) .....	6	76.00
77	Steel and iron (structural) .....	26	64.42
78	Steel and iron (forging) .....	13	74.23
79	Textile products .....	10	79.00
80	Thread .....	6	97.50
81	Trunks and traveling bags .....	12	68.75
82	Trunk and bag hardware .....	10	86.50
83	Typewriters and supplies .....	6	81.33
84	Underwear (women's and children's) .....	25	74.09
85	Varnishes .....	17	74.12
86	Watches, cases and material .....	11	60.45
87	Window shades .....	3	86.67
88	Wooden goods .....	38	76.71
89	Woolen and worsted goods .....	25	76.40
90	Unclassified .....	97	76.49
	All industries .....	2,423	74.92

TABLE No. 10.—Power Used and Owned by Industries, 1910.

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Character of Power Used.											
			Steam Engines.		Gas and Gasoline Engines.		Water Wheels.		Water Motors.		Electric Motors.		Air Compressors.	
			Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.
1	Agricultural machinery and implements.	7	6	415	4	290	4	148	.....	.....	56	363	.....	.....
2	Artisans' tools	44	32	3,184	14	754	3	135	1	16	30	416	.....	.....
3	Art tile	9	10	580	.....	.....	.....	.....	.....	.....	14	96	.....	.....
4	Boilers	16	25	2,547	1	18	2	250	.....	.....	54	973	.....	.....
5	Boxes (wood and paper)	52	33	1,790	7	61	.....	.....	.....	.....	53	369	.....	.....
6	Brewing (lager beer, ale and porter)	37	248	14,192	1	12	.....	.....	.....	.....	280	2,277	1	.....
7	Brick and terra cotta	74	149	16,710	8	251	.....	.....	.....	.....	147	3,801	2	25
8	Brushes	14	4	120	6	42	.....	.....	.....	.....	7	26	.....	.....
9	Buttons (metal)	9	7	285	4	62	.....	.....	.....	.....	116	354	.....	.....
10	Buttons (pearl)	26	15	614	6	71	.....	.....	.....	.....	15	118	.....	.....
11	Carpets and rugs	7	10	790	.....	.....	3	300	.....	.....	7	95	.....	.....
12	Carriages and wagons	29	14	660	7	55	.....	.....	.....	.....	23	173	.....	.....
13	Chemical products	69	269	18,072	3	370	3	120	.....	.....	465	6,402	1	50
14	Cigars and tobacco	35	40	3,745	1	15	7	113	3	3	82	705	.....	.....
15	Clothing	14	2	9	1	23	.....	.....	.....	.....	20	135	.....	.....
16	Confectionery	9	7	540	.....	.....	.....	.....	.....	.....	40	208	.....	.....
17	Cornices and skylights	22	3	95	4	65	.....	.....	.....	.....	14	140	.....	.....
18	Corsets and corset-waists	10	6	415	.....	.....	.....	.....	.....	.....	20	77	.....	.....
19	Cutlery	14	11	927	1	20	.....	.....	.....	.....	4	50	.....	.....
20	Cotton goods	33	62	7,450	5	52	10	690	.....	.....	160	1,983	.....	.....
21	Cotton good (finishing and dyeing)	19	213	7,309	.....	.....	5	375	.....	.....	86	2,598	.....	.....
22	Drawn wire and wire cloth	14	144	26,784	3	1,262	.....	.....	.....	.....	245	4,266	.....	.....
23	Electrical appliances	36	39	6,038	8	383	1	200	.....	.....	1,129	7,648	.....	.....
24	Embroideries	23	3	155	2	17	1	40	.....	.....	44	179	.....	.....
25	Fertilizers	11	27	2,890	1	5	.....	.....	.....	.....	111	1,573	.....	.....
26	Food products	32	68	4,543	6	274	.....	.....	.....	.....	173	1,631	1	25
27	Foundry (brass)	21	12	697	7	154	.....	.....	.....	.....	61	569	.....	.....
28	Foundry (iron)	57	80	5,836	18	2,111	1	30	.....	.....	462	7,284	9	285
29	Furnaces, ranges and heaters	16	19	1,478	5	110	1	40	.....	.....	86	1,046	1	150

TABLE No. 10.—Power Used and Owned by Industries, 1910.—(Continued).

Office Number.	INDUSTRIES.	Number of Establishments Considered.	Character of Power Used.											
			Steam Engines.		Gas and Gasoline Engines.		Water Wheels.		Water Motors.		Electric Motors.		Air Compressors.	
			Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.	Number.	Total H. P.
30	Gas and electric light fixtures.....	13												
31	Glass (cut tableware).....	7	238											
32	Glass (window and bottle).....	8	185											
33	Glass mirrors.....	68	3,558											
34	Graphite products.....	4	45											
35	Hats (fur and felt).....	7	1,585											
36	Hats (straw).....	43	5,144											
37	High explosives.....	5	193											
38	Inks and maulage.....	9	6,040											
39	Jewelry.....	7	379											
40	Knit goods.....	107	872											
41	Leather.....	24	1,365											
42	Leather goods.....	82	8,326											
43	Lamps.....	19	320											
44	Lime and cement.....	9	1,901											
45	Machinery.....	11	18,008											
46	Mattresses and bedding.....	140	27,746											
47	Metal goods.....	9	455											
48	Metal novelties.....	81	10,987											
49	Mining (iron ore).....	25	824											
50	Musical instruments.....	6	5,395											
51	Oilcloth (floor and table).....	17	1,116											
52	Oils.....	9	7,815											
53	Paints.....	19	484											
54	Paper.....	17	41											
55	Pig iron.....	44	4,755											
56	Pottery.....	141	18,900											
57	Printing and bookbinding.....	5	12,025											
58	Quarrying stone.....	51	3,861											
		21	8											
		18	2,765											

59	Roofing (metal and tar).....	3	19	1,774	2	22				6	44			
60	Rubber goods (hard and soft).....	51	116	22,893	3	40	7	25		158	1,716			
61	Saddles and harness.....	5			1	2				3	23			
62	Saddles and harness hardware.....	11	6	500	2	10				5	14			
63	Scientific instruments.....	21	23	5,235	9	152				156	1,338			
64	Sash, blinds and doors.....	25	22	1,560	1	12				30	167			
65	Shoes.....	28	24	1,225	2	16				54	292			
66	Shirts.....	24	14	542	4	32				16	103			
67	Shirt waists (women's).....	5	3	50						4	24			
68	Shipbuilding.....	17	47	7,537	8	208				393	4,755	1	40	
69	Silk (broad and ribbon).....	210	139	11,392	10	139	17	650		278	3,029	1	14	
70	Silk dyeing.....	17	150	5,886						51	625			
71	Silk throwing.....	35	20	1,887	2	25	8	385		65	746			
72	Silk mill supplies.....	17	7	715	3	29	1	12		10	47			
73	Silk dyeing.....	24	9	1,061	3	50				59	338			
74	Smelting and refining (gold, silver, copper, etc.).....	11	127	26,586	2	75				416	6,888	1	375	
75	Soap and tallow.....	18	49	2,866						204	2,003			
76	Steel and iron (bar).....	6	39	5,416	1	10	1	60		74	1,193	2	40	
77	Steel and iron (structural).....	26	41	8,023	9	273				528	4,258	3	625	
78	Steel and iron (forging).....	13	44	7,894			5	575		313	4,137			
79	Textile products.....	10	13	3,528			1	40		27	608			
80	Thread.....	6	19	13,163						50	980			
81	Trunks and traveling bags.....	12	3	240	1	10				15	45			
82	Trunk and bag hardware.....	10	11	1,135						7	94			
83	Typewriters and supplies.....	6	5	547	2	50				29	199			
84	Underwear (women's and children's).....	25	10	421	13	113				21	100			
85	Varnishes.....	17	13	543	1	6				43	510			
86	Watches, cases and material.....	11	9	491	2	190				129	881			
87	Window shades.....	3	2	175						1	2			
88	Wooden goods.....	38	28	1,965	4	58	1	90		18	400			
89	Woolen and worsted goods.....	25	67	20,317	1	10	7	720		151	3,625			
90	Unclassified.....	97	123	20,135	17	569	6	352		631	11,470	4	230	
	All industries.....	2,423	4,422	467,252	340	12,682	150	9,118	6	19	13,034	151,806	51	4,486



## PART II.

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Employment, Working Hours and Wages on Steam  
Railroads in New Jersey.

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Cost of Living in New Jersey.

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Fruit and Vegetable Canning Industry of New  
Jersey—Pack of 1910.

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Industrial Insurance System of Germany.

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## Statistics of Employment on Steam Railroads of New Jersey, for the Year Ending June 30, 1911.

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Number of Miles of Road in New Jersey, Number of Employees, Total  
Amount Paid in Wages, Average Daily and Yearly Earnings of  
Employees, Number of Employees Injured While on Duty,  
Number of Injuries Resulting in Death.

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The customary report on employment, hours of labor and compensation, of the several classes of steam railroad employes, is presented in the series of tables which follow, one for each of the eight trunk lines, and one summary embracing the totals of all for 1911, compared with those of 1910. The entire presentation shows in striking form the magnitude of the railroad interests centered in New Jersey. The figures relating to the number of wage earners include only those whose duties are wholly or for the most part performed within the geographical boundaries of the State. The data relate chiefly to employment, wages of labor, accidents to employes while on duty, number of days employed during the year, and number of hours worked per day. These totals for all the trunk lines in New Jersey are given on the table below, those for the twelve months ending June 30, 1911, being placed in comparison with similar data for 1910. The increases and decreases are shown numerically and by percentages.

The data presented by aggregates for both years on this table are not comparable, for the reason that one line of railroad—the West Jersey & Seashore, which appears in the compilation of 1911, was not included in that of 1910. The aggregates for 1911, shown on this table, are, therefore, increased to the full amount of these added totals. The *averages*, however, are affected only very slightly, if at all, by the change in the number of roads included in the totals for 1911, as will be seen by an examination of the table.

PARTICULARS.	1910.	1911.	Increase (+) or Decrease (-) in 1911 as com- pared with 1910.		
			Amounts.	Per- centage.	
Aggregate number of miles of road in New Jersey .....	1,673.86	1,969.12	+	295.26	17.6
Aggregate number of persons em- ployed .....	43,831	45,311	+	1,480	3.4
Aggregate number of days worked...	12,859,846	13,657,628	+	797,782	6.2
Average number of days worked per employee .....	293	301	+	8	2.7
Average number of hours worked per day .....	10.3	10.2	-	0.1	0.9
Average number of days not on duty	72	64	-	8	11.1
Aggregate amount paid in wages....	\$29,068,276.88	\$32,651,966.44	+	\$3,583,689.56	12.3
Average wages per day.....	\$2.26	\$2.39	+	\$0.13	5.8
Average yearly earnings per em- ployee .....	\$663.19	\$720.62	+	\$57.43	8.7
Aggregate number of employes in- jured at work .....	1,816	1,984	+	168	9.3
Aggregate number whose injuries re- sulted in death .....	89	79	-	10	11.2

Reviewing the aggregate totals shown on the above table, we find that these eight trunk lines of railway reported a mileage of road in operation in 1911, amounting to 1,969.12 miles; it is also shown that the roads employed 45,311 men whose duties were performed wholly or to a large extent in New Jersey, and that the time worked by this force during the year amounted to 13,657.628 days. The total amount paid in wages in 1911 was \$32,651,966, by far the larger proportion of which was received by residents of this State. Only five of the eight roads reporting in 1911 rendered statements showing the number of employes who had been injured while on duty, and the number of these whose injuries had resulted in death. The total number of injured employes, as reported by these five roads, is 1,984, of which number, 79, or a small fraction less than 4 per cent., were either killed outright or died shortly after receiving the injuries.

The items presented by averages, which, as before said, are fairly comparable for both years, show that the number of days worked per employe in 1910 was 293, and in 1911, 301; an increase of 8 days, or 2.7 per cent. The average number of hours worked per day was less by a small fraction of an hour in 1911 than in 1910, and the number of "rest days," or days not on duty, was 8 less in 1911 than in 1910. The average wage per day for all classes of employes, skilled and unskilled, was \$2.26 in

1910, and in 1911 it is \$2.39, an increase in the latter year of 13 cents per day, or 5.8 per cent. The average yearly earnings per employe was \$663.19 in 1910 and \$720.62 in 1911, an increase of \$57.43, or 8.7 per cent. The higher percentage of increase in average yearly earnings, as compared with the increase in wages per day, is of course due to the fact that the working time in 1911 was eight days more than that of 1910.

On the whole, the table shows that the earnings of labor employed on steam railroads are equal, when the comparative steadiness of employment is considered, to any enjoyed by the workmen in the choicest of the mechanical trades.

Practically all the accidents to railroad employes occurred in the classes of employes known collectively as trainmen, and among those whose duties are in some way related to the movement of trains, such as switchmen, flagmen, track walkers, yard men and road laborers. Carpenters, bridge builders, and gangs employed in construction work also furnished a considerable proportion of the casualty list.

CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending June 30, 1911.  
 Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Summary Table No. 1—Aggregates and Averages, by Companies.

CLASSIFICATION.	Years.	Number of miles of road in New Jersey.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed.	Average number of days during year not on duty, including Sundays.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employes injured during year.	Number of employes whose injuries resulted in death.
Pennsylvania Railroad Company.....	1910	436.00	18,532	5,592,443	302	9.6	63	\$13,555,838 52	\$2 43	\$731 48	1,253	30
	1911	397.46	18,505	5,549,501	299	9.8	66	13,982,765 30	2 53	755 62	1,497	40
Philadelphia and Reading Railroad Company...	1910	221.57	2,598	784,713	302	.....	63	1,486,729 04	1 89	572 28	194	7
	1911	221.57	2,742	836,217	305	.....	60	1,727,378 54	2 07	629 97	56	3
Central Railroad Company of New Jersey.....	1910	402.31	7,958	2,233,755	288	10.	77	5,264,710 81	2 30	661 57	207	25
	1911	402.31	7,957	2,385,156	300	10.	65	5,764,295 62	2 42	724 43	251	13
Delaware, Lackawanna and Western Railroad Company .....	1910	206.99	6,949	2,047,021	295	10.5	70	4,360,441 77	2 13	627 50	72	17
	1911	206.99	6,629	2,029,955	306	10.	59	4,574,060 93	2 26	690 01	88	15
Erie Railroad Company.....	1910	143.30	2,502	706,517	282	10.5	83	1,451,998 38	2 06	580 34	.....	.....
	1911	140.46	2,299	686,629	299	10.5	66	1,486,023 12	2 16	646 38	.....	.....
Lehigh Valley Railroad Company.....	1910	131.63	3,346	923,691	276	10.8	89	1,838,018 87	2 10	579 21	180	10
	1911	131.33	2,786	812,544	292	10.5	73	1,854,304 98	2 28	665 58	30	7
New York, Susquehanna and Western Railroad Company .....	1910	132.06	1,946	511,706	263	10.6	102	1,010,539 49	1 97	519 29	.....	.....
	1911	132.06	1,794	545,515	304	10.6	61	1,151,294 26	2 11	641 75	.....	.....
West Jersey and Seashore Railroad Company..	1910	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1911	336.94	2,599	812,111	312	10.	53	2,111,843 69	2 60	812 56	62	1
Totals.....	1910	1,673.86	43,831	12,859,846	293	10.3	72	\$29,068,276 88	\$2 26	\$663 19	1,816	89
	1911	1,969.12	45,311	13,637,628	301	10.2	64	32,651,966 44	2 39	720 62	1,984	79

**CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending  
June 30, 1911.—(Continued.)**

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Pennsylvania Railroad Company. Number of Miles of Road in New Jersey—397.46.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employees injured during year.	Number of employees whose injuries resulted in death.
Conductors .....	461	145,675	316	11	49	\$621,264 25	\$4 27	\$1,347 64	25	.....
Brakemen .....	1,213	355,653	293	11	72	1,085,429 76	3 05	894 83	142	11
Engineers .....	665	213,788	321	10	44	1,085,543 51	5 08	1,632 40	18	.....
Firemen .....	673	214,389	319	11	46	625,160 65	2 91	928 92	25	.....
Switchmen .....	229	83,448	364	11	1	139,503 05	1 67	609 18	23	.....
Flagmen .....	240	77,133	321	11	44	186,858 01	2 43	778 58	9	.....
Engine wipers, etc. ....	191	59,419	311	11	54	134,267 05	3 26	702 97	28	.....
Yardmen .....	830	269,139	324	10	41	809,592 20	3 01	975 41	47	.....
Trackmen .....	12,085	622,143	298	10	67	1,047,488 50	1 69	502 39	80	11
Agents .....	150	52,666	347	9	18	147,347 44	4 84	982 32	.....	.....
Assistant Agents .....	4	1,204	326	9	39	5,992 15	4 60	1,498 04	.....	.....
Baggagemen .....	162	51,555	318	10	47	122,373 20	2 38	755 39	3	.....
Clerks .....	1,102	363,362	330	9	35	893,800 43	4 46	811 07	.....	.....
Other depot men .....	552	166,544	302	10	63	343,126 22	3 06	621 60	30	.....
Machinists and helpers ..	881	254,724	289	9	76	723,613 00	3 84	821 35	198	.....
Blacksmiths and helpers ..	206	56,752	276	9	89	138,118 94	4 43	670 48	39	.....
Boilermakers and helpers ..	260	73,460	283	9	82	201,762 80	4 74	776 01	66	.....
Carbuilders and repairers ..	848	260,065	307	9	58	606,100 45	3 33	714 74	53	.....
Carpenters and bridgebuilders ..	505	145,866	289	10	76	383,853 76	3 63	760 11	23	.....
Construction gangs .....	142	23,219	164	10	201	39,416 95	1 69	277 58	5	1
Telegraph operators .....	429	145,348	339	8	26	367,964 10	3 53	857 73	.....	.....
Division Superintendent's office ..	80	24,634	308	9	57	93,633 60	3 80	1,170 42	.....	.....
Supply department .....	26	7,849	302	9	63	16,056 45	3 04	617 56	1	.....
Other employes .....	6,571	1,881,976	286	10	79	4,164,498 55	2 22	633 77	682	3
Total .....	*18,505	5,549,501	299	9.8	66	\$13,982,765 30	\$2 53	\$755 62	1,497	40

\*3,010 employes are required to pass into the States of New York and Pennsylvania in connection with their duties.

**CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending  
June 30, 1911.—(Continued.)**

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

West Jersey and Seashore Railroad Company. Number of Miles of Road in New Jersey—336.94.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employes injured during year.	Number of employes whose injuries resulted in death.
Conductors .....	114	37,551	329	10	26	\$157,362 85	\$5 00	\$1,643 53	2	1
Brakemen .....	292	78,370	268	10	97	234,851 28	2 00	804 28	50	1
Engineers .....	91	29,841	327	10	28	167,005 49	5 61	1,835 22	2	1
Firemen .....	102	30,295	298	10	67	100,296 44	3 30	983 30	1	1
Switchmen .....	3	1,080	360	12	5	2,160 00	2 00	720 00	.....	.....
Flagmen .....	20	6,480	324	11	41	19,958 40	2 99	997 92	1	.....
Engine wipers, etc.....	1	360	360	12	5	589 80	1 64	589 80	.....	.....
Yardmen .....	2	732	366	11	.....	2,301 00	3 14	1,150 50	.....	.....
Trackmen .....	644	199,716	310	10	55	357,573 60	1 79	555 24	2	.....
Agents .....	116	41,816	360	10	5	99,928 20	2 39	861 45	.....	.....
Baggagemen .....	31	10,416	336	11	29	21,516 00	2 07	694 06	.....	.....
Clerks .....	131	44,748	342	10	23	80,877 00	1 81	617 39	.....	.....
Other depot men.....	84	28,236	336	11	29	49,647 60	1 76	591 04	.....	.....
Machinists and helpers.....	16	5,460	341	11	24	15,501 00	2 84	968 81	.....	.....
Blacksmiths and helpers.....	7	2,412	345	11	20	5,535 00	2 30	790 71	.....	.....
Boilermakers and helpers.....	8	2,844	356	11	9	7,875 00	2 77	984 38	.....	.....
Carbuilders and repairers.....	18	4,608	256	10	109	9,679 80	2 10	537 77	.....	.....
Carpenters and Bridgebuilders.....	60	17,580	293	10	72	49,209 25	2 80	820 15	.....	.....
Telegraph operators .....	143	50,059	350	9	15	118,643 90	2 37	829 68	.....	.....
Division Superintendent's office.....	85	30,107	354	8	11	104,905 00	3 49	1,234 18	.....	.....
Other employes .....	631	189,300	300	10	65	476,427 00	2 52	755 04	2	.....
Total.....	*2,599	\$12,111	312	10	53	\$2,111,843 69	\$2 60	\$812 56	62	1

\*32 employes are required to pass into the States of New York and Pennsylvania in connection with their duties.

**CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending  
June 30, 1911.—(Continued.)**

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Erie Railroad Company. Number of Miles of Road in New Jersey—140.46.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employes injured during year.	Number of employes whose injuries resulted in death.
General officers .....	10	3,679	368	8	.....	\$51,311 17	\$13 94	\$5,131 12	.....	.....
Conductors .....	67	21,883	327	10	38	81,238 32	3 71	1,212 51	.....	.....
Brakemen .....	185	54,786	296	10	69	119,828 13	2 74	869 88	.....	.....
Engineers .....	88	27,103	308	10	57	113,160 80	4 18	1,285 92	.....	.....
Firemen .....	93	26,816	288	10	77	70,415 93	2 63	757 16	.....	.....
Switchmen .....	118	40,901	347	12	18	61,524 54	1 50	521 39	.....	.....
Flagmen .....										
Engine wipers, etc. ....										
Yardmen .....	339	92,823	274	12	91	140,171 20	1 50	413 48	.....	.....
Trackmen .....	39	13,916	357	12	8	27,108 62	1 95	695 09	.....	.....
Agents and assistant agents.....	544	169,801	312	12	53	306,305 19	1 80	563 06	.....	.....
Baggagemen, clerks and other depot men.....	111	28,695	258	10	107	73,468 70	2 57	661 88	.....	.....
Machinists, blacksmiths and boiler-makers.....	187	53,148	284	10	81	111,343 24	2 10	595 42	.....	.....
Carbuilders, carpenters and bridgebuilders.....	52	17,512	337	10	28	32,587 20	1 86	626 68	.....	.....
Telegraph Operators .....	28	10,097	361	10	4	26,986 11	2 67	963 79	.....	.....
Division Superintendent's office.....	438	125,469	286	12	79	240,573 97	1 92	549 26	.....	.....
Supply department and other employes.....										
Total.....	2,299	686,629	299	10.5	66	\$1,486,023 12	\$2 16	\$646 38	.....	.....

CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending  
June 30, 1911.—(Continued.)

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

New York, Susquehanna and Western Railroad Company. Number of Miles of Road in New Jersey—132.06.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employes injured during year.	Number of employes whose injuries resulted in death.
General officers .....	4	1,343	335	8	30	\$6,500 00	\$4 85	\$1,625 00	.....	.....
Conductors .....	63	21,738	345	10	20	77,164 74	3 55	1,224 84	.....	.....
Brakemen .....	200	64,170	328	10	37	150,158 43	2 29	750 79	.....	.....
Engineers .....	76	26,642	350	10	15	103,686 19	3 90	1,364 29	.....	.....
Firemen .....	84	26,228	312	10	53	64,826 16	2 47	771 74	.....	.....
Switchmen, flagmen, engine wipers and yardmen.....	152	50,377	331	12	34	75,405 73	1 50	496 09	.....	.....
Trackmen .....	308	78,843	256	12	109	123,540 04	1 57	401 10	.....	.....
Agents and assistant agents.....	62	21,862	352	12	13	43,034 02	1 97	694 09	.....	.....
Baggagemen, clerks and other depot men.....	295	92,321	313	12	52	170,694 52	1 85	578 63	.....	.....
Machinists and helpers .....	82	23,758	290	10	75	61,199 33	2 51	746 33	.....	.....
Blacksmith and helpers .....										
Boilermakers and helpers.....										
Carbuilders and repairers.....										
Carpenters and bridgebuilders .....	130	37,257	287	10	78	81,153 33	2 13	624 26	.....	.....
Telegraph operators .....	68	21,977	325	10	42	35,861 42	1 63	527 37	.....	.....
Division Superintendent's office.....	31	10,878	351	10	14	27,126 22	2 49	875 04	.....	.....
Supply department and other employes.....	239	68,120	285	12	80	130,944 13	1 92	547 88	.....	.....
Total.....	1,794	545,515	304	10.6	61	\$1,151,294 26	\$2 11	\$641 75	.....	.....

**CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending  
June 30, 1911.—(Continued.)**

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Delaware, Lackawanna and Western Railroad (Morris and Essex Division, and Sussex Railroad). Number of Miles of Road in New Jersey—206.99.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employes injured during year.	Number of employes whose injuries resulted in death.
General officers .....	15	4,989	332	8	33	\$63,655 66	\$12 66	\$4,203 71	.....	.....
Conductors .....	101	34,441	341	10	24	159,827 67	4 64	1,582 45	.....	.....
Brakemen .....	209	71,269	341	10	24	217,419 55	3 65	1,040 29	12	2
Engineers .....	177	60,357	341	10	24	292,075 81	4 84	1,650 15	5	1
Firemen .....	178	60,698	341	10	24	174,702 51	2 88	981 48	16	.....
Switchmen .....	29	3,889	341	12	24	19,646 21	1 99	677 46	1	.....
Flagmen .....	268	98,708	368	12	.....	123,398 00	1 25	460 44	2	.....
Engine wipers, etc.....	54	19,001	352	10	13	31,021 32	1 63	574 46	2	.....
Yardmen .....	170	57,970	341	10	24	211,930 09	3 66	1,246 65	20	2
Trackmen .....	1,254	280,567	225	10	140	437,308 62	1 55	348 73	2	.....
Agents .....	104	35,560	342	10	23	88,115 57	2 48	847 27	.....	.....
Baggagemen .....	91	31,079	342	11	22	68,281 19	2 19	750 34	3	.....
Clerks .....	250	83,384	334	10	31	185,272 10	2 22	741 09	.....	.....
Other depot men.....	658	217,203	330	11	35	388,331 90	1 79	590 17	1	.....
Machinists and helpers.....	200	61,245	306	10	59	130,896 23	2 14	654 43	.....	.....
Blacksmiths and helpers.....	47	13,608	290	10	75	31,671 72	2 32	673 87	.....	.....
Bollermakers and helpers.....	72	23,005	320	10	45	55,396 57	2 40	769 40	.....	.....
Carbuilders and repairers.....	671	202,783	302	10	62	449,159 99	2 22	669 39	1	.....
Carpenters and bridgebuilders.....	157	47,235	301	10	64	120,943 47	2 56	770 34	1	1
Telegraph operators .....	23	11,565	350	9	15	32,473 36	2 81	984 04	.....	.....
Division Superintendent's office.....	31	10,415	326	9	29	30,698 38	2 95	990 27	.....	.....
Supply department .....	66	20,924	317	10	48	38,995 62	1 86	590 84	.....	.....
Other employes .....	1,794	574,040	320	10	45	1,223,439 39	2 13	681 96	7	4
Total.....	6,629	2,029,955	306	10	59	\$4,574,060 93	\$2 26	\$690 01	88	15

CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending  
June 30, 1911.—(Continued.)

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Central Railroad of New Jersey. Number of Miles of Road in New Jersey—402.31.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employees injured during year.	Number of employees whose injuries resulted in death.
Other officers .....	9	2,817	313	.....	52	\$29,359 92	\$10 42	\$3,262 21	.....	.....
Station agents .....	163	48,674	299	11	66	125,498 74	12 78	831 28	.....	.....
Other station men .....	1,056	311,614	295	11	70	647,161 73	12 08	612 84	.....	1
Enginemen .....	323	120,009	360	10	5	501,775 46	4 18	1,506 83	14	.....
Firemen .....	334	115,835	347	10	18	290,297 14	12 51	869 15	38	1
Conductors .....	259	92,729	358	12	7	356,290 86	13 84	1,375 64	18	.....
Other trainmen .....	756	214,876	284	12	81	602,088 15	2 80	796 41	99	3
Machinists .....	236	61,611	261	9	104	202,438 61	13 29	857 79	6	.....
Carpenters .....	319	90,192	283	10	82	236,566 19	12 62	740 96	6	.....
Other shopmen .....	907	244,908	270	9	95	588,721 80	2 40	649 09	19	.....
Section foremen .....	127	38,595	304	10	61	100,404 08	2 60	790 58	.....	.....
Other trackmen .....	1,339	385,863	288	10	77	596,787 57	1 52	438 23	1	.....
Switchmen, flagmen and watchmen .....	383	115,750	302	12	63	259,834 90	13 24	678 42	3	1
Telegraph operators and dispatchers .....	61	20,232	332	9	33	55,778 51	12 76	914 40	.....	.....
Employee account floating equipment .....	362	93,193	257	9	168	263,455 52	12 83	727 78	.....	.....
All other employes and laborers .....	1,313	428,255	326	10	39	908,036 14	12 12	691 57	45	7
Total .....	7,957	2,385,156	300	10	65	\$5,764,295 62	\$2 42	\$724 43	251	13

**CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending June 30, 1911.—(Continued.)**

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Philadelphia and Reading Railway Company (Atlantic City Railroad, Delaware and Bound Brook Railroad and Port Reading Railroad). Number of Miles of Road in New Jersey—221.57.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employees injured during year.	Number of employees whose injuries resulted in death.
Conductors .....	71	19,988	281	.....	84	\$77,055 59	\$3 86	\$1,085 29	.....	.....
Brakemen .....	177	50,747	287	.....	78	131,297 35	2 60	745 75	17	2
Engineers .....	88	25,195	286	.....	79	113,269 66	4 50	1,287 16	5	.....
Firemen .....	92	25,927	282	.....	83	68,760 34	2 65	747 40	12	.....
Switchmen .....	136	38,973	287	.....	78	64,494 46	1 65	474 22	3	.....
Flagmen .....										
Engine wipers, etc. ....	96	32,854	342	.....	23	54,537 92	1 66	568 10	.....	.....
Yardmen .....	80	28,590	317	.....	48	47,450 00	1 66	527 22	.....	.....
Trackmen .....	759	204,433	269	.....	96	343,392 61	1 68	452 43	14	1
Agents .....	67	23,053	344	.....	21	50,466 33	2 19	753 23	.....	.....
Assistant Agents .....	21	6,045	283	.....	77	10,140 00	1 68	482 86	.....	.....
Baggagemen .....	18	5,310	295	.....	70	8,897 80	1 68	494 32	.....	.....
Clerks .....	58	21,763	375	.....	.....	36,501 25	1 68	629 33	.....	.....
Other depot men .....	315	111,656	354	.....	11	199,103 71	1 79	632 08	.....	.....
Machinists and helpers .....	43	10,598	240	.....	125	30,063 98	2 91	699 16	.....	.....
Blacksmiths and helpers .....	43	10,307	240	.....	125	26,062 70	2 53	606 11	.....	.....
Boilermakers and helpers .....	8	2,700	337	.....	28	6,837 00	2 54	854 63	.....	.....
Carbuilders and repairers .....	35	10,869	311	.....	54	27,608 64	2 54	788 82	.....	.....
Carpenters and bridgebuilders .....										
Construction gangs .....	48	14,580	304	.....	61	24,344 40	1 67	507 18	.....	.....
Telegraph operators .....	24	6,522	284	.....	81	16,517 35	2 42	688 22	.....	.....
Division Superintendent's office .....	8	2,123	265	.....	100	4,946 00	2 33	618 25	.....	.....
Other employees .....	54	183,684	337	.....	22	384,931 65	2 10	706 30	5	.....
<b>Total.....</b>	<b>2,742</b>	<b>836,217</b>	<b>305</b>	<b>.....</b>	<b>60</b>	<b>\$1,727,378 54</b>	<b>\$2 07</b>	<b>\$629 07</b>	<b>56</b>	<b>3</b>

CLASSIFICATION of Persons Employed on the Steam Railroads in New Jersey, for the Fiscal Year Ending June 30, 1911.—(Continued.)

Number of Persons Employed, Number of Hours on Duty per Day, Total Amount Paid in Wages, Average Daily Wage Rates, and Annual Earnings.

Lehigh Valley Railroad Company. Number of Miles of Road in New Jersey—131.33.

CLASSIFICATION.	Number of persons employed.	Aggregate number of days employed.	Average number of days employed per employee.	Average number of hours employed per day.	Average number of days during year not on duty, Sundays included.	Aggregate amount paid in wages.	Average wages per day.	Average yearly earnings per employee.	Number of employes injured during year.	Number of employes whose injuries resulted in death.
Conductors .....	74	26,001.78	351	11	14	\$98,993 13	\$3 81	\$1,337 75	2	.....
Brakemen .....	174	44,334.1	255	11	110	149,614 61	2 27	859 85	15	.....
Engineers .....	153	48,045.22	314	11½	51	196,323 41	4 09	1,283 19	2	.....
Firemen .....	172	49,201.63	286	11½	79	129,083 15	2 82	750 48	3	.....
Switchmen and Flagmen .....	60	18,419.83	307	12	58	48,733 49	2 65	812 23	1	.....
Engine wipers, etc. ....	87	26,987.87	310	10	55	59,524 23	1 87	590 74	.....	.....
Yardmen .....	233	79,205.8	340	11	25	163,581 18	2 07	702 07	.....	.....
Foremen .....	78	26,724.8	342	11	23	55,620 51	2 09	713 08	.....	.....
Agents, assistant agents, clerks, etc. ....	149	51,783.8	347	9	18	106,363 69	2 06	713 85	.....	.....
Baggagemen and other stationmen .....	293	72,993	259	9	106	137,499 05	1 86	480 77	1	.....
Machinists and helpers .....	17	5,550.9	326	10	39	14,134 12	2 55	831 42	.....	.....
Blacksmiths and helpers .....	181	57,794.6	319	10	46	117,119 22	2 03	647 07	2	1
Bollermakers and helpers .....										
Carbuilders and repairers .....										
Construction gangs .....	463	133,331.2	288	10	71	272,332 93	2 05	589 27	.....	.....
Telegraph operators .....	17	5,304.5	312	9	53	8,595 59	1 62	505 62	.....	.....
Other trackmen .....	318	93,260.7	293	12	72	142,238 64	1 53	447 29	4	.....
Other employes .....	324	72,605.72	224	10	141	163,043 03	2 25	503 22	.....	.....
Total .....	2,786	812,544.73	292	10.5	73	\$1,854,304 98	\$2 28	\$665 58	30	7

## Cost of Living in New Jersey.

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Retail Prices of a Selected List of Articles of Food Supplies, Furnished Each Year by Representative Dealers in the Principal Cities and Towns of the Twenty-one Counties of the State. Prices as they Were in the Month of June, 1911.

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The tables which follow show the retail prices for a list of fifty-two selected articles of food supplies which prevailed in the principal cities and towns of the State during the month of June, 1911. The same inquiry has been a feature of the annual report of the Bureau each year since 1898, and during that time but few changes have been made in the list of articles used in making the investigation, and none at all in the form in which the data obtained are presented. The rule has also been strictly adhered to of having the price lists filled by the same dealers each year, and always the figures quoted are those that prevailed during the month of June. The conditions for making comparisons of the lists of the several years covered by the inquiry are, therefore, as nearly perfect in every respect as could be desired. The practice has been to make comparisons of the prices of each year with those of the immediately preceding year, and also to compare them with those reported for 1898, thus showing the increases and decreases of each year and also the aggregates of the same for an increasingly longer period, which now amounts to thirteen years. A clear chart showing the trend of food cost throughout the State is thus furnished, the substantial accuracy of which cannot be doubted.

There is no topic of current interest that appeals to so many persons here, and elsewhere throughout the civilized world, as the gradual but persistent advance in the prices of food supplies and the causes that are operating to produce that result. The Bureau has no theory to advance regarding the latter phase of the question, having confined its investigations to the work of ascertaining the state of the retail market year after year, and making a record of such increases or decreases as were shown to have

been made. That the rise in prices is not by any means confined to our own country is now generally recognized, as is also the further fact that the causes which have produced the increase are operating abroad with as much vigor as they are here.

As an indication of the trend of economic conditions, statistics of prices and comparisons of the same with other years, unless accompanied by data relating to wages or earnings for the same periods, are practically worthless. The fairness or sufficiency of one cannot be determined without also considering the other. In recognition of this reciprocal relation of incomes and prices, the Bureau has sought to make an accurate record in its annual reports of such changes as appear in both from year to year. Current wages and earnings for that part of our population employed in factories and workshops, numbering approximately 326,000 men and women, are given by industries in the "Statistics of Manufactures" each year, and similar data are supplied for the nearly 50,000 men employed in steam railroad transportation in New Jersey, together with upwards of 5,000 persons engaged in the canning of fruits and vegetables throughout the State. Both elements of the economic problem being thus placed side by side, the inclination of the balance in either direction can be seen at a glance.

To insure the utmost accuracy in the data and uniformity of conditions in making the comparisons, the cost of living reports are, as stated above, furnished each year by the same dealers, and the prices quoted are those that prevailed during the month of June. The wage statistics are compiled from individual reports of all establishments engaged in manufacturing industry within the geographical limits of New Jersey.

Following the form of previous years, the data relating to the cost of food supplies is presented in three tables; the first giving the total aggregate cost of the bill of goods by localities; the second, the average prices which prevailed throughout the State for each article in the list in standard quantities by weight or measure—the prices for 1911 and 1910 being compared in parallel columns; and third, the same in form as the second table, excepting only that the comparison of the figures for 1911 is made with those of 1898, thus showing the changes that have taken place in prices during the past thirteen years.

Table No. 1, which gives the aggregate cost of the entire bill of supplies, is so arranged as to show the comparative costliness by localities; the city or town in which it is lowest appears first on the table, the others following in the order in which they show an advance in prices, the highest as a matter of course being the place which appears last on the table.

Califon, Hunterdon County, shows the cost of the bill of goods there to be the extraordinarily low amount, compared with other places, of \$9.835. In Jersey City, Marlboro, Middle Valley and Flanders, the totals reported range from \$11.580 to \$11.975. In three municipalities the totals are over \$12, but under \$13; in thirty-six, they are over \$13, but under \$14; in fourteen, they are over \$14, but under \$15; in five, they are over \$15, but under \$16, and in three localities the total ranges from \$16.185 to \$16.356. In presenting these totals, it has been found that the difference in prices prevailing in the various localities, and the changes that have taken place during the year in many of them, are so slight as to require the smallest decimal fraction to bring them into view. The average cost of the entire bill of goods throughout the State, is \$13.743. In 1910, the average cost was \$13.143; an increase is therefore shown in the cost of these food supplies as a whole, amounting to \$0.600, or 4.56 per cent.

Table No. 2 shows that of the fifty articles which appear on the list, 36 show decreases, and 14 show increases. The preponderance of increases over decreases, notwithstanding the much greater number of the latter, is due entirely to a remarkably great advance in the price of new and old potatoes, which averaged \$0.904 and \$0.239, more per bushel respectively in 1911 than in 1910. Excluding potatoes from the bill, the comparison would show a net reduction in last year's prices for the entire bill amounting to \$0.543, or 4.13 per cent.

The average yearly earnings of all classes of labor, skilled and unskilled, including men, women and minors, employed in manufacturing industry in New Jersey for 1910—the latest wage statistics available—was \$531.94, which was an increase over the previous year of \$15.37, or 2.97 per cent. These figures show that taking the bill of goods as a whole, the earnings of factory and workshop employes fell 1.16 per cent. short of meeting the advance in cost of food supplies shown by the prices quoted for June, 1911. The largest increase is shown by potatoes, the

figures relating to which are given above, and the largest decrease, appears in the first and second qualities of family flour, which are respectively 5.9 cents and 6.7 cents less per twenty-five pound bag in 1911, than they were in 1910.

Table No. 3 shows in comparison the cost of practically the same bill of goods in 1898 and 1911. The only difference in the list is that prices of flour per barrel instead of per 25 pound bags are used in the comparison. In other respects the list of supplies is the same as that used in the first and second tables. The substitution of barrels for twenty-five pound bags as the basis of quantity in the comparison necessarily produces a large increase in the total cost of the bill. In 1898, the list of articles contained in the bill shows an aggregate cost of \$16.901; in 1911, the same list of goods sold for \$22.108. The increase therefore during the past thirteen years was \$5.207, or 30.81 per cent., while the increase in wages of practically all kinds of labor employed in the State, outside of that in the building trades, was for the same period only 22.56 per cent. The advance in wages during the thirteen years covered by the comparison is thus shown to have fallen 8.25 per cent. short of balancing the increase in prices.

The articles showing the greatest increase are meats, particularly pork products; bacon, salt pork, and fresh pork show advances of 79.34 per cent., 64.21 per cent., and 54.46 per cent. per pound respectively, while the various cuts of beef, fresh and corned, show increases ranging between 14.10 per cent. for rib roast, to 32.50 per cent. for corned round per pound. The first and second quality of flour per barrel sold for \$5.154 and \$4.370 respectively in 1898, and for \$7.205, and \$6.397 respectively in 1911. The absolute increase in cost of the first quality is \$2.051, or 39.79 per cent., and of the second quality, \$2.027, or 46.38 per cent.

There are forty-three articles on this list, eleven of which show small decreases, while thirty-one show increases that are for the most part very large; one article alone—succotash—shows exactly the same price for both years of comparison. The table gives the increase or decrease in price for each article both in absolute amounts and by percentages.

TABLE No. 1.

The Cost of Living in New Jersey—Total Cost of the Entire List of Articles in the Various Cities and Towns of the State.

County.	City or Town.	Total Cost of Entire Bill.
Hunterdon	Califon	\$9.835
Hudson	Jersey City	11.580
Monmouth	Marlboro	11.606
Morris	Middle Valley	11.863
Morris	Flanders	11.975
Hunterdon	Glen Gardner	12.008
Hunterdon	Flemington	12.379
Gloucester	Clayton	12.999
Monmouth	Allentown	13.010
Morris	Dover	13.012
Cumberland	Millville	13.015
Warren	Phillipsburg	13.025
Sussex	Stillwater	13.064
Middlesex	Cheesequake	13.070
Morris	German Valley	13.084
Essex	Orange	13.097
Hudson	Harrison	13.123
Warren	Oxford	13.124
Warren	Blairstown	13.176
Essex	Belleville	13.180
Middlesex	Cranbury	13.201
Warren	Allamuchy	13.252
Monmouth	Allenwood	13.435
Sussex	Monroe	13.461
Ocean	New Egypt	13.510
Hunterdon	New Germantown	13.545
Morris	Chester	13.545
Hunterdon	High Bridge	13.570
Warren	Washington	13.605
Cumberland	Bridgeton	13.606
Burlington	Mount Holly	13.647
Warren	Belvidere	13.650
Monmouth	Freehold	13.728
Ocean	Manahawkin	13.758
Warren	Port Colden	13.769
Atlantic	Hammonton	13.776
Union	Elizabeth	13.800
Essex	Orange	13.805
Mercer	Trenton	13.865
Monmouth	Matawan	13.925
Sussex	Swartwood	13.982
Monmouth	Asbury Park	13.985
Bergen	Garfield	13.985
Warren	Hackettstown	13.988
Sussex	Newton	14.034
Hudson	Hoboken	14.042
Morris	Drakestown	14.118
Ocean	Lakehurst	14.151
Gloucester	Woodbury	14.155
Burlington	Burlington	14.180
Atlantic	Mays Landing	14.265

TABLE No. 1.—(Continued).

County.	City or Town.	Total Cost of Entire Bill.
Cape May .....	Cape May .....	\$14.530
Passaic .....	Passaic .....	14.615
Mercer .....	Princeton .....	14.660
Passaic .....	Paterson .....	14.675
Salem .....	Salem .....	14.690
Morris .....	Boonton .....	14.700
Burlington .....	Bordentown .....	14.941
Camden .....	Camden .....	15.160
Middlesex .....	Metuchen .....	15.190
Bergen .....	Hackensack .....	15.372
Somerset .....	Somerville .....	15.485
Bergen .....	Rutherford .....	15.667
Middlesex .....	New Brunswick .....	16.185
Essex .....	South Orange .....	16.240
Essex .....	Montclair .....	16.356

Total average for the entire State, 13.743.

TABLE No. 2.

Cost of Living in New Jersey—Comparison of Average Retail Prices,  
per Article, Month of June, for 1910 and 1911.

ARTICLES,	BASIS OF QUANTITIES.	Average Retail Prices.		Increase (+) or Decrease (-) in 1911 as compared with 1910.	
		1910.	1911.		
Flour, wheat, first quality.....	Bag (25 pounds)..	\$0.919	\$0.860	(-)	\$0.059
Flour, wheat, second quality.....	Bag (25 pounds)..	.816	.749	(-)	.067
Flour, prepared .....	Pound .....	.088	.127	(+)	.039
Oatmeal, loose .....	Pound .....	.048	.043	(-)	.005
Oatmeal, package .....	Pound (2 pounds)..	.108	.103	(-)	.005
Sugar, granulated .....	Pound .....	.059	.056	(-)	.003
Molasses, N. O. ....	Gallon .....	.589	.591	(+)	.002
Syrup .....	Gallon .....	.476	.474	(-)	.002
Bread, large .....	Loaf .....	.088	.090	(+)	.002
Bread, small .....	Loaf .....	.049	.050	(+)	.001
Butter, first quality.....	Pound .....	.349	.303	(-)	.046
Butter, second quality.....	Pound .....	.325	.254	(-)	.071
Lard .....	Pound .....	.174	.136	(-)	.038
Eggs .....	Dozen .....	.273	.224	(-)	.049
Cheese, best .....	Pound .....	.206	.185	(-)	.021
Cheese, medium .....	Pound .....	.167	.146	(-)	.021
Coffee, Rio .....	Pound .....	.184	.223	(+)	.039
Coffee, Java .....	Pound .....	.241	.298	(+)	.057
Coffee, Maracaibo .....	Pound .....	.317	.320	(+)	.003
Tea, black, first quality.....	Pound .....	.616	.606	(-)	.010
Tea, green, first quality.....	Pound .....	.616	.589	(-)	.027
Tea, mixed, first quality.....	Pound .....	.585	.569	(-)	.016
Potatoes, old .....	Bushel .....	.659	.898	(+)	.239
Potatoes, new .....	Bushel .....	1.070	1.974	(+)	.904
Beef, roast, rib .....	Pound .....	.195	.178	(-)	.017
Beef, roast, chuck .....	Pound .....	.155	.141	(-)	.014
Beef, steak, sirloin .....	Pound .....	.239	.230	(-)	.009
Beef, steak, round .....	Pound .....	.204	.191	(-)	.013
Beef, corned, round .....	Pound .....	.169	.159	(-)	.010
Beef, corned, brisket .....	Pound .....	.112	.095	(-)	.017
Beef, smoked .....	Pound .....	.301	.297	(-)	.004
Pork, fresh .....	Pound .....	.202	.173	(-)	.029
Pork, salt .....	Pound .....	.178	.156	(-)	.022
Bacon .....	Pound .....	.251	.217	(-)	.034
Ham .....	Pound .....	.219	.178	(-)	.041
Shoulder .....	Pound .....	.161	.132	(-)	.029
Mutton, leg .....	Pound .....	.205	.177	(-)	.028
Mutton, breast .....	Pound .....	.132	.103	(-)	.029
Mackerel, salt, No. 1.....	Pound .....	.169	.164	(-)	.005
Mackerel, salt, No. 2.....	Pound .....	.130	.124	(-)	.006
Tomatoes .....	Can .....	.093	.095	(+)	.002
Corn .....	Can .....	.114	.110	(-)	.004
Succotash .....	Can .....	.115	.116	(+)	.001
Rice .....	Pound .....	.086	.081	(-)	.005
Prunes, first quality .....	Pound .....	.114	.153	(+)	.039
Prunes, second quality .....	Pound .....	.083	.120	(+)	.037
Raisins, seeded .....	Pound .....	.105	.109	(+)	.004
Vinegar .....	Gallon .....	.225	.230	(+)	.005
Soap, common .....	Cake .....	.049	.047	(-)	.002
Kerosene oil .....	Gallon .....	.115	.094	(-)	.021
Totals.....		\$13.143	\$13.743	(+)	.600

TABLE No. 3.

Cost of Living in New Jersey—Comparison of Average Retail Prices,  
Month of June, for 1898 and 1911.

ARTICLES.	BASIS OF QUANTITIES.	Average Retail Prices.		Increase (+) or Decrease (-) in 1911 as compared with 1898.	Percentage of Increase or Decrease.
		1898.	1911.		
Flour, wheat, first quality.....	Barrel .....	\$5.154	\$7.205	(+) \$2.051	39.79
Flour, wheat, second quality.....	Barrel .....	4.370	6.397	(+) 2.027	46.38
Oatmeal, loose .....	Pound .....	.944	.043	(-) .001	2.27
Oatmeal, package .....	Pound (2 pounds).....	.106	.103	(-) .003	2.83
Sugar, granulated .....	Pound .....	.059	.056	(-) .003	5.08
Molasses, N. O. ....	Gallon .....	.479	.591	(+) .112	23.38
Syrup .....	Gallon .....	.401	.474	(+) .073	18.20
Butter, first quality.....	Pound .....	.219	.303	(+) .084	38.36
Butter, second quality.....	Pound .....	.169	.254	(+) .085	50.29
Lard .....	Pound .....	.091	.136	(+) .045	49.45
Cheese, best .....	Pound .....	.141	.185	(+) .044	31.20
Cheese, medium .....	Pound .....	.110	.146	(+) .036	32.73
Coffee, Rio .....	Pound .....	.190	.223	(+) .033	17.37
Coffee, Java .....	Pound .....	.320	.268	(-) .052	16.25
Coffee, Maracaibo .....	Pound .....	.250	.320	(+) .070	28.00
Tea, black, first quality.....	Pound .....	.641	.606	(-) .035	5.77
Tea, green, first quality.....	Pound .....	.627	.589	(-) .038	6.06
Tea, mixed, first quality.....	Pound .....	.587	.569	(-) .018	3.07
Beef, roast, rib .....	Pound .....	.156	.178	(+) .022	14.10
Beef, roast, chuck .....	Pound .....	.118	.141	(+) .023	19.49
Beef, steak, sirloin .....	Pound .....	.187	.230	(+) .043	22.99
Beef, steak, round .....	Pound .....	.152	.191	(+) .039	25.66
Beef, corned, round .....	Pound .....	.120	.159	(+) .039	32.50
Beef, corned, brisket .....	Pound .....	.075	.095	(+) .020	26.67
Beef, smoked .....	Pound .....	.249	.297	(+) .048	19.28
Pork, fresh .....	Pound .....	.112	.173	(+) .061	54.46
Pork, salt .....	Pound .....	.095	.156	(+) .061	64.21
Bacon .....	Pound .....	.121	.217	(+) .096	79.34
Ham .....	Pound .....	.119	.178	(+) .059	49.68
Shoulder .....	Pound .....	.084	.132	(+) .048	57.14
Mutton, leg .....	Pound .....	.145	.177	(+) .032	22.07
Mutton, breast .....	Pound .....	.094	.103	(+) .009	9.57
Mackerel, salt, No. 1.....	Pound .....	.154	.164	(+) .010	6.49
Mackerel, salt, No. 2.....	Pound .....	.128	.124	(-) .004	3.12
Tomatoes .....	Can .....	.109	.095	(-) .014	12.84
Corn .....	Can .....	.101	.110	(+) .009	8.91
Succotash .....	Can .....	.116	.116	.....	.....
Rice .....	Pound .....	.082	.081	(-) .001	1.22
Prunes, first quality .....	Pound .....	.102	.153	(+) .051	50.00
Prunes, second quality .....	Pound .....	.086	.120	(+) .034	39.53
Raisins, seeded .....	Pound .....	.095	.109	(+) .014	14.74
Soap, common .....	Cake .....	.043	.047	(+) .004	9.30
Kerosene oil .....	Gallon .....	.100	.094	(-) .006	6.00
Totals.....	.....	\$16.901	\$22.108	(+) \$5.207	30.80

## The Fruit and Vegetable Canning Industry of New Jersey—Season of 1910.

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The data relating to the canning industry of New Jersey for the season of 1910 will be found set forth in every essential detail in the tables which follow. The industry is one of great importance to the agricultural interests of the State, in that it provides a profitable outlet for a wide range of products, which without its aid might for want of a market be unavoidably allowed to perish where they were grown. An unmistakable impetus to farming and truck gardening has invariably followed the establishment of canneries in rural places, and manufacturing interests of certain kinds, such as the making of glass jars and the metal tops thereof, tin cans and other vessels used in packing have been greatly benefited by the growth of the industry. These glass and metal working industries employ many hundreds of operatives who are employed exclusively on cannery material and supplies. Besides these, the industry itself, during the packing season, provides several weeks employment for a large number of persons in the vicinity of the plants, who, in the absence of the opportunities which they afford, would probably be idle during the entire year.

Several of the largest canning establishments in New Jersey manufacture their own cans, and have for that purpose special departments fully equipped with appropriate machinery in which employment is, generally speaking, steady throughout the year.

The report on the industry, instead of being incorporated with the "food products," in the annual Statistics of Manufactures, is presented in this form because it was found to be practically impossible to have accounts and records of business kept by the packers in a way that would permit any more elaborate form of report than that which is here followed.

The condition of the industry, as shown by the packing operations of 1910, is shown in a series of three tables, the first of which gives the amount of capital invested, number of persons employed, total amount paid in wages, number of days in active

operation, and selling value of products for each establishment. On the second and third tables respectively will be found the quantities and varieties of fruits, and the quantities and varieties of vegetables included in the year's pack. In the following summary the totals of these tables are presented for 1910 in comparison with 1909 and such increases or decreases as appear are noted both in amounts and by percentages.

Comparison of Financial Statements for the Year 1909-1910.

	Year.		Increase (+) or Decrease (-) in 1910.	
	1909.	1910.	Amount.	Per Cent.
Number of canning establishments.....	43	33	- 10	- 23.2
Capital Invested .....	\$817,116	\$858,904	+ \$41,788	+ 5.1
Number of persons employed.....	5,388	4,127	- 1,261	- 23.4
Total amount paid in wages.....	\$390,860	\$353,901	- \$36,959	- 9.5
Total selling value of products.....	\$2,219,152	\$1,727,804	- \$491,348	- 22.1
Aggregate number of days in operation....	2,786	2,349	- 437	- 15.7
Average yearly earnings of labor.....	\$72.54	\$85.75	+ \$13.21	+ 18.2

As shown by the above table, 43 canneries were in operation in 1909, and 33 in 1910; the decrease, therefore, is 10 establishments, or 23.2 per cent. of the total number. The capital invested in 1910 shows an increase over the previous year of \$41,788, or 5.1 per cent.; the number of employes, permanent and temporary, was 1,261, or 23.4 per cent. less in 1910 than in 1909; the "total amount paid in wages," "total selling value of products," and "aggregate number of days in operation," also show reductions in 1910 as compared with 1909, of 9.5 per cent.; 22.1 per cent.; and 15.7 per cent. respectively. The average season's earnings of labor show for 1910 an increase of \$13.21, or 18.2 per cent.

Five of the items on the comparison table show decreases as pointed out above, and only two—"capital invested," and "average season's earnings of labor"—show an increase. The number of establishments in operation, the number of persons employed, and the selling value of products show, as indicated by the table, an almost equal percentage of falling off as might be expected, the shrinkage in the second and third items being the direct consequence of that which occurred in the first.

Table No. 1 shows fifteen establishments owned and operated by corporations having 313 stockholders; eight establishments

owned by partnerships of two or three members, and seven establishments under individual ownership. The partners, individual owners, and stockholders together, total 338 persons who control the entire industry. The aggregate amount of capital invested is \$858,904, which is approximately an average of \$26,000 per establishment. The total number of persons employed is 4,127, or an average of 125 for each establishment. The total amount paid in wages is \$353,901, or an average of \$87.75 per employee. The total aggregate value of products is \$1,727,804, or an average of \$52,355 per establishment. The total aggregate number of days in operation during the year is 2,349, or an average of 71.2 per establishment. Several of the canneries, as shown on the table, were in operation during from 115 to 290 days, and the season in the case of several others seems to have lasted only from 20 to 30 days. The total number of persons employed during the season was 4,127, of whom 1,689, or 41 per cent., were men, and 2,438, or 59 per cent., were women.

Table No. 2 shows the quantities of the various fruits canned during the year, the figures appearing just as reported in dozens of cans of several standard holding capacities. The figures are given separately for each establishment, and also for all establishments.

The following summary shows the fruit pack of 1910 in comparison with that of 1909; the contents of the several varieties of standard cans reported on Table No. 1 are reduced to a common basis of pounds, so that the comparison may be presented in the simplest possible form. The increases and decreases are entered on the table in amounts and also by percentages.

Comparison of Fruit Pack in 1909 and 1910.

ARTICLES.	Basis of Quantities.	Quantities for the Year.		Increase (+) or Decrease (-) in 1910.	
		1909.	1910.	Amount.	Per Cent.
Blackberries .....	Pounds.....	788,708	975,180	+ 206,472	+ 26.9
Pears .....	Pounds.....	1,514,748	3,590,028	+ 2,075,280	+ 137.0
Strawberries .....	Pounds.....	1,167,024	1,164,900	- 2,124	- 0.2
Cherries .....	Pounds.....	17,208	36,768	+ 19,560	+ 113.7
Pineapple .....	Pounds.....	8,916	.....	.....	.....
Raspberries .....	Pounds.....	27,984	17,448	- 10,536	- 37.7
Blueberries .....	Pounds.....	110,004	.....	.....	.....
Gooseberries .....	Pounds.....	2,424	1,750	- 674	- 27.8
Totals .....	.....	3,617,016	5,786,074	+ 2,169,058	+ 60.0

Only six of the eight varieties of fruit reported in 1909 appear in the products listed for 1910. The two varieties that seem to have been dropped during the latter year are "pineapple" and "blueberry," of which there were 8,916 pounds and 110,004 pounds respectively, canned in 1909. "Blackberries," "pears" and "cherries" show very large increases, the pack of 1910 being 26.9 per cent.; 137.0 per cent., and 113 per cent. greater than it was in 1909.

The total quantity of fruit of all kinds canned during the season of 1909 was 3,617,016 pounds, while in 1910 the quantity reported was, as shown by the table, 5,786,074; the increase was therefore 2,169,058 pounds, or almost exactly 60 per cent. Even with this great gain, the fruit pack of 1910 is still far behind that of 1908, when the quantity of these goods handled by the canneries was reported at 6,158,396 pounds.

Table No. 3 shows the different varieties of vegetables and the quantities of each that were reported in the pack of 1910. The report of each firm is indicated by an "office number," which in a few instances stands for two or more establishments located in different sections but under the same ownership. The ten varieties of products are entered on the table just as reported, in dozens of one, two and three pound cans, and also in gallon cans. The totals of each variety are shown by the footings of the table. The summary below shows the entire vegetable pack reduced to pounds, with the totals of each variety placed in comparison with those of 1908, increases and decreases being shown in absolute numbers and by percentages.

Comparison of Vegetable Pack in 1909 and 1910.

ARTICLES.	Basis of Quantities.	Year.		Increase (+) or Decrease (-) in 1910.	
		1909.	1910.	Amount.	Per Cent.
Tomatoes .....	Pounds.....	56,552,280	31,545,348	- 25,006,932	- 44.2
Lima beans .....	Pounds.....	5,883,744	4,280,520	- 1,603,224	- 27.2
Peas .....	Pounds.....	6,726,696	5,497,344	- 1,229,352	- 18.2
Pumpkins .....	Pounds.....	1,210,800	3,731,664	+ 2,520,864	+ 208.2
Squash .....	Pounds.....	1,474,536	1,483,056	+ 10,520	+ 0.7
Rhubarb .....	Pounds.....	875,004	873,996	- 1,008	- 0.1
Sweet potatoes .....	Pounds.....	1,667,220	1,644,576	- 22,644	- 1.4
Spinach .....	Pounds.....	359,676	479,568	+ 119,892	+ 33.3
Beets .....	Pounds.....	6,000	861,240	+ 855,240	+ 14,254.0
Asparagus .....	Pounds.....	232,512	.....	.....	.....
Pork and beans .....	Pounds.....	7,128	.....	.....	.....
Okra and tomatoes .....	Pounds.....	7,848	.....	.....	.....
Tomato pulp .....	Pounds.....	168,468	.....	.....	.....
Totals .....	.....	75,171,912	50,397,312	- 24,774,600	- 33.0

The above comparison table shows that four varieties of goods that had figured in the pack of 1909 have entirely disappeared from that of 1910. These articles are: "asparagus," "pork and beans," "okra and tomatoes" and "tomato pulp." There was also a great shrinkage in the quantities of several other varieties, particularly "tomatoes," which has always constituted about 75 per cent. of the entire vegetable pack. The quantity of these goods handled by the canneries in 1910 was 25,006,932 pounds, or 44.2 per cent. less than it was in 1909. Only four articles out of the entire list show an increase, the principal one—pumpkins—being 208.2 per cent. greater than in 1909. The total pack of vegetables of all kinds in 1910 was, as shown by the comparison table, 50,397,312 pounds; in 1909, the total pack was 75,171,912 pounds; the decrease in 1910 was, therefore, 24,774,600 pounds, or 33.0 per cent. Although several of the larger plants reported an increase in total products, the canning industry as a whole did not find the season of 1910 a prosperous one. A very satisfactory increase is shown in the quantity of fruit handled by the canneries, but this was far more than offset by the decline in vegetables.

#### THE FRUIT AND VEGETABLE CANNING INDUSTRY OF NEW JERSEY.

Character of Management, Capital Invested, Number of Persons Employed, Total Amount Paid in Wages, Selling Value of Product, and Number of Days in Active Operation During the Year.

TABLE No. 1.

Office Number.	Management.		Capital Invested.	Number of Persons Employed.			Total Amount Paid in Wages.	Selling Value of Products.	Number of Days in Operation.
	Private Firms. Number of Partners.	Corporations. No. of Stockholders.		Males.	Females.	Totals.			
1.....	.....	4	\$25,000	64	56	120	\$7,479	\$54,940	93
2.....	.....	3	30,000	119	135	245	40,000	171,863	240
3.....	.....	3	13,000	30	70	100	7,000	49,765	50
4.....	1	.....	3,000	30	30	50	1,500	13,800	60
5.....	1	.....	25,000	65	60	125	9,500	97,000	80
6.....	.....	3	322,500	250	100	350	113,800	347,360	64
7.....	.....	168	18,000	73	92	165	10,157	51,597	51
8.....	2	.....	10,000	50	120	170	5,400	34,400	30

TABLE No. 1.—Continued.

Offices Number.	Management.			Capital Invested.	Number of Persons Employed.			Total Amount Paid in Wages.	Selling Value of Products.	Number of Days in Operation.
	Private Firms. Number of Partners.	Corporations. No. of Stockholders.			Males.	Females.	Totals.			
9.....	.....	.....	3	\$20,000	40	87	127	\$7,631	\$35,104	90
10.....	.....	.....	2	48,088	250	375	625	29,907	129,000	60
11.....	.....	.....	3	25,388	73	360	275	19,880	107,908	120
12.....	2	.....	.....	8,000	13	28	41	1,650	7,000	33
13.....	.....	47	.....	5,500	17	76	93	4,868	16,638	60
14.....	1	.....	.....	55,000	16	27	43	1,639	21,638	96
15.....	3	.....	.....	35,000	80	150	230	28,000	200,000	175
16.....	3	.....	.....	16,000	26	28	52	1,500	9,000	45
17.....	1	.....	.....	500	4	7	11	563	2,100	30
18.....	.....	61	.....	5,900	18	20	38	2,140	9,000	45
19.....	1	.....	.....	30,000	67	41	108	50,000	10,618	28
20.....	.....	5	.....	60,000	40	15	55	3,472	71,375	290
21.....	.....	4	.....	15,250	53	112	165	4,881	31,393	39
22.....	.....	.....	.....	12,000	70	90	140	6,000	43,500	54
23.....	2	.....	.....	60,000	70	112	182	6,000	35,000	75
24.....	.....	5	.....	60,000	45	81	126	7,733	40,217	115
25.....	1	.....	.....	800	3	14	19	2,375	1,340	11
26.....	3	.....	.....	10,800	55	85	140	2,809	18,420	30
27.....	.....	.....	.....	15,500	25	80	105	4,183	40,400	35
28.....	.....	9	.....	31,500	70	120	190	8,000	60,000	40
29.....	2	.....	.....	7,000	16	25	41	800	7,360	20
30.....	2	.....	.....	12,000	72	90	142	2,000	19,133	90
30.....	1	.....	.....	4,000	8	30	38	1,396	7,450	77
Totals..	25	313	.....	\$88,904	1,889	2,438	4,327	\$53,901	\$1,727,804	2,346

THE FRUIT AND VEGETABLE CANNING INDUSTRY OF NEW JERSEY.

Product of Canned Fruits and Vegetables for the Year 1910.

TABLE No. 2.—FRUIT.

OFFICE NUMBER.	Blackberries.		Cherries.		Pears.			Raspberries.		Strawberries.		Gooseberries, Gallon Cans, Dozens.
	2-pound cans, Dozens.	Gallon cans, Dozens.	2-pound cans, Dozens.	Gallon cans, Dozens.	3-pound cans, Dozens.	2-pound cans, Dozens.	Gallon cans, Dozens.	2-pound cans, Dozens.	Gallon cans, Dozens.	2-pound cans, Dozens.	Gallon cans, Dozens.	
1.....	1,796	401								606		
2.....	8,229	872	111		23,350	2,560	750	356	89	14,690	1,221	210
3.....	3,000			30	4,000	4,000				4,000		
9.....					3,042	1,800				1,300	85	
10.....					8,900							
14.....		475		15	1,976	472	16					
15.....	12,000	2,000	400	200	25,000	4,000	3,009			10,000	3,000	
19.....					208							
23.....					11,320							
24.....					1,400							
30.....					1,400		40					
Totals.....	25,016	3,748	511	245	80,596	12,832	3,806	356	89	30,596	4,306	210

**THE FRUIT AND VEGETABLE CANNING INDUSTRY OF NEW JERSEY.**

Product of Canned Fruit and Vegetables for the Year 1910.

**TABLE No. 3.—VEGETABLES.**

OFFICE NUMBER.	Tomatoes.				Lima Beans.		Pumpkins.		Squash.
	2 lb. Cans Dozens.	2 lb. Cans Dozens.	1 lb. Cans Dozens.	Gallon Cans Dozens.	2 lb. Cans. Dozens.	Gallon Cans Dozens.	3 lb. Cans Dozens.	Gallon Cans Dozens.	2 lb. Cans Dozens.
1				7,983	9,523	390			
2	54,900			1,788	4,180	150		430	
3	14,000	6,000		2,000	14,000				1,500
4	12,000	5,000							
5					30,830	200			15,000
6					87,712	1,052			
7	33,080	4,708		1,063			7,410	135	2,262
8	36,000								
9	29,280								
10	114,500			11,510					
11	43,984	25,540	27,360	2,767					
12	8,000								
13	19,150			383					
14	10,000				180				
15	60,000	7,000			12,000	3,000	10,000	25,000	
16	12,000								
17	24,000								
18	11,555								
19*	1,024			11,223			78	540	173
20							7,822	2,100	4,772
21				17,800					
22	40,000								
23	28,836								
24									
25	15,700			2,240					
26		24,600							
27	45,000			4,000					
28	9,200								
29	4,148	4,880		4,400					
30	2,000			150					1,250
Totals	628,357	77,728	27,360	67,307	158,420	4,782	25,310	28,205	24,957

\*This firm also reports 7,742 barrels tomato pulp.

## THE FRUIT AND VEGETABLE CANNING INDUSTRY OF NEW JERSEY.

Product of Canned Fruit and Vegetables for the Year 1910.

TABLE No. 3.—VEGETABLES.

Squash—Gallon Cans Dozens.	Rhubarb.		Sweet Potatoes.		Beets.		Spinach.			Pears—2 lb. Cans Dozens.	Tomato Soup—No. 1 Cans Dozens.
	3 lb. Cans Dozens.	Gallon Cans Dozens.	3 lb. Cans Dozens.	Gallon Cans Dozens.	3 lb. Cans Dozens.	Gallon Cans Dozens.	3 lb. Cans Dozens.	2 lb. Cans. Dozens.	Gallon Cans Dozens.		
.....	.....	.....	13,342	666	.....	.....	.....	.....	.....	8,260	.....
.....	.....	3,880	4,256	.....	340	265	.....	.....	.....	.....	35,004
.....	.....	500	.....	.....	.....	.....	.....	.....	.....	.....	.....
208	.....	.....	.....	.....	.....	.....	.....	.....	.....	48,750	.....
335	.....	.....	.....	.....	.....	.....	9,268	430	1,356	149,146	.....
.....	.....	.....	7,000	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	1,134	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	11,920	65	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1,000	4,000	.....	.....	14,000	3,000	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	185	.....	.....	.....	.....	.....
902	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3,787	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	6,000	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22,900	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
614	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5,846	1,000	8,380	43,652	731	14,340	3,450	9,268	430	1,356	229,056	35,004



## Industrial Insurance System of Germany.

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### INTRODUCTION.

Probably no subject bearing on economic interests attracts and holds so large a share of public attention in the United States at the present time as the various plans advocated in legislatures, press, platform and pulpit for relieving wage workers of the burden of financial loss following permanent or temporary disability, resulting from accidental injury while in the performance of their customary duties. Our liability laws—for the most part judge-made, and based on industrial conditions long since passed away—have come to be regarded by many as obsolete or unfair, and, rightly or wrongly, the belief that their administration has been unduly favorable to the protection of property rights as against personal rights seems to be quite widely entertained. This attitude of the public mind has brought about a widespread demand for laws better adapted to modern industrial conditions and more susceptible of just and humane interpretation.

A commission appointed by the Federal government to investigate various methods of compensating workmen for disability originating in their employment, is still studying the subject, and similar commissions appointed by the States of Connecticut, Illinois, Massachusetts, Minnesota, New Jersey, New York, Ohio and Wisconsin, have reported or are still considering measures of a more or less advanced character dealing with the subject. The geographical position of these States would seem to indicate that active opposition to existing liability laws is confined to the eastern, northern, middle and middle western divisions of our country, and that if dissatisfaction regarding them exists in the southern states, it is not sufficiently pronounced as yet to bring about a general demand for improvement.

The New York commission recommended a compensation measure with application limited to certain particularly dangerous trades, which was enacted into law at the 1910 session of the Legislature of that State, and an act, establishing a schedule of

compensation for practically all classes of wage earners, substantially as recommended by our own commission, was placed on the statute books of New Jersey by the Legislature of 1911. The New York law was set aside recently by decision of the State courts as unconstitutional. The New Jersey compensation act is the most advanced legislation on this subject that has yet appeared on the statute books of an American state. A schedule fixing the amounts for which employers are liable as compensation for each one of a long list of injuries is incorporated into the act and the defensive pleas of fellow servants negligence and assumed risks, which have heretofore figured so conspicuously in damage suits, are entirely abolished. Other indications of progress are shown in Maryland and Montana, where State systems of co-operative insurance have been established for the benefit of the miners.

The Twenty-first Annual Report of this Bureau, published in 1898, contains a chapter on the state of the law of Master and Servant in New Jersey, in which some statutory regulation of the same on just and equitable lines was urged as a matter of justice to wage workers and employers alike. In discussing the then state of the law the writer said: "My object is to show (1) that the present law on the subject is exclusively judge-made, and has come to be a mass of legal subtleties more fruitful of controversy and litigation than capable of doing justice either to employer on employe; (2) to suggest that the law itself be improved by judicious revision and restatement in the form of a statute; (3) to suggest a means by which employers, in consideration of paying a certain sum in insurance premiums, would be relieved of further liability and claims for damages, which sometimes absorb more than the profits of business enterprises; and (4) to provide compensation for injuries to workmen with reasonable promptness and certainty. In whatever statute may be enacted," the article went on to say, "it should be made very clear that the great variety of legal quibbles, which now too often constitute successful defences, shall no longer be permitted to do so. The employer should know the extent of his liability to his employes and the workman should be reasonably certain of compensation in case of injury, without so much risk of losing both his case and his situation."

The discussion of employers' liability in this State has occupied a conspicuous place in each of the annual reports issued by this Bureau since the publication of the study from which the above extract is made; to emphasize the importance of the subject and indicate the urgent necessity of legislative action, a list of wage earners who suffered death or prolonged disability as a result of accidents that befell them while at work is compiled and published annually, together with such particulars relating to each occurrence as would serve to show whether they were or were not preventable by the use of proper safeguards.

Continuing the policy of keeping the subject before the public, the Thirty-second Annual Report of the Bureau contained a review of the common law doctrine of employers' liability in New Jersey and other states, with a reprint of such statutes modifying or entirely displacing the same as had been enacted up to the end of 1909. The purpose was to place before our Legislature and people the fullest possible information relating to the manner in which other states had dealt with this important subject, thereby furnishing a guide to such legislative action as might be deemed advisable in the readjustment of our own liability laws.

Our compensation law—the first having application to all classes of wage earners that has been enacted in the United States—bears no resemblance to any of these. It is in a class by itself, and will, in all probability, if proven successful and satisfactory here, become a model for similar legislation in other states. Experience yet to be gained through its practical operation may reveal something in the law that should as a matter of justice be changed, and it therefore seems advisable to examine and familiarize ourselves with the laws of other countries having similar ends in view. Undoubtedly Germany is chief among the countries offering material for such study, as being the first to adopt a system of compulsory insurance of workmen on a national scale as part of its policy.

Having stood the test of twenty-five years' successful operation, with results that justify fully the reasonable expectation of its founders, the German system of workmen's insurance has come to be regarded by many interested in the progressive modern sociological movement as the best method for equalizing industrial burdens and protecting the masses of the people against

the consequences of total or partial loss of working efficiency following accidental injury, sickness or old age that has yet been devised. Its success has had a most important influence on the development of social insurance throughout Europe, and in our own country it has long been regarded as a model that should be carefully studied and considered in framing laws for dealing with the same problems.

To facilitate such study and to enable our law-makers and people to familiarize themselves with the wide scope of the German law and the machinery of its administration, the Bureau secured the services of a competent special agent—Dr. W. H. Tolman, *Director of the American Museum of Safety Devices*, who in the early part of 1910 made a thorough investigation of the system and its administrative organization at the Imperial Insurance Office, Berlin, and at the offices of the various trade sections throughout the Empire. A very complete report covering every phase of the system was obtained.

An exhaustive investigation of the same subject, covering not Germany alone, but ten other European countries that have more or less comprehensive forms of industrial insurance, was made by the United States Bureau of Labor, and the results in regard to the systems of Germany, France, Austria, Belgium and Denmark are given with the most careful elaboration of every essential detail in Volume One of the Thirty-fourth Annual Report of Commissioner Charles P. Neill, which was published in the early part of 1911. This report is undoubtedly the most thorough study of industrial insurance under absolute or qualified governmental control or assistance that has yet appeared in print.

Before going into the German system, which is the main subject of this chapter, a brief review of those of other European countries will serve to show how powerfully the example of Germany in dealing with this fundamental social question has influenced the policy of other countries. The material for this outline sketch is drawn from the report of Mr. McNeill; the more extensive study of the German system is based on information derived in part from the same report, but more largely from the Bureau's own special investigation and from the official German reports.

The various forms of social insurance now in operation in European countries may be designated as follows:

1, Accident; 2, Sickness; 3, Maternity; 4, Invalidity and Old Age; 5, Unemployment; 6, Insurance for Widows and Orphans.

A review of each of these subdivisions of the insurance system is given in the following pages:

#### ACCIDENT INSURANCE.

The principle of systematic compensation for losses due to industrial accidents was established in Europe more than one hundred years ago, the earliest examples being found in the mining districts of Austria and part of the territory now included in the German Empire. As these industries were the first to be operated with large numbers of men whose safety depended on the care and skill of the manager and of their fellow workmen, and having also a high death rate, it was but natural that attempts should be made to provide in a definite manner for the relief of distress among employes caused by physical disabilities resulting from their employment. The industry of navigation possessing similar characteristics of inherent risk and numbers employed, also developed at an early date comparatively well-defined systems of relief for disability incurred in the operation of vessels. The next industry to be operated on a large scale, and which had at the same time a high trade risk, was that of railway transportation, and in the states of the present German Empire, early efforts were put forth to make provision for railway employes on a more liberal scale than that prevailing in other industries. With the growth in the size of factories, number of employes brought together in one place, and application of power machinery, there was a decided increase in the trade risk or incidental danger of the industries so affected. Previous to the development of large scale production, a comparatively simple system of compensation for industrial accidents prevailed in practically all countries, and was based on the idea that the workman suffering an accident should be compensated by the person or persons responsible for causing it.

The relief provided by the Civil Code in continental Europe was more readily obtainable than that permitted under the common law of England, but in each case the person liable was supposed to have committed some fault, and in order to recover, it was necessary for the person injured to begin suit and prove such fault according to the rules of evidence prevailing in the courts of each country. The gradual transition of the older liability conception to the modern idea of compensation cannot be followed in the limited space allowed for this chapter, but persons interested may find the same clearly indicated in Mr. McNeill's report.

Germany, as already stated, was the first country to adopt a comprehensive system of accident compensation on a large scale, which was done in 1884; Austria followed in 1887, and since then practically all the industrial

countries of Europe have adopted more or less modified forms of the same plan. Disregarding acts affecting only separate groups of wage earners, the following list shows the order in which the various countries adopted laws providing national systems of accident compensation: Germany, 1884; Austria, 1887; Norway, 1894; Finland, 1895; Great Britain, 1897; Denmark, 1898; Italy, 1898; France, 1899; Spain, 1900; New Zealand, 1900; South Australia, 1900; Netherlands, 1901; Greece, 1901; Sweden, 1901; Western Australia, 1902; Luxemburg, 1902; British Columbia, 1902; Russia, 1903; Belgium, 1903; Cape of Good Hope, 1905; Queensland, 1905; Hungary, 1907; Transvaal, 1907; Alberta, (Canada), 1908; Quebec, (Canada), 1909. New York and New Jersey passed their laws, as before stated, in 1910 and 1911, respectively.

At the present time, three distinct types of compensation for accidental injuries may be distinguished in the systems of these countries.

1. Systems of pure compensation, in which the employer must provide a compensation according to a scale specified in the law without any obligation to insure or furnish a guarantee that the money will be forthcoming when demanded. Belgium, Denmark, France, Great Britain, Greece, Russia and Spain are included in this group, as is New Jersey also.

While insurance is not required, the law in practically all the countries named, seeks to encourage it by relieving the employer of his liability if he contracts for such insurance. The system necessarily implies a proper supervision of the operations of accident insurance organizations that carry such risks. In Belgium and France, the state has established a guarantee fund to protect the insured persons in case of the insolvency of the employer or the insurance company. In France all employers, whether insured or not, must contribute a certain tax to this guarantee fund, while in Belgium only the employers who fail to carry accident insurance are required to pay. In case of accident leading to death, the uninsured employer is required to deposit the capitalized value of the pension due. These requirements exert a powerful influence in favor of insurance.

2. Systems in which the law holds the employer individually responsible and in addition requires him to take out insurance either in recognized private companies, or in a state institution, or else to furnish a guarantee to cover his responsibility. Finland, Italy and the Netherlands are in this group. In the Netherlands a state institution exists which does a considerable part of the insurance, but private companies are operating in competition with it, as are also mutual associations and establishment funds under satisfactory guarantee to the state. Similarly in Italy a large national institution, under State supervision and control, operates side by side with all other forms of insurance institutions, such as commercial insurance companies, mutual employers associations, and in exceptional cases, specially authorized establishment funds. In Finland, the business of accident insurance is divided mainly among stock companies and employers associations.

3. Systems in which the law requires the employer to insure in a specified manner or a specified institution. This group includes Austria, Germany, Hungary, Luxemburg and Norway.

In Hungary, Luxemburg and Norway a central state institution conducts the insurance of employers subject to the law, while in Austria similar institutions exist, but for the convenience of administration the country is divided into a number of districts with a separate institution for each district.

In Germany the organizations conducting the insurance are composed of employers engaged in the same or similar industries, and membership in the proper association is compulsory for all employers.

In countries in which a compulsory system of insurance or compensation is in force, the old liability legislation must necessarily be retained to form what may be termed the background for cases not covered by this system.

In certain countries, of which Great Britain is the most conspicuous example, the workman is given the right to choose whether he will demand redress under the compensation laws or under liability laws. This right is also reserved to workmen and their employers under the New Jersey law. While theoretically this plan leaves the compensation laws and the liability laws existing side by side, as a matter of fact the new system practically supplants the old one.

In Sweden the law provides that the compensation received does not deprive the injured workman of any rights under the old liability laws, for damages in excess of the amount of compensation received, but in practice this right is very seldom exercised.

#### SICKNESS INSURANCE.

As the danger of sickness and economic distress resulting therefrom exists in every form of industrial organization, the beginnings of sickness insurance go further back than those of insurance against accidents or any other form of social insurance; these beginnings are to be found in the organization of mutual aid societies, and are not limited to any special industry or social group. From this form of purely voluntary organization, supported exclusively by contributions of its members, a steady development has taken place toward compulsory sickness insurance strictly regulated, and in some cases assisted by the state, but the transformation is far from complete, and as yet, the compulsory system has been adopted in Germany and Austria only. The important feature of this development has been that the mutual aid society was found, for many reasons, to be the most convenient form or organization for the purpose of establishing compulsory sickness insurance. Briefly, the evolution of sickness insurance may be said to be by the following stages:

1. Free and voluntary associations entirely unregulated by law.
2. Regulation by law, either compulsory or optional, with classification of societies into recognized and unrecognized.
3. Regulation combined with government assistance.
4. Compulsory insurance, the final stage in the process of evolution.

## FREE, UNREGULATED SOCIETIES.

Strictly speaking, in no country are mutual benefit societies or any other form of organization, left without some sort of government control to which even voluntary associations of citizens would naturally be subject. In the making of its rules of association and by-laws, care must be taken that there shall be nothing in conflict with the law of the land either in the purposes of the organization or the duties imposed upon its members. The nearest to being in an unregulated condition are the mutual benefit societies of Spain and Russia.

## GOVERNMENT REGULATION.

Great Britain, Finland, The Netherlands, Italy and Sweden may be classified in this group. In all these countries special laws have been promulgated for the regulation of mutual benefit societies. Generally speaking, submission to this regulation is not compulsory. It remains with each individual society to choose whether to subject itself to this more or less strict regulation, but certain advantages are offered to such societies as do so; these are partly of an indirect nature such as free postage or exemption from certain stamp dues, but the main advantage lies in the official approval which necessarily follows submission to government control. In all these countries the existing mutual benefit societies are naturally divided into two classes—those subject, and those not subject to the regulations. Statistics show that in these countries increasing numbers are availing themselves of the advantages of incorporation, and that the larger and sounder the organization the more likely it is to do so. As yet, however, the regulated societies are in the minority.

Notwithstanding the great difference in the economic conditions of Great Britain and Italy, the situation as regards benefit societies is very similar. The mutual benefit societies in Great Britain—usually known as friendly societies—are purely voluntary and have existed for more than a century. Laws for the regulation of these societies date back as far as 1793; the acts of 1875 and 1896 provide for the voluntary registration of friendly societies by which they subject themselves to fairly strict regulation in exchange for various minor benefits and general advantages resulting from improved standing as a registered friendly society. Similar conditions prevail in Sweden, the law providing for optional registration of sick benefit societies, while in Finland all workmen's mutual benefit societies, whether for sick or old age relief, must be subject to government regulation.

## GOVERNMENT SUBSIDIES.

Government recognition merely not having proved a sufficient stimulus to the extension of mutual aid societies so as to take in all classes of wage earners, a more effective method of accomplishing this aim is sought in direct government subsidies. Belgium, Denmark and France have adopted this policy. All have laws permitting and even encouraging voluntary registra-

tion and regulation, but in each of them the recognized or regulated societies participate in an annual distribution of subsidy funds provided by government for that purpose. In France the subsidies granted by government are limited by law to old age and invalidity pensions only, and are not allowed to be paid out on any other account. In Denmark the law grants state subsidies to recognized societies that provide sick benefits and old age pensions.

### COMPULSORY INSURANCE.

While the activities of mutual benefit societies have undoubtedly been stimulated by the various systems described above, they have still fallen far short of bringing this class of mutual benefit home to the entire body of wage earners. The only method which has as yet been found practicable for accomplishing this aim is the introduction of compulsory sickness insurance, which usually carries with it the shifting of some part of the burden from the employe to the employer. Germany, by its act of June 15th, 1883, was the first to introduce this system on a national scale; its example was followed by Austria in 1888, Hungary in 1891, Luxemburg in 1901 and recently by Norway in 1909. In all three countries the policy was followed of retaining the voluntary sick benefit societies existing at the time the compulsory laws were enacted. It was believed that local organization and self government were necessary to the success of the system, and therefore a great variety of organizations is found in these countries even under the uniform system of compulsion. Funds based on geographical lines, establishment funds, trade funds, and others frequently operate side by side, though at the present time the tendency is to strengthen the funds based on geographical limits.

The idea of compulsory sickness insurance is increasing in popularity, and in countries in which, as yet, it does not exist, particularly France, Italy, Russia and Switzerland, proposals for its establishment seem to be growing in favor.

A study of organizations for sickness insurance shows how closely sickness is interwoven with other causes of economic distress. From the point of view of causation, it is often difficult to draw the line between sickness and accident, and sickness may develop into more or less permanent invalidity. In its earliest form the mutual benefit society naturally gave assistance in all cases of disability, whether due to accidents or sickness, and the length of time for which it was given depended on the financial strength of the organization. The investigations of actuaries have placed sickness insurance on a definite insurance basis, and more careful differentiation between the various causes and forms of infirmity has resulted. Nevertheless for practical purposes of administration the societies find it of advantage not to draw the line too strictly.

With the growth of workmen's accident insurance systems, the burden of industrial accidents has fallen less heavily on the mutual benefit societies, yet it has been found advantageous both in Germany and Austria to leave the care of all accidents during the earlier stages to the sickness insurance organizations. The advantages of such a combination are on the one hand,

the speed of relief, and on the other, the comparative simplicity of administration and supervision which tends to reduce malingering. In other countries where there is no such well organized system of compulsory insurance, the compensation laws frequently provide for a certain waiting period during which accidents are not compensated and the duty of furnishing relief in such cases falls upon the voluntary mutual benefit societies.

### INVALIDITY AND SICKNESS INSURANCE.

Where no well regulated system of invalidity insurance exists, a considerable part of the relief of invalids becomes a burden upon the mutual benefit societies primarily organized for the relief of temporary disability. In the nature of things the difference between sickness and invalidity is one of degree and not of kind. Prolongation of illness changes a case of sickness to one of invalidity, and on the other hand, the final cure of a person after a more or less prolonged period of invalidity, is not unusual, but the continued care of chronic invalids soon becomes a heavy burden upon the sick benefit societies and some limitation of the period of benefit payments becomes a necessary provision in the constitution of all sick benefit organizations. In Germany, where this problem of invalidity and old age received the most careful attention, an arbitrary line distinguishing sickness from invalidity is now drawn at twenty-six weeks.

### MATERNITY INSURANCE.

This branch of social insurance is still little developed in most countries and is usually combined with the general system of sickness insurance. The employment of women in industry however has emphasized the importance of this form of insurance, which from an administrative point of view requires that the provision for maternity shall differ from that for ordinary sickness.

The actuarial factors on which a system of maternity insurance must be built are different from others in that it concerns only female wage workers within certain well defined age periods, while the social intent is even broader than that of ordinary sickness insurance, its purpose being not only assistance to the mother, but also care for future generations and the reduction of infant mortality.

The earliest efforts toward accomplishing these aims were in the form of legislation regulating conditions of work for some time before and after childbirth, so as to prevent the occurrence of various diseases and accidents frequently connected therewith. The period varies in the legislation of different countries, usually being from four to six weeks. This, unlike sickness legislation, forces a period of idleness upon the female, thereby creating a need of financial assistance.

### PRESENT SYSTEMS OF MATERNITY INSURANCE.

In Germany, though the theoretic difference between maternity and sickness is recognized, the granting of these benefits is made a part of the sick-

ness insurance system. In France, there is as yet no specific regulation of maternity insurance. Many of the mutual benefit societies grant maternity benefits, and there are many societies for the express purpose of providing maternity relief. These are all subject to the general laws relating to mutual benefit organizations. In Austria it is combined with the general system of sickness insurance. In Russia the legislation requiring employers to furnish medical help to their employes is extended to cases of maternity, and the regulations provide even that the larger establishments in which female labor is employed shall permanently maintain midwives in the nearest hospitals.

In Italy a bill brought into the Parliament by the government five years ago and now under discussion with considerable chances for success, provides for maternity insurance on a national scale. The plan proposes the organization of one central fund for the compulsory insurance of all wage-earning women of child-bearing age, employed in industrial establishments. The cost of this insurance is to be met by equal contributions from employers and employes concerned, and the benefits are to consist of three-fourths of the ordinary wages for a period of twenty-eight days after confinement, during which period work is prohibited to such mothers by a law of 1902.

Whether in connection with sickness insurance, or independently, this form of insurance has in practically all countries shown a tendency to develop under pressure of more advanced labor legislation and of the desire to reduce the death rate of infants in the industrial districts.

#### OLD AGE AND INVALIDITY INSURANCE.

The earliest and most commonly known forms of provision for the indigent aged are the systems of public charity known as outdoor and institutional relief, but neither of these forms can properly be designated as features of a social insurance system. In European countries the payment of pensions to superannuated or invalid employes has been customary for many years.

In addition, many private establishments have been accustomed to pension aged or infirm employes after long terms of service; such pensions are usually paid entirely by the employer, the purpose being to secure good conduct and continuity of service from the employes.

Such pensions have, however, affected only a small proportion of the persons generally included in a system of social insurance. The first forms of old age and invalidity insurance are found in the voluntary mutual organizations of various kinds, such as the miners' relief funds, trade union funds, and mutual aid societies. The systems adopted by these organizations were usually without any proper insurance basis so far as an equilibrium between liabilities and assets is concerned, and even at the present time many organizations are endeavoring to carry on the same benevolent work without an assured income large enough to meet liabilities.

The forms of old-age insurance now in operation may be classified as—voluntary insurance not subsidized by government; voluntary insurance receiving government subsidies; compulsory insurance, and non-contributory insurance. A brief review of these systems follows:

## I. VOLUNTARY SYSTEM OF OLD-AGE INSURANCE.

*(a)* NOT RECEIVING GOVERNMENT SUBSIDIES.

The earliest and most extensive system of voluntary old-age insurance were those of the miners funds. Such voluntary funds have existed for many years in Austria, Belgium, France, Germany, Great Britain and Poland. In most cases the incomes of these funds were derived from contributions of both employers and employes, and their operation proved so satisfactory that at a later date membership in them was made compulsory in the continental countries. Similar funds gradually sprang up in other industries employing large groups of workmen, as in navigation and railroads.

Since the development of the factory system the trades unions have attempted to make provisions for their aged members, although, as before stated, often without an actuarial basis. The trades unions of Great Britain lead in this respect, and similar work is carried on or attempted by unions in Austria, Germany and some other countries.

In Belgium, France, Great Britain and Italy, the government has instituted a scale of old-age annuities to individuals without regard to occupation on terms merely sufficient to defray the cost of insurance; usually the operation of this insurance is conducted by the postal savings bank or some other existing public office, the advantages being a low cost of administration and the security of a government institution.

Establishment funds, which provide old-age pensions for employes on the basis of contributions from both employers and workmen, are found in many countries. Usually the employer requires the workmen to join the fund, so that so far as the latter is concerned the system may be regarded as compulsory. Such establishment funds have had an especially large development in France, the railroad relief fund being the principal one.

*(b)* RECEIVING GOVERNMENT SUBSIDIES.

The importance of encouraging workmen and persons of small means to provide for old age was recognized at an early date by many European governments. To encourage voluntary organizations providing old-age pensions, the governments of Belgium, France and some other countries grant subsidies of various kinds to all such societies. Special institutions for carrying old-age pensions have been provided in some countries and as such insurance is necessarily very expensive, government had added a subsidy in the form of either paying the cost of administration or making a direct appropriation in aid of the work. In Italy, Portugal and Spain these subsidies take the form of a grant of money to insured persons engaged in manual occupations. In Belgium and France the government subsidy is a special grant to workmen over sixty-five years of age, but in the latter country it is conditional on twenty-five years of membership in the insurance society.

In countries having compulsory systems of old-age insurance—that is to say, Austria, France and Germany—persons not subject to the compulsory law are permitted to voluntarily insure themselves in the subsidized societies

under certain restrictions and receive the benefit of the government grants to these national systems.

## II. COMPULSORY SYSTEMS OF OLD-AGE INSURANCE.

The three European countries having a national system of compulsory old-age insurance are Austria, France and Germany. In each country the law enumerates the class of persons subject to its provisions. In Austria salaried persons only are included, though a plan is now being formulated for a national system of insurance for workmen; in France and Germany the laws cover nearly all of the population gainfully employed who are receiving wages or salaries, though many independent persons of small means are also included. The expense of the pensions in each of the three countries is met by payments from the insured persons and from the employers; in France and Germany the State grants an additional amount to the pension paid, while in Austria the government grants a subsidy toward the cost of administration. The payments of the insured persons are obligatory, and are deducted from the wages or salaries by the employer.

Austria, France, Russia, Belgium and Italy have compulsory systems of insurance applying only to persons engaged in specially dangerous occupations, such as mining, navigation and railroad transportation. Employes in state industrial establishments, such as the tobacco factories of France and Italy, and certain government monopolies in Russia, are also covered by this special insurance.

## III. NON-CONTRIBUTORY SYSTEMS OF OLD-AGE PENSIONS.

\* Systems of contributory old-age pensions have been found to involve such heavy outlays, both by the insured employes and their employers, that the state has invariably found it necessary to assume at least a part of the burden by making direct contributions to the insurance fund, as well as by assuming all or part of the cost of administration, which necessarily must be very high. Another difficulty often brought forth as an argument against a system of old-age pensions on a national scale is the necessity for large accumulations of capital and the difficulty attending their proper investment and the far-reaching effect of such investments upon the general condition of the money market. These objections are entirely overcome by a comprehensive non-contributory system of old-age pensions paid out of the general revenues of the state. In this way the burden is assessed equally on the entire population in accordance with the general policy of taxation prevailing in the country. The best known example of this system may be found in Great Britain, although previous to its adoption there it had existed in Denmark and some of the Australian commonwealths. This plan is also in use in France, where it is known as a system of obligatory relief of aged and infirm persons in indigent circumstances; this system, as introduced in 1905, does not interfere with the compulsory insurance system approaching the German type which was introduced in France by a law of 1910. In France

the non-contributory pensions provided in the act of 1905 begin at 70, while the old-age pensions as established by the law of 1910 begin at the age of 65; under the French system aged persons are permitted to receive benefits under both laws at the same time.

This non-contributory system is not, strictly speaking, a form of social insurance, as it is entirely independent of any insurance principles, but it is interesting as representing an effort to meet conditions that social insurance was designed to cope with.

### INVALIDITY INSURANCE.

The conditions of old-age and invalidity are very similar from the insurance point of view. Both forms of insurance are intended to meet long continued disability; the difference lies mainly in the age at which the payment of benefits under either begins but payment of benefits under either form is quite liable to be continued for a number of years. For this reason invalidity insurance has naturally been combined with the old age systems, though in its earliest forms it was operated in connection with the sick benefit. The existing forms of invalidity insurance may therefore be classified like the old-age insurance, as, first, voluntary systems; second, compulsory systems; and third, noncontributory invalidity pensions.

As to the first, comparatively few voluntary organizations provide invalidity insurance, the work being usually done in connection with old-age insurance, and in some cases also by the sick benefits, when old age pensions are not granted. In Great Britain the friendly societies, in Germany the trade unions, in Belgium, France and Italy the mutual benefit societies provide such insurance. Where special government institutions exist for voluntary old-age insurance, there are usually some invalidity features which may take the form either of a premature liquidation of the pension, or such liquidation together with special invalidity benefits.

In the special old-age and invalidity funds for miners, railroad employes, seamen, etc., which were referred to in connection with old-age insurance, invalidity pensions are usually but not universally granted. In some of the railroad funds in France and other countries, invalidity pensions depend upon a certain length of service, and in others no provision is made at all for them. In general it may be said that there has been a gradual increase of invalidity pensions in connection with all old-age insurance systems. In Germany it is now the dominant feature of the old-age and invalidity insurance system, there being in force at the present time about 100,000 old-age pensions as compared with 800,000 invalidity pensions.

The same reasons for state subsidies of old-age insurance apply in the case of invalidity insurance; such institutions as provide old-age insurance usually furnish invalidity insurance also on the same basis and receive the same, or even a larger subsidy from the state. Such invalidity pensions are provided in Belgium, France and Italy. The mutual aid societies in these countries provide invalidity pensions in addition to old-age insurance and receive government subsidies for that purpose.

In Austria, France and Germany, where there are compulsory systems of invalidity insurance, persons not subject to the obligation to insure are permitted under certain conditions to do so voluntarily and are allowed the benefit of government aid.

### COMPULSORY SYSTEMS OF INSURANCE.

Invalidity and old-age insurance are combined under the compulsory laws of Austria, France and Germany. The persons subject to one form of insurance are also covered by the other. The pensions provided consist of a basic sum computed on the length of time for which the insured person has paid the required contributions, and in France and Germany this sum is increased by a special subsidy from the state; in Austria, where the law applies to salaried persons only, the Government subsidy is given in the form of an appropriation to defray part of the cost of administration of the old-age and invalidity pension fund.

In France the invalidity insurance of miners and railroad employes in their respective relief funds is obligatory, and in Belgium all railroad employes and all seamen must be covered by invalidity insurance.

France and Austria now have compulsory laws relating to old-age and invalidity insurance, but both went into effect so recently that statistics of their operation were not available in time for use in this report. In Germany practically the entire wage earning population is covered by the compulsory system of old-age and invalidity insurance, with, as before noted, a vast preponderance of invalidity cases.

### NON-CONTRIBUTORY SYSTEMS OF INVALIDITY INSURANCE.

The most conspicuous instance of a state system of invalidity insurance is that created by the French law of 1905, providing relief for aged and infirm persons. Under this system persons over 16 years of age are insured against invalidity without any previous action on their part. In the Australian confederation and in the commonwealth of Victoria, similar benefits are automatically provided by law. In New South Wales and in Denmark, invalids above a certain age are entitled to pensions.

### UNEMPLOYMENT INSURANCE.

Want of employment is a condition in the experience of the average wage earner which is productive of practically as much suffering as would be the case if the stoppage of earnings was due to invalidity. Insurance against unemployment has therefore been a matter of experimentation for a long time, but as yet no satisfactory system has been evolved. Individual effort to provide against the consequences of unemployment by deposits in savings banks is the earliest and probably the most reliable method. Mainly for the purpose of affording aid to such thrift, institutions for savings have received the encouragement of government in practically all countries. Next to individual effort come the collective undertakings of various kinds, the

most important of which are by the trade organizations of the workers themselves. As was the case with other forms of social insurance, the first methods used were very crude and had no proper insurance basis, nor can it be said that those in use at the present time are much better. The most successful systems now in vogue are those of the trade unions and other forms of non-speculative voluntary organizations. Provision against distress due to employment has proved to be a feature well adapted to promote the general aims of trade unions, and has been very effective in preventing the depression of wages by unemployed workers. Several attempts have been made to provide unemployment insurance by companies conducted on a commercial basis. In recent years the operation of voluntary associations for providing against periods of unemployment have been recognized as having a distinct social value, and at the present time the formation of such societies in the most important industrial countries of Europe is being encouraged by means of subsidies from the national governments, while in other countries the local or municipal authorities are even more energetically aiding these institutions. Only one attempt has thus far been made to establish a system of compulsory unemployment insurance; that was in the Swiss Canton of St. Gall, and for a variety of reasons the effort had to be abandoned.

With the growth of trade unions it was recognized at an early date that proper care of fellow craftsmen out of work would be an efficient means of preventing any cutting of the prevailing rates of wages. The British trade unions in particular recognized the importance of this provision against unemployment, and at least one of them had instituted a system of out-of-work benefit as early as 1831. This example spread so that at the present time such relief is provided by some of the unions in every industrial country of Europe. The forms in which unemployment benefits are provided consist of, first, a certain weekly allowance of money while out of work, usually granted under some restrictions; second, a travel benefit, enabling the idle workman to reach localities where there are opportunities for employment; and third, a removal benefit, permitting the workman to remove his family to where he has found permanent employment. Some of the trade unions of Belgium and France have workshops in which idle members are allowed to work until other employment has been secured for them. In the Friendly Societies of Great Britain the unemployment benefit consists solely of the remission of dues while the member is unable to obtain employment.

The social importance of voluntary organizations for the relief of unemployed workmen was first recognized by some of the cities of Belgium where the system of granting subsidies to trade union and other funds paying unemployment benefits has reached a considerable development. Municipalities in other countries adopted this method of encouraging unemployment insurance, and in the year 1905 the National Government of France put into operation a system of subsidies on a national scale by appropriating a liberal sum to defray the expenses. The example of France was followed in 1906 by Norway, and in 1907 by Denmark. In each of these three countries a subsidy proportioned to the amount paid by the organization providing the unemployment benefit is granted by government, and in each case the law

making the grant carefully stipulates the conditions under which the subsidy is to be distributed. In other countries large amounts are distributed as subsidies by many of the local governments, such as the municipalities, communes and provinces. France and Germany, and many of the local governments have adopted this policy. In Norway the local governments voluntarily reimburse the national government for the larger part of the expenditures on account of the subsidies. In all the countries in which subsidies are granted, the principal institutions receiving them are the trade unions. In order to make provisions for workmen who are not members of trade unions, in some places a plan has been adopted of giving a bonus on savings bank deposits which are withdrawn because of want of work. In other places the trade unions are required to admit, as members of their unemployment section, any one engaged in the occupation who may desire to avail himself of the unemployment subsidy system.

In almost all the industrial countries of Europe there are numbers of business firms that have created unemployment funds for the benefit of men who work in their establishments. Membership in these funds is sometimes voluntary. As the largest part, if not all of the money in these funds is contributed by the employes, such organizations are systems of compulsory saving, rather than systems of insurance, because most frequently the member is entitled to only the amount paid in by him, together with interest on the same.

One instance is known of a large German industrial establishment, the rules of which provide that when a workman is dismissed for want of work, he becomes entitled to full wages or salary for a period of time based on length of service in the establishment.

#### INSURANCE FOR WIDOWS AND ORPHANS.

Under all accident compensation systems, a fatal accident covered by the law results in a benefit of some kind to the survivors of the injured person. These benefits are usually in either the form of a lump sum payment to the widow and orphans, or a pension to the widow for life or until remarried, and a pension to the children until a certain age is reached. It is evident that many cases will arise where the death of the insured person through ordinary illness leaves the family in as great distress as if the death had been caused by an industrial accident, and in many cases the family is in even deeper distress because death may occur after a long period of illness in which the family savings and other resources were consumed in caring for the sick person. To make provision for such cases, widows and orphans funds were provided by the miners' relief fund in the various countries, but particularly in Austria, Belgium, France, Germany and Great Britain. Similar provision, usually amounting to half the pension to which the deceased was entitled, or was receiving, is made by the railway funds and the seamen's funds. In Germany, at the present time, the navigation accident association which administers the compulsory accident and invalidity insurance for seamen, conducts a system of widow and orphan insurance which is founded upon a carefully considered actuarial basis. The German Im-

perial Government has now under consideration the creation of a national compulsory system of insurance for widows and orphans. Under the invalidity and old-age laws of France, in case of death, a small sum is paid to the widow and to the children under 16 years. Under the system in force in Austria (for salaried persons only) the widow received a pension equal to one-half the amount to which the husband was entitled at the time of his death, and each child under 18 years receives a variable pension until that age is reached, but if the insured person had paid dues for less than the minimum period necessary to become entitled to benefits under the law, the widow or children receive a lump sum payment instead of a pension. In Germany, under the invalidity and old-age law, if a member dies before reaching a pension, the survivors become entitled to the dues or contributions paid in by the insured person up to the time of his death.

#### INTERNATIONAL AGREEMENTS.

The laws reviewed in the preceding pages are, of course, primarily for the benefit of resident citizens of the countries in which they were enacted, being adapted to local conditions and administered by local agencies. The foreign workman employed in any given jurisdiction is necessarily at a disadvantage since in case of injury the law can operate in his behalf only during the period of his residence in the country, while fatal injuries frequently give rise to questions affecting the rights of non-resident beneficiaries. Such questions as between the different jurisdictions in the United States are of minor importance compared with those arising between countries under diverse political systems, engaged in keen industrial competition, and lying in close proximity along an extended boundary line.

A number of compensation and accident insurance laws of European countries contain provisions for liquidating the claims of alien workmen returning to their homes, by the payment of a lump sum. Such an agreement exists between Austria and France. As between Germany and Hungary, there is an agreement which provides that payment of benefits may be suspended during the absence of the beneficiary from the country of employment. In Great Britain the same course is followed unless it is clear that the injured workman has been permanently disabled.

In Denmark and France, dependents of a foreign subject dying as a result of injury are entitled to no compensation unless they are residents of the country at the time the injury was received. Under the laws of Hungary, Germany and Sweden, such dependents are, however, entitled to compensation, if under the laws of their countries reciprocal advantages in case of injury or death are allowed to their respective subjects in the country of employment. In other words, the accident and compensation laws of all European countries discriminate against non-resident dependents of foreign subjects who through accidental injury may be entitled to the benefits which they provide; this discrimination will, however, be waived in favor of the subjects or citizens of any country that enters into a reciprocal arrangement for the removal of such disability. Up to the time of this writing, agreements relieving the citizens and subjects of both countries of all such dis-

abilities were made between France and Italy in 1907, and Italy and Switzerland, and Italy and Germany in the same year. Germany, France, Austria and Belgium, the principal manufacturing countries of continental Europe, have now made agreements between themselves, and also with almost all the smaller states, which secure practically the same rights to all workmen and their dependents, regardless of the question of residence.

The foregoing review will convey to the reader a very fair understanding of the wonderful progress made during the past twenty-five years in the development of social insurance among the nations of Europe. In all countries except France and Germany the insurance in its various forms is entirely voluntary, and the organizations which carry them on are practically self-governing, although, as before explained, a mild kind of regulation must be submitted to by such of them as accept government subsidies in any form. The process of evolution among them seems to lean toward the extension of government authority over their management, and, perhaps, the final application of the compulsory principle to them all. However this may be, there can be no question as to the great value of these societies in alleviating at least some of the hardships to which wage earners are necessarily subjected under our modern industrial system. Under our present competitive organization of industry, including the wage system of compensation, insurance of this character is the most reliable safeguard against temporary or permanent loss of earning power on the part of workmen that has yet been devised. In its voluntary form, the system has grown from the application of the wage earner's intelligence to his wants and necessities, and has existed in all industrial countries for many years. In Europe there is now a marked tendency toward extending government authority over these mutual benefit societies, thus giving them the only element which they had lacked, that is to say, permanence and unquestionable ability to fulfill all assumed obligations.

Germany was the leader in this movement and the first nation to adopt in concrete form the idea that organized society, as represented by the State, should no longer leave the wage worker to bear alone and unaided the vastly increased liability to accidental injury and health impairment to which he is subject under the high pressure of modern industrial conditions. As the German system is the one that most largely influences the develop-

ment and progress of the social insurance movement in other countries, including to a limited extent that of our own, a brief outline of its history, form of organization and the latest available statistics of its operation are given in the following pages.

#### THE GERMAN WORKMEN'S INSURANCE SYSTEM.

Germany was the first great industrial nation to adopt the principle of compulsory insurance. Many years before the establishment of the Empire, some of the local governments enacted laws for the protection of disabled workmen within their jurisdiction, under which those employed in certain trades having the highest injury risks were required to pay regularly a part of their wages into the communal treasury, from which they were thereafter entitled to draw sickness and accident relief. The successful operation of these laws contributed not a little toward preparing the way for the institution of a similar system throughout the entire country.

One of the earliest acts of the new German Empire was the adoption of an employers' liability law in 1871, which act remained in force with some more or less important modifications until it was displaced in 1884 by the new compensation system, which was adopted only after a thorough trial had demonstrated that justice to the wage earner could not be secured under the liability law. It is now more than a quarter of a century since the compulsory insurance system was instituted in the German Empire, and during that time it has given such satisfaction that no proposal to restrict the plan or impede its extension has ever been seriously offered. As a matter of fact, the system has, as already explained, so far outrun the limits of German territory that it seems likely to become continental in its scope at no distant date.

Doubtless the general satisfaction which the German system of industrial insurance has given is very largely, if not wholly, due to the circumstance of its having been put in operation simultaneously in all parts of the Empire, thus guarding against the imposition of a burden on industry in one section which the others were not called upon to bear. Another important advantage is found in the fact that the plan itself as finally adopted involved no radical departure from the long established economic custom of wage earners in providing against sickness or other forms of disability by associating themselves together in mutual benefit societies organized on occupational lines. Practically speaking, these voluntary societies were made the basis of the German national system, the only change being that under the new law all workmen were required to become members and contribute toward the maintenance of the general insurance system, as the voluntary members had been doing previously in their restricted sphere.

The institution of the system caused no shock to either wage earners or employers; a very large proportion, if not a majority of the former, had, as members of the voluntary societies, paid for benefits received without overburdening their earnings, and the government simply required that all persons gainfully employed whose earnings were below a certain specified amount

should do the same. From the beginning the compulsory insurance was no more costly to the wage-earner than that obtained from the old benefit societies, while its range of benefits is greater; it offers also the inestimable advantage of government responsibility and support, which guarantees absolute security to all beneficiaries.

The employer's contribution to the insurance fund is probably not much in excess of the amounts formerly paid out by him in defending suits for damages under the old liability law, and in voluntary contributions to the maintenance of workmen injured in his service, besides caring for those of his old employes who by reason of age, or other form of physical disability, were no longer able to work. The government's share of the cost is more than compensated by the great reduction, amounting in some districts to the almost complete abolition of payment of old time poor relief, which under the new system is no longer necessary.

### HISTORY OF ACCIDENT INSURANCE.

The first bill for a law relating to accident insurance of workmen was brought before the German Imperial parliament in March, 1881. The main features of this bill were that the existing regulations relating to accidents occurring in the operation of railroads should remain unchanged, while employers operating factories, workshops, mines, etc., were required to insure their workmen and establishment officials, within certain bounds, against economic loss in consequence of accidents occurring in the course of their employment. The insurance was to be carried by a government insurance corporation and the cost paid by the employer and the workmen, assisted by a subsidy to be paid by the Imperial Government. Insurance by combinations of employers in similar industries was permitted by this bill, but insurance with private companies was forbidden. The bill was changed by parliamentary action so that the subsidy by the Imperial Government was excluded. The bill in its original form permitted the establishment of mutual insurance on industrial lines by the employers, but prohibited insurance with private companies. In its amended form the plan of insurance by corporations of employers was stricken out and a system of state insurance offices substituted in its place, but the general idea of compulsory insurance was retained. The amendments proving unsatisfactory to the government, the whole matter was withdrawn from the consideration of parliament.

The government took up the question again without delay, and realizing the importance of having reliable statistical data to support its position, the federal council passed a resolution by which employers were required to report on a carefully prepared schedule all accidents involving injury to employes, which had occurred in their establishments in the four months previous to November 30, 1881. The data, which related to 2,000,000 workmen, were in the hands of the government about one month later. A new bill was introduced into parliament early in 1882, with a message from the Emperor urging its adoption as a matter of duty on the part of the state. In this message it was intimated that the purposes of the measure would be

aided by the formation of mutual insurance organizations of employers. The revised bill provided for a system of compulsory accident insurance, and was accompanied by an elaborate memorial discussing existing methods for the relief of distress arising from industrial accidents and condemning the existing system as entirely inadequate. At the same time a bill providing for the compulsory insurance of workmen against sickness was also introduced. The new bill provided that workmen injured in industrial employments should be cared for during the first thirteen weeks by means of sick funds, the establishment of which was made compulsory. The compulsory accident insurance would, therefore, care for only the severe cases, that is to say, such accidents as caused death or disability for more than thirteen weeks, and in the latter case the benefits of the accident insurance, were to begin only after the thirteenth week. The sickness insurance was to be paid for by the workmen with contributions from employers, and the accident insurance was to be carried on by mutual accident insurance corporations composed of all employers engaged in the same or similar lines of trade, assisted by a state subsidy.

The two bills for sickness and accident insurance were referred to the same committee of parliament. The sickness bill, which was first taken up, was passed on June 15, 1883, and went into operation on December 1, 1884. The bill for accident insurance was not reached until the next session, but the first step had been taken in providing for accidents during the first thirteen weeks of disability.

In the discussion of the accident insurance law, it became apparent that all parties in parliament were opposed to the Imperial subsidy provision, although this particular feature of the bill was urged by government as no more than a just equivalent for the drain on the poor law funds which heretofore had been seriously burdened by the victims of industrial accidents.

As provided in this bill, the organization of the accident insurance was to be managed by a government bureau; the sickness insurance bill provided for mutual associations of the insured workmen. The principal defect in the accident insurance plan was not taking into account the great diversity of accident risks in the different industries and in establishments carrying on the same industry. The plan provided that each branch of industry subject to the insurance law should be given a risk rating and establishments with the same rating were to be joined in organizing mutual associations for specific districts. In each district there would be a number of such associations, each representing one industry and where the number of establishments was not great enough to form one organization for any particular industry, the plan provided that they should be combined into one association. This plan provoked opposition on two important grounds, namely—the difficulty of administration, and the fact that it brought together in one administrative organization branches of industry having no common economic interest or relation.

The third bill for a compulsory accident insurance law was introduced by the government on March 6, 1884; it contained no provision for a subsidy by the Imperial government, and according to this plan mutual organizations, including all the establishments in one branch of industry or group of in-

dustries, were to administer the insurance. The bill passed with but few changes from its original form on July 6, 1884, and went into effect in 1885. This law included workmen employed in manufacturing, mining, etc., but left out many branches, among them the vast numbers engaged in inland transportation. The insurance was extended to these occupations as it also was to establishments of the Federal and State governments, including the Federal telegraph system, and the civil employes of the army and navy departments. Insurance of employes in government establishments under this law was to be provided directly by the Federal or State governments. Persons in the military service injured while engaged in industrial employment were admitted to the benefits of the sickness and accident insurance by a law passed on March 15, 1886. The system was extended to persons employed in agriculture and forestry by a law of 1886, and the number so engaged was estimated at 7,000,000. In 1887 the accident insurance system was extended to persons employed in the building trades and to persons employed in navigation.

In 1894 a proposal was made to extend the insurance to persons in small establishments, such, for instance, as the hand-working employes, and to special occupations such as persons employed in hospitals, zoological gardens, laboratories, fire extinguishing service, etc. A second law introduced in 1894 proposed a general consolidation of all the various forms of workmen's insurance, sickness, accident and invalidity, into a series of institutions in order to reduce the number of existing organizations that had been created to carry out the new laws. As a result of the discussion on this proposal, a bill was introduced in November, 1896, which provided for a general revision of all existing forms of compulsory accident insurance administration.

This general revision aimed at the establishment of uniformity of administration of insurance in the four classes covered, and on June 30, 1900, the plan was fully carried out by the passage of one introductory law and four subsidiary laws consisting of—first, the industrial accident insurance law; second, the accident insurance law for the building trades; third, the accident insurance law for agriculture; and fourth, the accident insurance law for navigation, all bearing the same date.

A provision was introduced in the revised law which extended relief to imprisoned persons in case of accidents. According to this plan a prisoner who suffers an injury in the course of his employment in prison is entitled to such moderate compensation as may be determined by the administration officials, provided that the employment was one included in the insurance laws when engaged in by free persons.

Under these revised laws, a somewhat different type of administrative organizations is provided for the four classes of insurance indicated above; these are planned to meet the necessarily different conditions surrounding each class, and the experience gained by their operation shows results that are entirely satisfactory.

To maintain perfect equality of responsibility among all industrial interests, a new establishment which engages in a business subject to the compulsory insurance, is required to join the accident association of its class and

pay the same assessments as the older firms. In other words, a new firm entering an industry which has a known cost for accidents, based on years of experience, must include this expense in its calculations equally with that required for taxes and other fixed forms of obligation. Assessments from the insured establishments must be paid over by the board of directors of the accident association to the post office department, and any association in arrears of payment is proceeded against as if in arrears of taxes. The Imperial insurance office acts in the matter on notification of the post office department, and if the assets of the association are not sufficient to meet the arrears, the individual members may be proceeded against in the same manner.

### ACCIDENT COMPENSATION.

An accident in the sense contemplated by these laws, is defined as "an undesigned and unforeseen occurrence of an afflictive or unfortunate character, a casualty, a mishap, which causes either physical or mental incapacity of a temporary or permanent character." The so-called "industrial diseases" are not classed as accidents, these being due to some well-known peculiarities associated with certain industries, and not in any sense the result of a single casualty; nor does the gradual falling away of strength, or the aggravation of a special physical defect entitle the workman to compensation. Legally to claim compensation, the victim of an accident must be actually engaged at his calling, that is to say, the actual work for which he was employed. The accident must have occurred during his working hours, the cause must be connected with his trade, and incapacity or death as a result of the accident must be proved. Sunstroke, frost bites, or insect bites, being due to natural causes, are not included. Going to or from one job to another within the factory or workshop limits, or passing from one building to another included in the works, is regarded as working time, and accidents that occur under such circumstances are compensated, but accidents that take place in passing either way between the home and the factory establish no claim for compensation.

The general classes of industries covered by the insurance are explained in the previous chapter, but so many other occupations not coming properly under either of these four classifications have since been included, that now practically every wage-earner in the German Empire, together with salaried persons whose compensation does not exceed 3,000 marks (\$714) per year, is a beneficiary of the system. The obligation to insure is irrespective of nationality or relationship to the employer (wives helping in the business are the only exceptions); and no citizen's qualifications are necessary, no permanent employment or fixed wages; a man becomes automatically insured when he secures employment, or rather when he commences work. In all the industries and occupations covered by the insurance, women whenever employed are beneficiaries equally with men, and as before explained, there are certain special benefits to which they alone may become entitled.

The responsibility of others, or even personal carelessness, does not impair the claim for compensation; but claims based on injuries resulting from

deliberate carelessness on the part of the person injured may be refused. Cases of deliberate self-inflicted injury for the purpose of obtaining a pension are punished by the criminal law.

Liability for all expenses of caring for the injured person, either in or out of a hospital, devolves upon the accident insurance association from the commencement of the fourteenth week; from the time of the injury to the expiration of the thirteenth week he is cared for by the sick insurance funds. In case the man has been drawing sick pay and this, for any cause, (not his own fault) is withheld, the accident allowance is granted from the day of stoppage of sick pay. Accident allowances or pensions are paid monthly in advance; small pensions up to 60 marks (\$14.28) are paid quarterly or yearly. In addition to his pension the injured person receives free medical treatment and is also supplied with such surgical appliances and apparatus, including crutches, braces, artificial limbs, eye-glasses, etc., as he may require. Fresh air treatment, and if necessary for recovery change of climate, are also included.

The law requires that all disability caused by accident shall be cared for during the first thirteen weeks by the sickness insurance organizations, the cost of which is provided in the ratio of two-thirds by the workmen and one-third by the associated employers, but the individual employer by whom the injured person is directly employed is called on to defray part of the expenses of cases lasting longer than four weeks. A large proportion of the accidents compensated cause disability for only a short time, and experience has shown that such cases can be best handled by small local organizations in which proper precautions can be taken against the danger of imposition by malingering. This plan makes the workmen and employers practically equal participators in carrying the burden of accident and sickness insurance, and also tends—as was the intention of those who framed the laws—to make the workmen regard the insurance, not as a charity, but as a system of self-protection in which they bear a share of the expense and in the administration of which they play an important part. The transfer of minor injury cases to the local sickness-insurance organizations was decided upon because large organizations with a numerous membership, such as are required to properly distribute the cost of accident insurance, were at a disadvantage in dealing with claims for the multitude of minor injuries caused by modern industrial methods. The division of jurisdiction was simplified by the fact that the voluntary sick-benefit associations in existence at the time the compulsory accident insurance system was adopted were accustomed to pay benefits for accidental injury as well as for sickness.

In cases of ordinary sickness not due to accident the injured person receives from the sickness fund 50 per cent. of the regular wages for a period of four weeks; beginning with the fifth week and continuing to the end of the thirteenth week, the allowance is  $66\frac{2}{3}$  per cent. of regular wages, the immediate employer of the injured workman alone contributing the additional amount. If the sick person has not recovered by that time, the invalidity division of the insurance system then provides the regular invalidity pension. If it seems probable that persons disabled either by an industrial accident, or

by a disease causing long continued invalidity, may be restored to health by special courses of treatment, the accident and invalidity insurance officials may relieve the sick fund of caring for them and provide the necessary treatment at their own expense.

An insured person who has been injured by accident while engaged in his occupation draws benefits from three sources in succession; first, from the sick insurance fund alone for the first four weeks of disability, the amount being not less than 50 per cent. of his earnings; second, from the sick fund and his employer together, from the beginning of the fifth week to the end of the thirteenth week, the amount being, as explained above,  $66\frac{2}{3}$  per cent. of regular earnings; third, from the accident association alone, from the beginning of the fourteenth week. If, however, the injured person is not covered by the sickness-insurance, and his income is less than 2,000 marks (\$476) per year, his employer alone must provide the regular sick benefits for the first thirteen weeks of disability.

The relative share of accident relief borne by the sick funds and the accident associations is shown by the duration of disability resulting from accidents. In the ten years following 1886, the records indicated the proportion of accidents resulting in disability for thirteen weeks or less to have been 84 per cent. of the total number, but according to an eminent authority on the subject, the first thirteen weeks' cost of accident relief for the 84 per cent. of the cases requires a fraction less than 16 per cent. of the entire outlay for accident insurance. Through the care by the sick fund of all the minor injuries which form so large a proportion of the total number of accidents, it is estimated that the workmen provide approximately 11 per cent. of the entire cost of the insurance, the other 89 per cent. being paid by the employers.

## Compensation Beginning with the Fourteenth Week.

### MEDICAL ATTENDANCE.

First among the purposes of the accident-insurance system is restoring the earning capacity of the injured workman; the associations are therefore required to furnish free of cost medical and surgical attendance, medicines and all necessary appliances before enumerated and keep the same in repair after they have been supplied. The accident association may also take over from the jurisdiction of the sick fund the care of persons whose injuries are of such a nature that a special course of treatment would be of value in improving their earning capacity. In such cases the cost of special treatment is borne by the accident association, while the sick fund provides the customary pecuniary benefits. Failure on the part of the pensioner to follow the course of treatment for reducing his loss of earning power may be punished by the withdrawal of his pension.

As an aid to the earliest possible reversion of the injured workman's earning capacity the associations have founded homes for convalescents, hospitals and other similar institutions. They have also established accident stations in many parts of the city of Berlin, where surgeons and physicians

are in constant attendance and where persons injured in accidents may receive immediate attention.

The law requires that a pension be provided beginning with the fourteenth week and continuing during disability; in case of total disability, a "full pension," that is to say, 66 $\frac{2}{3}$  per cent. of the injured person's annual earnings, is paid; in case of partial disability, a "partial pension" corresponding in amount to the loss of earning power is allowed. These pensions are really annuities, paid for life or during the continuance of the disability.

Pensions are paid monthly in advance, except in the case of small pensions, when, by agreement with the pensioner, payments may be made at longer intervals. If the amount of the pension is so small that the cost of handling it would be unduly burdensome, the capitalized value of the pension may be paid, but only on request of the injured person, who must be informed that by accepting a lump sum he forfeits all claim to an increased pension if his condition becomes worse.

In case the injured person is not only incapable of work, but is also helpless, that is to say, is blind, has lost both legs or both arms, he is entitled to an additional allowance for cost of care required by his condition; under such circumstances the pension may be increased to 100 per cent. Aside from such cases, the associations may not grant pensions exceeding two-thirds of the earnings.

The pension paid is based on the amount of wages or salary received during the last year of employment in the establishment where the person was injured, but only one-third of the amount in excess of 1,500 marks (\$357) is usually considered in calculating the earnings. Where the annual earnings are not made up of definite weekly sums, the amount is assumed to be three hundred times the averaged daily rate for casual labor. In the case of injured persons receiving no regular wages, or who receive less than the rate for casual day labor, their annual earnings are assumed to be three hundred times the prevailing rate for ordinary day labor.

The policy underlying the accident insurance law is decidedly against granting full wages to injured persons during the period of disability. The ground taken was that the workman should be given no more than enough to support him in the manner to which he was accustomed. It was reasoned also that while the disability continued, many of the expenditures necessary while in active employment, such as working clothes, tools, etc., were not called for, and the injured person would be the more eager to return to work by making his income smaller while in receipt of the accident compensation. It was feared that had full pay been granted, the compensation might prove to be a premium on accidental injury.

The following list taken from the report of Commissioner Neill, illustrates the various degrees of "disability" resulting from accidents as indicated by the pensions awarded by the associations in each case.

EXAMPLES OF AMOUNT OF PENSIONS AWARDED FOR PERMANENT  
DISABILITY.

OCCUPATION OF INJURED PERSON.	NATURE OF INJURY.	Amount of Pension in Per Cent. of "Full Earnings."
Sawyer .....	Loss of right hand.....	66%
Farm laborer .....	Loss of 2 phalanges of right index finger.....	15
Washerwoman .....	Right hand crushed.....	80
Butcher .....	Stiffness of right index finger following cut...	30
Cabinetmaker .....	Loss of 1 phalanx of right index and ring fingers .....	20
General laborer .....	Loss of 2 phalanges of the third and fourth fingers of left hand.....	20
Worker in hat factory.....	Loss of left thumb.....	30
Worker in machine factory.....	Loss of left little finger.....	None
Turner .....	Loss of right arm.....	75
Ship carpenter (67 years of age)....	Weakness in right arm, stiffness of elbow, accompanied by weakness of old age.....	100
Second-class steersman on vessel....	Loss of left forearm.....	66%
Factory hand .....	Blindness in both eyes.....	100
Ship carpenter and caulker.....	Loss of one eye.....	50
Mason's helper .....	Loss of sight of one eye.....	25
Farm laborer (62 years of age).....	Weakness caused by loss of flesh from left leg .....	50
Mason .....	Injury to left leg.....	60
Farm foreman .....	Loss of left leg.....	70
Glass grinder .....	Injury resulting in clubfoot.....	20
General laborer .....	Loss of 3 outer toes of left foot.....	10
Cabinetmaker .....	Loss of foot following caries.....	75
Carpenter (51 years of age).....	Injury of right knee joint.....	66%
Fireman .....	Hernia .....	10
Mason's helper .....	Aggravation of a right hernia, developing of a left hernia.....	30
Locksmith .....	Neurosis .....	33%

The only cases of "total disability" appearing in the above list are that of the "factory hand," whose injury caused "blindness in both eyes," and one case of disability and old age combined, for both of which the compensation awarded was 100 per cent. of full wages. The question to what extent an injured person is still capable of earning a living, though for the time being unable to secure employment at anything, is all that is considered in determining the degree of disability. Thus the loss of one arm or one leg is not regarded as total disability, but the loss of both arms or both legs is invariably so rated. The occupation of the injured person and the degree to which an injury may affect his ability to follow it, exerts much influence in determining the compensation. The purpose is not to pay for all injuries that an insured person may suffer, but to compensate him on some equitable principle of appraisal for the actual loss of earning power which they may cause.

The accident compensation is fixed by the Trade Association, but in case of dissatisfaction with the grant, an appeal can be made within one month to the court of arbitration. From this court's decision an appeal lies to the Imperial Insurance office. These legal processes are free to the insured, and as the decision may take time, the trade association usually allows the contestant an advance on his claims. If this is refused, he must appeal to the poor law authorities for support and they, in turn, may reclaim from the association one-half the income they have allowed.

All insured workmen are urged to report at once, even a minor accident; in case it is serious, to notify the employer or manager without delay; even the slightest injury must not be overlooked or neglected, as the after effects may be serious. Witnesses should be secured at once, and the employer or manager must notify the police, who are required to investigate the accident and register the same with full particulars at the office of the Trade Association having jurisdiction of the industry in which it occurred.

The heirs of the injured man whose claims have been allowed must, in the event of his death, come forward within at least two years. A mere registry of the proof of an accident resulting in death does not prevent claims being outlawed.

Practically all the trade associations issue books and pamphlets with special advice and regulations for the prevention of accidents. Safety appliances are described and recommended, and the practical experience of the trade in dealing with dangerous machinery and processes is summarized for the benefit of employers and workmen. These publications are veritable encyclopedias of information relating to safety devices and accident prevention in the form of descriptive text, scale drawings and photographs. The associations also address circulars to the individual manufacturers from time to time warning them against the consequences of any relaxation of vigilance in the matter of accident prevention, or calling attention to some accident of a serious character that had occurred in their works for which want of care on their part was responsible.

A fairly representative circular letter sent by the South Western Wood Trade Association to all members of the trade, in which their attention is called to the risk of using planers and shapers without safety devices, is reproduced below in full.

"As you have not made a report, we enclose a card and hope to hear from you at once whether such measures for safety have been taken, and if not, why.

"We beg further to observe that nothing can excuse the continued use of the old type of unguarded planer, as the frightful dangers of such machines, both from a humanitarian and a financial standpoint, forbid in everyone's interest our continuing to permit their use, in opposition to the regulations of our insurance ordinances.

"On January 26, 1910, another accident occurred in a furniture factory where eight men were employed at a planer. You will see by the enclosed that the accident was very serious, totally crippling the right hand of a young man, which will burden our association with his support for many years.

Such accidents might be of daily occurrence, and one can only wonder at employers for deliberately adding such burdens to their expenses, to say nothing of their moral responsibility in neglecting to use precautionary measures.

"We have said enough to make the matter plain; furthermore, we offer to bear a part of the cost of installing the safety devices. We wish also to state that failure to comply makes the factory owner liable to arrest under Clause 136 of the Industrial Insurance Ordinances.

"The advantages of the protected planer are so well understood that the makers of wood working machinery, in compliance with our orders, no longer furnish the old type for this district.

THE DIRECTORS OF THE WOOD WORKERS' ASSN.,  
(Signed) PRESIDENT FABER, *City Counselor*,  
Stuttgart, March 11, 1910."

Another circular issued by the Wood Workers' Association to the factory owners contains the following stern condemnation of the negligence which permits the occurrence of preventable accidents.

"More heavy losses in property and blood from the unprotected planer.

Left hand, accident June 11, 1909, (Tuebingen) Mechanic, age 20.  
Yearly income, 470 Marks. Shaping machine.

Right hand, accident January 26, 1910, (Stuttgart-Gaisberg)  
Mechanic, age 23. Yearly income, 700 Marks. Shaping machine.

Right hand, accident August 23, 1909, (Gussen) Joiner, age 27.  
Yearly income, 400 Marks. Simple planer.

Right hand, accident June 29, 1908, (Karlsruhe) Machinist, age  
35. Yearly income, 300 Marks.

"Four serious accidents from planers within a short time! For these, which *could not* have happened with the safety devices, the association is saddled with a yearly payment of 1,870 marks. In case these hideously crippled men reach a normal old age, the burden on the association will amount to at least 160,000 marks! as against 840 marks for the safety attachment!

"If this were to continue, the burden of debts would become too great for our association. After these accidents occurred these planing machines were fitted at once with the safety attachments, to which the proprietor's attention had long been called. Employers neglecting these precautions will surely have accidents on their consciences. In cases where human kindness and common decency do not dictate the use of safety devices, the following rules show that the law demands it:

"Section 120a. Trade regulations for the German Empire—Manufacturers are required to protect the health and safety of their employes as far as the nature of their occupation permits, by installing the proper machinery. Special attention should be paid to all protective devices for dangerous machinery."—Stuttgart, March 10, 1910.

## FUNERAL BENEFITS.

If the death of the workman is caused directly or indirectly by the accident, the person paying the burial expenses is entitled to the funeral benefit. The amount is usually fixed at one-fifteenth of the annual earnings, but not less than 50 marks (\$11.90). Being regarded as a death benefit rather than a funeral benefit, in case of an accident that makes burial impossible, such as drowning or burning, the benefit is still paid to the legal heirs. The funeral benefit must be paid by the accident association within one week after proof of the death is submitted.

## BENEFITS TO SURVIVORS.

In case of accident resulting in death, a pension is allowed to the survivors; these are, as recognized by the insurance law, first, the widow; second, children; and third, other dependents—that is to say, parents, grandparents and grandchildren. The widow's pension is 20 per cent. of the annual earnings of the deceased husband, and an equal amount for each child under fifteen years of age; the whole pension, however, must not exceed 60 per cent. of the yearly earnings. The widower's pension continues only during his inability to pursue a gainful occupation, but the widow's claim is valid for life, regardless of her condition, but in the event of remarriage, a settlement of her claim is made by the payment of a lump sum amounting to three year's pension, or 60 per cent. of the husband's annual earnings. In case the number of children entitled to a pension exceeds two, the pension of the widow and each child is reduced equally so that the total payments to the family shall not exceed the maximum limit of 60 per cent. Children's pensions continue until they have reached the age of 15 years.

If the deceased insured person leaves parents or grandparents of whom he was the sole or main support, such dependents are entitled to pensions aggregating 20 per cent. of his earnings while the condition of dependency lasts. Similarly, should the deceased have orphaned grandchildren who were dependent on him for support, such dependents are allowed pensions aggregating not more than 20 per cent. of his full yearly earnings, the same to continue until each of them has reached the age of 15 years. Pensions to parents, grandparents, and grandchildren, are paid only in cases where the allowances to widows and children fall short of 60 per cent. of the earnings of the deceased, and then only the margin of difference can be used for such pensions. As between the claims of parents and grandparents, the former take precedence.

If the deceased insured person should be a foreigner, such children as he may leave who are residents of a foreign country are not, under the law, entitled to a pension. The government may suspend this provision in favor of any foreign country which makes reciprocal arrangements in favor of German subjects.

## OTHER BENEFITS.

Under the law an injured person, who, because of the accident and through no fault of his own, is unable to find employment, may for a time

be provided with a full pension. This is given not as an unemployment benefit, but because at the conclusion of the medical treatment the injured person may find it difficult to secure work suitable to his weakened condition. The accident associations, if they so desire, may carry such workmen until they are fully able to undertake remunerative employment.

If the condition of an injured person requires treatment of a more elaborate character than could be given him at home, the association may provide for free treatment and maintenance in a hospital; meanwhile the compensation provided for survivors in case of death must be paid to his dependents. In case the injured person is not included in the sickness-insurance, his employer must pay to the accident association all the expenses of medical treatment and maintenance for the first thirteen weeks.

On the request of a pensioner, the accident association may secure his admission into a home for invalids, where he may remain indefinitely, but can withdraw by giving three months notice; while an inmate of such home or refuge the pension is discontinued.

#### DETERMINATION OF BENEFITS.

All accidents causing death, or disability for three days, must be reported to the police. Each establishment has a duly authorized representative for making such reports. On receiving notice of an accident the local police officials must ascertain (1) the cause and nature of the accident; (2) the number and names of persons killed or injured; (3) the nature of the injuries; (4) the residences of the injured persons; (5) the heirs of the persons killed and the dependents of the persons injured by the accident, who under the law could claim compensation; and (6) the amount of pension, if any, which the injured person may be drawing under the accident, or the invalidity insurance laws. A thorough investigation of each accident is made by a committee consisting of state inspectors, representatives of the sickness and accident associations, and a representative of the proprietor of the establishment in which the accident occurred.

The character and amount of benefits to which the injured person or his dependents in case of death may be entitled are determined by this investigation, and the decision is reported to those concerned with the least possible delay. The heirs or dependents are allowed two weeks within which to enter a protest, if they consider the award insufficient. If, notwithstanding the protest, the decision is not changed, the parties interested are allowed one month in which to appeal to the Court of Arbitration, after which, if still unsatisfied, the matter may be carried to the Imperial Insurance Office at Berlin, the decision of which is final in all cases arising under the insurance laws.

Notification of injuries caused by accident must be made within two years, or all right to compensation will lapse. Only two classes of cases are excepted from this rule: First, persons whose injuries do not show noticeable effect within that period; and second, persons who through no fault of their own were prevented from filing their claims. In each of these cases

claims must be filed within three months after becoming aware of the effect of the injury, or after the obstacles to filing a claim were removed.

After the compensation has been decided upon, the accident association notifies the recipient through which post office it will be paid, and gives all necessary information to the government officials of that district.

Provision is made in the law for periodical re-examinations of persons receiving compensation, but to warrant any reduction in the amount, the improvement shown in the pensioner's condition must be so decided as to be unmistakable.

The right to a pension ceases under the following circumstances: 1. While the pensioner is undergoing a term of imprisonment exceeding 30 days, or if he becomes an inmate of a workhouse or a reformatory. 2. While the pensioner lives in a foreign country. This provision is waived in favor of such foreign countries as make reciprocal agreements with Germany. 3. While the pensioner lives in a foreign country without giving notice of his address.

#### GENERAL ADMINISTRATION.

The administrative machinery of the accident insurance system consists principally of the following institutions: The mutual accident associations; the insurance courts; some state insurance offices, and the Imperial insurance office.

The following brief description of these institutions will convey an understanding of their joint and several relation to the insurance system.

#### THE MUTUAL ACCIDENT ASSOCIATION.

The most important of these institutions are the mutual accident insurance associations composed exclusively of employers; to these bodies, which have all the rights and privileges of legal corporations, is intrusted the work of carrying the compulsory accident insurance laws into effect, subject to the supervision of the government insurance offices. The employers in the various industries are organized into these accident associations, covering the entire Empire, excepting only the iron and other metal trades, textiles, woods, and the building trades, which have separate territorial jurisdictions. The industrial establishments subject to the law are represented by 66 accident insurance associations, and the agricultural and forestry, by 48 associations. These associations are self-governing to a large extent, and have the right to organize new sections as the interests of the system may require.

As the name implies, the insurance is conducted on the mutual plan, and all benefits paid to the workmen are met by assessments on the members of the association in accordance with a plan devised by themselves. If several distinct lines of manufacture are carried on by an employer in one place, his establishment is classed according to the principal industry.

The work of each association is carried on under a constitution adopted by a general meeting of its members. This constitution provides among other things the procedure to be followed by the officials of the association in determining the risk classifications for the various establishments, the pro-

cedure in closing up an establishment, particularly in the matter of securing payment of assessments due by proprietors who go out of business, and also that to be followed in computing the annual wage payments and fixing the contribution to the insurance fund for each establishment. The constitution of the accident association must be approved by the Imperial Insurance office *before it goes into effect*, but in case of non-approval, the association may appeal to the Federal Council of the Empire.

All the authority appertaining to the association and all the duties devolving upon it under the insurance law are discharged by a board of directors, elected at a general meeting of the association; and only persons who are qualified to serve as jurors in the courts of the Empire are eligible for election to the board. A member elected to the board who refuses to serve may be fined 500 Marks (\$119) for such refusal.

Under this plan of organization, the employers manage their own insurance; private accident-insurance companies are strictly excluded from the business. Many reasons for regarding this as the best policy were advanced in the parliamentary reports and discussions which preceded the adoption of the insurance law. Having decided that accident compensation should be paid in the form of annuities, it becomes imperatively necessary that there should be no question about the payment; at any time, it was held, a private company might be forced into bankruptcy by a great accident, thus throwing upon charitable agencies, both the victims of that accident and all the persons on the company's annuity roll when it occurred. Government regulation of the private insurance companies could do little or nothing to prevent collapse under sudden and severe strain. Private insurance companies show a tendency to avail themselves of technicalities for delaying or refusing the payment of claims, and also show a preference for good risks, which, as a matter of course, would make it difficult to obtain reasonable rates on those of a less desirable character. It was believed also that participation in the insurance by private companies would destroy the unity of effort for the prevention of accidents, as the methods pursued by them might differ widely from those followed by the accident associations.

#### THE IMPERIAL INSURANCE OFFICE.

The Imperial Insurance Office, which is located at Berlin, is the supervisory head of the Workman's Insurance system and the court of last resort in controversies growing out of, or relating to the accident and the invalidity insurance. It is composed of a president, and of permanent and temporary members. The president and permanent members are appointed for life by the Emperor upon nomination by the upper house of the imperial parliament. Of the temporary members, six are appointed by the upper house of parliament (four at least from its own members); six representatives of employers are selected from the boards of directors of the accident associations; and six representatives of insured persons. The representatives of the employers and the insured persons are elected for five years, and must be selected—two each from the industrial, agricultural, and navigation insurance associations.

The authority of the office in the field of accident insurance extends to the interpretation of the law, the approval of constitutions of accident associations, schedules of risk ratings, rules for the prevention of accidents, general supervision of the formation of accident associations, and auditing their accounts. Other duties of a judicial character include the settlement of all controversies arising from the practical application of the insurance laws.

### STATE INSURANCE OFFICES.

The accident insurance law permits the creation of state insurance offices with powers and functions similar to the imperial office, but restricted to the boundaries of their own states. The authority of the state offices extends only to accident associations composed solely of firms located in their respective states. Eight of the German States are reported as having such offices in 1910.

### THE COURTS OF ARBITRATION FOR WORKMEN'S INSURANCE.

The old age and invalidity law of 1889 created a number of special courts for the settlement of disputes arising under that act. The 1900 revision of the accident insurance laws extended the functions of these courts to the accident insurance, and abolished the special arbitration courts for each accident association that had existed prior to that time. In passing on controversies arising under the accident insurance law, the associate judges—employers and workmen—must be persons connected with some one or more of the establishments insured under that law. At the beginning of each fiscal year, a number of physicians resident in the locality where the court is situated, are appointed to serve as expert advisors.

### PREVENTION OF ACCIDENTS.

In Germany and all other countries where compulsory accident insurance has been established, special efforts have been made to interest employers in the adoption of every available means for reducing the number of accidents. Factory inspection had for years made the prevention of accidents its principal field of activity, and on the adoption of the compulsory insurance system, existing factory inspection methods were supplanted by an even more energetic system. One of the principal advantages of the organization of the insurance in distinct industrial groups is that the application of a more thorough and drastic system of preventative measures is made possible thereby.

The associations are authorized under the law to issue regulations for the protection of employes in the establishments insured by them, and whenever it is dissatisfied with the measures taken, the imperial insurance office can compel the accident association to adopt such regulations. In framing the first insurance law, the interest which each association and each individual employer would naturally have in reducing the number of accidents was regarded as sufficient reason for granting full power to the associations to adopt and enforce whatever preventative measures they deemed proper, but

to guard against the possibility of carelessness or neglect on their part, full authority is given the imperial insurance office to compel the adoption of such protective devices and precautions against accidents as in its judgment the circumstances and conditions of each industry or each particular establishment might require.

The rules for accident prevention apply to both employers and workmen; they comprehend also the mode of operation, character of buildings, general type of apparatus, and the conduct of employes while at work. Fines may be imposed on workmen for failure to comply with regulations up to six Marks, (\$1.43) and on employers, as high as one thousand Marks (\$238), or the risk rating of the establishment may be increased, thereby compelling the payment of higher insurance assessments. If a negligently conducted establishment is already paying the highest rates, its assessments may, as a punitive measure, and as a means of quickening the interest of the proprietor in the adoption of proper safeguards, be increased to double the regular charge. Fines of this character are imposed by the board of directors of the association, subject, however, in the case of employers to the right of appeal to the imperial insurance office. Workmen who violate the rules are fined by the board of directors of the establishment sick fund, or by the local police officers, subject to right of appeal to the government officials having supervision of the various sick funds.

Rules for the prevention of accidents are drawn up by a committee of the board of directors of the accident association, and before final adoption they are thoroughly discussed and considered in a special conference at which the directors are assisted by representatives of the workmen who have a right to vote for the adoption, modification, or rejection of the regulations submitted. The workmen's representatives must be selected far enough in advance of the conference to afford an opportunity for familiarizing themselves with the character of the rules, and the imperial insurance office must also be notified of the meeting in time to have a representative present. After their adoption in this manner, the rules must be submitted to the general meeting of the accident association, and, if approved by that body, they are then laid before the imperial insurance office, which may either ratify the rules as received, or resubmit them in changed form to another conference of representatives of the workmen and the directors of the insurance association. When finally approved by the imperial insurance office, the accident associations are required to provide the government officials and local police offices with printed copies of the rules.

For the enforcement of such rules, the accident associations appoint inspectors chosen for their technical knowledge of the industries and establishments included in various groups, who are required to report to the board of directors any violation of regulations or the existence of conditions likely to be productive of accidents. These factory inspectors are selected with the utmost possible care; all must be graduates of high schools, and must also have passed through a course of two years training in a technical institute of the first-class. In the largest states of the Empire—Prussia and Saxony—the candidate for appointment as inspector must in order to qualify (1) have had at least three years technical training; (2) have studied law and political

science for at least one and one-half years, and (3) have passed two examinations in a wide variety of scientific and technical subjects arranged to test his knowledge of economics, food values, industrial hygiene, accident prevention, and public welfare. For the protection of trade secrets, the inspectors of the accident association are sworn not to reveal any information of that character acquired in the performance of their duties. All expenses for accident prevention are defrayed by the associations promulgating such rules, but special expenditures caused by negligence in any establishment may be assessed against the proprietor or firm owning it.

The accident associations have drawn up a series of model or standard rules for the prevention of accidents which affiliated factories and establishments are required to adopt as a whole or in modified form according to their peculiar circumstances and conditions. These rules are as follows:

## Model Regulations for the Prevention of Accidents. (a)

### I. GENERAL REGULATIONS.

#### I. RULES FOR EMPLOYERS.

##### A. ARRANGEMENT OF ESTABLISHMENT.

1. The parts of the building used for the business of the establishment must be kept in a condition of perfect repair and safety.

2. Care must be taken that the paths, aisles, passageways, etc., in all workrooms are kept in good condition and are not blocked by heaping up the material there or transporting articles in them except in so far as may be temporarily necessary by the nature of the work.

3. Narrow spaces between moving machinery and power-transmission apparatus (shafts, belts, etc.), which can be crossed only with risk, are to be blocked off for persons not employed on such machines.

4. All floors are to be kept in good condition in so far as the nature of the work permits. If slippery conditions or unusually smooth places can not be avoided because of the nature of the work or of weather conditions, then proper means shall be used as soon as possible to remove the unsafe conditions.

5. The galleries, staging, permanent overhead ways and stair openings are to be protected at least on one side with a permanent hand rail and with a strip of board, etc., to prevent the foot from slipping off the edge.

6. Boards and planks used for runways must have sufficient width and must be sufficiently strong or otherwise supported so that upon walking or wheeling over them tipping and sway shall be avoided.

7. Permanent stairways must be protected with a hand rail or hand rope upon at least one side.

8. Movable or temporary stairways, ladders, stepladders, etc., must be sufficiently strong and are to be maintained in good condition.

9. Ladders are to be so adapted to the nature of the floor and of the upper supporting point that they are made as secure as possible against slipping or sliding.

10. Ladders which lead to galleries, staging, wall work, etc., must extend at least 0.75 meter (29.53 inches) above the upper edge of the place to be reached unless some other arrangement is made to afford sufficient security for those going up or down the ladders.

11. In order to make the rescue of persons in case of fire as easy as possible, each building must be properly supplied with exit doors, stairs, and windows.

12. All openings of upper floors leading outside or to a lower floor must be supplied on both sides with handles and with a crossbar.

13. Ditches, canals, sunken tanks, and other depressions involving risk which are located in the working rooms or on the working places are, as far as the nature of the work permits, to be securely covered or to be supplied with a protecting wall or rail. Where it is not possible to prevent approach thereto or to cover it up or close it off by rails, etc., then in cases described in the preceding paragraph sufficient light must be arranged upon the approach of darkness. If, from the nature of the work or the arrangement of the rooms and work places for the operations in the same, sufficient light can not be furnished, then the workmen are to be required upon entering such rooms and work places to carry lanterns with them at all times. In case of openings in the floors self-closing dropping doors are sufficient.

14. Vessels which contain corrosive, hot, or poisonous substances are, as far as the nature of the work permits, to be securely covered or closed or the edges of such vessels are to be raised high enough above the surrounding floors, etc., so that by the use of ordinary caution persons shall be prevented from falling into them.

15. All work places and passageways are, as far as the nature of the work permits, to be sufficiently lighted during their occupancy.

#### B. METHOD OF WORK.

1. The employer must provide for the proper maintenance of protective apparatus and supervise the enforcement of the rules for the prevention of accidents in the establishment, or he must intrust these duties to proper persons.

2. The rules for the prevention of accidents issued by the accident associations for employers are to be made known to all workmen by placards hung up in proper places.

3. All tools, apparatus and machinery in use in the establishment are to be maintained in good condition.

4. Persons who are known to the proprietor to suffer from intoxication, apoplexy, cramps, temporary fainting spells, dizziness, partial deafness, or other physical weakness or defects to such a degree that on this account they are subject to unusual risk in certain kinds of work, may not be intrusted with such work.

5. Intoxicated persons are not to be permitted in the establishment.

6. Work which is especially dangerous may be intrusted only to those persons to whom the risk is known.

7. The storing of inflammable or explosive materials in large quantities in the workrooms is to be prohibited as far as the nature of the work permits.

8. The heaping up of old polishing materials and of inflammable factory waste in the workrooms is to be prohibited.

9. In rooms in which with ordinary care dangerous gases may develop, collect, or extend, as well as gases of an inflammable or explosive nature, or dust bodies can enter, no open fire may be used. Entering such rooms after dark is to be permitted only with the use of safety lamps unless the rooms are lighted by means of isolated lights or lighting apparatus from the outside of the room.

10. In workrooms in which it is to be expected that in spite of ordinary care dangerous dust, unwholesome gases, or unwholesome vapors in sufficient quantities to become dangerous may accumulate, the workmen employed in such rooms are to be supplied with mouth sponges, respirators, or other proper protective devices.

11. In all kinds of work the nature of which is such as to easily cause injuries to the eye, the persons engaged in such work are to be provided with proper protective devices, such as eyeglasses, masks, shields, etc.

12. Putting on or taking off clothing, as well as keeping it in the immediate vicinity of moving machinery, is to be prohibited.

#### C. RULES FOR INJURED PERSONS.

1. In every establishment there must be hung up at least one placard which explains in ordinary language the methods of providing first aid to injured persons, and with appropriate illustrations, as far as necessary.

2. In every establishment there must be kept a supply of bandages, etc., protected against dust, against handling, etc.

3. Stringent rules must be issued that as long as an open wound is not protected by at least a dressing, the injured person must cease work.

4. Injured persons, who as a result of an accident were unable to resume work for more than three days, and were treated by a physician, may be allowed to resume work only when the physician certifies to the working ability of the injured person.

#### 2. RULES FOR WORKMEN.

1. Before beginning to use tools, apparatus, machinery, etc., as well as the proper protective devices, every workman must examine the same to find out whether they are in proper condition. If such is not the case he must immediately remedy the existing defects or report the same to his superior.

2. Working tools, apparatus, etc., as well as the protective devices, are to be used only for the purposes for which they are intended. The arbitrary removal or the intended damaging or the failure to use existing safety devices and prescribed protective materials is to be punished. Protective devices which, during the work, are removed for special purposes must as soon as such purpose is accomplished be immediately put in place again.

3. All actions or conduct contrary to the purpose of the establishment, especially games, horseplay and the like, which may endanger the person himself or others, are to be strictly prohibited.

4. Workmen who suffer from apoplexy, cramps, fainting spells, dizziness, partial deafness, short-sightedness, hernia, or other physical weaknesses or defects not visible to the eye, to such an extent that in certain work they are exposed to an unusual degree of risk, are required, whenever they are intrusted with such work, to give notice of such defect to their superior officials.

5. Intoxicated workmen may neither enter nor remain in the establishment.

6. Every workman is required to call the attention of those persons who are ordered to act as helpers, or to be instructed by him, especially apprentices and young persons, to the risks or dangers accompanying the employment. He is required to see that such persons follow the prescribed rules and regulations.

7. Every workman is required to give immediate notice of any damage to the machinery, etc., or to report any unusual phenomena in the machinery, apparatus, etc.

8. No workman is to be allowed to use machinery for whose use or maintenance or service he has not been detailed.

9. In workrooms and in work places the workmen may use only the passageways, entrances, and exits designated for their use.

It is especially prohibited to enter blocked-off spaces between moving machinery and transmission apparatus (such as shafting, belting, etc.)

10. Passageways may not be blocked by heaping up material or by transporting articles except in so far as it is made necessary by the nature of the work.

11. Resting or sleeping in the firerooms, on stoves or boiler walls, on roofs or high staging, or in occupied stalls of horses, as well as in the immediate vicinity of moving machinery or near paths or tracks is not to be allowed.

12. Putting on or taking off clothing, as well as keeping it in the immediate vicinity of moving machinery, is prohibited.

13. Entering of unlighted work places and dark rooms is, as far as the nature of the work permits of light, to be allowed only with the use of a light.

14. Workmen may use ladders given to them for a definite purpose for that purpose only. The use of unsafe ladders is prohibited.

15. The accumulation of inflammable and explosive materials within the workrooms in larger masses than the nature of the work requires is prohibited.

16. Discarded polishing materials and inflammable factory waste may not be heaped up in the workrooms.

17. When safety lamps have been prescribed for persons using certain rooms, then only persons authorized to enter such rooms may do so, and such persons are required to use the prescribed lamps.

In such rooms the striking of matches and the use of means for making a light and the opening of lamps is to be prohibited.

18. Workrooms and working places containing pits, canals, sunken tanks, and other dangerous excavations which are neither covered nor shut in nor blocked off with rails may be entered only with lanterns after dark, unless other illumination is used.

19. In workrooms in which inflammable or explosive materials are placed, smoking is prohibited.

20. Workmen employed at tending engines, motors, shafting, etc., are required to wear close-fitting clothing.

21. Persons employed in the vicinity of moving parts of machinery are not to be allowed to wear the hair hanging loose or use loose clothing, ribbons, veils, neckerchiefs, etc.

22. Every injury occurring in the establishment is to be reported by the injured person as soon as possible to the proper officer.

23. Every workman must exercise the greatest care that any wound, no matter how trifling it may seem, shall be immediately cleansed and carefully protected against the entering of dust or other foreign material.

As long as the injury is not at least protected by an emergency dressing, the injured person must cease work.

### III. REGULATIONS FOR POWER MACHINERY.

#### I. RULES FOR EMPLOYEES.

1. Care must be taken that steam, gas, and other engines or parts of the same shall be shut off from the workrooms by firm railing or in other proper manner, unless they are located in special rooms or directly connected with the working machinery.

2. Water wheels and turbines are to be located in special rooms, or, if on account of their position they are accessible to unauthorized persons, they must be surrounded with proper fencing.

3. Turning off or turning on the engine must be announced by a signal audible to all persons in the workrooms.

4. The flywheels, the main driving belts, or driving ropes are to be properly closed in.

5. All moving parts of an engine which are accessible are to be properly guarded.

6. Wheels, projecting pins, and screws on revolving parts of power machinery are to be properly covered whenever the engine tender is thereby exposed to any risk.

7. If the oiling and greasing of parts of the engine while in motion is necessary, proper arrangements are to be made so that this can be done without risk. Cross couplings, eccentrics, piston rods, sliding beams, etc., are to be supplied with automatic lubricating devices.

8. Cleaning of rapidly moving parts of an engine may only be done when it is standing still.

9. For all engines, motors, etc., including water wheels, turbines, etc., apparatus is to be installed which will permit of securely fastening them when not in operation.

## 2. RULES FOR WORKMEN.

1. The engine tender may not allow unauthorized persons to enter the engine room or to remain there.

2. If the engine has been standing still for some time, the tender must, before starting it, assure himself that everything is in proper order, including the protective devices, and especially that sufficient oil and lubricants are on hand.

Any defects which can not be immediately remedied are to be reported to the official superior.

3. The cleaning of rapidly moving parts of the engine may never be done while the engine is in motion.

4. In changing shifts the engine tender may not leave until the next man has actually taken charge.

5. Each time the engine is started or stopped the prescribed signal must be given. When the signal is received from the workroom for stopping the engine it must immediately be brought to a stop and may not again be started until the proper signal is received.

6. The engine tender, before starting the flywheel of the engine, must close the steam valve and open the cylinder cocks.

## IV. POWER-TRANSMISSION APPARATUS, BELTING, SHAFTING, ETC.

### I. RULES FOR EMPLOYERS.

1. All shafting and transmission apparatus up to a height of 70.87 inches above the floor is to be guarded in the proper manner. Shafting which must be stepped over at specific places is to be covered at such places.

2. Upright shafting in passageways, etc., is to be protected up to 59.05 inches above the floor.

3. If shafting in motion must be cleaned or polished, the proper tools for this purpose must be kept.

4. If in the immediate vicinity of moving shafting, etc., building work or setting-up work is to be done, proper protection is to be installed temporarily.

5. Belts more than 1.18 inches in width, as well as ropes and chains, in so far as they move with greater rapidity than 32.8 feet per second, may not be thrown on or off by hand while in motion. This prohibition also includes belts of more than 2.36 inches in width moving slower than the speed just mentioned.

6. For throwing the belts from one pulley to another proper belting apparatus must be installed.

7. Belts or ropes thrown off in case they are not entirely removed must be fixed on permanent holders in such a way that the belts, etc., can not come into contact with the moving parts of the shafting.

8. Belts which move with a greater speed than 32.8 feet per second and all belts more than 7.07 inches in width must be securely protected underneath whenever they are located above working places or passageways.

9. All belts are to be guarded whenever they run lower than 70.87 inches above the floor of a passageway.

The belts which run through floors are to be protected with an inclosure 70.87 inches in height, unless there is some other guard for the belting in question. In the latter case the openings are to be surrounded by an upright foot guard of at least 9.84 inches in height.

10. Putting grease or rosin on the belts is permitted only while they are moving slowly.

11. For rope transmission the regulations contained in articles 5 to 10 are to be applied, except in the case of moving cranes.

12. No moving parts of shafting shall have projecting pins, screws and the like unless they are protected by some adequate coverings. Wrapping the projecting parts with rags, cotton waste, and similar materials is to be prohibited.

13. Pulleys, belt pulleys, cog wheels, friction clutches, etc., whose lowest point is nearer than 70.87 inches above the floors of the passageways are to be guarded up to this height in a proper manner.

14. Shafting is to be so arranged, as far as the conditions in the establishment shall permit, in such a manner that each workroom can be shut off independently of the other. Where such an arrangement is not provided, then in each workroom a signal apparatus shall be installed by means of which a signal can be given for stopping the power or for starting or stopping the engine.

All arrangements for throwing off belting, etc., are to be installed in such a manner that it is impossible for the shafting to start again of its own account.

These rules and regulations were, as before stated, formulated by selected employers and workmen engaged in the various industries to which they apply; it therefore seems reasonable to believe that they are as well adapted to serving the end in view as men acting under a sense of broad enlightened self-interest and possessing also a perfect technical knowledge of all the problems involved in accident prevention could make them.

In the United States such protective factory and workshop rules as carry penalties for violation or neglect to observe them are made by the various state legislatures, and, as a natural consequence, such regulations generally prove to be less effective than there is reason for believing would be the case if formulated—as the foregoing regulations were—by men whose knowledge of the industrial conditions to be dealt with had been acquired by years of personal experience.

As accident prevention is, after all, the primary purpose of the German compulsory laws, and also the end sought by our own legislation on similar lines, the full text of the translation of these rules is given in the belief that, representing as they do twenty-five years practical experience in the field of accident prevention, some suggestions of value to our employers and workmen under the operation of our new liability and compensation laws may be found in its contents.

### THE SYSTEM OF RISK TARIFFS.

Each one of the sixty-two trade associations, which includes all the industries of the Empire, is composed of a large number of individual establishments or subdivisions—for instance, the leather trade association in-

cludes 6,388 firms; clothing, 9,364; Bavarian wood trade, 14,474; and mining, 40,252. The board of directors of each association after a careful investigation fixes on a risk classification for the establishments under its control and formulates a schedule of charges in accordance with the risk classes into which each establishment may be divided. Before the findings of the association are fixed, they must receive the approval of the Imperial insurance office, which will itself fix the danger tariff if the trade association fails to do so within a certain period. An employer who objects to the risk rating of his establishment may appeal within two weeks to the Imperial insurance office.

The risk classification and danger tariff must be revised not later than two years after its initial adoption, and at intervals of five years thereafter there must be a new revision, based on the number of accidents and the amount of compensation paid during that period, a list of which must be furnished to the association by each establishment, together with a statement showing the number of employes, both regular and casual, on its payroll, and the amount of wages paid to them. The premiums to be paid by the establishments are calculated on these returns. As in practice, many accidents have their origin in causes not at all suggested by the nature of the work carried on in the establishment, no accurate calculation of the liability to such occurrences can be made; the entire system, however, being based on the principle of mutuality, the burden of an unforeseeable casualty does not fall entirely on the establishment in which it occurred, nor is a zero rating given to an establishment in which there were no accidents during the time between revisions of the danger tariff. The basis of the risk rating up to the year 1896 was the *average* risk of accidents in establishments of the same kind; since then, the plan has been to ascertain the amount of expense caused by accidents in the various branches of industry, and periodically revising the old risk tariff on the basis of the expense caused by accidents during the preceding period. To illustrate the simplicity of this plan—in the Fine Machine Work and Electric Trade Association, during the period from October 1, 1885, to December 31, 1905, the total wages paid amounted to 1,959,346,343 Marks (\$467,324,429), and the total compensation paid on account of accidents, 8,401,281 Marks (\$1,989,504.) This shows an approximate average of \$4.30 paid out as compensation for every \$1,000 paid in wages, and in revising the risk tariff of this association for coming years, it is only necessary to assess this average amount together with the capitalized value of the pensions then in operation. The risk tariff is calculated for a specific industry only when the wages paid amount to at least 5,000,000 Marks (\$1,190,000); otherwise a number of industries are combined together in related groups and the premiums calculated approximately according to their several risks and other practical considerations which enter into the scale of computation.

In a group of industries with varying degrees of danger, each one is rated by itself. To illustrate—in the Gas and Water Trade Association, there are five danger classes:

1. Water systems without power—danger factor, 5.9.

2. Electric plants, as auxiliary to gas and water works—danger factor, 6.3.
3. Gas plants—danger factor, 7.7.
4. Water systems with power—danger factor, 8.3.
5. Pumping stations for sewer systems—danger factor, 9.4.

In cases where unusual danger or extraordinary risk is connected with any work, such as the installation of heavy machinery, the trade association can add fifty per cent. to the premium of that particular plant. The association may also, as stated elsewhere, penalize a carelessly conducted establishment under its control, in which precautions against accidents are not strictly observed, by either imposing a fine or increasing its risk rating until it is shown that the preventative rules are being strictly obeyed.

#### STATISTICS OF OPERATIONS FOR 1908.

Population of the German Empire .....	63,125,000
Total number of persons insured against accidents .....	27,174,000
Number insured against accident per 1,000 of population.....	430
Number of persons receiving compensation for the first time....	142,965
Number of accidents resulting in death .....	9,856
Number of accidents resulting in complete permanent disability..	1,160
Number of accidents resulting in partial permanent disability....	57,410
Number resulting in temporary disability of over 13 weeks.....	74,539
Total number of dependents of persons killed, entitled to pensions Of this number, there were—widows and widowers.....	20,544 6,605
Children and grandchildren .....	13,607
Parents and grandparents .....	332

### Itemized Statement of Expenditures for Accident Compensation.

#### INDUSTRIAL ACCIDENT ASSOCIATIONS—AGRICULTURAL ACCIDENT ASSOCIATIONS, AND PUBLIC AUTHORITIES—1908.

##### AGGREGATES FOR THE THREE SYSTEMS.

	No.	Amount.
Medical treatment .....	96,818	\$858,264
Pensions to injured persons .....	900,734	27,433,354
Treatment and board of persons in hospitals....	30,483	1,185,579
Pensions to dependents of persons in hospitals... ..		326,836
Settlements to injured persons .....	5,413	347,010
Funeral expenses .....	10,818	179,235
Pensions to widows (or widowers).....	81,498	2,995,856
Settlement to widows in case of remarriage.....	1,537	226,976
Pensions to children and grandchildren.....	109,757	3,547,839
Pensions to parents, grandparents and other relatives. . . . .	4,192	168,199
<b>Total expenditure for all forms of accident compensation (1908) .....</b>		<b>\$37,380,963</b>

## EXPENDITURES FOR ADMINISTRATION.

Investigation of accidents and fixing compensation.....	\$1,256,313
Courts for deciding claims .....	563,609
Accident preventative devices and measures .....	443,003
General administration .....	3,629,732
Addition to reserve fund .....	4,579,099
Total expenditure for administration .....	10,471,756
Total expenditure for compensation and administration 1908..	48,374,385

The expense for administration, as given above, does not include the cost of the Imperial insurance office, the cost of the state insurance offices, the cost of the services of the postoffice department, and the cost of the services of government officials who exercise a general supervision over the operation of the entire system. Deducting the \$4,579,099 which was added to the reserve fund during the year, reduces the actually outlay for all purposes of administration to \$5,892,657.

The Imperial insurance office carefully scrutinizes the cost of administration of the system, and the official report which it issues each year presents a statement of the various accident associations showing the cost of general administration for each, based on the expenditures per insured person, per \$1,000 of wages, per insured establishment, and per accident reported. The official figures relating to these items for the year 1908 are as follows:

Administration cost per person insured.....	\$0.28
Administration cost per \$1,000 of wages .....	1.25
Administration cost per establishment insured.....	3.60
Administration cost per accident reported.....	5.44

It seems practically impossible to determine from the official reports just what the insurance for industrial accidents costs the German employer. The most definite statement relating to the subject is contained in a report of the Bureau of Information of the Imperial Insurance Office, from which the data relating to the year 1908 is presented in the following table:

TOTAL NUMBER INSURED, TOTAL AMOUNT OF WAGES, TOTAL EXPENDITURE FOR INSURANCE, AVERAGE EXPENDITURE PER PERSON INSURED AND PER \$1,000 OF WAGES PAID, BY INDUSTRIES.

INDUSTRY.	Number of Persons Insured.	Total Amount of Wages Paid all Persons Insured.	Expenditures for Insurance.		
			Total Amount.	Average Amount Per—	
				Person Insured.	\$1,000 wages of persons Insured.
Mining .....	798,378	\$265,879,323	\$6,927,885	\$8 68	\$26 06
Quarrying .....	439,719	42,518,401	1,218,235	2 77	28 65
Fine mechanical products.....	224,497	70,311,883	495,624	2 20	7 03
Iron and steel.....	1,210,183	343,828,911	6,068,142	5 00	17 65
Metal working .....	203,039	49,797,627	444,492	2 19	8 93
Musical instruments .....	50,333	9,053,999	75,588	1 50	8 35
Glass .....	87,798	19,073,441	170,303	2 01	8 93
Pottery .....	89,005	19,042,713	135,790	1 53	7 13
Brick and tile making.....	277,955	44,247,827	764,360	2 75	17 27
Chemicals .....	216,751	57,249,608	1,029,830	4 75	17 99
Gas and water works.....	70,079	20,400,213	267,292	3 82	13 10
Linen .....	59,412	11,287,230	112,896	1 90	10 00
Textiles .....	761,866	139,084,045	1,116,128	1 46	8 02
Silk .....	69,235	14,524,152	43,339	63	2 98
Paper making .....	86,866	17,633,628	417,175	4 80	23 26
Paper products .....	131,248	28,846,719	180,509	1 38	6 26
Leather .....	76,788	19,495,627	262,064	3 41	13 44
Woodworking .....	428,742	93,395,459	1,898,462	4 43	20 33
Flour milling .....	63,729	14,333,680	604,048	9 48	42 14
Food products .....	154,697	29,539,015	244,703	1 58	8 28
Sugar .....	93,791	12,061,209	352,052	3 75	29 19
Dairying and starch distilling.....	50,020	11,430,255	208,291	4 18	18 28
Breweries .....	106,035	33,702,396	1,044,256	9 85	30 98
Tobacco .....	175,894	25,224,303	45,069	26	1 79
Clothing .....	278,866	57,009,747	212,341	76	3 73
Chimney sweeping .....	5,622	1,343,464	22,740	4 02	16 93
Building trades .....	1,260,270	253,547,088	5,557,740	4 41	21 92
Printing and publishing.....	174,653	40,318,264	193,880	1 11	4 81
Privately owned railways.....	28,714	8,554,003	138,050	4 81	16 14
Street railways .....	69,129	21,682,040	246,705	3 57	11 38
Express and storage.....	268,241	91,465,956	1,413,118	3 84	15 45
Carting, trucking, etc.....	104,153	21,790,395	921,307	8 85	42 28
Inland navigation .....	59,242	13,528,667	443,894	7 49	32 81
Marine navigation .....	77,345	16,395,356	482,327	6 24	29 42
Engineering, excavating .....	306,276	48,490,523	876,280	2 86	18 07
Meat products .....	110,251	21,377,493	302,867	2 75	14 17
Blacksmithing .....	151,919	26,596,007	256,737	1 69	9 65

The expenditures given on the foregoing table are, as before stated, for 1908; the official report from which they are drawn shows that from the organization of the system up to about 1903, the different industries covered by the insurance as a rule showed a tendency to increased cost. Since that time many of the insurance associations show either a stationary cost or a slight tendency toward reduction, particularly in the rate per \$1,000

of wages. The cost per person insured ranges from \$9.85 per year for the brewing industry, which is the highest, downward to \$0.26 for the tobacco industry, the lowest.

The average annual cost of the accident insurance for all industries was, in 1908, \$2.19 per person insured, and \$12.50 per \$1,000 of wages for the industrial associations. For the agricultural associations, the cost per person insured was \$0.42, and for the public authorities, the cost was \$2.03. The average cost per \$1,000 of wages for the agricultural associations and the public authorities does not appear in any of the German reports.

The latest information obtainable relating to the average compensation paid per accident under the law is contained in a report of the Imperial insurance office issued in 1900, the data having reference to the year 1897. However, as there has been no material change since then in the rules under which compensation is awarded, the averages of the present year are in all probability practically the same. The figures for 1897 showing the average compensation paid per accident by all industrial accident associations, classified by the causes to which the accidents were due, are as follows:

1. Engines, power transmission apparatus, working machinery, etc. ....	\$32.20
2. Elevators, hoists, cranes, lifting apparatus, etc. ....	53.72
3. Steam boilers, steam piping, (explosions, etc.) ....	64.64
4. Explosive material (explosions of powder, dynamite, etc)	73.62
5. Inflammable, hot and acid materials, gases, vapors, etc...	59.24
6. Falls from ladders, stairs, etc., into excavations, etc....	55.85
7. Collapse of scaffolds, downfall of materials, objects, etc.	57.73
8. Loading and unloading by hand, by hoisting, carrying, etc. . . . .	38.81
9. Vehicles (run over by wagons, cars, etc., of all kinds) ..	47.63
10. Railway operation, run over, etc. ....	45.26
11. Shipping and transportation by water . . . . .	62.12
12. Accidents due to animals (kick, bite, blow, etc.) ....	46.64
13. Hand tools and simple instruments, hammers, axes, spades, hoes, etc. ....	36.20
14. All other . . . . .	46.04

The above summary table is of value as showing the comparative expense for all industries from accidents due to the various causes specified thereon. The record shows that handling "explosive material" and the incidental explosions of gunpowder and dynamite, leads all other accident producing factors in expensiveness, the next highest being the injuries due to steam boilers and piping, the compensation for accidents originating in these causes showing an average of \$73.62, and \$64.64 respectively for each person injured. This is due, not to there being a greater number of accidents from these causes, but rather to the obvious reason that such as do occur generally result in injuries of a severe character from which recovery is slow. The smallest average compensation per accident (\$32.20), was paid to those who were injured through "engines, power transmission, apparatus, working machinery," the greater number of injuries chargeable to these agencies being probably of a minor character which caused but little loss of working time. The following table shows for the year 1908 the average compensation and other relief provided per accident, by industries:

INDUSTRY.	Average Com- pensation Paid Per Accident.
Mining .....	\$66 80
Quarrying .....	47 45
Glass, pottery and brickmaking.....	44 52
Iron and steel.....	50 47
Metal working, and musical instruments.....	43 41
Chemicals .....	53 17
Gas and water works.....	63 29
Textiles .....	33 26
Paper and printing.....	39 21
Leather and clothing.....	40 01
Woodworking .....	37 63
Food products .....	36 86
Milling, sugar, dairying, starch and brewery.....	46 82
Building trades .....	50 38
Privately owned railways.....	72 44
Storage and drayage.....	49 02
Inland navigation .....	58 52
Marine navigation (excluding state operation).....	62 30
All industries—aggregate average compensation per accident.....	49 80

The cost of compensation as shown on the above table is dependent on the degree of disability and also on the rate of wages paid in the industry, the amount allowed being a fixed proportion of the regular standard wages of the trade in which the injured person was employed, varying according to the seriousness of the injury, it follows that the higher the wages, the more costly the compensation, the rate of which may reach two-thirds of full earnings, and in some exceptional cases as already pointed out, the injured person is allowed compensation equal to his full earnings before the accident which caused his disability occurred.

The accidents for which compensation was allowed in 1897, were investigated with a view to determining the question of responsibility for their occurrence, with results as shown in the table below.

NUMBER OF ACCIDENTS AND RESPONSIBILITY FOR THE SAME, INCLUDING INDUSTRIES, BUILDING TRADES AND NAVIGATION.

ACCIDENTS DUE TO—	Number.	Per Cent. of Total.
Fault of employer.....	7,547	16.81
Fault of workman.....	13,419	29.89
Fault of fellow workman or other person.....	2,370	5.28
Fault of employer and workman together.....	2,092	4.66
Unavoidable risk of the industry.....	18,878	42.05
Acts of God, chance, etc.....	590	1.31
Total .....	44,896	100.00

As shown above, the employer was at fault in 16.81 per cent.; the workman was responsible in 29.89 per cent.; and the unavoidable risk of the industry was chargeable with 42.05 per cent. of the accidents which occurred that year.

Defective apparatus, absence or insufficiency of protective appliances, absence or insufficiency of rules, directions, etc., are the causes assigned for the accidents resulting from the negligence of employers; while lack of skill, inattention, etc., failure to use existing protective devices, disregard of existing regulations or orders, acts of horse-play, mischief, intoxication, etc., and unsuitable clothing, were jointly and severally responsible for the accidents due to the fault of workmen.

The figures relating to the agricultural accidents for 1901 show the total number to have been 56,509, divided with regard to responsibility as follows: Neglect of employers, 9,997, or 17.69 per cent.; neglect or carelessness of the workman, 15,783, or 27.92 per cent.; unavoidable risk of the industry, 27,853, or 49.23 per cent.; fault of employer and workman in common, 399, or 0.67 per cent.; fault of fellow workman or other person, 1,084, or 1.92 per cent.; and due to act of God, chance, etc., 1,456, or 2.57 per cent.

More than two-thirds of the agricultural accidents for which the employing farmers were responsible occurred through the absence or insufficiency of protective appliances, and more than 90 per cent. of all the accidents due to fault of the workmen, were caused by lack of skill, or inattention on their part.

The proportion of accidents for which the employer was solely responsible, together with those for which he shared responsibility with the workman, is shown by the above table to have been approximately 22 per cent., while the remaining 78 per cent. were due to causes beyond his control. In this connection it is interesting to note the apportionment between employer and workman of the cost of carrying on the entire system of insurance—sickness, accident, invalidity and old age, as the same is exemplified in a number of reports showing the actual expenditures for these purposes by individual firms. The data selected for illustration are taken from a report of the Bergische Stahl-Industry, a large steel manufacturing corporation of Ramschied, Germany, in which 1,750 men were employed in 1908. The report gives the expenditures in detail from 1885 to 1908, showing the compulsory and the voluntary contributions of the firm per employe on insurance account for each year, together with the compulsory payments of employes for the same purpose. The figures for 1908, are as follows:

Number of persons employed for whom insurance was paid....	1,630
Average earnings per workman (including 6 per cent of young persons under 16 years) .....	\$389.00
Compulsory contributions by the firm per workman on account of—	
Sickness insurance .....	3.08
Accident insurance .....	6.89
Old age and invalidity insurance.....	2.15
Total compulsory contributions per workman by the firm.....	12.12
Voluntary contributions per workman by the firm (recurring annually). . . . .	10.90
Total compulsory and voluntary contributions per workman by the firm for insurance purposes .....	23.02

Per cent. of contributions of firm earnings for insurance purposes	5.91
Compulsory contributions per workman by the insured persons—	
Sickness . . . . .	\$6.23
Old age and invalidity . . . . .	2.15
Total compulsory contributions by insured persons . . . . .	8.38
Per cent. of contributions of workman's wages for compulsory insurance. . . . .	2.16

The report from which the above data is drawn, shows that during the period from 1885 to 1908, the compulsory contributions for sickness had increased only a small fraction less than 49 per cent.; the contributions for accident insurance show considerable fluctuations up to 1900, after which in consequence of the new law of that year, the payments have increased more than 100 per cent.

Assuming that the figures given above are fairly representative of the experience of other industrial firms in Germany under the compulsory insurance law, it would appear that the employer pays—including voluntary contributions, approximately 73 per cent. of the cost, and the insured workmen, 27 per cent.

Some understanding of the benefits which the wage-earning population of Germany has derived from the compulsory accident insurance system, may be obtained by a study of the figures representing the receipts and expenditures of the insurance associations for the period from 1885 to 1908, which are as follows:

#### RECEIPTS, 1885-1908.

(Industrial and Agricultural Accident Associations only.)

Total receipts from all sources . . . . .	\$614,960,516
From assessments paid by employers . . . . .	461,354,908
From interest on accumulated funds . . . . .	4,203,135
Premiums, fines and amounts from other sources. . . . .	149,402,473

(For the "Public Authorities" accident insurance there is no system of assessments and consequently no "receipts." The insured persons are all in the Civil Service of the Empire, and the full cost of their insurance is provided for in the annual appropriations for the departments and offices in which they are employed).

#### EXPENDITURES, 1885-1908.

(Industrial and Agricultural Accident Associations and Public Authorities.)

Total expenditures for all purposes . . . . .		\$520,167,393
	No.	Amount.
For medical treatment . . . . .	1,166,033	\$9,759,855
Pensions to injured persons . . . . .	997,209	282,437,597
Treatment and board in hospitals . . . . .	406,963	14,989,862
Pensions to dependents of persons in hospitals. . . . .		4,018,718
Settlements to injured persons . . . . .	36,854	3,393,567
Funeral expenses . . . . .	173,540	2,311,919
Pensions to widow (or widowers) . . . . .	889,517	30,115,461
Settlements to widows on remarriage. . . . .	21,535	2,671,623
Pensions to children and grandchildren. . . . .	1,433,973	38,099,563

	No.	Amount.
Pensions to other relatives.....	52,667	\$1,860,617
Total expenditures for compensation .....		389,658,782
Other expenditures not specified .....		10,057,933

## EXPENDITURES FOR ADMINISTRATION.

Investigation of Accidents and Determining Compensation..		\$12,603,371
Courts for deciding claims .....		5,769,521
Administering preventative measures .....		5,247,642
General administration .....		36,812,714
Addition to reserve fund .....		60,017,430

Under the law of 1885, each of the accident insurance associations is required to establish a reserve fund. The funds for this purpose are secured by adding to the assessments made on members for compensation, a supplementary charge, which, beginning with 300 per cent. the first year, is gradually reduced until the eleventh year is reached when the supplementary charge is 10 per cent. Thereafter the charge takes the form of a percentage of the existing reserve fund, and is reduced gradually until the rate of 4 per cent. is reached, at which figure it is for the present allowed to remain. The reserve fund is invested in the most profitable manner consistent with absolute security, and it is expected that before many years have elapsed the interest which it produces will go far toward offsetting the increase in the annual expenditure per insured person.

The reserve funds of the accident insurance organizations amounted at the end of the year 1908, to \$65,820,101, of which \$61,641,385 were credited to the industrial associations; \$3,537,513 to the agricultural associations; \$641,203 to the navigation associations, and the insurance institutes of that part of the building trades that is merged with them.

In 1897, the year when the number of "full-time" workers was first computed, the records show that in all industries excepting "agricultural and forestry" there were 43.25 compensated accidents old and new for every 1,000 full-time workmen insured; in 1908 the number compensated had grown to 66.30 per 1,000 insured. The agricultural and forestry associations had 15.95 compensated accidents per 1,000 insured workmen in 1897, and 24.73 in 1908. The increase in the number of compensated accidents during this twelve year period was a fraction more than 53 per cent. for all the associations except the agricultural and forestry, and for these, the increase is shown to have been 55 per cent. This gradual increase may be expected to continue for years to come, and will not cease until a point is reached when the passing away of pensioners carried over from previous years, offsets the number of new ones added to the rolls each succeeding year. The number of new compensated accidents per 1,000 insured workmen occurring each year also show a progressive increase. In 1897 the number reported was 7.97, and in 1908 it was 9.29, an increase of 16.5 per cent. in the number of compensated accidents occurring in 1908 compared with the record of 1897.

This increase is due to a number of causes rather than to any single cause. The mine-owners accident association, in reply to a circular letter of the imperial insurance office on the subject, attributes the increase to a combination of the following causes: "A disposition on the part of insured per-

sons to connect previous pathological conditions with a real or pretended accident; in mining work, it is easy to find some incident which preceded a case of sickness and establish a connection between it and the disability. In some cases trickery is resorted to for the purpose of securing a pension. The workmen seek to secure compensation for every accident regardless of how insignificant it may be. The result is that officials are induced to report as "accidents" the most trifling incidents which otherwise would not be reported at all."

Other causes assigned for the increase are—more intense methods of working; increasing use of machinery; the unwise manner of living of the workmen which diminishes their mental capacity, and their physical power of resistance. Failure to observe the rules for the prevention of accidents is also responsible for some of the increase.

The experience of the accident associations in the matter of dependents left by each 100 persons killed by accident, shows considerable fluctation in the number, but still a slight increase in 1908, as compared with 1888, so far as the industrial and agricultural associations are concerned, while the public authorities associations show a very decided decrease. For the period 1888 to 1908, the average number of dependents for every 100 insured workmen killed was 215.46, for the industrial associations; 175.64 for the agricultural associations; and 226.65 for the public authorities associations. The following table shows the total number of full-time workmen employed in the various industrial groups in 1908, together with the actual number and per cent. of persons injured by accidents (old and new), who were drawing compensation that year, and also the number of new accidents per 1,000 employed who were on the pension rolls of the several industry groups and drawing compensation for the first time that year.

## ACCIDENTS COMPENSATED—BY INDUSTRY GROUPS, 1908.

INDUSTRY GROUP.	Total Number of Full Time Workmen.	Old and New Accidents Compensated.		New Accidents Compensated.
		Number.	Per Cent.	
Mining .....	798,378	80,580	10.1	14.69
Quarrying .....	169,566	19,159	11.3	15.67
Glass, pottery and brick making.....	354,362	17,527	4.9	6.86
Iron and steel.....	1,289,887	97,114	7.5	11.61
Metal working, instruments, etc.....	445,983	18,374	4.1	6.65
Chemicals .....	216,751	13,680	6.3	9.20
Gas and water works.....	70,079	3,093	4.4	6.75
Textiles .....	885,522	26,812	3.0	3.10
Paper and printing.....	367,992	14,212	3.9	4.86
Leather and clothing.....	325,056	9,129	2.9	3.36
Woodworking .....	395,117	36,686	9.3	12.71
Food products .....	449,730	11,771	2.6	4.86
Milling, distilling, sugar and brewing.....	292,983	31,727	10.8	12.00
Building trades (state work excluded).....	1,109,233	94,311	8.5	11.78
Privately owned railways.....	105,679	4,268	4.0	5.17
Storage and drayage.....	465,614	35,069	7.5	12.79
Inland navigation .....	55,108	5,730	10.4	14.73
Marine navigation (without state operation).....	71,491	4,217	5.9	6.43
Establishments of the military and naval administration .....	61,486	3,485	5.7	4.44
Public building operations.....	103,924	5,692	5.5	7.46
Government railroad, postal and telegraph systems	500,129	32,910	6.6	7.25
State establishments engaged in navigation.....	6,531	668	10.2	13.01
Agriculture and forestry without state operation....	17,179,000	442,848	2.6	3.59
Agriculture and forestry (state operations only).....	246,796	8,237	3.3	3.11
All industries except agriculture and forestry.....	8,540,601	566,214	6.6	9.29

The column in the above table headed "old and new accidents compensated," includes all cases of disabled persons carried over from previous years, together with those injured who received compensation for the first time in 1908; these figures with their equivalent percentages, shows accurately the extent of the burden which each industrial group was carrying under the accident insurance laws at that time.

The last entry on the table—"all industries except agriculture and forestry"—shows that for the 8,540,601 full-time workmen included in the insurance there were 566,214, or 6.6 per cent. of the total, receiving compensa-

tion for injuries, of which number, 9.29 in every 1,000, or a little less than one per cent. of the full-time workers, were injured by accidents which disabled them for 13 weeks or more. The industry groups showing the highest percentages of disabled workmen are "quarrying," 11.3; "milling, distilling, brewing and sugar," 10.8; "inland navigation," 10.4; "state establishments engaged in navigation," 10.2; and "mining," 10.1. The other groups show percentages of disabled workmen ranging downward from 9.3 per cent. in woodworking, to 2.6 per cent. in food products. The same industry groups lead all others in the number of new accidents per 1,000 full-time workmen that were compensated for the first time in 1908, the range being from 15.67 in "quarrying" to 3.10 in "textiles." The new accident column affords a fairly reliable indication of the trade risk of each industry group, as an examination of the original reports from which these data were drawn shows only slight variations in the figures relating to new cases in previous years, but the industry groups showing the largest numbers of accumulated cases drawing compensation from previous years also show the largest number receiving compensation for the first time in 1908.

The following table shows for all associations, (industrial, agricultural, and public authorities), the number of persons injured in accidents due to each specified cause, during the year 1908.

CAUSES OF ACCIDENTS.	Number Injured.
Engines, power transmission apparatus and working machinery.....	20,256
Elevators, hoists, cranes and lifting apparatus.....	3,428
Steam boilers, steam piping, steam cooking apparatus (explosions, etc.)....	226
Explosive material (explosions of powder, dynamite, etc.).....	753
Inflammable, hot and acid materials, gases, vapors, etc.....	3,631
Collapse, downfall, etc., of material.....	16,306
Falls from ladders, scaffolds, windows, etc., into excavations, etc.....	29,762
Loading, unloading by hand, by holisting, carrying, etc.....	17,154
Vehicles (run over by wagons and cars of all kinds).....	16,512
Railway operation (run over, etc.).....	5,488
Shipping and transportation by water.....	726
Animals (push, blow, bite, etc.), including all accidents while riding.....	10,443
Hand tools and simple instruments (hammers, axes, spades, etc.).....	10,625
All other causes.....	7,655
Total number injured from all causes in 1908.....	142,965

Of the total number of accidents specified in the above table, 75,830 occurred to persons included in the industrial associations, 61,609 were members of the agricultural associations, and 5,526 held membership in the public authorities association. Of the 75,830 accidents that occurred in the industrial associations, 15,286, or a small fraction more than 20 per cent. were caused by "engines, power transmission apparatus, etc." This cause of accidents is not only the leading one in 1908, but has been the leading cause each year since the insurance system was organized. Next in importance

among the causes of accidents in the industrial associations comes "collapse, downfall, etc., of material," 11,612; and "falls from ladders, stairs, windows, etc," 11,743. Taking these three causes together accounts for 38,641, or 51.2 per cent. of all accidents in the industrial associations for the year.

In the agricultural associations, the leading cause of accidents was—"falls from ladders, stairs, windows, etc," 17,110, or 27.7 per cent. of the total number that occurred during the year. Among those insured in the public authorities associations the leading cause of accidents was "railway operation, etc.," which was responsible for 1,411, or 25.5 per cent. of the total number.

Under the German accident insurance system, the compensation paid is regulated by the degree of disability resulting from the accident, and the amount of wages that were being earned by the injured person when the accident occurred. The latest available data on the subject of compensation paid to injured persons, according to the degree of disability, is given for the year 1897, in a report of the Imperial Insurance Office, issued in 1900. The average amounts paid per day for the 230,095 persons then on the pension rolls of the industrial accident associations is shown in the following table:

Daily pension for loss of earning power of—under 10 per cent.....	\$0.02
Daily pension for loss of earning power of 10 and under 15 per cent. ....	0.04
Daily pension for loss of earning power of 15 and under 20 per cent. ....	0.05
Daily pension for loss of earning power of 20 and under 25 per cent. ....	0.07
Daily pension for loss of earning power of 25 and under 50 per cent. ....	0.11
Daily pension for loss of earning power of 50 and under 75 per cent. ....	0.20
Daily pension for loss of earning power of 75 and under 100 per cent. ....	0.28
Daily pension for loss of earning power of 100 per cent.....	0.38
Average daily amount paid for all cases .....	0.11

The average for all cases, including all the industrial accident associations, is shown by the last line of the above table to have been eleven cents per day. The highest compensation paid, 38 cents per day, is, as a matter of course, for loss of 100 per cent. of earning power, which leaves the recipient, for the time being at least, totally unable to work. The report of the Imperial insurance office contains data similar to that in the above table for each industrial group separately, but the amounts of compensation allowed for each degree of disability show a material variation from the average for all industries in only a few instances. The highest average compensation in any one of the industrial groups occurs in the railways where it is 18 cents per day. The highest compensation paid for total disability, 44 cents per day, is also shown by the railway group. The textile group shows the lowest average for all degrees of disability, the amount being 8 cents per day.

The relative expensiveness of the various degrees of disability to the accident insurance associations is shown in the following table, taken from

a report of the Imperial insurance office published in 1900. The figures have reference to the year 1897. The table shows the percentages of the total pensions paid, and of the total days for which pensions were paid by the industrial accident associations, by degrees of disability.

PER CENT. OF LOSS OF EARNING POWER.	Per Cent. of Total Pensions Paid.	Per Cent. of Total Days for which Pensions Were Paid.
Under 10 .....	1.45	7.25
10 but under 15.....	7.18	21.24
15 but under 20.....	6.04	12.11
20 but under 25.....	7.29	10.96
25 but under 50.....	27.07	26.33
50 but under 75.....	23.64	12.96
75 but under 100.....	10.04	4.00
100 .....	17.29	5.06
Total .....	100.00	100.00

As shown by the above table, of the total compensation paid for accidents by the industrial associations in 1897, the injuries causing loss of earning power of from 25 to 50 per cent. received 27.07 per cent. of the compensation and were responsible for 26.33 per cent. of the total days of disability for which pensions were paid, and accidents causing from 10 to 15 per cent. of disability come next in cost with 21.24 per cent. of the days for which pensions were paid.

As has already been explained, sufferers from accidents are cared for entirely by the sickness insurance associations for the first thirteen weeks, and such of them as have not recovered at the expiration of that time pass under care of the accident associations at the beginning of the fourteenth week, from which time compensation according to the degree of disability as illustrated by the table on page 83 is allowed until the injured workman has either died, recovered or suffered a permanent loss of all earning power, in which case he is cared for by the invalidity and old-age association provided he is in the class entitled to such continuous protection.

The condition of the injured workmen after they have received compensation for a certain number of years is shown in a report on the subject issued by the Imperial insurance office, covering the period from 1896 to 1906. From this report it is seen that in the year 1896 compensation was paid for the first time to 38,538 injured persons insured in the industrial accident associations, who had already been disabled for thirteen weeks; at the end of the year 20.82 per cent. of these persons had entirely recovered. At the end of the second year 28.37 per cent. of the original number had entirely recovered, and at the end of four years 35.09. After five years 11.0 per cent. had died, leaving 53.89 per cent. of the 38,538 persons granted pensions for the first time in 1896 who were still disabled and continuing to receive compensation.

## SICKNESS INSURANCE.

The earliest form of workmen's insurance is that which provides against sickness or temporary disability. In Germany it has existed for many years as a compulsory adjunct to many trades and industries. In the early part of the nineteenth century the guild corporations were required to provide sick benefits of various kinds, apprentices were cared for by their masters in case of disability, and the miners, at an early period of the history of that industry, had compulsory institutes of various kinds for the relief of their sick or disabled fellow workmen. The Kingdoms of Prussia and Bavaria were among the first of the states included in the present German Empire to make the establishment of sick and relief funds obligatory in certain classes of labor. In 1854, a Prussian royal decree authorized local governments throughout the Kingdom to make the establishment of relief funds compulsory in the territories under their jurisdiction. Similar action was taken soon after by Bavaria, Saxony, and other German states; as a result of these laws and decrees, journeymen, apprentices, factory operatives, and other workers were required to organize and become members of sick funds, and mutual aid and burial funds. Compulsory sickness insurance on a national scale, however, dates from the enactment of the law on that subject by the Imperial parliament in 1883, nearly two years previous to the adoption of the compulsory accident insurance plan. This statute was the first in the series that are now included in the great German system of social insurance. Under its provisions, insurance against sickness and invalidity was made compulsory for practically all workers in the Empire—male and female—having a yearly income no greater than 2,000 Marks (\$476).

Within three days after obtaining employment, the man must be enrolled in a sick club; in fact he is enrolled automatically when he commences work. He is then provided with a record book in which his weekly payments to the sick club are entered. The premium which he pays is, approximately, three per cent. of his daily wages, and varies from  $7\frac{1}{2}$  to 19 cents per week. For the maintenance of the sickness insurance, the employer pays one-third and the workman two-thirds. The premiums are paid by the employer, who deducts the amounts from the wages of his workmen. In case of sickness the insured workman is entitled to twenty-six weeks continuous care with doctor's attendance, medicine, and, if necessary, crutches, artificial limbs, spectacles, and other appurtenances required by his condition free of cost.

If incapacitated for work, sick pay is allowed for each working day on the basis of from one-half to three-fourths of the daily wages. This aid may be extended to one year, and in some cases free doctor's attendance is allowed to the family. The sick man may be sent to a hospital where he is given free board and treatment, and while there, a "family aid," graded according to their needs and number of children, is provided for his dependents. A workman receiving 3 Marks (71.4 cents) daily, pays 63 pfennigs (16 cents) weekly, premium, and is entitled to 1.50 Marks (35.7 cents) sick pay. If the patient is in a hospital, the family receives an "aid"

og 75 pfennigs (19 cents) daily. The burial fund is not less than 50 Marks (\$11.90).

Workmen may insure in a voluntary society but must in such cases pay all expenses themselves. If thus enrolled, they are not required to insure in the state institutions, in case the benefits are at least equal to those provided by the latter. Women receive sick pay for six weeks following confinement, and if complications resulting in illness set in, they have a right to the usual sick pay and other benefits.

A member of a sick club who leaves his work and takes up no other employment is allowed to retain his membership, but only on condition that he pays the full amount of dues. In changing from one kind of employment to another, the workman is allowed three weeks in which to decide between retaining his membership in the old organization or joining the club connected with his new occupation; if overtaken by sickness during that time, he is cared for by the old club.

There are seven distinct types of sickness insurance funds now in operation as parts of the German system; these are: 1. The local sick fund; 2. The parish or communal funds; 3. The establishment funds; 4. The building trade funds; 5. The Guild funds; 6. The aid funds, and 7. The miners funds.

#### THE LOCAL OR COMMUNAL SICK FUNDS.

The "local sick funds" are the most numerous, and the membership is generally selected on occupational lines. Communes may establish local funds, provided at least 100 persons desire to be included; in case the number is less than 100, the superior administrative authorities may authorize its incorporation, if satisfied of its ability to meet all financial obligations. As a rule, these funds are established by voluntary action of the communes affected, but the administrative authorities may compel them to create a local fund where one is needed, in case they neglect to do so.

Local or communal sick funds, as a rule, are created for persons employed in one or more establishments engaged in the same occupation within a specified area. The insurance is therefore as nearly as possible on occupational lines. This, however, is not feasible at all times, and the communes may combine different occupations and establishments having less than 100 employes into one fund. If there are more than 100 employes in each occupation or establishment, the communes can combine these into one fund only with the consent of the persons affected, and with the approval of the superior administrative authorities. The combination of several communes into one local sick fund may also be ordered by the superior administrative authorities whenever in their judgment such a course would result in greater financial stability of the fund; but the persons affected, if dissatisfied with such action, have a right of appeal to the Imperial insurance office which must, however, be exercised within four weeks after the order to combine has been issued.

The local sick funds are governed by a constitution drawn up by the communal officials, but the persons affected must be allowed to express their opinion on its various provisions. The constitution must be in harmony with

the general insurance law of the Empire, and with the benevolent purposes of the fund. Before becoming operative, the constitution must receive the approval of the superior administrative authorities.

The general administration of the sick fund is carried on by a board of directors and a body of delegates elected by the members by secret ballot. Where the fund has less than 500 members, all those among them who are in full possession of civil rights may attend the meeting and take part in the discussions. The general meeting elects the board of directors. The employer has a proportion of votes in the general meeting corresponding with the amount of his contribution to the fund, but such votes must not in any case be more than one-third of the total number, and may be cast by the manager or other representative official of his establishment. Employers are entitled to a proportion of members in the board of directors corresponding to their votes in the general meeting. If the general meeting fails to elect, the board is appointed by the government officials. Service on the board of directors is compulsory, and can be refused when elected only by a person already holding offices in the accident or invalidity insurance systems, or by one who has served the sick insurance system in some non-salaried office during a period of two years. The local funds appoint all the bookkeepers, cashiers and other employes required for carrying on their business. Cash balances must be deposited in the public savings banks, or invested in such securities as are approved by the state authorities for the investment of trust funds. Each fund must maintain a reserve of not less than the average expenditure per year for the past three years, for which purpose a supplementary charge of 10 per cent. on the dues must be made and continued when necessary to keep the reserve up to that amount. The form of bookkeeping is laid down by the authorities of the Imperial insurance department and an annual report of receipts and expenditures on a blank furnished for that purpose must be made to the superior insurance authorities. The bookkeepers, cashiers, and all other employes of the funds, as well as members of the board of directors, are held to a strict responsibility for the administration of their offices, and in cases of malfeasance, neglect, or misrepresentations in reports concerning the funds, are liable to prosecution under the civil code in the same manner as are trustees or guardians. The strictest possible supervision of the affairs of the funds is maintained both by the communal and superior insurance authorities, and any violation of trust is followed quickly by forced restitution and appropriate punishment. In case a director, bookkeeper, or other official of the fund is deprived of any of his civil rights by the verdict of a court, or has committed any act prejudicial to the interests of the fund, his removal by order of the superior administrative authorities quickly follows. In communes having more than 10,000 inhabitants, the supervision of the local sick funds and the duty of seeing that the provisions of the sickness insurance laws are strictly complied with, devolves upon the communal officials. In cases where the number of inhabitants is smaller, supervision is in the hands of officials appointed by the various states of the Empire. The final supervision of the fund rests in the hands of the superior administrative authorities.

The superior administrative authorities are authorized either to close a fund or to approve of its dissolution when such action is sanctioned by the communal authorities and the general meeting of the fund concerned. Closing of a fund is obligatory whenever the membership falls permanently below 50, or when it becomes apparent from the annual reports that the minimum benefits specified in the law cannot be provided on dues equal to 4 per cent. of the wages. Whenever a fund is closed or dissolved, such of its members as are subject to the compulsory insurance law are transferred to another local fund, or are attached to the communal insurance; in either case whatever remains of the assets of the dissolved fund after paying all liabilities is turned over to the organization to which the members are assigned.

The best possible illustration of the method and operation of these funds, and the one most frequently used by writers on the subject, is the work of the local sick fund of Leipzig, the model organization of its kind in Germany. Immediately following the adoption of the sickness insurance law in 1884, eighteen local sick funds for various occupations were established in Leipzig, together with the usual communal sickness insurance, the united membership of which was approximately 21,000. After a short period of separate operation it became manifest that a more economical and efficient administration of the affairs of the funds could be secured by consolidating the nineteen organizations and placing them under one managing authority. This was done in 1887, and the territory covered by the consolidated fund was extended beyond the confines of Leipzig, so as to include many new communes.

The total membership of the Leipzig fund in 1902 was 141,000 persons, and the number of employers approximately 20,000. This is now the largest fund in Germany. The example of Leipzig was not followed elsewhere in Germany; in 1902, Berlin had 54 local funds; Breslau, 54; Stuttgart, 18; Hamburg, 19, and other cities of the Empire a number proportional to their populations.

As already stated, the business of the local fund is managed by a board of directors and the general meeting, the proportion of representation as between the insured persons and their employers being two-thirds of the former and one-third of the latter. The general meeting of the Leipzig fund consists of 450 members elected for three year terms. The board of directors consists of eighteen members, twelve representing the insured persons, and six the employers. The term of office is three years, and one-third of the membership is renewed each year, the proportionate representation of employers and insured persons being always maintained.

The benefits paid by the sick fund of Leipzig are as follows:

1. Free medical attendance, medicines, therapeutic appliances, etc., from the commencement of the sickness.
2. In case of disability a pecuniary benefit not to exceed 15 Marks (\$3.57) per week beginning with the second day of disability and continuing for thirty-four weeks.
3. In place of the benefits specified under 1 and 2 above, the fund may

give free medical care and maintenance in a hospital, a sanitarium, or home for convalescents, and in addition, while the disabled wage-earner is in such an institution, a cash benefit to the family dependent upon him, equal to two-thirds of the amount to which the member is entitled; or one-quarter of the ordinary sick benefit if the member is unmarried.

4. A pecuniary benefit for a period of six weeks to female members in case of childbirth.

5. A funeral benefit in case of the death of a member.

6. A benefit to members of the family not gainfully employed who are living in the household of an insured person, consisting of: (a) in case of the sickness of the children, of the wife (or husband), parents, or grandparents, if these are not members of the fund, the benefits are free medical treatment and free medicines, but not including theraupautic appliances, for the duration of the sickness, but not exceeding thirteen (13) weeks. (b) in case of the death of the wife or of a child, if they were not themselves members of the fund, a funeral benefit is paid of 30 Marks (\$7.14) for the wife, and of 15 Marks (\$3.57) for a child.

Among the class of benefits designated under No. 6, the records show that in 1902 free medical attendance and medicines were provided for 55,084 wives, 125,440 children, and 5,323 other dependents of members, while funeral benefits were paid for the death of 376 wives and 3,279 children of members. The dues, as in all the sick funds, are paid by the employer, one-third at his own expense, and two-thirds which he deducts from the wage payments of the persons insured. The dues are collected at the end of each month by fourteen collectors employed for that purpose by the fund, or are forwarded by the employer within one week to the office of the fund. If the proper payments are not made within one week, the fund starts proceedings against the employer in the manner provided by law.

The members of the Leipzig fund are divided into ten classes according to their daily earnings. The dues to the fund are regulated by the average amount of wages in the class to which the member belongs, and are fixed at 3.5 per cent. of this average wage while the cash benefits are based on the amount of dues paid. The following table shows the amount of dues and benefits for each of the ten classes into which the members of the fund are divided.

WAGE CLASSES OF MEMBERS, WITH RATES OF DUES AND BENEFITS, OF THE LOCAL SICK FUND OF LEIPZIG AND SURROUNDING TERRITORY, 1902.

Class.	Average Daily Wages.	Weekly Dues Paid By—		Total Dues Paid by Workman and Employer Per Employee.	Sick Benefits Not Including Medical Attendance and Medicines.	Funeral Benefits.
		Workman.	Employer, for Each Workman.			
1	\$1 19	\$0.167	\$0.083	\$0.250	\$3 57	\$23 80
2	1 07	.152	.076	.228	3 21	21 42
3	95	.133	.067	.200	2 86	19 04
4	83	.119	.060	.179	2 50	16 66
5	71	.100	.050	.150	2 14	14 28
6	60	.086	.043	.129	1 79	11 90
7	48	.067	.033	.100	1 43	9 52
8	36	.053	.026	.079	1 07	7 14
9	24	.033	.017	.050	71	4 76
10	14	.019	.010	.029	43	2 86

The above figures show that in the first-class, which is the best paid group of workmen, the wages average \$1.19 per day, or, on full time, \$7.14 per week; out of this sum he is required to pay 16.7 cents per week as his own contribution to the sick insurance, while his employer pays on his account and on the account of every workman of the same class in his service, just one-half that amount, or 8.3 cents per week. A workman in this class is entitled to a sick cash benefit of \$3.57 per week, besides doctor's attendance, medicines, hospital care and other advantages enumerated before. The wages, dues and benefits of each succeeding class show the decreases indicated by the figures on the table; the lowest number, 10, which is composed of children of both sexes under 14 years of age, shows an average wage of 14 cents per day, from which they contribute 1.9 cents a week to the sick fund, to which their employers must also contribute 1 cent per week. To summarize the contents of this table, the highest average daily wages is shown to be \$1.19, and the lowest, 14 cents; the highest contribution by workmen to the fund, 16.7 cents per week, and the lowest, 1.9 cents per week. Taking the dues of workmen and employers together, the greatest amount is shown to be 25 cents per week for the first-class, and 2.9 cents per week for the tenth or lowest class. The maximum cash benefit paid for sickness is \$3.57 per week, and the minimum cash benefit 43 cents per week. The highest funeral benefit paid is \$23.80, and the lowest \$2.86.

The dissatisfaction among insured persons over being obliged to accept treatment by one or another of the comparatively small number of physicians in the service of the sickness insurance organizations was overcome by the Leipzig fund, which, in 1902, had in its service under contract about 300 practitioners, or nearly 80 per cent. of the total number in the city and territory under jurisdiction of the fund, and of these, 97 were specialists. A member may select from among these the one whom he desires, but if a

visit is to be paid to a sick member at his dwelling, he must accept the services of the physician residing nearest to him. The physicians are paid a certain lump sum per year, based on the membership of the fund. Forty-three druggists in the district covered by the fund are under contract to deliver medicines. The fund also has in its service a staff of the best physicians, who make the examinations of voluntary applicants for membership, and also examine disabled members after treatment by the regular fund physician. During the continuance of sickness, the authority of the attendant physician over the patient is absolute; if a patient disobeys the orders of the physician, he may be punished with a fine equal to three times the daily sick benefit for each offence. The area covered by the fund is divided into thirty-one districts, for each of which there is an agent, with some paid, and a larger number of volunteer assistants, who attend to the management of all business relating to the fund and its members within the limits of the district. The volunteer assistants or sick visitors perform their duties after the working hours of the regular occupations in which they are employed, and receive no compensation whatever for such work.

The fund has the use of three health resorts free of charge, in which nearly 200 patients receive treatment annually. The fund also has the use of a beautifully wooded district near Leipzig, on which are suitable buildings, kitchens, etc., where persons suffering from lung diseases remain during the day and return to their homes in the evening. Patients who use the park by direction of the fund physicians are supplied with car fare and also a midday meal.

Reducing the disability due to tuberculosis is regarded as one of the most important fields of activity of the Leipzig fund, and every possible care is provided for members suffering from or threatened with this disease, and all officials of the fund are required to report such cases as come under their observation, so that treatment may begin without delay. The following table shows the expenditures of the Leipzig fund for the period 1884 to 1902.

CAUSES OF EXPENDITURE.	Expenditures, 1884 to 1902.	
	Amount.	Per Cent.
Medical treatment .....	\$1,877,949	20.2
Medicines, etc. ....	1,162,505	12.5
Pecuniary benefits to members.....	3,917,860	42.1
Pecuniary benefits to families of members.....	106,822	1.2
Benefits in case of childbirth.....	146,945	1.6
Funeral benefits .....	321,629	3.4
Medical care and maintenance in institutions.....	742,860	8.0
Costs of administration.....	766,030	8.1
All other expenditures.....	266,958	2.9
<b>Total expenditures .....</b>	<b>\$9,309,553</b>	<b>100.0</b>

### COMMUNAL SICKNESS INSURANCE.

In establishing the German sickness insurance system, the plan followed was to organize the insured on trade lines as far as this could be done. It

was found, however, that in many districts there were numbers of persons subject to the insurance law that could not be included in any of the seven classes of funds authorized to organize sickness insurance. The Communal governments were therefore directed to provide insurance for all such persons. Out of this has risen the parish or communal insurance; it is not to be regarded as a separate, distinct organization, but only one of the duties which under law must be performed by the communal authorities. This duty exists automatically so long as there are workmen in a commune, who, while subject to the insurance laws, are still not qualified for membership in any of the other funds. It is the duty of the commune to provide such persons with the regular sick benefits when they become disabled, and to pay the costs the communal authorities collect from the insured persons the dues or contributions specified in the law. As a rule these take the form of assessments based on wages, usually  $1\frac{1}{2}$  per cent., and never more than 3 per cent. of the daily wages in that locality; as in the other sick funds the insured person pays two-thirds, and his employer one-third of the cost, but the money is paid to and disbursed when required by the communal authorities. A separate account of all such receipts and expenditures is kept, and an annual report of operations relating to sickness must be made to the superior administrative authorities. Communal insurance is administered without compensation, and whenever the funds on hand are insufficient for the purposes of the insurance, the commune must temporarily provide a loan to cover the requirements.

#### ESTABLISHMENT FUNDS.

Long before the introduction of compulsory sickness insurance, the sick benefit society for performing the same work was known in practically every industrial country of the world. Under the compulsory system these voluntary societies were turned into a very effective part of the machinery of its administration. While local sick funds are created for specific branches of industry or for numbers of establishments of similar character in a certain district, the "establishment funds" are organized to insure against sickness the employes of a single establishment, or of several establishments if owned by the same employer. An establishment fund may not be created for the establishments of several employers; the only exception to this rule occurs when one of several plants owned by an employer is sold to another person; in such a case, at the request of the new proprietor, his employes may continue with those of their old employer. Although the minimum number of workmen required for an establishment fund is fifty, the employer may be ordered to start one by the superior insurance authorities, if his employes are subjected by the character of their work to an unusually high risk of sickness. This course is followed to prevent the local sick funds, or the communal insurance being unduly burdened with establishments in which the work is specially menacing to health. Whenever an employer has more than fifty persons in his establishment, the commune in which it is located, or the local fund in which his employes are insured, may make application to the superior insurance authorities to have the employer create an estab-

lishment fund for his own workmen. In case such an order issued by the superior insurance authorities is ignored or disobeyed, the employer must, at his own expense, pay the dues not exceeding 5 per cent. of the wages of his workmen.

In general, the administration of this type of fund is the same as that of the local funds. The same proportion of authority is exercised by employers and employes in drawing up the constitution, and the instrument when agreed upon and adopted, must, before becoming operative, receive the sanction and approval of the superior administrative authorities. The employer is responsible for, and must pay all the cost of keeping books and accounts relating to the insurance, and if there is at any time a deficit in the treasury of the fund he must advance the amount necessary to cover the same, and whenever the contributions to the fund equal 4 per cent. of the wages and are still not sufficient to provide the minimum benefits specified in the law, the employer must, at his own expense, supply the amount necessary to enable the fund to meet these obligations. In the establishment fund, as in the local and all other funds, the employer pays one-third and the insured employe two-thirds of the ordinary contributions. In case the number of employes in an establishment has fallen permanently below 50, the fund connected with it is dissolved, and such of the workmen as are qualified under the law go into the nearest local fund of similar industry, or if there is none of that character in the district, they must all be cared for by the communal insurance.

#### BUILDING TRADES FUNDS.

This is a separate type of fund, in the organization of which the special requirements of the building trades are taken into account. As operations in the building industry bring together large bodies of men for a short time, and these men are exposed to an unusually high rate of disability, it is often preferable to unite them for sickness insurance purposes in a separate organization. The building funds are therefore only another form of establishment fund, and are subjected to practically the same regulations. They do not, however, accumulate reserve funds, unless directed to do so by the superior insurance authorities; when a large number of men are employed on heavy excavation, or large building work, all the contractors engaged on the work may be included in this order. If the order is not complied with, the contractors must pay all the ordinary benefits of the sickness insurance to sick or disabled workmen in their employment without deductions from their wages. Building funds must be closed when the work is completed or the firm conducting it is dissolved. All controversies over benefits in this fund, and the claims against it of communes or other bodies for temporary relief extended to members, are settled by the administrative authorities.

#### GUILD FUNDS AND MUTUAL AID FUNDS.

These two classes of funds were in existence in Germany for many years before the adoption of the general insurance law of 1883, and were

made part of the system with but slight changes in the structure of their organization on the sole condition that their benefits are not to fall below the minimum standards provided by the compulsory system, and that the assessments on members shall at no time exceed 4 per cent. of their wages. The Guilds, which are corporations or fraternities composed of employers and employes engaged in the same or similar pursuits, have a treasury separate from that of the guild sick fund, and from this must be paid whatever deficiency there may be in the insurance fund not covered by the authorized maximum assessment of 4 per cent. on the workmen's wages. Both the Guild funds and the Mutual Aid funds are required to maintain reserve funds, and must keep their sickness insurance records separate from those of other lines of activity in which they may be engaged. All persons employed by members of the Guild must be insured in the Guild sick fund. The mutual aid funds were, as the name implies, voluntary associations of working men for mutual protection against the consequences of sickness, accident and death. The compulsory insurance law of 1883 recognized their organizations, and made them a part of the new compulsory system, their only requirement being that the benefits paid should be not less than those provided for by the compulsory law. These aid societies were themselves originally compulsory, having been started in the early part of the nineteenth century by many of the communal or local governments for the purpose of meeting the same conditions of distress following sickness or injury in their arrears, as those that are now being dealt with on a national scale by the existing compulsory insurance laws. They had, however, come to be regarded as voluntary, and were so in fact at the time the compulsory insurance law was adopted. The Aid funds are carried on by the usual contribution from the members of two-thirds of the cost, and one-third from their employers. The members are at liberty to go from one industry or establishment to another, a right enjoyed to only a very limited extent by other workmen, and the employers have no share in the administration of the fund. The members of the aid funds also have a right to participate in the election of representatives to the directorate of the invalidity insurance institute. Another advantage of importance is that the certificates of those funds are accepted as proving the duration of sickness in making claim for invalidity pensions. A majority of the Aid funds continue to operate under State charter granted to them before the national system was organized.

#### MINERS FUND.

The miners funds for the insurance of members against sickness, accident, and old-age is the oldest organization of its kind in Germany. The work of benevolence which it had carried on for nearly one hundred years was so like in character and scope to that prescribed by the national insurance laws of 1883, that it may reasonably be regarded as the archetype of that great system. At all events, when the compulsory sickness insurance was established, the miners funds were found to have reached such a high state of development that they were accepted without change of form as part of the new system. At that time the miners were providing every form of

relief established by the new law, including the care of dependents of members, which was not provided for by the general law until some years later. Their principal activities at the present time, however, relate to the relief of sickness or temporary disability, the other parts of the work being now performed by the accident and invalidity branches of the system. The regulations governing the funds are found in the mining laws of the several States of the Empire, the Kingdom of Prussia controlling the largest number. The only obligation imposed on them by the general insurance law, is that the minimum standard of benefits required for other industries shall be maintained. The miners funds are supervised by the superior mining officers of the state in which they are located. Inspectors appointed by these officers attend the general meetings of the board of directors and of all committees.

The foregoing sketch of the several varieties of funds that have been created or adopted for carrying the German insurance laws into effect shows that the compulsive principle underlies them all, and that practically every man and woman in the Empire who works for wages, excepting only those employed in agriculture and forestry, whose incomes are not above 2,000 Marks (\$476.00) per year, are now enrolled in these funds and enjoying the protection which they provide. Agricultural and forestry laborers were excluded when the sickness insurance law of 1883 was adopted, because it was deemed inexpedient to place any additional burdens on the agricultural interests of the Empire at that time. An official plan, however, which provides for extensive changes in the entire system of workmen's insurance, is now under consideration, and among them is a provision extending the sickness insurance to all persons who are engaged in work of a subordinate nature or who hold subordinate positions. If adopted, this will place the sickness and the invalidity insurance on practically the same basis, and will, as a matter of course, include the agricultural and forestry laborers, with others not at present covered by the sickness insurance.

The extent of the German national system of insurance against sickness is strikingly shown by the following figures relating to conditions in 1908, the latest for which the statistics are available.

Number of Communal sick funds.....	8,008
Number of Local sick funds.....	4,752
Number of Establishment sick funds.....	7,873
Number of Guild sick funds.....	772
Number of Registered Aid sick funds.....	1,444
Number of Building sick funds.....	38
Number of Miners sick fund.....	170
<b>Total number of sick funds in the Empire.....</b>	<b>23,057</b>
Average number of members per sick fund.....	572
Total number of persons insured against sickness and temporary disability .....	13,189,599
Number of cases of sickness.....	5,206,148
Number insured against sickness and disability per 1,000 wage earners .....	807
Number of persons insured per 1,000 of population.....	209

## RECEIPTS OF ALL SICKNESS INSURANCE FUNDS (1908).

Cash on hand beginning of year.....	\$4,671,646
Interest on investments of all kinds.....	2,082,044
Entrance fees .....	441,871
Dues of workmen and employers.....	73,912,731
Withdrawals from reserves and other capital.....	8,668,469
Loans paid in.....	1,794,353
All other receipts.....	3,484,515
	<hr/>
Total receipts from all sources during year.....	\$95,055,629

## EXPENDITURES OF ALL SICKNESS INSURANCE FUNDS (1908).

For medical treatment.....	\$16,110,706
Medicine and medical supplies.....	10,317,685
Pecuniary sick benefits—to members.....	30,815,425
Pecuniary sick benefits—to families of members.....	967,654
Benefits for confinement cases.....	1,410,799
Death benefits .....	1,780,323
Medical treatment and maintenance in hospitals.....	9,317,059
Care of convalescents.....	56,028
Investments of all kinds including additions to reserve fund...	11,309,391
Administration .....	4,759,507
All other expenditures.....	3,820,441
	<hr/>
Total expenditures for benefits, investments, and ad- ministration .....	\$90,665,018
Excess receipts over expenditures for the year.....	4,390,611

The above figures, which relate only to the operations of the sick funds for the year 1908, show the colossal proportions to which the system has grown. In 1885 the total number of persons insured against sickness and disability was 4,670,959, or an average of 100 for each 1,000 of population. In 1908, as shown in the above table, the number insured was 13,189,599, or 209 per 1,000 of population. According to estimates made by officials of the Imperial insurance office in 1906, the number of German wage-earners insured against sickness and temporary disability was 807 per 1,000. The cost of relief of sickness shows an almost unbroken increase since the beginning of the system as shown by the following table, which gives the average expenditures per case of sickness and per day of sickness, by years, from 1885 to 1908, for all the sick funds.

YEAR.	Average Expenditure for the Relief of Sickness.		YEAR.	Average Expenditure for the Relief of Sickness.	
	Per Case of Sickness.	Per Day of Sickness.		Per Case of Sickness.	Per Day of Sickness.
1885	\$6 29	\$0 45	1897	\$9 67	\$0 56
1886	7 38	48	1898	10 15	57
1887	7 56	49	1899	9 95	57
1888	8 31	50	1900	10 21	58
1889	8 27	50	1901	10 75	58
1890	8 26	51	1902	11 16	59
1891	8 55	52	1903	11 38	60
1892	9 05	52	1904	12 04	61
1893	8 69	53	1905	12 42	62
1894	9 51	54	1906	13 01	66
1895	9 23	54	1907	13 15	67
1896	9 45	55	1908	13 59	68

The above figures represent the averages for all funds combined; the several types of fund, however, show considerable variations from these averages. The lowest is the communal fund which provides only the minimum benefits, and the highest is the establishment funds with an average of \$14.75 per case of disability in 1908. The local funds which include the largest number of insured persons showed an average expenditure of \$13.35 per case of sickness or temporary disability in 1908; approximately the same differences are shown in the average expenditures per day of sickness by the different associations.

As already stated, the sick funds care for—not only cases of sickness, but also those due to injury by accident—the cost of which must be defrayed by them during the first thirteen weeks of disability. The number of cases of both characters, cared for during the year 1908 was 5,206,148; of these 3,999,532 were men, and 1,206,616 were women. The total number of cases of sickness relieved from 1885 to 1908 was 74,480,981.

The law prescribes thirteen weeks as the minimum period for which benefits must be paid, but leaves the funds free to extend this period in certain cases if they so desire. As a matter of fact, large numbers are carried for twenty-six weeks, or until the invalidity insurance becomes liable for their continuance; the benefits are, however, as a rule, much less than was paid during the compulsive period.

From 1885 to 1908, a period of twenty-four years, the receipts of the 23,340 individual funds included in the sickness insurance system reached the enormous total of \$1,070,544,835, of which 78 per cent. was paid in as dues by the workmen and their employers on the basis of two-thirds and one-third, respectively. The remaining 22 per cent. was derived from entrance fees, interest on investments, etc. The expenditures of the funds during the same period show a total of \$1,005,427,555, of which 78 per cent. was spent for the sick and other benefits; 13 per cent. for interest earning investments of various kinds, besides contributions to the reserve funds; and 9 per cent. for administration and other purposes.

## INVALIDITY AND OLD-AGE INSURANCE.

The German insurance system had its beginning in 1883, when the law relating to sickness was passed by the Imperial parliament; the accident insurance law followed in 1884, and after a parliamentary discussion of the subject extending over several years, the great system of protection against extreme poverty throughout the empire was completed by the enactment of the law relating to old-age and invalidity in 1889. Another act, passed in 1899, amplified the powers of the institutes for carrying on the insurance, and also made the standard of disability which justified a claim for pension more definite and easy to determine, and the "waiting time," that is to say, the period between the cessation of sick benefits and accident benefits and the granting of an invalidity pension, was reduced from 52 to 26 weeks. The invalidity institutes were given greater authority in the matter of providing medical treatment for insured persons, and caring for invalids in institutions instead of providing pensions was made one of the benefits.

In preparing the bill establishing the invalidity insurance, it was first proposed to make it a part of either the accident or the sickness insurance, but the proposal was rejected and a separate management consisting—with exception of the railroad employes and miners—of "institutes" organized on territorial lines. The railroad and mining industries, because of their special character, coupled with the fact that they had a system of old age insurance of their own, which had been in successful operation for many years, were allowed to retain their own organization. The law, as finally passed by the imperial parliament, provided that the territory covered by each institute should be the larger parts of the area of the state, such as a province, or the entire area of a state, or even several states might be combined under one institute if such an arrangement seemed desirable.

At the present time there are 31 of these territorial insurance institutes in the German Empire, so distributed that the entire area of the country is covered by them. There are 13 in Prussia, 8 in Bavaria, and one each in Saxony, Wurtemberg, Baden, Hessen, Oldenberg, Brunswick and Alsace-Lorraine. There is one institute for the Hansa cities, one for the Thuringian State, and one for the two Grand Duchies of Macklenburg. These institutes are endowed with all the right and duties of legal persons. The institutes are self-governing, and must provide a constitution and code of rules, but these must conform to the regulations of the Imperial insurance office. The official bodies which conduct the business of the institutes are, first, the board of directors consisting of one or more government officers, with an equal number of representatives of the employers and the insured persons; second, a supervisory committee consisting of five representatives of the employers and five representatives of the insured persons; third, the local officers; fourth, the collecting officers; and fifth, the supervisory officials whose duty it is to see that all dues are promptly and fully paid. In case the assets of the institutes are at any time insufficient to meet obligations, the government of the area which they cover is responsible for the deficit and must make it up.

The persons insured are practically all men and women who have com-

pleted their sixteenth year of age, and who are dependent on the wages which they earn for support, provided such wage or salary do not exceed 2,000 Marks (\$476) per annum. Married and single, natives and foreigners who are employed in German establishments, and who are not specifically exempt from the insurance, are all included. Besides the railroad and mine employes, there were many old established local and territorial invalidity funds which were allowed to continue on condition that their benefits should never fall below those provided by the Imperial law. The law of 1899 permitted the accident association created under the navigation accident insurance law to conduct the invalidity insurance of seamen insured against accident under that law, but this permission was granted on condition that provision should be made for pensioning widows and orphans of seamen in addition to the regular invalidity insurance of members. This step was taken because of the special risks to which seamen were exposed by the character of their occupation and the liability to sickness and special forms of invalidity due to climatic influences, and the frequent absence of medical treatment during long voyages. Before the introduction of the compulsory insurance system there were a number of funds in existence supported by ship-owners and seamen, which cared for sick and disabled seamen and also made provisions for the widows and orphans. While the law of 1899 was under discussion, efforts were made to extend the invalidity insurance so as to include all widows and orphans, the advocates of such extension claiming that it would add greatly to the popularity of the invalidity law, and that it was in fact the only feature lacking to completely round out the entire insurance system. The proposal was rejected at that time, but it has been growing in popularity with the passing of years, and in 1909 the Imperial Chancellor laid before the federal council of the Empire a comprehensive plan for the reorganization of the sickness, accident and invalidity insurance, a part of which is providing these benefits for widows and orphans. At this writing the proposed scheme had not reached the stage of submission to the Imperial parliament, but a preponderance of public sentiment favors the proposal, and there is little doubt regarding its final adoption.

#### KIND OF DISABILITY INSURED.

Invalidity pensions are paid to those persons, regardless of age, who become disabled through any cause to an extent that produces a permanent loss of earning power. Sick benefits and compensations under the sickness insurance and accident insurance laws are paid to all persons subject to the invalidity insurance law who have been ill for a period of 26 weeks, regardless of the age of the insured person. Invalidity pensions are paid thereafter until the recovery of earning capacity, or until the insured person has reached the age of 70 years, when he becomes entitled to the old-age pension without regard to the presence or absence of disability in any form. Invalidity is regarded as established when the condition of the insured person is such that he can no longer earn one-third of the amount earned by capable men of his class and attainment in the region where his labor is performed, and that state of things being established, the invalid is

awarded a pension, not on the basis of his earnings when the invalidity begins, but the average earnings of his lifetime. The law is exceedingly liberal in its interpretation of the circumstances on which a claim of invalidity is made. In passing on the question of a claimant's ability to earn something in the way of income, he is not required to take up an occupation which is not compatible with his physical or mental abilities, or which can be followed only in a district far removed from his place of residence.

#### SOURCES OF INCOME.

The income of the invalidity insurance system is derived from contributions of the insured persons, from contributions of employers, and from contributions of the Imperial Government. The contributions of the employer and the insured person are each one-half of the premiums for the pensions as prescribed by law. The contribution of the government consists of, first, a cash payment of 50 Marks (\$11.90) annually for each invalidity and old-age pension in force, and second, besides this direct payment, the services of the post office department in the collection of premiums and the payment of pensions, the services of certain officials who supervise the administration of the law and the entire cost of the Imperial insurance office. In the discussions which preceded the passage of the invalidity and old-age insurance law, an effort was made to have the cost of carrying it on defrayed by means of a tax upon the whole Empire, but it was finally agreed that the better policy would be to follow the plan of the sickness insurance law, by making the workmen and their employers jointly support the system, assisted by the annual gift on the part of the government referred to above. A pension system, paid for by dues based on wages or earnings adjusts itself closely to the financial standing of the insured person, while if paid for entirely without his assistance it would in effect differ very little, if at all, from ordinary poor relief. The insurance institutes, territorial and special, are required by law to accumulate reserve funds of sufficient amount to guarantee their ability to meet all obligations promptly as they accrue. The insured persons are divided into five classes on the basis of yearly wages, each having a different premium rate.

The wages of each class are as follows (the Marks reduced to dollars):

Wage Class No. 1.....	\$83 80 and under.
Wage Class No. 2.....	83 80 to \$130 90
Wage Class No. 3.....	130 90 to 202 30
Wage Class No. 4.....	202 30 to 273 70
Wage Class No. 5.....	273 70 and over.

The premiums per week as fixed by law, half to be paid by the employer and half by the workman, are as follows:

Wage Class No. 1.....	14 pfennigs (3.3 cents)
Wage Class No. 2.....	20 pfennigs (4.8 cents)
Wage Class No. 3.....	24 pfennigs (5.7 cents)
Wage Class No. 4.....	30 pfennigs (7.1 cents)
Wage Class No. 5.....	36 pfennigs (8.6 cents)

The insured person, if he so desires, can have himself rated in a higher wage class than the one indicated by his wages, but in such a case the excess dues and contributions must be paid by himself. A person voluntarily insured pays the entire premium and is allowed to select the wage class that he prefers entering. These rates were fixed by the law of 1899, and were to remain in force until December 31, 1910; every ten years thereafter they are subject to revision by the federal council of the Empire. Before the expiration of each ten years' period an actuarial investigation is made by the Imperial insurance office, and if a deficit or an excess is shown, the rates for the succeeding ten years' period are to be modified accordingly. In fixing the rates the law takes no account of the variation in risks of different occupation or of different establishments so far as the insured person is concerned; wages or earnings alone are taken into consideration in fixing the rates, which, as before stated, are arranged to correspond with the ability of the insured person to pay. The framers of the law desired to establish the system on principles of mutuality without reference to the various circumstances which produce invalidity.

The annual invalidity pensions for the five classes into which insured persons are divided were fixed by the law of 1899 at the following amounts, in which are included the pensions allowed by the invalidity institutes and the subsidy of the Imperial Government:

Wage Class No. 1.....	110 Marks (\$26 18)
Wage Class No. 2.....	140 Marks ( 33 32)
Wage Class No. 3.....	170 Marks ( 40 46)
Wage Class No. 4.....	200 Marks ( 47 60)
Wage Class No. 5.....	230 Marks ( 54 74)

The dues of the invalidity insurance are paid by means of stamps purchased from an agency of the institute and then pasted on receipt cards; the stamps are cancelled by marking on them the dates on which they were pasted. Each invalidity institute has its own distinctive card which must be used by all persons insured in it. The police officers of the subdivisions of the area covered by the institute, the local postal authorities and also the offices of the sick fund act as agents of the invalidity insurance in distributing the cards; failure on the part of an insured person to provide himself with one leaves him liable to a fine. On pay-day it is the duty of the employer to paste a stamp on the card for each week of employment. The employer has certain other duties to perform in connection with the receipt of dues, and any neglect of them leaves him liable to the imposition of a fine. If the negligence of the employer causes an insured person to lose his right to a pension or other benefits he becomes liable in a suit for damages. Many cases have occurred of employers being required by the courts to pay the entire cost of pensions for the lapse of which their failure to obey the law was responsible. Whenever a receipt card is filled with stamps it must be returned to the proper local agency and a new one procured.

In 1907 the Navigation Accident Association, with the sanction of the Federal Council of the Empire, introduced as part of its system of in-

validity insurance a provision for pensioning the widows, orphans and other dependents of seamen and other persons engaged in navigation. This plan has been in operation long enough to demonstrate its feasibility with only a slight increase in the weekly premiums paid by shipowners and insured persons.

Under the proposed new insurance code, the provision of most importance to the invalidity institutes is that relating to the benefits for survivors of insured persons, which, under the law, will hereafter form a part of the invalidity and old-age insurance. Under the new code many classes of persons, including small employers and certain grades of public officials of the Empire not previously subject to compulsory insurance, will be included. Persons who formerly secured exemption under the law by proving themselves possessed of other resources which adequately protected them against disability must, under the new order of things, show that these resources are sufficient to provide incomes for their widows and children or other dependents at least equal to the pensions which the invalidity institutes will provide for them under the new law.

The weekly contributions of the various wage classes under the proposed law, with provision for pensioning widows and orphans, are as follows:

Wage Class No. 1.....	16 pfennigs ( 3.8 cents)
Wage Class No. 2.....	24 pfennigs ( 5.7 cents)
Wage Class No. 3.....	30 pfennigs ( 7.1 cents)
Wage Class No. 4.....	38 pfennigs ( 9.0 cents)
Wage Class No. 5.....	46 pfennigs (10.9 cents)

The widow's right to a pension under the new law is subject to practically the same conditions as that of her husband while living; that is to say, when she can no longer earn one-third of the amount which women in good physical and mental health, of similar training, and living in the same locality, are able to earn by their labor. The Imperial subsidy to a widow's pension is the same as that allowed for men, that is to say, 50 Marks (\$11.90) per annum, and to an orphan's pension, 16 $\frac{2}{3}$  Marks (\$4.05) per annum. Independent of the Imperial subsidy, the pensions granted to the survivors of the insured person may not in the aggregate be more than one and one-half times the invalidity pension of the one from whom their rights are derived, and if there are only orphans, the pensions of all must not exceed the amount of the invalidity pension. If an orphan entitled to a pension reaches the required age (15 years) or dies, the amount of the pension is divided equally among the remaining children of the same family who are under age. In case of remarriage, a widow's pension ceases.

The number of persons included in the invalidity and old-age insurance system in 1908 was 15,226,000, or 242 per 1,000 of population of the Empire. The official reports for 1906, the latest available data, places the number of persons enrolled in this branch of the German insurance system per 1,000 wage earners at 919.

The following table presents a condensed statement of the financial operations of the invalidity and old-age insurance system from its creation in 1891 to 1908, the latest year for which official reports are available:

Total receipts, 1891-1908.....	\$798,874,026
Contributions of employers.....	280,109,497
Contributions of insured persons.....	280,109,497
Contributions of The Imperial Government.....	127,502,864
Interest and all other contributions.....	111,152,168
Total expenditures, 1891-1908.....	444,346,801
For benefits .....	400,453,362
For administration and other purposes.....	43,893,439
Reserve fund on hand.....	354,527,225

The details of the expenditures shown above are given in the following table:

Expenditures for invalidity pensions.....	\$249,126,530
Expenditures for old-age pensions.....	97,096,525
Expenditures for sickness pensions.....	5,331,691
Expenditures for medical treatment.....	26,685,370
Expenditures for treatment in institutions.....	543,624
Expenditures for miscellaneous benefits.....	1,125,754
Return of contributions to insured persons.....	20,543,841

In explanation of the last item on the above table, it may be stated that under certain circumstances the law requires the return to insured persons of one-half the dues paid in to the invalidity and old-age insurance institutes. The cases calling for such returns are: 1. To female insured persons if they marry. 2. In case of the death of a male insured person, the return is made to his widow, or if there be none, then to his legitimate children under 15 years of age. 3. In case of the death of the female insured person, to the fatherless children under 15 years of age, or in case of the disability of the husband who was supported by the earnings of deceased insured wife, the return is made to the widower. In all these cases the claim for a return of contributions is valid only when at least 200 weeks payments have been made, and the insured had not previously been awarded an invalidity or old-age pension.

At the close of the year 1909, the invalidity institutes had on their pension rolls 893,585 insured persons who were drawing invalidity pensions; 102,362 who were drawing old-age pensions, and 18,502 who were receiving sick pensions.

The total amount of expenditures for benefits of all kinds in 1908 was \$43,191,472, of which the employers paid \$15,583,637, or 36.1 per cent.; the employes exactly the same amount, and the Imperial Government \$12,024,197, or 27.8 per cent. In 1891 the proportion paid by the employers and insured persons (one-half each) was 60.5 per cent., while the contribution of the Empire was 39.5 per cent. The decrease in the share of the Empire is due to the fact that its subsidies are for pensions only and have not varied in amount since the insurance was instituted; while on the other hand there has been almost from the beginning of the invalidity and old-age insurance a steadily growing increase in the amounts expended for benefits other than pensions. The pensions have also increased in size, therefore the proportion of benefits paid by the Government naturally decreases with the increase in pension and other expenditures.

The great reserve fund (\$354,527,225) of the invalidity institutes is invested almost exclusively in bonds of communes, parishes and schools, and in first mortgages on real estate—mostly improved tenements for workmen in the large cities. On these various classes of investments, the interest earned in 1908 was 3.57 per cent.

### UNEMPLOYMENT INSURANCE.

The compulsory insurance system described in the foregoing pages protects the wage worker when physically unable to work because of accidental injury, sickness, or invalidity, but does not help the physically able and willing man who because of inability to find employment may suffer distress as severe as that which falls on persons who have lost the ability to work. Relief against distress due to this cause is provided by voluntary associations of various kinds organized on occupational lines. These bodies are, however, few in number, and the benefits provided are admitted to be very inadequate, and from the very nature of the problem it cannot be otherwise. Many of these organizations receive subsidies from the local or municipal government of the districts in which they operate. These subsidies are very small, however, and the sums given are more valuable as an evidence of public interest in the movement than they are as contributions to the benefits which the organizations are able to pay. In some cases the subsidies are said to have been made small in order to encourage a sound and natural development instead of stimulating more rapid growth by larger grants. The most difficult problem connected with unemployment insurance seems to be the practical impossibility of controlling the character of the unemployment. Frequently that due to the will or connivance of the insured person is indistinguishable from the unavoidable unemployment, which fact makes it necessary to only partially indemnify the insured workman for his losses on account of unemployment. The entire question is regarded dubiously by insurance experts who recognize the fact that under certain circumstances a worker may be entirely justified in giving up his position, and may also decline to accept employment where wages and other conditions are unsatisfactory without forfeiting his rights under the insurance; but the greatest obstacle to the establishment of a successful system of unemployment insurance is the difficulty of dealing with the class whose idleness is due to lack of desire to work. The causes of involuntary employment, other than the physical disability which is provided for by the sickness insurance, are very numerous, and the difficulties attending an attempt to find an actuarial basis for so many divergent causes of unemployment are very great. Many industries practically suspend operations at regular intervals each year, as is the case with building trades, inland waterways, agriculture, quarrying, brick making, etc.; others, the so-called seasonal trades, have alternate periods of activity and depression. Besides these, periods of general industrial depression occur every few years which cause widespread unemployment. Any system of insurance must be adjusted to meet these varying risks and others still more difficult to deal with, which relate directly to the class referred to above who prefer idleness to work.

At the present time there is no imperial or state system of unemployment insurance in Germany, save in so far as the accident insurance law provides that an insured person suffering from partial disability may be granted a full pension so long as he remains out of work through no fault of his own. In three of the German states—Bavaria, Baden and Hessen—proposals to establish such insurance were discussed in 1909, but the plans as formulated were dismissed on the ground that neither the cities, towns nor villages could carry the burdens which such a law would impose upon them. Notwithstanding this unfavorable view of the question by the larger political divisions of Germany, the idea of such an insurance is gaining in popularity throughout the Empire, and many of the municipalities, such as Leipzig, Strassburg and Cologne, are now subsidizing organizations for insurance against unemployment, and their example is being followed by many other cities and towns in which the municipal authorities are co-operating with voluntary organizations for the amelioration of distress caused by want of employment.

These evidences of increasing public interest in the subject afford the best guarantee that the great and beneficent system of social insurance which now protects the German wage earner against the loss of earning power through sickness, accidental injury, invalidity, and old-age will before the passage of many years be rounded out and perfected by a provision for partially indemnifying him for losses on account of unemployment.

A recapitulation of the principal data contained in the foregoing pages shows that in 1908 the membership of the three classes into which the German workmen's insurance is divided, was 55,589,599. Of these there were 27,174,000 insured against accident; 13,189,599 against sickness, and 15,226,000 against invalidity and old-age. There are of course many duplications, as a large majority of wage earners hold membership in the three branches, and are, consequently, counted three times in the total aggregate membership of 55,589,599. No report of the actual number of individuals included in the system has ever been made, but estimates by the most competent authorities places it at approximately 28,000,000, or 44 per cent. of the total population of the German Empire. From 1885 to 1908, the receipts of the three divisions of the insurance reached the enormous total of \$2,484,379,477, of which \$614,960,516 is credited to the accident insurance; \$1,070,544,835 to the sickness insurance, and \$798,874,026 to the old-age and invalidity insurance. The expenditures for the same period were \$520,167,393 by the accident insurance; \$1,005,427,555 by the sickness insurance, and \$444,346,801 by the old-age and invalidity insurance, the three items making a grand total of \$1,969,941,749.

The number of insured persons who lost their lives through industrial accidents during the period from 1885 to 1908 was 163,267. These left dependents—widows, children, grandchildren, parents and grandparents—to the number of 334,896, all of whom were cared for by the accident associations. The number of insured persons who suffered injuries not resulting in death, but severe enough to entitle them to compensation, was 2,072,132. The total number of persons cared for by the accident associations, including the killed and their dependents, was 2,570,028. From 1885 to 1908 the total number of

cases of insured persons cared for by the sickness insurance through more or less extended periods of illness, or who suffered from industrial accidents for periods not exceeding thirteen weeks, was 74,480,980.

In 1908, the number of persons on the pension rolls of the invalidity and old-age insurance institutes was 1,014,449. The total number of beneficiaries under the three divisions of the insurance system from the time of their organization up to 1908 was 78,065,457.

Of at least equal importance with these direct benefits are the great improvements brought about in factory management and the personal habits of the workmen, through the influence of the insurance laws. Factory inspection with a view to insuring the safety of operatives reaches a higher point of perfection in Germany than is known elsewhere throughout the world. The high standard of qualifications established for these officers by the Imperial Insurance authorities, requiring as it does academic, technical and sociological knowledge of the most advanced character, together with the fact that their appointment to office depends on the approval of the accident associations, who, much more than anyone else, have an interest in everything having a tendency to reduce the number of accidents, renders it practically certain that such appointments can be held only by those who are fully qualified to discharge the duties of this most important office.

In its minute care for the safety and health of the workmen, the Imperial Insurance Office became impressed with the fact that the health of the entire population, particularly the insured, was being injured by excess in the use of alcoholic stimulants, and has accordingly done everything in its power to further all movements tending to lessen the excessive use of alcohol. Under its orders workmen are forbidden to take to, sell, or consume spirits in their factories or workshops; at the same time employers are required to provide good and pure drinking water. In the promotion of its educational campaign against strong drink, special attention is bestowed on young persons just entering industrial life, so that they may not drift unawares into subjection to a habit which lessens efficiency and sooner or later brings about the destruction of health. In order to avoid premature invalidity, an insured person may be sent to a sanatorium to take the cure for drunkenness. Practically all the trades associations publish hand books of accident prevention and rules for the preservation of health, with cautionary chapters on the dangers attending the excessive use of alcoholic drinks. Some associations, particularly those engaged in the building trades, have rules which forbid the employment of persons known to be habitual drunkards, and in practically all industrial establishments, together with the railroad service, the use of intoxicating drinks of all kinds is prohibited during working hours.

#### MUSEUMS OF SAFETY DEVICES.

Another advantage of inestimable value for which German workmen are indebted to the industrial insurance system is the widespread interest awakened throughout the Empire in promoting the use of safety devices

designed to maintain healthful conditions in factories and workshops and to protect persons employed in hazardous occupations or on dangerous processes of manufacture against accidental injury. As already stated, the installation of such of these devices as receive the approval of the accident associations is compulsory on industrial establishments under their jurisdiction.

In the city of Berlin, a large and finely appointed museum for the display of these safety devices has been established. The building covers about one-sixth of an acre and contains both the exposition halls and the administration offices. In the selection of exhibits the directors of the museum have made it a rule that only such should be shown as are in actual use or have had their utility clearly demonstrated. Thus the museum presents a true picture of the technique of accident prevention. Particular stress is laid on the point that the devices must be made in conformity with the practical requirements of industry.

Accordingly, machines equipped with safety devices are shown in the same form and size as if intended for a real factory or workshop, and as far as possible such machinery is driven by power while on exhibition. When the machinery is too large for exhibit in its actual size, the application of safety devices is illustrated by means of models, drawings or photographs. In the courtyard of the museum a collection of safety scaffolding, ladders and other appliances of the building trades are shown as they would be in actual use.

Among other exhibits are scientific instruments for indicating the degree of vitiated air in the factory, many varieties of exhausts for dust, smoke and vapors; nutrition of food stuffs, workmen's dwellings, systems of ventilation and heating; in fact, whatever concerns the protection of the workman at his employment or in his home.

To aid in overcoming the indifference and unwillingness of workmen to use the provided safety devices and to exercise proper caution while at work, pamphlets in simple and convincing language issued by the Accident Associations are brought within their reach. In one of these selected as typical, it is stated that protection is vastly more important than compensation in that it means the preservation of the workman's strength and resources, not only for himself but for the state, as the conservation of the human element in trade and industry will be an important factor in the maintenance of the industrial position of the Fatherland. In the daily pursuit of his trade, the workman is advised:

1. To examine all tools, so as to see if they are fit to use; if not able to put them in suitable condition, notify the foreman.
2. The abuse and mishandling of tools and machines is a punishable offense.
3. Quarreling and fooling are forbidden.
4. Intoxicated workmen must not enter the place of work; if they do, their presence should be reported at once, as it is dangerous to their fellows. Anything that is wrong in the shop should be reported to the foreman.
5. In case of urgent peril, the workman himself should stop the machinery.

6. Only the regular exits and entrances are to be used. Workmen have no business to be outside their own departments. Passageways must be kept clear. The careful use of ladders must be observed always.

7. Long hair, braids, loose dresses, long neckties and ribbons are sources of peril about machinery.

8. The smallest injury should be reported at once. If the injury is serious, the doctor or a specialist should be immediately sent for. All wounds should be cleaned and covered without delay.

9. Those breaking the rules, abusing the machines, neglecting to use safety devices, or who commit other prejudicial acts, are fined 6 Marks (\$1.43).

Next follow hints and suggestions in the choice of a trade. It is pointed out that heart, respiratory, ear and skin troubles are to be expected in baking, brewing, wood turning, grinding, weaving and milling. Workmen predisposed to weakness in the occupational diseases connected with these trades are warned against the risk incurred in taking them up.

The importance of pure air as a counter irritant to tuberculosis is urged, as are also cleanliness and order in the general manner of life, particularly in regard to the mouth and teeth. The use of a bath at least once a week is a necessity to health; "avoiding dirt avoids illness"; "a closed mouth makes for health." Workmen are urged to utilize free time in strengthening those parts of the body not exercised in the regular work. Temperance in the use of alcohol is recommended; the workman is reminded that it is not a food, and that the feeling of gayety which it engenders is caused by a mistaken impression from the brain. The moderate use of alcohol is said to be not so bad, but "its abuse sent more than 150,000 persons to prison last year. Idiots, cripples and the insane are among some of the physiological results of an excessive use of alcoholism." The free use of fruits, it is pointed out, tends to take away the craving for strong drink. It is suggested that, as far as possible, workmen should avoid appointments and holding of meetings at places where drinking is expected. The workmen, it is stated, can, by setting a good example to their fellows, do much toward maintaining their industrial integrity which, in the aggregate, means the industrial supremacy of Germany.

#### POPULARIZATION OF SAFETY AND CAUTION.

The museum of safety issues a hand-book of several hundred pages, in which are stated the name and address of each exhibitor and the character of his exhibit. In the museum's classification the safety devices are grouped under five main divisions, two of which relate to "accident prevention" and three to "first aid to the injured," "industrial hygiene," and "mutuality," which latter includes improved dwellings, food nutrition and other forms of industrial betterment.

Similar museums exist in Amsterdam, Paris, Vienna, Milan, Budapest, Moscow, Zurich, Stockholm, Munich, Copenhagen and Montreal.

The only institution of similar character in our own country is the

American Museum of Safety, which occupies several large halls in the Engineering Societies Building, 29 West Thirty-ninth street, New York City. This institution has been slow in its development on account of the ignorance of the general public in our country regarding the movement for protecting the lives of workingmen, and because of the lack of any kind of governmental aid in its maintenance. Museums of safety are founded and maintained in the conservative countries of Europe, because there their immense value as an educational force, closely allied with the problems of conserving human life and health, are fully realized and appreciated. It is a matter of rather humiliating disappointment and regret that the efforts of our American industrial reformers in the same field have thus far failed to receive the measure of encouragement and support that, considering the transcendent importance of the subject, they had every reason to expect.

This New York museum, or one of similar character established in the principal industrial center of our own State, should be made a clearing house of the best world experience in the prevention of accidents and the promotion of sanitation. There are good reasons for believing that a large proportion of the accidents in American industries are preventable. It is pitiful that such a needless waste of human life and efficiency should be allowed to continue when the means of prevention are so ready at hand. The following criticism appeared in an illustrated manual on accident prevention, issued by one of the most influential of the German Trade associations. After commenting on a statistical report of 35,000 workmen killed and 2,000,000 more or less seriously injured by industrial accidents in the United States during 1907, it went on to observe that "at least one-third of these deaths and accidents could have been avoided if safety devices and measures of prevention already known had been employed." In Germany a high degree of safety is obtained by means of daily propaganda through Museums of Safety, rules and regulations for accident prevention in force in 697,000 industrial establishments, popular lectures and the distribution of easily comprehended pamphlets and documents. This educational propoganda starts in the readers placed in the hands of school children, thus inoculating ideas of caution and safety at the very foundation of the child's life.

In the United States it is estimated that three millions of people are ill annually from preventable causes; of this number one million are in the working period of life. A conservative estimate of their loss of wage-earning efficiency every year is \$400,000,000; this vast social and economic waste is caused by occupational diseases, industrial poisons, dust and noxious fumes, impure drinking water, poorly ventilated and lighted workrooms and general unsanitary conditions.

A Museum of Safety utilizes the basic principle for preventing this waste of human life with its attendant train of sickness, poverty and misery. How deplorable to reflect that the life of the head of the family, the sole breadwinner, may be snuffed out by a preventable accident, leaving the wife and children stranded. The mother, in most cases an unskilled worker, can earn but little; consequently charity must step in to support and educate the children. No self respecting man or woman wishes

to be the recipient of charity. The stamina of children reared in charity is weakened, the moral fiber is impaired, independency gives place to timidity, all of which results in lowering standards of morals, education and citizenship. Accident prevention will strike at the very root of this great evil.

How different to all this is the condition of the German workman who is protected against accidental injury while at work, and to whom social insurance comes as a right and not as a charity. Disability on the part of the breadwinner can never extinguish a German family; the necessities of existence are always guaranteed at the time when the workman is stricken by sickness, accident or incapacity, and amidst the most trying circumstances his courage is maintained by the consciousness that resources which he himself has helped to create protects his family from want in their time of trial.

In our own country at the present time, the State, or philanthropically disposed persons of large means, could confer no greater benefaction on the people at large than by establishing upon a broad basis a Museum of Safety Devices, which would become a great storehouse of information relating to practical methods of accident prevention. The material collected in such an institution would be of incalculable value in illustrating the possibilities of accident prevention, while at the same time serving as a foundation for the preparation and enactment of effective industrial legislation.

## PART III.

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### INDUSTRIAL CHRONOLOGY OF NEW JERSEY.

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Accidents to Workmen While on Duty.

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Permanent or Temporary Suspension of Work in  
Manufacturing Establishments.

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Changes in Working Hours and Wages.

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New Manufacturing Plants Established and Old  
Ones Enlarged.

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Industrial Property Destroyed by Fire or Flood.

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Trade and Labor Unions Organized.

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Strikes and Lockouts.

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## **Industrial Chronology of New Jersey for the Twelve Months Ending September 30, 1911.**

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The industrial chronology of New Jersey, the publication of which in these reports was begun ten years ago, has, through successive yearly enlargement of the field covered and improvements in the methods of obtaining the required data, become a most interesting and valuable compendium of information having a direct and intimate relation to the interests of labor and industry throughout the State. One of the most important of the realized ideals of industrial reformers—the enactment of a genuine employers liability law—is indebted for much of the public interest and approval that carried it through successfully to the persistent agitation of the subject in this chapter. Begun at the time when the failure of the common law to meet the requirements of modern industrial conditions was not so generally recognized as it is to-day, these annual presentations of the steadily increasing lists of casualties has had no small share in bringing about a realization of the injustice of the old order of things and awakening the public conscience to the necessity of a radical change in the law.

The chapter includes the customary compilations of—first, “accidents to workmen while on duty;” second, “permanent or temporary suspension of work in manufacturing plants;” third, “changes in working hours and wages;” fourth, “new manufacturing plants erected and old ones enlarged;” fifth, “manufacturing plants destroyed or damaged by fire or flood;” and sixth, “organization of new trade and labor unions.”

The accidents to workmen are divided into two classes, major and minor, and these are again subdivided into six occupational groups, showing the number that occurred among “factory and workshop operatives;” among “building and construction workmen;” among “tunnelmen, miners and excavators;” “transportation employes;” “linemen and other electrical workers,” and among workmen in occupations designated as “unclassified.” As before stated, the accidents are divided into two classes—those

that resulted in death or serious disability, and those that were of only a minor or comparatively trifling nature, not likely to interfere with the man's ability to pursue his regular occupation for more than a few days.

In this year's compilation the list of individual accidents is omitted, not because its publication as an integral part of the presentation is regarded as superfluous or unnecessary, but solely for the reason that the limitations of a table do not afford the necessary space, nor is its form adapted to a proper display of the particular circumstances of each case. Next year, an effort will be made to remedy this defect, by returning to the old form of making each accident of a serious character the subject of a brief textual note, in which the facts of interest relating to each occurrence will be given.

It is by no means claimed that this presentation of industrial accidents includes absolutely all that have occurred during the period which it covers, and it is extremely dubious whether any practicable method can be devised, even with the support of a compulsory law, that will be effective in securing them all. Employers in some instances, and the families of injured persons in many others, show a curious but most decided aversion to giving information about such occurrences, a reserve that is in all probability due on both sides to a fear that possibly anything said might be used in a manner detrimental to their interest in a suit for damages, which, it appears, is generally expected to follow where the injuries resulting from accidents are of a serious character.

After trying several plans for securing this and other information for the "Industrial Chronology," the one finally adopted as proving most practicable and also producing the best results, is to carefully examine all the daily newspapers published in the State for items relating to industrial accidents and the other subjects embraced in the chronology; these are promptly verified or corrected through the medium of appropriate inquiry blanks, and a *correct statement of the facts in each case obtained*. It is therefore safe to say that although this compilation of accidents may fall short of the actual number that occurred, it still contains everything of that character brought to public notice by the newspapers, and is, perhaps, as nearly complete as it is possible

to make it, regardless of the methods employed for obtaining the information.

The duration of disability and the amount of financial assistance received, if there were any practical means of finding the same for each case, would very greatly increase the actuarial and sociological value of these statistics. There is no such means, however, and it is questionable whether any can be devised that will work satisfactorily; even in Germany, where under the industrial insurance system every injury becomes automatically a matter of official record because of its forming the basis of a claim for compensation, the duration of disability and the amount of compensation paid is reported only by averages, based on the experience of periods of five years.

Summary Table No. 1, which follows, shows for all the industrial groups combined the number of accidents productive of major injuries that occurred during the twelve months, and these are divided under headings which show as clearly as possible the various agencies and circumstances connected with or responsible for their having occurred. The table shows the total number whose injuries were attributable to each of these causes, and also the number whose injuries resulted in death.

**Major Accidents to Workmen While on Duty. Causes of Accidents that Occurred During the Twelve Months Ending September 30, 1911.**

**SUMMARY TABLE No. 1—Including all Industrial Groups.**

CAUSE OF ACCIDENT.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and seriously injured.
<i>Engines, working machinery and power transmission apparatus</i> .....	12	112	124
<i>Elevators, derricks, cranes and other lifting apparatus</i> .....	20	39	59
<i>Steam boilers, steam piping, explosions, etc.</i> .....	2	14	16
<i>Explosive material—explosions of powder, dynamite, etc.</i> ...	26	22	48
<i>Inflammable and acid materials, gases, vapors, etc.</i> .....	5	15	20
<i>Collapse and downfall of material</i> .....	11	104	115
<i>Falls from ladders, scaffolds, trestles, buildings, etc.</i> .....	37	141	178
<i>Loading and unloading freight and other material by hand.</i>	4	19	23
<i>Vehicles, falls from, run over, run down by, wagons, trucks, cars, etc.</i> .....	11	30	41
<i>Hand tools, hammers, wrenches, hand working machinery, etc.</i> .....	..	2	2

SUMMARY TABLE No. 1—(Continued.)

CAUSE OF ACCIDENT.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and seriously injured.
Collapse of excavations, caissons, fall of material in mines, trenches, etc. ....	28	19	47
Contact with electric apparatus, live wires, third rails, etc.	20	10	30
Woodworking machinery, circular and band saws, shapers, etc. ....	..	19	19
Metal shaping machinery, steam hammers, hand forgings..	..	8	8
Falls into fly-wheel pits, or on workshop floors.....	..	7	7
Molten metal, spilling of, falling into, etc., burns from other causes .....	1	13	14
Falls into oil tanks, tubs of boiling water, dyes, chemicals, etc. ....	4	8	12
Water transportation, falls from boats, vessels, docks, etc.	8	6	14
Water transportation, caught in engines, propelling machinery, etc. ....	1	..	1
Bursting of emery wheels, flying pieces of metal, etc.....	1	2	3
Collapse of scaffolds, ladders, buildings, trestles, etc.....	8	49	57
Falls from chimneys, smokestacks, tanks, etc.....	..	2	2
Contact with electrically charged body of fellow workman..	1	..	1
Falls through breaking of electric wire poles.....	5	11	16
Material out of place.....	..	2	2
Railway operation, run over, struck by, or falls from locomotives, cars, etc.....	98	44	142
Railway operation, crushed between moving cars and platform .....	5	11	16
Railway operation, crushed between cars, or under wheels while coupling .....	10	11	21
Railway operation, struck by overhead bridges or other railroad structures .....	2	7	9
Railway operation, frogs, switches, turn-tables, etc.....	3	4	7
Railway operation, stepping on or off locomotives or cars..	6	7	13
Railway operation, derailed cars.....	1	1	2
Railway operation, collisions .....	9	11	20
Railway operation, projecting or flying material from passing trains .....	1	..	1
All other causes .....	..	28	28
Totals.....	340	778	1,118

The above table is, as before stated, a summary of the serious accidents that occurred in all occupational groups classified according to the causes which brought them about. The total number of serious accidents is shown to have been 1,118, of which 340, or 34.4 per cent, resulted in death either at the time of occurrence or shortly thereafter. This very large proportion of fatalities is indicative of the care taken in the classification of individual cases to exclude from this table all that were not really serious, so far as their character could be determined by the particulars reported at the time the accident occurred.

By far the largest number of casualties resulting in death and serious injury that appear on the table are chargeable to the vari-

ous circumstances and conditions connected with railroad operation; chief among these being cases of "run over, struck by, or falls from locomotives, cars, etc.," which collectively accounted for 142 serious accidents, 98 of which were fatal; accidents incidental to coupling and uncoupling comes next with 21 casualties and 10 deaths. Collisions accounted for 20 accidents, and 9 deaths, and crushed between moving cars and platforms, 16 accidents and 5 deaths. The accidents appearing on this table as originating in "railway operation" are, as shown by the headings, all of a character incidental to the operation of steam railroads, and the classes of employes involved include only those concerned in the movement of trains, such as engineers, firemen, brakemen, switchmen and track walkers. Other classes of railroad workers, such as construction gangs, yardmen and stationmen, are classed in this summary under the headings which explain the origin of their injuries, but all are brought together in Table No. 4, which deals with casualties to transportation employes alone.

"Falls from scaffolds, trestles, buildings, etc.," is second to railway operation in the number of serious accidents that occurred through these collective causes. The table shows 178 casualties under this heading, 37 of which resulted in death. Following these comes "Collapse and downfall of material," which caused 115 accidents, 11 of them resulting in death. "Collapse of excavations, caissons, mines, trenches, etc.," produced 47 accidents, 28 of which resulted in death. "Explosive material—explosions of powder, dynamite, etc.," were responsible for 48 accidents, 26 of which proved fatal. "Elevators, cranes, and other lifting apparatus," caused 59 accidents, 20 of which were fatal. The largest proportion of deaths to the total number of accidents occurred through "Contact with live wires and other electric apparatus;" thirty men were injured in this way, and 20 of these suffered death.

The table as a whole presents a very comprehensive review of the various appliances, conditions and circumstances with which the serious and fatal accidents of the entire year were in some way associated.

Table No. 1 (a) which follows, is another summary of all serious and fatal accidents, which shows the character and bodily location of the injuries, and the number of persons who were so injured. Like the preceding summary, this table is compiled so

as to show the number of persons in all the occupational groups whose injuries were of a similar character.

Major Accidents to Workmen While on Duty. Results of Accidents that Occurred During the Twelve Months Ending September 30, 1911.

SUMMARY TABLE No. 1 (a)—Including all Industrial Groups.

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	340
Both arms amputated .....	3
Both legs amputated .....	4
One arm and one leg amputated.....	1
One arm amputated .....	13
One leg amputated .....	17
One hand amputated .....	10
One foot amputated .....	9
One or more fingers amputated.....	70
One thumb amputated .....	4
One or more toes amputated.....	4
Skull fractured .....	30
Skull fractured and collar bone broken.....	2
Skull fractured and ribs broken.....	3
Skull fractured and ankle broken.....	1
Spine fractured .....	2
Both arms broken .....	1
Both arms broken and skull fractured.....	1
Both legs broken .....	9
Both legs and both arms broken.....	1
Both legs and several ribs broken.....	1
One arm broken .....	30
One arm and one leg broken.....	2
One arm and one hip broken.....	1
One arm and one shoulder broken.....	1
One arm and one wrist broken.....	1
One arm and both feet broken.....	1
One arm broken and back sprained.....	1
One leg broken .....	66
One leg and both wrists broken.....	1
One leg and collar bone broken.....	1
One leg broken and internal injuries.....	2
One leg broken and foot crushed.....	1
One leg broken and eyesight destroyed.....	1
One or more ribs broken.....	38
One or more ribs and collar bone broken.....	5
Collar bone broken .....	9
Skull, collar bone and ribs broken.....	1
One hand broken .....	3
One wrist broken .....	9
One ankle broken .....	11
One hip broken .....	3
One shoulder broken .....	2
One shoulder blade broken .....	3
One thigh broken .....	1
One thigh broken and one shoulder dislocated.....	1
Jaw bone broken .....	4
One kneecap broken .....	4
Nose broken .....	5

## SUMMARY TABLE No. 1 (a)—(Continued.)

RESULTS OF ACCIDENTS.	Number Injured.
Nose broken and foot crushed.....	1
One foot and one wrist broken.....	1
One or more toes broken.....	1
Body crushed .....	14
Both legs crushed .....	2
Both arms and head crushed.....	2
One leg and one arm crushed.....	2
One leg crushed .....	4
One arm crushed .....	5
Chest crushed .....	1
One hand crushed .....	17
One foot crushed .....	28
Jaw bone crushed .....	1
One wrist crushed .....	1
One ankle crushed .....	1
One or more fingers crushed.....	2
Both legs lacerated .....	2
One arm lacerated .....	6
One hand lacerated .....	4
One thigh lacerated .....	1
Face lacerated .....	4
Sculp lacerated .....	1
Head and body burned by fire or acid.....	15
Face and head burned by fire.....	2
Face burned by fire .....	1
Face and both hands burned by fire.....	2
Body burned by fire .....	6
Both legs burned by fire.....	1
One arm burned by fire.....	1
One hand burned by fire.....	1
One foot burned by fire.....	1
Body burned by live wire.....	4
Both hands burned by live wire.....	1
Both arms and face burned by live wire.....	1
Face and head burned by live wire.....	1
One hand burned by live wire.....	1
Body scalded by hot water or steam.....	14
Both feet scalded .....	1
One foot scalded .....	1
One arm lacerated .....	4
One hand lacerated .....	1
One or more fingers lacerated.....	2
Head injured .....	10
Head and body injured .....	2
Head and shoulders injured.....	2
Back injured .....	1
Both knees injured .....	1
Both arms injured .....	1
Neck injured .....	1
One shoulder injured .....	1
One arm wrenched .....	1
One shoulder dislocated .....	12
One hip dislocated .....	1
One wrist dislocated .....	1
Back sprained .....	2
One arm sprained .....	1
Head lacerated .....	6

SUMMARY TABLE No. 1 (a)—(Continued.)

RESULTS OF ACCIDENTS.	Number Injured.
Scalp lacerated .....	4
Face lacerated .....	2
One eye lacerated .....	1
One foot lacerated .....	1
Scalp torn from head .....	1
Eyesight wholly or partly destroyed.....	5
Concussion of brain .....	13
Body bruised .....	33
Body and face bruised .....	1
Both eardrums shattered .....	1
Partially asphyxiated .....	2
Blood poisoning following injury.....	2
Paralysis following injury .....	1
Spinal injuries .....	4
Internal injuries .....	74
Otherwise seriously injured .....	34
<b>Total number of major injuries.....</b>	<b>1,118</b>

As shown by the above table there were 340 accidents which resulted in death at the time they occurred, or within a short time thereafter; 3 that caused the amputation of both arms; 4 of both legs; 1 of one arm and one leg; 13 of one arm; 17 of one leg; 10 of one hand; and 9 of one foot.

Four lost one or more fingers; 30 suffered fracture of the skull alone, and six others, skull fracture with other injuries. One man had both arms broken, and another had both arms broken and skull fractured. Thirty had one arm broken; 66 one leg broken; and 38 one or more ribs broken. Five met with accidents which resulted in the total or partial destruction of eyesight, 74 received injuries of an internal character, and one unfortunate, a young woman, had the scalp torn from her head through the hair being caught and wound around an unguarded shaft in the factory in which she was employed.

This table of injuries is necessarily a long one, as in no other way could the purpose be carried out of showing the wide range of physical suffering resulting from industrial accidents, and the urgent necessity which exists for the mitigation of this great evil by encouraging, or even compelling the use by employers of safety devices of proven value, wherever the same can be applied. In Germany and England the use of such devices is compulsory, and heavy fines are imposed by the accident associations in cases where operatives are injured in consequence of failure on the part of employers to provide them.

The industrial efficiency of Germany, which has experienced a wonderful increase during the past twenty-five years, is due in no small degree to the care exercised by employers for the protection of their workmen by the use of these and all other means that may tend to lessen the dangers of their occupations. Accidents resulting in serious injuries are, as a natural consequence, much less numerous, in proportion to the volume of production and numbers employed, than they are in this or any other great industrial country. Indeed, it is owing to this wise and humane policy of combining prevention with compensation, that the industries of Germany are enabled to meet all obligations to injured workmen arising under the insurance laws, without in the slightest degree impairing their ability to meet the competition of the world.

The foregoing summary tables (No. 1 and No. 1a) show, as already explained, the causes or conditions under which the accidents occurred for all occupations, and also the character of the physical injuries which resulted from them. The tables that follow present the same data in precisely the same form, for each of the six general occupational groups into which the presentation is divided. These appear in the following order:

Table No. 2 and No. 2a; factory and workshop industries.

Table No. 3 and No. 3a; building and construction industries.

Table No. 4 and No. 4a; transportation, by steam and electric roads and by water.

Table No. 5 and No. 5a; tunnels, excavations, mines, trenches, etc.

Table No. 6 and No. 6a; linemen and other electrical workers.

Table No. 7 and No. 7a; unclassified occupations.

Following these are three tables containing a record of the accidents which resulted in only "minor" injuries, classified like the others, so as to show the number that occurred in each occupational group, the causes or circumstances under which they occurred, and the bodily location of the injuries suffered. A recapitulation of the data relating to both classes of injuries—major and minor, is given below.

## Major and Minor Accidents, by Occupational Groups.

OCCUPATIONAL CLASSIFICATION.	Number of Accidents that Caused:			Total No. Killed and Injured.
	Death.	Major Injuries.	Minor Injuries.	
Factory and workshop operatives.....	61	278	234	573
Building and construction workmen.....	41	187	140	368
Transportation employes .....	150	135	121	406
Tunnelmen, miners, excavators, etc.....	33	56	40	129
Linemen and other electrical workers.....	22	20	21	63
Unclassified wage earners .....	33	102	182	317
<b>Totals.....</b>	<b>340</b>	<b>778</b>	<b>738</b>	<b>1,856</b>

The above table shows that of the total number of accidents, major and minor, 573, or 30.9 per cent. occurred in the "factory and workshop" group; 368, or 19.8 per cent. among "building and construction workmen;" 406, or 21.9 per cent. occurred among "transportation employes;" 129, or 6.9 per cent. were suffered by "tunnelmen, miners, excavators, etc.;" 63, or 3.4 per cent. by "linemen and other electrical workers," and 317, or 17.1 per cent. by "unclassified wage earners." In the number of deaths resulting from injuries, "transportation employes," which furnished 150, leads all others; "factory and workshop operatives" come next with 63, and "building and construction," third, with 41. In the percentage of accidents resulting in death, the order among the six industrial groups is as follows: "Transportation," 37.0 per cent.; "linemen and other electrical workers," 34.9 per cent.; "tunnelmen, miners, excavators, etc.," 25.6 per cent.; "building and construction," 11.1 per cent.; "factory and workshop operatives," 10.7 per cent., and "unclassified wage earners," 10.4 per cent. These percentages of deaths are based on the actual number of accidents, major and minor, that occurred in each occupational group, and the number of these that terminated fatally. The only one of the occupational groups that enjoys the advantage of special protective laws is "factories and workshops."

Placing the average number of factory and workshop operatives in New Jersey at 300,000, we find the 573 injured to be 0.19 per cent. of this total; in other words, for every 1,000 persons employed, there was a small fraction less than two persons

who were the victims of accidental injury during the year. The number of persons employed in "building and construction" in New Jersey is approximately 60,000; the 368 injured is therefore a small fraction more than 0.61 per cent. of the total, which would be 6.1 persons injured for every 1,000 employed.

The average number of persons employed on the steam railroads of New Jersey, whose duties are performed wholly or for the most part within the geographical limits of the State, is about 40,000; of these, about 21,000 are of the classes in which practically all the casualties occur—that is to say, the engineers, firemen, brakemen, switchmen, yardmen, trackmen, repair gangs, and others having to do with the movement of trains and the maintenance of the roadway, the number of accidents reported, fatal, serious and minor, is 406, or 1.9 per cent. of the total force employed in these various duties. This means that for every 1,000 men of these several classes of employes, 19 were more or less seriously injured during the year. When the fact is considered that on the entire railroad system of the United States, the annual casualties among these same classes of railroad employes is almost four times the above ratio, due credit should be given for the care bestowed on railroad management and operation in New Jersey.

As there are no accurate data relating to the numbers of persons employed in either of the other occupational groups, no statement of their accident ratio can be made.

The totals on the foregoing table show the number of accidents of all kinds to have been 1,856; of these, 340, or 18.3 per cent., resulted in death; 778, or 41.5 per cent., in major injuries, the details of which appear on Table No. 1a, and 738, or 40.2 per cent. in minor injuries, particulars regarding which are given on the last three tables of the series.

The statistics of accidents for each occupational group are given separately in the tables that follow, the forms being precisely the same as those of the preceding summaries—that is to say, there are for each of the six occupational groups, two tables—one showing the means by which the accidents were brought about, and the other the character of the injuries suffered by the victims. Both the causes and the consequences of these accidents are so clearly shown on these tables as to require no further comment.

Major Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending Sept. 30, 1911.

TABLE No. 2.—Factories and Workshops.

CAUSE OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Engines, working machinery and power transmission apparatus .....	10	100	110
Elevators, derricks, cranes and other lifting apparatus.....	11	14	25
Steam boilers, steam piping, explosions, etc.....	..	9	9
Explosive material—explosions of powder, dynamite, etc....	10	9	19
Inflammable and acid materials, gases, vapors, etc.....	3	8	11
Collapse and downfall of material.....	5	46	51
Falls from ladders, scaffolds, trestles, buildings, etc.....	8	19	27
Loading and unloading material, freight, etc.....	1	8	9
Vehicles—falls from, run over, run down by, wagons, trucks, cars, etc. ....	..	1	1
Railway operations—run over, falls from, struck by locomotives, cars, trains, etc.....	4	1	5
Hand tools—hammers, wrenches, axes, etc., hand worked machinery, etc. ....	..	1	1
Collapse of excavations, fall of material in mines, tunnels, trenches, sewers, etc. ....	1	1	2
Contact with electric apparatus, live wires, etc.....	1	1	2
Woodworking machinery, circular and band saws, shapers, etc. ....	..	16	16
Metal shaping machinery, steam hammers, hand forging, etc. ....	..	8	8
Falls into flywheel pits, or on workshop floors.....	..	7	7
Molten metal, spilling of, falling into, etc., burns from other causes .....	1	13	14
Falls into tanks or tubs of boiling water, dyes, chemicals, etc. ....	4	7	11
Water transportation, sinking of boats, falls from boats and docks .....	1	1	2
Flying fragments of exploded emery wheels, flying pieces of metal, etc. ....	1	2	3
All other causes .....	..	6	6
Totals.....	61	278	339

Summary of Major Accidents to Workmen While on Duty. Character of Injuries by Industry Groups for the Twelve Months Ending September 30, 1911.

TABLE No. 2 (a)—Factories and Workshops.

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	61
Both arms amputated .....	1
One arm amputated .....	6
One leg amputated .....	3
One hand amputated .....	8
One foot amputated .....	2
One or more fingers amputated.....	63
One thumb amputated .....	4

TABLE No. 2 (a)—(Continued.)

RESULTS OF ACCIDENTS.	Number Injured.
One or more toes amputated .....	1
Skull fractured .....	7
One leg broken .....	13
One arm broken .....	5
One or more ribs broken .....	6
One hand broken .....	1
One wrist broken .....	2
One ankle broken .....	3
Collar bone broken .....	2
Collar bone and ribs broken .....	1
Thigh broken and hip dislocated .....	1
Skull, collar bone and ribs broken.....	1
Skull fractured and collar bone broken.....	2
Skull fractured and ribs broken .....	1
Both legs broken .....	1
Jaw bone broken .....	2
Nose broken .....	1
One shoulder broken .....	1
One or more toes broken .....	1
One hip broken .....	2
Body crushed .....	8
One arm crushed .....	2
One leg crushed .....	1
One hand crushed .....	14
One foot crushed .....	16
Jawbone crushed .....	1
Both legs lacerated .....	1
One arm lacerated .....	5
One hand lacerated .....	4
Face lacerated .....	3
Collar bone lacerated .....	1
Head and body burned by fire or acid.....	15
Both legs burned by fire .....	1
One arm burned by fire .....	1
One hand burned by fire .....	1
One foot burned by fire .....	1
Body scalded by hot water or steam.....	10
Both feet scalded .....	1
One foot scalded .....	1
One arm mangled .....	4
One hand mangled .....	1
Head injured .....	4
Back injured .....	1
One arm wrenched .....	1
One shoulder dislocated .....	2
Eyesight wholly or partly destroyed.....	4
One eye injured .....	1
Fingers crushed .....	2
Scalp torn from head .....	1
Scalp lacerated .....	2
Concussion of brain .....	1
Body bruised .....	8
Internal injuries .....	18
Otherwise seriously injured .....	11
Total number of major injuries.....	339

Major Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending Sept. 30, 1911.

TABLE No. 3.—Building and Construction.

CAUSES OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Falls from scaffolds, ladders, buildings, etc.....	22	99	121
Elevators, cranes, hoists and other lifting apparatus.....	5	11	16
Collapse of buildings, scaffolds, ladders, etc.....	8	45	53
Downfall of material .....	3	20	23
Run down by train .....	2	..	2
Hand tools, hammers, chisels, wrenches, etc.....	..	1	1
Falls from chimneys, smokestacks, tanks, etc.....	..	2	2
Material out of place .....	..	2	2
Vehicles—run over or run down by wagons, cars, etc.....	1	..	1
Other causes .....	..	7	7
Totals.....	41	187	• 228

Summary Major Accidents to Workmen While on Duty. Character of Injuries by Industry Groups for the Twelve Months Ending September 30, 1911.

TABLE No. 3 (a)—Building and Construction Workmen.

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	41
One arm amputated .....	2
One foot amputated .....	1
One or more fingers amputated .....	2
Skull fractured .....	7
Both legs broken .....	4
One leg broken .....	23
One leg broken and injured internally.....	1
Both arms broken and skull fractured.....	1
One arm broken .....	13
Collar bone broken .....	3
Collar bone and ribs broken.....	3
One or more ribs broken .....	16
One shoulder blade broken .....	2
Jaw bone broken .....	1
One hand broken .....	2
One leg and both wrists broken.....	1
One wrist broken .....	3
One ankle broken .....	5
Nose broken .....	3
Skull fractured and ribs broken.....	2
Skull fractured and ankle broken.....	1
One arm and one hip broken.....	1

TABLE No. 3 (a)—(Continued.)

RESULTS OF ACCIDENTS.	Number Injured.
One arm and both feet broken.....	1
One arm and one shoulder broken.....	1
One arm broken and back sprained.....	1
Spine fractured .....	1
Nose broken and foot crushed.....	1
One kneecap broken .....	2
Both legs crushed .....	1
One leg and one arm crushed.....	2
One arm crushed .....	2
Head lacerated .....	3
Scalp lacerated .....	2
Face lacerated .....	2
One foot lacerated .....	1
One shoulder dislocated .....	8
Back sprained .....	2
One arm sprained .....	1
Head injured .....	1
Head and shoulders injured.....	1
Body bruised .....	16
Body and face bruised .....	1
Body burned by fire or acid .....	3
Face burned by fire .....	1
Concussion of brain .....	5
Spinal injuries .....	1
Paralysis following injury .....	1
Internal injuries .....	15
Otherwise seriously injured .....	14
Total number of major injuries.....	228

**Major Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending Sept. 30, 1911.**

TABLE No. 4.—Transportation, by Steam and Electric Roads, and by Water.

CAUSE OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Falls from engines or trains while in motion.....	19	19	38
Falls from bridges, trestles, etc., into ash pits, etc.....	4	7	11
Caught between moving cars and platforms.....	5	11	16
Collapse and downfall of material.....	..	18	18
Run over or struck by locomotives, trains, cars, etc.....	70	17	87
Crushed between cars or under wheels while coupling.....	10	11	21
Explosions of boilers, steam pipes, etc.....	1	4	5
Struck by overhead bridges, or other part of road structure	2	7	9
Caught in frogs or switches handling turntables.....	2	2	4
Stepping on or off engines or cars.....	6	7	13
Running machinery, power transmission apparatus.....	..	1	1
Rerailed cars .....	1	1	2

TABLE No. 4.—(Continued.)

CAUSE OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Collisions .....	9	11	20
Run down by moving cars or other vehicles (trolley employees) .....	3	4	7
Flying or projecting material from passing trains.....	1	..	1
Misplaced switches, laying rails.....	1	2	3
Water transportation—engines, propelling machinery.....	1	..	1
Water transportation—explosion of dynamite on barge.....	12	2	14
Common tools, wrenches, hammers, etc.....	..	1	1
Derricks, hoisting apparatus, etc.....	1	..	1
Contact with live wire .....	1	1	2
Contact with "third rail".....	1	..	1
Other causes .....	..	9	9
Totals.....	150	135	285

Summary of Major Accidents to Workmen While on Duty. Character of Injuries by Industry Groups for the Twelve Months Ending September 30, 1911.

TABLE No. 4 (a)—Transportation Employees.

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	150
One leg amputated .....	11
Both arms amputated .....	1
One arm amputated .....	5
One leg and one arm amputated.....	1
One hand amputated .....	2
One foot amputated .....	4
One or more fingers amputated.....	3
One or more toes amputated.....	3
Both legs broken .....	2
One leg broken .....	9
One leg broken and foot crushed.....	1
One arm broken .....	3
Collar bone broken .....	2
Nose broken .....	1
Jaw bone broken .....	1
One or more ribs broken .....	5
Skull fractured .....	10
Spine fractured .....	1
Both legs and ribs broken .....	1
One thigh broken .....	1
One wrist broken .....	1
One kneecap broken .....	2
Body crushed .....	5

TABLE No. 4 (a)—(Continued.)

RESULTS OF ACCIDENTS.	Number Injured.
Both legs crushed .....	1
One leg crushed .....	1
One arm crushed .....	1
One hand crushed .....	2
One wrist crushed .....	1
One foot crushed .....	6
One shoulder blade dislocated .....	1
One hip dislocated .....	1
Head and shoulders injured .....	1
Both knees injured .....	1
Both arms injured .....	1
Body burned by fire .....	1
Both hands and face burned by fire.....	2
Body scalded by escaping steam .....	4
Body bruised .....	4
Head lacerated .....	3
Internal injuries .....	21
Concussion of brain .....	4
Otherwise seriously injured .....	4
Total number of major injuries.....	285

Major Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending Sept. 30, 1911.

TABLE No. 5.—Tunnelmen, Excavators, Miners, Trench Diggers, etc.

CAUSE OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Collapse of caissons, trenches, excavations, etc.....	25	13	37
Falls from ladders, scaffolding, trestles, bridges, embankments, etc. ....	2	2	4
Collapse of scaffolds, ladders, bridges, trestles, etc.....	2	2	2
Elevators, cranes, derricks, chutes, etc.....	2	7	9
Railway operation, run down by engines, trains, cars, etc.	1	2	3
Falls into trenches, excavations, etc.....	1	3	3
Collapse or downfall of material.....	1	12	13
Explosive material—explosions of dynamite, powder, etc....	2	10	12
Inflammable—hot and acid materials, vapors, gases, etc....	1	1	1
Woodworking machinery, circular and band saws.....	1	1	1
Vehicles—run down or struck by wagons, cars, etc.....	1	1	1
Defective appliances, tools, etc.....	1	1	1
Engines, working machinery, etc.....	1	1	1
Other causes .....	1	1	1
Totals.....	33	56	89

**Summary of Major Accidents to Workmen While on Duty. Character of Injuries by Industry Groups for the Twelve Months Ending September 30, 1911.**

**TABLE No. 5 (a)—Tunnelmen, Miners, Excavators and Other Outside Laborers.**

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	33
Both arms amputated .....	1
Both legs amputated .....	3
One arm amputated .....	1
One or more fingers amputated.....	2
Skull fractured .....	3
Both legs and both arms broken.....	1
One leg broken .....	6
One leg broken and eyesight destroyed.....	1
Both arms broken .....	1
One arm broken .....	1
One shoulder blade broken .....	1
One or more ribs broken .....	5
Both legs broken .....	1
Both arms and head crushed.....	2
Chest crushed .....	1
One leg crushed .....	1
One foot crushed .....	2
Both legs lacerated .....	1
One thigh lacerated .....	1
Spinal injuries .....	2
Internal injuries .....	7
Head injured .....	1
Neck injured .....	1
One shoulder injured .....	1
Body bruised .....	2
Eyesight wholly or partly destroyed.....	1
Ear drums shattered .....	1
Concussion of brain .....	2
Partially asphyxiated .....	1
Otherwise seriously injured .....	2
<b>Total number of major injuries.....</b>	<b>89</b>

Major Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending Sept. 30, 1911.

TABLE No. 6.—Linemen and Other Electrical Workers.

CAUSE OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Operating switch .....	1	..	1
Contact with live wires on poles and otherwise.....	14	8	22
Falls against controlling switch .....	1	..	1
Contact with electrically charged body of fellow workman..	1	..	1
Inflammable, hot and acid materials.....	..	1	1
Falls from and breaking of poles.....	5	11	16
Totals.....	22	20	42

Summary of Major Accidents to Workmen While on Duty. Character of Injuries by Industry Groups for the Twelve Months Ending September 30, 1911.

TABLE No. 6 (a)—Linemen and Other Electrical Workers.

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	22
Skull fractured .....	1
One leg broken .....	2
One leg and one arm broken .....	1
One arm and one wrist broken.....	1
Collar bone broken .....	1
Face and arms burned by live wire.....	1
Face and head burned by live wire.....	1
Both hands burned by live wire.....	1
One hand burned by live wire.....	1
Body burned by live wire .....	4
Head injured .....	1
Internal injuries .....	4
Otherwise seriously injured .....	1
Total number of major injuries.....	42

Major Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending Sept. 30, 1911.

TABLE No. 7.—Unclassified Occupations.

CAUSE OF ACCIDENTS.	Number killed or who died of injuries.	Number seriously injured.	Total number killed and injured.
Engines, working machinery, power transmission apparatus, etc. ....	2	10	12
Elevators, hoists, cranes, derricks and other lifting apparatus .....	1	7	8
Steam boilers, steam piping, explosions of, etc.....	1	1	2
Explosive material—explosions of powder, dynamite, etc....	2	1	3
Inflammable, hot and acid materials, gases, vapors, etc....	2	5	7
Collapse, downfall, etc., of material.....	2	8	10
Falls from ladders, scaffolds, trestles, buildings, etc.....	1	14	15
Loading and unloading by hand.....	3	11	14
Vehicles—falls from, run over or run down by, collisions with trucks, cars, etc.....	7	24	31
Railway operations—run over, struck by and falls from trains, engines, cars, etc.....	2	3	6
Collapse of excavations, mines, tunnels, trenches, sewers, falls from embankments, etc.....	2	3	5
Water transportation—falls from vessels or docks into water .....	7	5	12
Collapse of scaffolds, ladders, trestles, etc.....	..	2	2
Falls into vats of boiling water, dyes, chemicals, etc.....	..	1	1
Woodworking machinery—circular and band saws, shapers, etc. ....	..	2	2
Other causes .....	..	5	5
Totals.....	33	102	135

Summary of Major Accidents to Workmen While on Duty. Character of Injuries by Industry Groups for the Twelve Months Ending September 30, 1911.

TABLE No. 7 (a)—Workmen in Unclassified Occupations.

RESULTS OF ACCIDENTS.	Number Injured.
Fatal at time of injury or shortly after.....	33
Both legs amputated .....	1
One leg amputated .....	2
One or more fingers amputated.....	10
One foot amputated .....	2
Skull fractured .....	2
Both legs broken .....	1
One leg broken .....	13
One arm broken .....	8

TABLE No. 7 (a)—(Continued.)

RESULTS OF ACCIDENTS.	Number Injured.
One arm and one leg broken.....	1
One leg and collar bone broken.....	1
One leg broken and internal injuries.....	1
One hip broken.....	1
One shoulder broken.....	1
One or more ribs broken.....	6
One wrist broken.....	2
One ankle broken.....	3
Ribs and collar bone broken.....	1
One foot and one wrist broken.....	1
Body crushed.....	1
One leg crushed.....	1
One hand crushed.....	1
One foot crushed.....	4
One ankle crushed.....	1
Concussion of brain.....	1
Internal injuries.....	9
Spinal injuries.....	1
Face lacerated.....	1
Scalp lacerated.....	1
One arm lacerated.....	1
Head injured.....	3
Head and body injured.....	2
Scalded by hot water or steam.....	2
Body burned by fire or acid.....	2
Face and head burned by fire or acid.....	2
Partially asphyxiated.....	1
Blood poisoning following injury.....	2
Body bruised.....	3
Fingers mangled.....	2
One wrist dislocated.....	1
One shoulder dislocated.....	1
Otherwise seriously injured.....	2
Total number of major injuries.....	135

## Minor Accidents by Industry Classification.

INDUSTRY CLASSIFICATION.	Number.
Factories and workshops.....	224
Building and construction.....	140
Transportation.....	121
Tunnelmen, miners, excavators and other laborers.....	40
Linemen and other electrical workers.....	21
Unclassified.....	182
Total.....	738

**Minor Accidents. Classification According to Bodily Location of Injury.**

INJURIES TO.	Number Injured.
Hands .....	158
Body .....	139
Head .....	116
Feet .....	81
Legs .....	65
Arms .....	34
Shock .....	28
Back .....	25
Shoulder .....	18
Internal injuries (including partial asphyxiation by gas).....	18
Other injuries .....	17
Eyes .....	13
Hands and face .....	12
Legs and arms .....	7
Stomach .....	5
Side .....	2
<b>Total.....</b>	<b>788</b>

Minor Accidents to Workmen While on Duty. Causes of Accidents by Industry Groups for the Twelve Months Ending September 30, 1911.

ALL INDUSTRIES.

CAUSES OF ACCIDENTS.	Factories and Workshops.	Building and Construction.	Transportation.	Tunnelmen, Miners, Excavators and other Laborers.	Linemen and other Electrical Workers.	Unclassified.
Engines, working machinery and power transmission apparatus.....	79	1	1	..	..	10
Elevators, derricks, cranes, hoists and other lifting apparatus.....	6	..	3	..	..	4
Steam boilers, steam piping, boiling water, explosions, etc.....	10	..	2	..	..	2
Explosive material—explosions of powder, dynamite, etc.....	5	..	..	1	..	4
Inflammable and acid materials, gases, vapors, etc.....	6	..	1	3	3	6
Collapse and downfall of material.....	46	52	13	4	..	27
Falls from ladders, scaffolds, trestles, buildings, etc.....	28	80	..	3	..	29
Loading and unloading freight, material, etc.....	..	..	3	1	..	4
Vehicles—falls from, run over or run down by, wagons, trucks, trolley cars, etc.....	4	..	3	3	..	61
Railway operations—run over, fell from or struck by engines, cars, etc.....	..	..	75	..	..	..
Hand tools, hand worked machinery, simple instruments, hammers, axes, spades, etc...	5	..	4	2	..	9
Collapse of excavations, falls of material, in mines, tunnels, trenches, sewers.....	..	..	..	12	..	..
Contact with electric apparatus, live wires, etc., falls from telegraph poles, etc.....	..	..	1	..	18	..
Woodworking machinery, circular saws, shapers, etc.....	5	2	..	..	..	..
Metal shaping machinery, steam hammers, hand forgings, etc.....	6	..	..	..	..	2
Burns .....	13	1	1	..	..	5
Other causes .....	21	4	14	3	..	19
Totals.....	234	140	121	40	21	182

TABLE No. 8.

**Permanent or Temporary Suspension of Work in Manufacturing Establishments.**

This table gives the names and locations of manufacturing plants throughout the State that were closed wholly or partly, permanently or temporarily, during the twelve months ending September 30, 1911. The character of the industry is also shown, together with a brief statement of the reasons for closing. In the case of temporary suspensions, the length of time involved in days and weeks is also given.

The number of establishments reporting a more or less extended period of total or partial suspension of work is thirty. One of these, a silk mill, was closed permanently because of lack of orders, and another, a manufactory of ladies' waists, because the business had been moved to New York. Four establishments were closed indefinitely, three of them because of "lack of orders," and one through the same cause, coupled with tariff agitation.

"Lack of orders" was responsible for the interruption of work in thirteen establishments, breakdown of machinery caused the stoppage in nine establishments, and taking inventory was responsible for the interruption of work in several more.

"Labor difficulties" caused a total suspension of work in a pottery for three weeks, and a large silk mill was obliged to suspend work for four weeks on account of lack of water. In two cases of temporary suspension, no reasons are assigned. Six establishments report having been closed for from three to four days, and in eighteen establishments the periods of idleness ranged from one to eight weeks. In the case of a wire plant, located at Trenton, for which there are three entries on the table, two showing a suspension on account of defect in the machinery, lasting from three days to four weeks, and the other entered as "indefinite" with regard to the duration of suspension, it should be borne in mind that in each instance only a comparatively small part of these large works were involved. One of the permanently closed plants was located at Paterson, and the other, which was moved from the State, at Matawan.

The lines of manufacture reporting suspensions because of "lack of orders," are: woolen and worsted goods, three establish-

ments; silk goods, two establishments, and high explosives, fire-proofing, iron mining, underwear, locomotives, rugs, thread, and stoves, one establishment each.

The number of occurrences of the kind set forth on this table corresponds exactly with the record of the year previous, in the total number of suspensions, but those of a permanent character are fewer this year, and the periods of idleness under temporary suspension are, generally, of shorter duration.

TABLE No. 8.

Closing up or Suspension of Work in Manufacturing Plants, from October 1, 1910, to September 30, 1911.

Closed Temporarily (T.)		Time		NAME OF FIRM.	INDUSTRY.	LOCATION OF WORKS.	REASONS FOR CLOSING.	
Closed Permanently (P.)		Closed.						
Date of Closing.	T.	P.	Days.	Weeks				
Oct. 1.....	T.	.....	3	.....	Mechelin Tire Co.....	Ruber tires .....	Milltown .....	Taking inventory.
Oct. 23.....	T.	.....	3	.....	Lambertville Pottery Co.....	Potteryware .....	Lambertville .....	Labor difficulties.
Nov. 1.....	T.	.....	4	.....	Bentley Silk Mill.....	Silk .....	Newton .....	Unable to procure sufficient water.
Nov. 2.....	T.	.....	4	.....	J. A. Roeblings Sons Co. Rod Mill.....	Wire .....	Roebling .....	Machinery broken down.
Nov. 7.....	T.	.....	1	.....	Raritan Woolen Mills.....	Woolen goods .....	Raritan .....	Lack of orders.
Nov. 7.....	T.	.....	4	.....	Somerset Mfg. Co.....	Worsted goods .....	Raritan .....	Lack of orders.
Nov. 22.....	T.	.....	3	.....	E. I. Du Pont de Nemours Powder Co.	High explosives .....	Gibbstown .....	Lack of orders.
Dec. 14.....	T.	.....	2	.....	National Fire Proofing Co.....	Fire-proofing .....	Lorillards .....	Lack of orders.
Feb. 8.....	T.	.....	3	.....	United Box Board Co.....	Box boards .....	Whippany .....	Machinery broken down.
Feb. 28.....	T.	.....	4	.....	Empire Steel & Iron Co.....	Mining iron ore.....	Oxford .....	Lack of orders; machinery broken down.
Mar. 22.....	T.	.....	4	.....	Pennsylvania R. R. Car Shops.....	Repairing cars .....	Kearny .....	No reason assigned.
Mar. 28.....	T.	.....	2	.....	United States Rubber Co.....	Rubber goods .....	New Brunswick.....	Machinery broken down.
Mar. 30.....	T.	.....	4	.....	A. T. Skerry & Co.....	Woolen goods .....	Changewater .....	Lack of orders.
Mar. 31.....	T.	.....	1	.....	Pennsylvania R. R. Car Shops.....	Repairing cars .....	Trenton .....	No reason assigned.
Apr. 6.....	P.	.....	.....	.....	Levett Mfg. Co.....	Ladies' waists .....	Matawan .....	Desired to be in New York.
Apr. 12.....	T.	.....	4	.....	Jules Simon Co.....	Underwear .....	Freehold .....	Lack of orders.
Apr. 18.....	T.	.....	1	.....	U. S. Cast Iron Pipe Co. Shop No. 3	Pipe .....	Burlington .....	Machinery broken down.
Apr. 21.....	T.	.....	*	.....	American Locomotive Works, Cooke Works	Locomotives .....	Paterson .....	Lack of orders.
May 27.....	T.	.....	3	.....	The Welsbach Co.....	Gas mantles .....	Gloucester City.....	Machinery broken down.
May 27.....	T.	.....	3	.....	J. A. Roeblings Sons Co.....	Wire .....	Trenton .....	Machinery broken down.
June 3.....	T.	.....	*	.....	Fries-Harley Rug Co.....	Rugs .....	Gloucester City.....	Lack of orders.
July 1.....	T.	.....	3	.....	Lambertville Rubber Co.....	Rubber .....	Lambertville .....	Taking inventory; machinery broken down.
July 1.....	T.	.....	3	.....	Superior Thread & Yarn Co.....	Thread .....	Pluckemin .....	Lack of orders.
July 3.....	T.	.....	2	.....	Richardson & Boynton Stove Works	Stoves .....	Dover .....	Lack of orders.
July 3.....	P.	.....	.....	.....	Riegelsville Silk Co.....	Silk goods .....	Paterson .....	Lack of orders.
July 3.....	T.	.....	1	.....	Henry R. Worthington.....	Pumps .....	Harrison .....	Machinery broken down.
July 3.....	T.	.....	1	.....	General Electric Co.....	Electrical supplies..	Harrison .....	Machinery broken down.
Aug. 23.....	T.	.....	2	.....	Clark Theard Co.....	Thread .....	East Newark .....	Machinery broken down.
Aug. 24.....	T.	.....	*	.....	Singleton Silk Co.....	Silk .....	Wharton .....	Lack of orders.
Aug. 24.....	T.	.....	*	.....	J. A. Roeblings Sons Co.....	Wire .....	Trenton .....	Lack of orders and agitation on tariff.

\*Indefinitely.

TABLE No. 9.

Increase or Decrease in Wages or Working Hours, from October 1, 1910, to September 30, 1911.

The purpose of this table is to show in the briefest possible form the general trend of working time and wages in the industries of the State during the twelve months covered by this report. The number of establishments for which changes in either or both these respects are reported is 54; of these, 21 are cases of factories reopened after a more or less extended period of total idleness; 11 are cases in which the working force had to be practically doubled by the employment of a night shift—six of them for three, and five for five nights per week; 3 establishments changed from half-time to full time; 2 increased the working time from four days per week to six days; one increased the working time from 4 to 5 days per week, and another changed from 47 to 52 hours per week, and still another from 55 to 60 hours per week.

Wages were increased in the several amounts shown on the table by five establishments, and decreases are reported by four. Overtime was discontinued in two establishments, in which the normal working hours were restored, and one plant changed from full to half-time.

Of the 54 entries on the table, 45 show increases of either or both working time and wages, and 9 show decreases. In the large number of establishments (21) reported as having been reopened after a long period of total idleness, were several that had succumbed to the pressure of the money panic of 1907-08, and had remained idle until reopened this year. The resumption of work in these and other establishments in which hours were increased or night shifts employed, is another indication of the prosperity enjoyed by the industries of the State during the year 1911.

The table tells its own story, which cannot be made clearer by any further analysis or explanation.

TABLE No. 9.

Increase or Decrease in Wages or Working Hours, from October 1, 1910, to September 30, 1911.

NAME OF FIRM,	Character of Business or Goods Made.	Location of Works.	Increase (+) Decrease (-)	Date of Increase or Decrease.	Amount of Increase or Decrease.
Hirschorn & Mack.....	Cigars .....	South River.....	+	Oct. 13....	Employment of a night shift five evenings per week until 9 o'clock.
Singleton Silk Mill.....	Silk goods .....	Dover .....	+	Oct. 31....	Employment of a night shift three evenings per week.
Delaware River Shoe Mfg. Co.....	Shoes .....	Beverly .....	+	Nov. 2....	From half time to full time.
New Jersey Zinc Co.....	Zinc .....	Franklin Furnace..	-	Nov. 7....	Discontinued night work.
Pennsylvania R. R. Car Shops.....	Car repairing .....	Trenton .....	+	Nov. 14....	From four days per week to five.
McEwan Bros. ....	Paper .....	Whippany .....	-	Nov. 21....	To five days per week; had been working six.
Tileworkers .....	Tile .....	Perth Amboy.....	+	Nov. 22....	Increase in wages of 5 cents per hour.
William Lund & Son.....	Worsted yarn .....	Camden .....	+	Nov. 22....	Employment of a night shift three evenings per week.
Joel C. Demarest.....	Quarrying slate ..	Lafayette .....	+	Dec. 1....	Reopened on full time. Had been closed.
Philadelphia Watch Case Co.....	Watch cases .....	Riverside .....	+	Dec. 10....	Employment of a night shift three evenings per week until 10 o'clock.
Hightstown Smyrna Rug Co.....	Rugs .....	Hightstown .....	+	Dec. 16....	Employment of a night shift three evenings per week.
American Snuff Co.....	Snuff .....	Helmetta .....	+	Dec. 24....	Increase in wages of 15 per cent.
N. Y. & N. J. Telephone Co.....	Telephone service..	Newark .....	+	Jan. 1....	Increase in wages of \$1.00 and \$2.00 per week according to that received.
Public Service Corporation.....	Trolley service.....	Paterson .....	+	Jan. 1....	Increase in weekly wages of 9 per cent.
Public Service Corporation.....	Trolley service.....	Jersey City.....	+	Jan. 1....	Increase in weekly wages of 9 per cent.
Richardson & Boynton Stove Works.	Stoves .....	Dover .....	+	Jan. 11....	Reopened on full time. Had been closed.
N. Y. & N. J. Fish Oil Co.....	Fertilizers .....	Port Monmouth....	+	Jan. 11....	Reopened on full time. Had been closed.
J. A. Roeblings Sons Co., Rod Mill.	Wire .....	Roebing .....	+	Jan. 14....	Reopened on full time. Had been closed.
Empire Steel & Iron Co.....	Mining iron ore.....	Mount Hope.....	-	Jan. 15....	Decrease in wages of 10 per cent.
Wharton Steel Co.....	Steel castings .....	Wharton .....	-	Jan. 15....	Decrease in wages of 10 per cent.
Thomas Iron Co.....	Mining iron ore.....	Wharton .....	-	Jan. 15....	Decrease in wages of 10 per cent.
Crucible Steel Co., Gun Dept.....	Steel .....	Harrison .....	+	Jan. 25....	Employment of a night shift five evenings per week.
Changewater Woolen Co.....	Woolen goods .....	Changewater .....	+	Feb. 3....	Reopened on full time. Had been closed.
Llondale Bleach, Dye & Print Wks.	Bleaching & dyeing	Rockaway .....	+	Feb. 8....	To full time; had been working half.
Hanover Paper Mill.....	Paper .....	Whippany .....	+	Feb. 8....	Reopened on full time. Had been closed.
Pasic Iron Ore Co.....	Mining iron ore.....	Buttsville .....	-	Feb. 9....	Decrease in wages of 10 per cent.
United Box Board Co.....	Box board .....	Whippany .....	+	Feb. 27....	Reopened on full time. Had been closed.
Edison Portland Cement Co.....	Portland cement....	New Village.....	+	Feb. 28....	From four days per week to six.

Florence Iron Co.....	Castings .....	Florence .....	+	Mar. 13.....	Employment of a night shift.
Cohen Mfg. Co.....	Silk goods .....	Paterson .....	+	Mar. 13.....	Reopened on full time. Had been closed.
Singer Mfg. Co.....	Sewing machines...	Elizabeth .....	+	Mar. 29.....	From 47 to 52 hours per week.
Empire Steel & Iron Co.....	Mining iron ore....	Dover .....	+	Apr. 21.....	Reopened on full time. Had been closed.
American Bridge Co.....	Structural steel....	Trenton .....	+	Apr. 21.....	From four days per week to six.
Thomas Devlin Malleable Iron Wks.	Malleable iron....	Burlington .....	-	May 4.....	Discontinued night work.
Little Ferry Paper Co.....	Paper .....	Little Ferry.....	+	May 25.....	Reopened on full time. Had been closed.
Rockaway Rolling Mill.....	Forgings .....	Rockaway .....	+	June 6.....	Reopened on full time. Had been closed.
Rockaway Brick Works.....	Bricks .....	Rockaway .....	+	June 6.....	Reopened on full time. Had been closed.
United Olecloth Co.....	Olecloth .....	Yardville .....	+	June 19.....	Reopened on full time. Had been closed.
Crescent Brick Co.....	Bricks .....	Tinton Falls.....	+	June 20.....	Reopened on full time. Had been closed.
Summit Silk Co.....	Silk goods .....	Summit .....	+	June 27.....	To half time; had been working full time.
Fries-Harley Co. ....	Rugs .....	Gloucester City....	+	July 19.....	Reopened on full time. Had been closed.
Richardson & Boynton Co.....	Stoves .....	Dover .....	+	July 19.....	Reopened on full time. Had been closed.
The Singer Co.....	Sewing machines...	Elizabeth .....	+	July 19.....	Reopened on full time. Had been closed.
Lambertville Rubber Co.....	Mechanical rubber goods .....	Lambertville .....	+	July 25.....	Reopened on full time. Had been closed.
E. I. Du Pont de Nemours Powder Co. ....	Smokeless powder..	Kenvil .....	-	July 31.....	To five days per week; had been working six.
American Locomotive Works, Rogers Plant .....	Locomotives .....	Paterson .....	+	Aug. 8.....	To full time. Had been on half time.
American Snuff Co.....	Snuff .....	Helmetta .....	+	Aug. 23.....	To 60 hours per week. Had been working 55.
Stockton Rubber Co.....	Rubber goods.....	Stockton .....	+	Aug. 29.....	Reopened on full time. Had been closed.
John Williams Mfg. Co., Titus Mill.	Woolen goods.....	Trenton .....	+	Sept. 18.....	Reopened on full time. Had been closed.
Old Bridge Enam. Brick & Tile Co..	Enameled brick....	Old Bridge.....	+	Sept. 19.....	Employment of a night shift.
Superior Thread & Yarn Co.....	Thread .....	Pluckemin .....	+	Sept. 19.....	Reopened on full time. Had been closed.
Alois Bohl .....	Embroidery .....	South River.....	+	Sept. 28.....	Employment of a night shift three evenings per week.
Mendel & Lunep... ..	Embroidery .....	South River.....	+	Sept. 28.....	Employment of a night shift three evenings per week.
Minor-Pullen Co. ....	Shoes .....	Hightstown .....	+	Sept. 28.....	Employment of a night shift three evenings per week.

TABLE No. 10.

## New Manufacturing Plants Erected and Old Ones Enlarged.

This table shows the number of new manufacturing establishments erected and opened for work during the twelve months covered by the chronology, and also the number of previously existing plants that had to be enlarged to a greater or less extent in order to meet the requirements of an increasing demand for their products. The names of the firms concerned, character of the industry carried on, cost of the new plant or the improvement to the old one, location of the works, and date on which the improvements were inaugurated, are shown for each entry.

As shown by the table, the total amount invested during the year in factory and workshop erection, enlargement and equipment, during the twelve months, amounted to \$6,349,038, not including eight new establishments and extensions made to three old ones, the cost of which could not be ascertained. The industries in which the newly erected establishments are to engage, and the number for each, are as follows: silk goods, 6; automobiles and parts, 5; cocoa and chocolate, 3; jewelry, 3; machinery, 3; chemicals, 2; varnish, 2; steel, 2; cigars, 2; sheet metal work, 2; and buildings to be leased for manufacturing purposes, 2.

The following industries are represented in new construction by one establishment each: paper boxes, embroidery, briquettes, tallow, flax, oil cans, water meters, car repairing, cartridges, printing and bookbinding, clothing, artificial ice, clocks, automobile tops, fire-proofing, wax paper, gas tanks, hats, metal beds, women's cloaks, pianos, women's waists, shoe lasts, trunks and bags, rubber substitutes, denatured alcohol and wagons.

The number of new plants established in the various cities and towns of the State during the year covered by this record and the cost of the same are as follows:

	Number.	Cost.
Newark .....	20	\$606,100 00
Jersey City .....	7	730,000 00
Paterson .....	3	165,000 00
New Brunswick .....	3	195,000 00
Camden .....	2	610,000 00
Perth Amboy .....	2	82,000 00
Hoboken .....	2	88,000 00
Plainfield .....	2	44,000 00
Kearnsby .....	1	450,000 00
Passaic .....	1	300,000 00

	Number.	Cost.
Burlington .....	1	\$75,000 00
Bayonne .....	1	75,000 00
Hackensack .....	1	65,000 00
Maurer .....	1	50,000 00
Springfield .....	1	15,000 00
Secaucus .....	1	13,000 00
Asbury Park .....	1	11,000 00
South River .....	1	10,000 00
Kenilworth .....	1	10,000 00
Kearny .....	1	10,000 00
Morganville .....	1	10,000 00

The above table shows the city of Newark in the lead of all other municipalities of the State, so far as the number of new establishments is concerned, with a total of 20 plants representing an investment of \$616,100; Jersey City comes next with 7 plants which cost \$730,000. Paterson and New Brunswick follow with 3 each, representing investments of \$165,000 and \$195,000 respectively. Camden is credited with 2 new plants which cost \$610,000, and Keasby with one, representing an investment of \$450,000. In all, the number of municipalities that shared to a greater or less extent in the factory growth of the State during the year 1911, was twenty-one. By far the largest part of this industrial expansion was experienced in the middle counties of the State. With the exception of Trenton, Camden and Burlington, but little industrial progress is shown in the southern, and none at all in the northern counties.

TABLE No. 10.

New Manufacturing Plants Erected and Old Ones Enlarged, from October 1, 1910, to September 30, 1911.

Character of Improvements.		When Made.	Cost.	NAME OF FIRM.	Kind of Goods Made.	Location of Works.
New.	Old.					
.....	Old.	Oct. 5.....	\$225,000	MacAndrews & Forbes Co.....	Chemicals (boxes) .....	Camden.
New.	.....	Oct. 5.....	12,000	Herman Silver .....	To be leased for mfg.....	Newark.
New.	.....	Oct. 6.....	.....	Ellis Adding Typewriter Co.....	Adding typewriters .....	Newark.
New.	.....	Oct. 7.....	14,000	Charles H Phillips.....	To be leased for mfg.....	Newark.
New.	.....	Oct. 10.....	12,000	International Oxygen Co.....	Chemicals .....	Newark.
.....	Old.	Oct. 14.....	91,700	American Colortype Co.....	Art novelties .....	Newark.
New.	.....	Oct. 18.....	125,000	Mengel Box Co .....	Boxes .....	Jersey City.
.....	Old.	Oct. 18.....	150,000	Swift & Co.....	Lard .....	Kearny.
New.	.....	Oct. 20.....	.....	Erie Railroad Co.....	Machinery .....	Jersey City.
New.	.....	Oct. 22.....	19,000	Silver & Co.....	Embroidery.....	Jersey City.
.....	Old.	Oct. 22.....	50,000	Colgate & Co.....	Soaps and perfumes.....	Jersey City.
.....	Old.	Oct. 23.....	7,000	Trenton Iron Co.....	Wire .....	Trenton.
.....	Old.	Oct. 24.....	50,000	The Peter Breidt City Brewing Co.....	Beer .....	Elizabeth.
.....	Old.	Oct. 24.....	30,000	Samuel L. Moore's Sons Co.....	Castings .....	Elizabeth.
.....	Old.	Oct. 24.....	15,000	Waverly Paper Box Co.....	Paper boxes .....	Waverly.
.....	Old.	Oct. 24.....	900	Carnegie Steel Co.....	Castings .....	Waverly.
.....	Old.	Oct. 24.....	2,000	Barlow Foundry Co.....	Iron castings .....	Newark.
.....	Old.	Oct. 25.....	12,000	Essex County Brewing Co.....	Beer .....	Newark.
New.	.....	Oct. 25.....	8,000	Hurl Mfg. Co.....	Varnish .....	Newark.
.....	Old.	Oct. 25.....	9,000	Martin Dennis Co.....	Tanners' chemicals .....	Newark.
.....	Old.	Oct. 25.....	8,000	Newark Tube & Metal Works.....	Metal goods .....	Newark.
New.	.....	Oct. 28.....	50,000	Katzenbach & Stephens.....	Ribbons .....	Newark.
.....	Old.	Oct. 28.....	30,000	Phoenix Ceramic Co.....	Glazed sanitary ware.....	Perth Amboy.
New.	.....	Nov. 3.....	13,000	Louis Stern .....	Tallow .....	Secaucus.
New.	.....	Nov. 3.....	50,000	The Electric Smelting & Aluminum Co.....	Briquettes .....	Maurer.
New.	.....	Nov. 5.....	70,000	The Allentown Spinning Co.....	Flax .....	Paterson.
.....	Old.	Nov. 5.....	3,500	Forman, Stumpf & Sharpe.....	Silk .....	Paterson.
.....	Old.	Nov. 5.....	.....	Gera Mill .....	Dress goods .....	Passaic.
.....	Old.	Nov. 8.....	1,100	Elite Pottery Co.....	Pottery ware .....	Trenton.
.....	Old.	Nov. 8.....	1,000	Smith & Sons Co.....	Wire novelties .....	Lambertville.

.....	Old.	Nov. 8.....	2,000	Trenton Potteries Co.....	Sanitary ware .....	Trenton.
.....	Old.	Nov. 9.....	3,500	Peoples' Brewing Co.....	Beer .....	Trenton.
.....	Old.	Nov. 11.....	28,000	J. L. Mott Iron Co.....	Plumbers' earthenware .....	Trenton.
New.	.....	Nov. 11.....	75,000	Burlington Silk Mills.....	Silk goods .....	Burlington.
.....	Old.	Nov. 11.....	500	Superior Fire Linings Co.....	Fire brick .....	Trenton.
.....	Old.	Nov. 11.....	40,000	Mutual Chemical Co.....	Chemicals .....	Jersey City.
.....	Old.	Nov. 17.....	300	Rockaway Rolling Mill.....	Iron bars .....	Rockaway.
.....	Old.	Nov. 17.....	1,000	B. H. Reed & Bros.....	Brick and tile.....	Cranbury.
.....	Old.	Nov. 19.....	4,800	August Buerman .....	Saddlery hardware .....	Newark.
.....	Old.	Nov. 19.....	28,500	Lister Agricultural Chemical Co.....	Fertilizers .....	Newark.
.....	Old.	Nov. 22.....	85,000	The Joseph Hensler Brewing Co.....	Beer .....	Newark.
.....	Old.	Nov. 23.....	35,000	The George Stratford Oakum Works.....	Oakum .....	Jersey City.
.....	Old.	Nov. 26.....	200,000	Fuld & Frank.....	Garments .....	Newark.
.....	Old.	Nov. 26.....	9,300	George W. Wiedenmayer.....	Beer .....	Newark.
New.	.....	Nov. 28.....	75,000	Standard Oil Co.....	Oil cans .....	Bayonne.
New.	.....	Dec. 2.....	15,000	Gamon Meter Co.....	Water meters .....	Newark.
.....	Old.	Dec. 2.....	200	Fleke Bros. Refining Co.....	Oils and greases .....	Newark.
New.	.....	Dec. 2.....	65,000	D. B. Dunham & Sons, Inc.....	Automobile parts .....	Newark.
.....	Old.	Dec. 8.....	2,500	J. L. Sommers Mfg. Co.....	Wire novelties .....	Newark.
New.	.....	Dec. 16.....	25,000	West Jersey Railroad Co.....	Car repairing .....	Jersey City.
.....	Old.	Dec. 17.....	12,000	Flood & Conklin.....	Varnish .....	Newark.
.....	Old.	Dec. 18.....	6,000	Hanson & Van Winkle Co.....	Dynamos .....	Newark.
New.	.....	Dec. 18.....	75,000	United States Cartridge Co.....	Cartridges .....	Perth Amboy.
.....	Old.	Dec. 19.....	1,750	Titan Steel Casting Co.....	Steel castings .....	Newark.
.....	Old.	Dec. 19.....	2,000	New Jersey Rubber Co.....	Rubber reclaiming .....	Lambertville.
New.	.....	Dec. 29.....	500,000	The Jersey City Printing Co.....	Printing and bookbinding.....	Jersey City.
.....	Old.	Dec. 29.....	250,000	Westinghouse Elec. Mfg. Co.....	Electrical appliances .....	Newark.
.....	Old.	Jan. 3.....	15,700	The Monument Pottery Co.....	Porcelain ware .....	Trenton.
.....	Old.	Jan. 5.....	20,500	Rubber & Celluloid Harness & Trim. Co.....	Brushes and harness trimmings...	Newark.
.....	Old.	Jan. 5.....	20,000	The Celluloid Co.....	Celluloid goods .....	Newark.
New.	.....	Jan. 6.....	6,000	The N. Y. Revolving Portable Elevator Co.....	Machinery .....	Jersey City.
.....	Old.	Jan. 16.....	10,000	The Trenton Potteries Co., "Equitable Plant".	Sanitary ware .....	Trenton.
New.	.....	Jan. 17.....	30,000	M. & S. Cocoa & Chocolate Co.....	Cocoa and chocolate.....	Jersey City.
New.	.....	Jan. 21.....	11,000	Millar, Mandel & Co.....	Clothing .....	Asbury Park.
.....	.....	Jan. 27.....	65,000	Stickel Hygeia Ice Co.....	Artificial ice .....	Hackensack.
.....	Old.	Jan. 27.....	24,000	Elm Realty Co.....	Pearl buttons .....	Arlington.
.....	Old.	Jan. 28.....	1,000	Flemington Cut Glass Co.....	Cut glass .....	Flemington.
New.	.....	Feb. 4.....	5,000	Berkowitz & Lask.....	Cloaks .....	Newark.
.....	Old.	Feb. 4.....	50,000	Otis Elevator Co.....	Elevators .....	Harrison.
.....	Old.	Feb. 6.....	5,000	Hardman Tire & Rubber Co.....	Rubber tires .....	Belleville.
New.	.....	Feb. 6.....	15,000	New Jersey Automobile Top Co.....	Automobile tops .....	Newark.
New.	.....	Feb. 7.....	450,000	Didier-March Co.....	Fire-proofing .....	Keasbey.
.....	Old.	Feb. 9.....	.....	Barber Asphalt Co.....	Asphalt .....	Perth Amboy.
.....	Old.	Feb. 16.....	5,000	Otto Brandt .....	Mineral waters .....	Newark.
.....	Old.	Feb. 17.....	15,000	A. Hollander & Son.....	Dyeing .....	Newark.
.....	Old.	Feb. 20.....	55,000	Gottfried Krueger Brg. Co.....	Beer and ales.....	Newark.
New.	.....	Feb. 20.....	.....	Runkel Bros., Inc.....	Chocolate and cocoa.....	Elizabeth.

TABLE No. 10.—(Continued.)

New Manufacturing Plants Erected and Old Ones Enlarged, from October 1, 1910, to September 30, 1911.

Character of Improvements.		When Made.	Cost.	NAME OF FIRM.	Kind of Goods Made.	Location of Works.
New.	Old.					
	Old.	Feb. 22.....	\$33,000	William Peter Brewing Co.....	Lager beer .....	Union Hill.
	Old.	Feb. 24.....	51,000	Seton Leather Co.....	Leather .....	Belleville.
	Old.	Feb. 24.....	15,000	Payne Bros., Inc.....	Structural steel .....	Newark.
	Old.	Mar. 3.....	1,500	A. Bernhardt & Co.....	Upholstering .....	Newark.
New.		Mar. 11.....	50,000	J. Colyer & Co.....	Automobile bodies .....	Newark.
New.		Mar. 14.....	10,000	The Terry & Tench Co., Inc.....	Steel .....	Kearny.
	Old.	Mar. 14.....	12,000	De Laval Steam Turbine Co.....	Steam turbines .....	Trenton.
New.		Mar. 15.....	35,000	Harry Solomon .....	Cigars .....	New Brunswick.
New.		Mar. 16.....	25,000	Leonard Sheet Metal Works, Inc.....	Sheet metal work.....	Jersey City.
	Old.	Mar. 17.....	16,000	United Cigar Manufacturers' Co.....	Cigars .....	Perth Amboy.
	Old.	Mar. 21.....	7,500	Mercer Rubber Co.....	Mechanical rubber goods.....	Trenton.
	Old.	Mar. 21.....	10,068	National Radiator Co.....	Radiators .....	Trenton.
New.		Mar. 22.....	10,000	The R. V. Crine Seed Co.....	Catsup .....	Morganville.
New.		Mar. 22.....	8,000	Grove Hinman, Inc.....	Bronze work .....	Plainfield.
	Old.	Mar. 25.....	2,000	William & J. M. Riker.....	Jewelry .....	Newark.
	Old.	Mar. 27.....	5,200	Enterprise Cigar Co.....	Cigars .....	Trenton.
	Old.	Mar. 27.....	1,100	Elite Pottery Co.....	Pottery ware .....	Trenton.
	Old.	Mar. 28.....	2,000	Barbour Bros.....	Machinery .....	Trenton.
New.		Mar. 28.....	10,000	Papyrus Artificial Paper Co.....	Paper .....	Kenilworth.
	Old.	Apr. 3.....	10,000	The J. E. Mergott Co.....	Metal goods .....	Newark.
New.		Apr. 3.....	14,000	Day, Clark & Co.....	Jewelry .....	Newark.
	Old.	Apr. 4.....	35,000	Federal Terra Cotta Co.....	Terra cotta .....	Perth Amboy.
	Old.	Apr. 4.....	25,000	Sayre & Fisher Co.....	Brick .....	Sayreville.
New.		Apr. 8.....	16,000	Sterling Wax Paper Co.....	Wax paper .....	Newark.
	Old.	Apr. 8.....	15,000	John Nieder Co.....	Leather .....	Newark.
	Old.	Apr. 10.....	50,000	Crucible Steel Co. of America, Atha Plant.....	Steel .....	Harrison.
	Old.	Apr. 12.....	1,200	A. C. Loper Co.....	Catsups and sauces.....	Farmingdale.
	Old.	Apr. 13.....	10,000	The Somerville Iron Works.....	Soil pipe and fittings.....	Somerville.
	Old.	Apr. 15.....	8,000	Newark Gear Cutting Machine Co.....	Machinery .....	Newark.
New.		Apr. 15.....	50,000	J. W. Rosenbaum.....	Jewelry .....	Newark.

.....	Old.	Apr. 29.....	9,000	The Sherwin-Williams Co.....	Paint .....	Newark.
.....	Old.	Apr. 29.....	10,000	J. Lewis Cigar Co.....	Cigars .....	Newark.
.....	Old.	Apr. 29.....	10,000	Terwilliger-Stone Leather Co.....	Leather .....	Newark.
New.	.....	Apr. 29.....	6,000	The Prest-O-Lite Co.....	Refill gas tanks.....	Newark.
New.	.....	May 6.....	12,500	E. V. Connett & Co.....	Hats .....	Newark.
.....	Old.	May 6.....	6,000	Theodore E. Beck & Co.....	Leather .....	Newark.
New.	.....	May 19.....	75,000	Oriental Metal Bed Co.....	Metal beds .....	Hoboken.
New.	.....	May 19.....	10,000	Goetze Gasket & Packing Co.....	Packings .....	New Brunswick.
.....	Old.	May 19.....	42,000	Rowland Firth & Son.....	Iron and steel castings.....	Phillipsburg.
.....	Old.	May 19.....	44,658	Weldmann Silk Dyeing Co.....	Silk dyeing .....	Paterson.
New.	.....	May 20.....	.....	Casper Silk Co.....	Silk goods .....	Paterson.
New.	.....	May 20.....	.....	Mannheimer & Kasse Co.....	Women's cloaks .....	Perth Amboy.
.....	Old.	May 20.....	10,000	Scharling & Co.....	Silver goods .....	Newark.
New.	.....	May 20.....	.....	John S. Hobbs.....	Jewelry .....	Newark.
.....	Old.	May 27.....	12,000	B. Conlan & Co.....	Metal novelties .....	Newark.
.....	Old.	June 2.....	3,000	J. T. Severns Sons & Co.....	Mill work .....	Burlington.
.....	Old.	June 5.....	12,500	Loy & Nawrath Co.....	Sheet metal presses.....	Newark.
New.	.....	June 5.....	90,000	Lauter Co.....	Planos .....	Newark.
New.	.....	June 5.....	150,000	Simplex Automobile Co.....	Automobiles .....	New Brunswick.
.....	Old.	June 10.....	5,000	Charles Nelder .....	Leather .....	Newark.
.....	Old.	June 14.....	65,000	The Schwarzenbach Huber Co.....	Silk goods .....	West Hoboken.
New.	.....	June 15.....	7,000	H. Kottler .....	Ladies' waists .....	Perth Amboy.
.....	Old.	June 24.....	17,000	Cambridge Co. ....	Castings and forgings.....	Riverside.
.....	Old.	June 26.....	150,000	Thomas A. Edison, Inc.....	Electric wagons .....	Belleville.
.....	Old.	June 27.....	130,000	Chr. Feigenspan Corp. ....	Beer .....	Newark.
.....	Old.	June 27.....	10,000	Newark Plaster Co.....	Plaster .....	Newark.
New.	.....	June 28.....	75,000	The Johnson-Van Vlaanderen Mach. Co.....	Machinery .....	Paterson.
New.	.....	July 5.....	80,000	John Pell & Son, Inc.....	Shoe lasts .....	Newark.
.....	Old.	July 5.....	1,500	Blanchard Bros. & Lane.....	Leather .....	Newark.
.....	Old.	July 10.....	8,000	The Jersey Biscuit Co.....	Biscuits .....	Newark.
.....	Old.	July 10.....	1,500	J. Lichtman & Son.....	Leather .....	Newark.
.....	Old.	July 11.....	6,000	H. F. Sommers & Co.....	Leather .....	Newark.
New.	.....	July 14.....	35,000	William Bal, Inc.....	Trunks and bags.....	Newark.
.....	Old.	July 15.....	15,000	P. Ballantine & Son.....	Beer .....	Newark.
New.	.....	July 22.....	15,000	The Carter Bell Mfg. Co.....	Rubber substitute .....	Springfield.
New.	.....	July 27.....	16,000	T. J. Mitchell Co.....	Broad silk .....	Plainfield.
New.	.....	July 27.....	20,000	The Newark Automobile Mfg. Co.....	Commercial motor cars.....	Newark.
New.	.....	Aug. 4.....	.....	Burlington Distilling Co.....	Denatured alcohol .....	Burlington.
New.	.....	Aug. 8.....	600,000	American Artificial Silk Mfg. Co.....	Artificial silk .....	Camden.
New.	.....	Aug. 8.....	20,000	Pervilhac & Co.....	Silk dyeing .....	Paterson.
.....	Old.	Aug. 9.....	4,300	American Saw Works.....	Circular saws .....	Hackettstown.
.....	Old.	Aug. 10.....	35,000	Hartford Suspension Co.....	Automobile shock absorber.....	Jersey City.
.....	Old.	Aug. 12.....	14,000	Jas. R. Hensler Ale Brewing Co.....	Ale and beer .....	Newark.
.....	Old.	Aug. 14.....	20,000	Union Brewing Co. of Newark.....	Beer .....	Newark.
.....	Old.	Aug. 14.....	6,000	K. Kaufman & Co.....	Leather goods .....	Newark.
.....	Old.	Aug. 15.....	12,000	Maltbie Chemical Co.....	Chemicals .....	Newark.
.....	Old.	Aug. 15.....	1,897	J. Wiss & Sons Co.....	Cutlery .....	Newark.

TABLE No. 10.—(Continued.)

New Manufacturing Plants Erected and Old Ones Enlarged, from October 1, 1910, to September 30, 1911.

Character of Improvements.		When Made.	Cost.	NAME OF FIRM.	Kind of Goods Made.	Location of Works.
New.	Old.					
.....	Old.	Aug. 16.....	\$9,500	Hanson & Van Winkle Co.....	Electro plating supplies.....	Newark.
.....	Old.	Aug. 16.....	15,000	Robert H. Ingersoll & Bros.....	Watches .....	Trenton.
New.	.....	Aug. 17.....	13,000	Leon Henry .....	Cocoa .....	Hoboken.
New.	.....	Aug. 18.....	.....	Falroute Iron & Steel Co.....	Iron and steel.....	Newark.
New.	.....	Aug. 21.....	10,000	Joseph Stuib Varnish Co.....	Varnish .....	Camden.
.....	Old.	Aug. 22.....	.....	Raritan Copper Works.....	Refining lead .....	Perth Amboy.
.....	Old.	Aug. 24.....	40,000	Titan Steel Casting Co.....	Steel castings .....	Newark.
.....	Old.	Aug 24.....	2,500	Universal Caster & Foundry Co.....	Casters and ball bearings.....	Newark.
.....	Old.	Aug 28.....	24,000	Middlesex Embroidery Works.....	Embroideries .....	South River.
New.	.....	Aug. 29.....	300,000	Passaic Metal Ware Co.....	Metal boxes and cans.....	Passaic.
.....	Old.	Sept. 2.....	3,275	The Eagle Co.....	Castings .....	Newark.
.....	Old.	Sept. 18.....	5,000	Ferry, Weber & Co.....	Hats .....	Newark.
New.	.....	Sept. 18.....	37,100	John Sturm & Sons.....	Wagons .....	Newark.
New.	.....	Sept. 19.....	10,000	United Cigar Manufacturers' Co.....	Cigars .....	South River.
.....	Old.	Sept. 25.....	3,800	The Celluloid Co.....	Celluloid goods .....	Newark.
.....	Old.	Sept. 30.....	1,800	Valley Forge Cutlery Co.....	Cutlery .....	Newark.
.....	Old.	Sept. 30.....	8,000	Norfolk & New Brunswick Hosiery Co.....	Hosiery .....	New Brunswick.
.....	Old.	Sept. 30.....	50,000	Chesebrough Mfg. Co.....	Vaseline .....	Perth Amboy.
			\$6,349,038			

TABLE No. 11.

## Damage to Manufacturing Plants by Fire or Flood.

On this table will be found a record of the destruction by fire of property in use for manufacturing purposes during the year. The date when the fire occurred, name of the owning firm, location of the destroyed or damaged property, character of the industry carried on, and the value of property destroyed, are given separately for each establishment involved. The total number of fires in industrial plants was 106, and the total aggregate loss amounted to \$1,302,860, with two factory fires from which no report of damages was received.

During the twelve months ending September 30, 1910, there had been 117 factory fires, resulting in a total loss of \$2,853,041; the losses for 1911 were therefore \$1,550,181 less than was shown by the record of 1910.

The next preceding table (No. 9) shows that \$6,349,038 was added to the total value of property in use for manufacturing purposes throughout the State; deducting from this amount the value of property similarly employed that was destroyed by fire during the same period, and we have a net gain for the year in the value of existing factory property amounting to \$5,046,178. Although practically all parts of the State where factory industries are carried on had one or more fires, the greater number, as a matter of course, occurred in the larger industrial centers.

The record for Newark was 17 fires, total loss, \$160,753; Paterson, 17, total loss, \$177,955; Trenton, 11, total loss, \$88,937; Jersey City, 6, total loss, \$63,090; Bayonne, 5, total loss, \$264,484; Elizabeth, 6, total loss, \$50,950; Hoboken, 7, total loss, \$36,795; Weehawken, 2, total loss, \$150,300; Camden, 5, total loss, \$39,000; and Irvington, 5, total loss, \$53,480. Twenty-three other cities and towns report one or two factory fires each, all but a few of them resulting in comparatively small loss.

TABLE No. 11.

Manufacturing Plants Damaged or Destroyed by Fire or Flood, from October 1, 1910, to September 30, 1911.

NAME OF FIRM.	When Fire Occurred.	Kind of Goods Made.	Location of Works.	Amount of Loss.
Rodgers & Thompson.....	Oct. 12.....	Silk goods .....	West New York.....	\$1,384
B. Jacobson & Son.....	Oct. 15.....	Mill work .....	Elizabeth .....	20,000
J. E. Thropp & Sons Co.....	Oct. 27.....	Castings .....	Trenton .....	90
J. R. McCardle & Co.....	Oct. 27.....	Carriages .....	Trenton .....	2,277
Woodhouse Chain Co.....	Nov. 4.....	Chains .....	Trenton .....	15
T. P. Howell & Co.....	Nov. 7.....	Leather .....	Newark .....	25
Standard Chemical Co.....	Nov. 8.....	Chemicals .....	Bayonne .....	8,100
Tidewater Oil Co.....	Nov. 10.....	Oil refining .....	Bayonne .....	186,734
John Boyle & Co.....	Nov. 14.....	Cotton duck .....	Bayonne .....	70,000
Sitley & Son.....	Nov. 15.....	Flour .....	Camden .....	9,351
Irvington Smelting & Refining Co.....	Nov. 18.....	Metals refined .....	Irvington .....	17,280
The Thatcher Furnace Co.....	Nov. 19.....	Furnaces .....	Garwood .....	9,300
Carl Bracher Co.....	Nov. 20.....	Razor hones .....	Newark .....	7,046
Camden Coke Co.....	Nov. 24.....	Coke .....	Camden .....	2,500
Newark Paper Box Co.....	Nov. 26.....	Paper boxes .....	Newark .....	2,500
Anchor Lamp Co.....	Nov. 26.....	Lamps .....	Newark .....	7,023
The Wolf Co.....	Nov. 26.....	Underwear .....	Newark .....	26,000
The Drake-Morrison Paper Box Co.....	Nov. 26.....	Paper boxes .....	Newark .....	3,000
New Jersey China Co.....	Nov. 28.....	China ware .....	Trenton .....	32
Creasant Embossing Co.....	Nov. 29.....	Printing .....	Plainfield .....	82
Armstrong Box Works.....	Dec. 2.....	Boxes .....	Trenton .....	50
Robert Sanderson .....	Dec. 7.....	Woodwork .....	Caldwell .....	3,100
Trenton Oilcloth & Linoleum Co.....	Dec. 11.....	Oilcloth and linoleum.....	Trenton .....	350
L. A. Bell Carriage Co.....	Dec. 11.....	Carriages .....	Somerville .....	30,000
Surges Concrete Block Co.....	Dec. 18.....	Concrete blocks .....	Irvington .....	10,000
Rushmore Dynamo Works.....	Dec. 22.....	Searchlights .....	Plainfield .....	1,390
Hudson Hat Co.....	Dec. 23.....	Hats .....	Newark .....	235
De Young & Putters.....	Dec. 26.....	Bread .....	Ridgewood .....	2,150
J. J. Hackenjos & Co.....	Dec. 26.....	Paints .....	Newark .....	550
Lackawanna Leather Co.....	Dec. 27.....	Leather .....	Hackettstown .....	4,125
International Smokeless Powder Co.....	Dec. 28.....	Smokeless powder .....	Parlin .....	220
Hackettstown Leather Co.....	Dec. 28.....	Leather .....	Hackettstown .....	200
Harding Box Co.....	Dec. 31.....	Boxes .....	Paterson .....	2,920
The Brewster Cocoa Co.....	Jan. 5.....	Cocoa and chocolate.....	Jersey City .....	275

The Electrolytic Art Metal Co.	Jan. 6	Silver deposit ware	Trenton	11,435
The Newark Rivet Works	Jan. 17	Rivets	Newark	100
Star Expansion Bolt Co.	Jan. 20	Bolts	Bayonne	4,500
F. A. Schlosstein Co.	Jan. 22	Jewelry	Newark	630
Whitall-Tatum Co.	Jan. 31	Bottles and jars	Millville	
Levitt Manufacturing Co.	Feb. 4	Ladies' waists	Matawan	3,000
Vacuum Oil Co.	Feb. 6	Oil refinery	Weehawken	150,000
The Somerset Manufacturing Co.	Feb. 6	Worsted and woolen goods	Raritan	42,000
John R. Rankin	Feb. 10	Electrical supplies	Elizabeth	940
The Jaynes Co.	Feb. 21	Metal goods	Irvington	8,500
C. J. Pfersch	Feb. 21	Embroidering	Hoboken	2,200
The Peerless Leather Works	Feb. 21	Leather	Irvington	14,700
Stratford Oakum Works	Feb. 23	Oakum	Jersey City	165
Newark Paraffine & Parchment Paper Co.	Mar. 1	Paper	Newark	69,000
United States Varnish Tile Co.	Mar. 12	Tile	Paterson	25,000
Barrett Manufacturing Co.	Mar. 15	Paper	Elizabeth	100
Central R. R. Car Shops	Mar. 15	Car repairing	Elizabeth	24,064
Hayes Welting Co.	Mar. 21	Welt leather	Belvidere	8,900
The Franz Hill Brewing Co.	Mar. 26	Lager beer	Trenton	1,303
The Marblito Co.	Mar. 31	Marble substitutes	Perth Amboy	4,000
The Oil Seeds Co.	Apr. 4	Chemicals	Bayonne	960
The Camden Iron Works	Apr. 6	Castings	Camden	12,000
Owens & Traeger Co.	Apr. 11	Paper boxes	Hoboken	25,000
Jacob W. Katz	Apr. 17	Hatters' furs	Newark	11,916
Adolph Beck	Apr. 18	Bicycles	Newark	5,000
Knapp Chemical Co.	Apr. 25	Chemicals	Jersey City	1,000
Spencer Kellogg Co.	May 4	Linseed oil	Hoboken	425
Scalona & Strauss	May 8	Cigars	New Naples	3,500
Southwark Manufacturing Co.	May 8	Whiting	Camden	10,000
Theodore Smith & Sons Co.	May 9	Boilermakers	Jersey City	50,000
Standard Bithullithic Co.	May 12	Asphalt	Harrison	15,000
Washington Casket Co.	May 18	Caskets	Washington	27,022
Boonton Iron & Steel Co.	May 19	Steel and iron	Boonton	10,000
E. I. Du Pont de Nemours Powder Co.	May 22	High explosives	Gibbstown	3,589
William G. Potts	May 23	Millwork	Bustleton	10,000
Theodore Shulz	May 25	Millwork	Jersey City	4,150
Ball Silk Mill	May 27	Silk goods	Paterson	10,685
Barrett Manufacturing Co.	May 28	Roofing	Elizabeth	4,246
William P. Taylor	June 6	Millwork	Manasquan	9,000
Bayway Chemical Co.	June 8	Chemicals	Elizabeth	1,600
Empire Silk Co.	June 10	Silk goods	Paterson	52,000
The Robertson & Lamond Co.	June 10	Silk goods	Paterson	1,204
Florence Bros.	June 10	Millwork	Paterson	3,669
Johnson Cowdin Co.	June 10	Silk goods	Paterson	35,000
Fred Ball	June 10	Silk goods	Paterson	150
C. E. Muller & Co.	June 10	Silk goods	Paterson	15,127
S. J. Aronsohn	June 10	Silk goods	Paterson	11,900

TABLE No. 11.—(Continued.)

Manufacturing Plants Damaged or Destroyed by Fire or Flood, from October 1, 1910, to September 30, 1911.

NAME OF FIRM.	When Fire Occurred.	Kind of Goods Made.	Location of Works.	Amount of Loss.
Cardinal & Becker.....	June 10.....	Silk goods .....	Paterson .....	\$300
Agasote Millboard Co. ....	June 14.....	Mill boards .....	Trenton .....	70,540
Joseph Auer .....	June 22.....	Machinery .....	Trenton .....	2,600
Sleeth Manufacturing Co.....	June 23.....	Wire and wire cloth.....	Belleville .....	535
Knapp Chemical Co.....	June 23.....	Chemicals .....	Jersey City .....	7,500
New Jersey Wood Finishing Co.....	July 7.....	Wood finishing .....	Perth Amboy .....	90
Fandango Mills .....	July 9.....	Paper .....	Millburn .....	2,918
United Embroidery Works .....	July 21.....	Embroidery .....	Hoboken .....	90
Phineas Jones & Co.....	July 26.....	Automobile and carriage wheels...	Newark .....	15,903
Hershovitz Bros. ....	Aug. 12.....	Millwork .....	Hoboken .....	3,050
Mercer Automobile Co.....	Aug. 12.....	Automobiles .....	Trenton .....	60
Trenton Oilcloth & Linoleum Co.....	Aug. 12.....	Oilcloth and linoleum.....	Trenton .....	.....
Greenwood Pottery Co.....	Aug. 12.....	Chinaware .....	Trenton .....	300
William McCrum .....	Aug. 14.....	Silk .....	Paterson .....	20,000
De Luca Embroidery Co.....	Aug. 15.....	Embroideries .....	Weehawken .....	300
Ferry, Weber & Co.....	Sept. 5.....	Hats .....	Newark .....	4,800
Donato Montefort Co.....	Sept. 8.....	Cigars .....	Hoboken .....	2,025
Hightstown Smyrna Rug Co.....	Sept. 13.....	Rugs .....	Hightstown .....	6,500
Tidewater Oil Co.....	Sept. 20.....	Oil refining .....	Bayonne .....	2,300
Hanover Paper Mill Co.....	Sept. 23.....	Paper .....	Whippany .....	11,000
Camden Copper Works.....	Sept. 25.....	Copper .....	Camden .....	5,150
Surges Concrete Block Co.....	Sept. 27.....	Concrete blocks .....	Irvington .....	3,000
Joseph N. Courtade .....	Sept. 27.....	Planos .....	Hoboken .....	4,000
Bernstein Bros. ....	Sept. 30.....	Leather .....	Newark .....	25
H. W. Johns-Manville Co.....	Sept. 30.....	Cork insulation .....	Newark .....	7,000
				\$1,302,860

TABLE No. 12.

Trade and Labor Unions Organized for the Twelve Months Ending  
September 30, 1911.

This table shows the number of trade and labor unions organized during the twelve months covered by the record; the occupations in connection with which they were formed, the locality and the date of organization.

The total number of these organizations that came into being during the twelve months ending September 30, 1911, is, as shown on the table, nine, and the occupations concerned were: electricians, three unions—one each in the towns of Orange, Bloomfield, and Montclair; ironworkers, at Newark; barbers, at Jersey City; retail clerks, stationary firemen and team drivers, at Trenton; and freight agents, at Paterson. Most of these newly formed unions may be regarded as emergency organizations, formed to meet some crisis that had unexpectedly arisen, such as refusals on the part of employers to concede some advances in wages, reduction in working time. Such organizations are quite frequently formed by groups of employes either just before, or immediately following the commencement of a strike, and are scarcely ever continued after the settlement of the controversy in which they originated. Year after year seems to show a steady decline in the number of unions organized, which may mean that the organizing movement has lost much of its original vigor, or else that the occupational field has been so thoroughly covered that there is no occasion for new organizations. Whatever the correct explanation may be, there can be no question as to the fact that, as above stated, activity in the matter of organizing new labor unions in New Jersey has shown a very marked decline during the past five or six years.

NAME OF UNION ORGANIZED.	Where Union Was Organized.	When Organized.
Electricians .....	Orange .....	Oct. 18
Electricians .....	Bloomfield .....	Oct. 18
Electricians .....	Montclair .....	Oct. 18
Ironworkers .....	Newark .....	Nov. 20
Barbers .....	Jersey City .....	Dec. 5
Retail clerks .....	Trenton .....	April 1
Stationary firemen .....	Trenton .....	April 1
Team drivers .....	Trenton .....	April 1
Freight agents .....	Paterson .....	July 11



## Strikes and Lockouts in New Jersey for the Twelve Months Ending September 30, 1911.

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OCTOBER 11—Fifty-five conductors and motormen employed on the lines of the Riverside Traction Co., between Camden, Riverside, Beverly, Burlington, Bordentown and Trenton, went out on strike because a newly appointed superintendent of the lines had discharged a conductor for ignoring a rule which his fellow employes declared to be a very trivial offence. The conductors and motormen had formed a union about a week before the man was discharged, and coupled with the demand for his reinstatement, which was made a couple of days before the strike, was a request for an increase in wages and a more definite regulation relating to working hours. The established rates of wages were eighteen, nineteen and twenty cents per hour, according to length of service; the working hours, although nominally established at ten per day, were, it was claimed, frequently extended beyond that time. The strike resulted in a complete victory for the men, the company agreeing to a wage schedule ranging from 21 to 24 cents per hour, and the re-employment of recently discharged employes. Permission was also given to motormen to sit down while on the long runs between towns. The company refused recognition of the union, which was one of the demands, but agreed to arbitrate all future disagreements with a committee representing the employes. The strike lasted two days, and the wage loss was approximately \$225.

OCTOBER 23—A strike of express company drivers and helpers employed by the United States Co., at Jersey City, Communipaw, Hoboken and Weehawken, was begun on this date in sympathy with employes of the same company in New York City, who had inaugurated a strike for an increase in wages and the correction of certain alleged abuses which had grown up incidental to their work. The employes of the Adams and the Well Fargo companies joined the strikers in a body two days later, making in all about 2,000 employes of the three companies who quit work. The same action had already been taken by employes of the Adams and the Wells Fargo Companies in New York, and an understanding was established between the strikers in both States, that work would not be resumed at any point until the three companies had subscribed to an agreement which met the approval of all concerned in the strike. The demands of the men included an advance in wages of \$5 per month, a twelve-hour working day and double pay for overtime, recognition of the union, and reinstatement of all who took part in the strike. The officials of the express companies agreed to concede all demands made by the strikers excepting only the recognition of the union. The business of all three companies was brought to a standstill, and large numbers of cars laden with

freight, much of it of a perishable character, were sidetracked at the terminals of the various trunk lines of railroad along the Hudson river. Attempts on the part of the companies to deliver goods provoked riotous demonstrations of opposition at all points, and the police forces of the municipalities affected were kept busy suppressing disorder and protecting property. The United States Express Co. addressed a communication to the Mayor of Jersey City, calling attention to the utter impossibility of carrying on its business under existing conditions of mob violence, to which its wagons and employes were subjected wherever they appeared on the streets of Jersey City, and requested that in view of the manifest inability of the city authorities to afford adequate protection, the Governor of the State be called upon to place a sufficient number of troops in the districts covered by the strike to suppress all disorder. After a personal inspection of the scene of disturbance, and an investigation of the facilities for the preservation of order at the disposal of the municipal authorities, the Governor decided that aid from the State forces was not required at that time. Frequent conferences were held between the Governor, the Mayors of the municipalities; and the officers of the express companies for the purpose of bringing about a settlement, but the latter persisted in their refusal to recognize the union. On November 14th an understanding was reached under which the New York part of the strike was settled; all the demands originally made by the strikers, except recognition of the union, were granted, and arrangements made under which committees of employes were to have access to the officers of their respective companies for the purpose of placing grievances before them. The companies further agreed to take back all their old employes regardless of their having joined the union.

After considerable discussion of the terms under which the New York division of the strike was settled and some opposition to the abandonment of the demands for full recognition of the union, the same terms were agreed to by New Jersey employes of the company, and the strike was declared off. On presenting themselves for work at the various express depots in Jersey City, the men were informed that orders had been issued from the New York offices of the company forbidding the display of union buttons by employes; the men refused to take out their wagons until later in the day when the order was rescinded.

Under the terms of settlement a new wage and working hour scale was to be arranged by a committee representing the employes and the companies, the same to take effect on December 1st.

NOVEMBER 2—About 24 workmen employed in the beam house departments of three leather manufacturing plants in Newark, viz.: E. S. Ward & Co., M. Strauss & Sons and George Stengel, Inc., went out on strike on this date because some machinery, the use of which would reduce the number employed in the beam house, had been installed; practically all the employes of the three companies, about 550 in number, joined the strikers, and made it a condition precedent to their return, that the union, Amalgamated Heavy Leather Workers of America, should receive recog-

dition with an agreement that only members of that body should be employed in the shops. After one week of idleness, the employes of George Stengel returned to work, having agreed to the use of machines in the beam department on receiving assurance from the firm that their earnings would not be affected thereby. The return of these men to work left 400 employes of the other firms still engaged in the strike, which gradually died out; some of the men returning as individuals were allowed to resume work on the old terms, while the places of the others were filled by new men. The strike was partly successful so far as the employes of the George Stengel Co. were concerned, but a total failure in the case of the others, many of whom were still without employment on January 1st, 1911. The wage loss to the strikers for the month of November, during which time their old places were to a large extent open to them, was, based on the report of one of the three firms, \$26,000.

NOVEMBER 5—About 300 carpenters of Atlantic City and nearby towns went on strike to enforce a demand for an increase of wages amounting to 40 cents per day. The strikers had been receiving \$3.60, and demanded \$4.00 per day, the increase to take effect from January 5. After two weeks idleness, during which time all building operations were suspended in the city, a compromise agreement was reached between the carpenters and the bosses, under which the increased pay was granted, but the time for its going into effect was fixed at February 5. The number of men involved directly and indirectly was 400, and the wage loss amounted to approximately \$15,500.

NOVEMBER 9—Twelve men operating shapers, planers, and milling machines in the works of the Otis Elevator Co., at Harrison, went on strike because of the discharge of one of their number. Officials of the Brotherhood of Machinists, after an interview with the company officials, finding no cause for the men's action, recommended that they return to work. The men were idle one day, and the wage loss did not exceed \$40.

NOVEMBER 11—Fifteen union carpenters and masons employed by the Modern Shop Construction Co., of Westfield, went on strike because a number of non-union lathers and laborers were employed on the same building. The men, who were ordered to quit work by the walking delegate, remained out for one week, when the strike was settled by the laborers joining the union, and the non-union lathers being discharged. Wage loss, \$300.

NOVEMBER 14—Two hundred operators on women's garments, all members of Cloakmakers Local No. 21, of Newark, who were employed by a number of Newark manufacturers of these goods, went out on strike for an increase in wages and a reduction of the hours of labor. The male operators had been receiving \$12 and \$14 per week for fifty-nine hours' work, and the female workers from \$6 to \$7 per week. The demand was for a reduction of working time to fifty-two hours per week, and an increase in piece prices by which an additional \$1.00 per week could be

earned. After three days' idleness 100 of the operators returned to the shops in which they had been employed with all their demands granted. Concessions of practically the same character were made by the other employers and work was resumed by all on the 21st, having lasted three days for 100 operatives, and six days for the others. The wage loss was estimated at \$2,000.

NOVEMBER 22—The polishers and buffers employed by the Empire Spring Bed Co., of Jersey City, struck for an increase of piece prices, and returned to work the same day under a compromise that was satisfactory to themselves and the firm.

DECEMBER 5—Twenty-five drivers and loaders employed in the Jersey City establishment of the Armour Beef Co. went on strike for an increase in wages; a demand was also made for the re-employment of a man who had been discharged a few days before for intoxication. Three days later the strikers returned to work under concessions in the matter of wages. The demand for the reinstatement of the discharged man was withdrawn. The wage loss could not be ascertained with exactness, but it was probably less than \$150.

DECEMBER 9—All the building trades workmen employed on the Essex County Tuberculosis Hospital, at Soho, were ordered by their respective business agents to cease work, because a sub-contractor from Buffalo was laying some of the flooring at a fixed price per square foot, which is contrary to union rules. The unions concerned demanded that the sub-contractor be forced to quit work, but the general contracting company refused to interfere. The sub-contractor offered to pay a fee to the unions for permission to finish his work, but the proposal was rejected. The matter was finally settled by the withdrawal of the sub-contractor, who was not a union man, and the Board of Freeholders adopted a resolution that all persons employed on County work must be citizens of the United States, and residents of Essex county. About 75 men—plumbers, painters, steamfitters, electrical workers and sheet iron workers—were involved in the strike. The wage loss was, approximately, \$780.

DECEMBER 9—Forty union workmen of the building trades, employed in the construction of an addition to the powerhouse of the Public Service Corporation, at Marion, quit work on orders of walking delegates of the Hudson Building Trades Council, because eight electricians in the regular employment of the corporation were among the workers on the building. The delegates demanded the discharge of these men and the employment in their places of members of the electrical union, which was refused. The construction company that had contracted for the entire building sub-let parts of the work to other concerns, some of them running "open shops," and therefore employing both union and non-union labor. The union men, mostly iron workers, obeyed the delegates' orders by quitting work, many of them protesting against being required to do

so, in view of the near approach of the Christmas holidays. The corporation took over all contracts affected by the action of the strikers, and employed on its own account a sufficient number of men to finish the work. None of the forty strikers resumed work, and the strike failed. The wage loss could not be determined, as it was impossible to ascertain how long each of the men concerned was idle before finding other employment.

DECEMBER 15—Fifteen union carpenters employed on a building in course of construction at Perth Amboy were ordered off the works by the walking delegates of the carpenters' union, because the contractor had employed some non-union workmen. The discharge of these men followed three days later, and the strikers returned to work. Wage loss, \$180.

DECEMBER 24—An agreement was reached on this date which brings to an apparently amicable close a disagreement on the subject of wages between the building trades contractors and the building trades workmen, that has continued for the past three years. An arbitration committee, to which the entire subject of wages was referred, reported a schedule for each trade which allowed about three-fifths of the increases originally demanded by the unions. Under this adjustment, the wage scale per hour in and about Elizabeth, which went into effect on January 2d, 1911, is as follows: Carpenters, 47¼ cents; mason, 60 cents; plumbers, 53 cents; painters, 45½ cents; lathers, 50 cents; lathers on piece work, \$2.75 per thousand; electricians, 56¼ cents; helpers, 31¼ cents; tinnerns, 53 cents; and hod carriers, 33 cents.

DECEMBER 28—Forty-nine weavers employed in the Sterling Ribbon Co's mills, at Paterson, quit work to enforce a demand they had made for an increase in wages. The firm refused to grant the advance. The strike, which was a failure, continued until February 23, 1911, a period of eight weeks; the wage loss, as reported, was \$3,800.

JANUARY 1—Twenty men employed by the Kanouse Water Co., of Jersey City, as drivers and helpers, struck for an increase of wages. The drivers were receiving \$12 per week, and commissions on their sales, but wanted instead of that arrangement a level weekly wage of \$16 without commissions. The strikers were replaced by non-union men the same day, and all lost their employment.

JANUARY 4—Members of the Coach Drivers Union, of Passaic, notified their employers that the organization had adopted a resolution against Sunday work, which all members in good standing would strictly observe on and after the date of notification.

JANUARY 5—A misunderstanding on the part of six employes, brought about and intensified by a number of agitators, led to a strike in one department of the works of John Lucas & Co., at Gibbsboro, in which 30 employes participated. The following day other employes quit work,

making in all sixty men who joined the strike. All returned to work after from three to three and one-half days idleness, excepting two men, whom the firm would not re-employ. The wage loss was \$350.

JANUARY 11—One hundred and forty-five employes of the Electro Dynamic Co., at Bayonne, went on strike to compel the reinstatement of a foreman who had been discharged. The strike lasted one and one-half days, and was not successful. The wage loss was \$300.

JANUARY 14—Forty-seven employes of the Safety Insulated Wire and Cable Co., of Bayonne, went on strike because of sympathy with a discharged foreman. The strike, which was unsuccessful, lasted three days; the wage loss was \$125.

JANUARY 27—Fifty-nine workmen, employed in the drill press department of the Victor Talking Machine Co's works, in Camden, quit work because the immediate re-employment of a man who had been discharged was refused by the Superintendent, who promised to investigate the man's record in the works and reinstate him if there were no other violations of rules charged against him than that for which he had been discharged. The workmen would not wait for the decision, but quit work on the instant. After one and one-half days all were back again except the discharged man, who had repeatedly violated the rules. The wage loss was \$140.

FEBRUARY 9—Fifty-nine men and four women employed in the mill of the Henry Doherty Silk Co., at Paterson, struck to enforce a demand they had made for an increase in the price per yard for weaving. All returned without the increase after being idle two and one-half working days. The wage loss, as reported, was \$473.

FEBRUARY 11—Eight steamfitters, carpenters and painters employed on the D. Wolf building, at Perth Amboy, quit work because of a painter being employed who could not show a union card. The local building trades delegate demanded the discharge of all non-union men as a condition precedent to the resumption of work, which was agreed to by the owner one week later. The wage loss was \$192.

FEBRUARY 15—Sixteen weavers employed in the silk mill of A. Brokman, at Paterson, went out on strike because a fellow weaver had been discharged for turning out imperfect goods; the strikers insisted on the reinstatement of the man, and the demand was complied with, and in addition thereto recognition of the union by the firm was secured. The strike lasted two days, and the wage loss, as reported, was \$75.

FEBRUARY 15—The Colwell Lead Co., at Elizabeth, manufacturers of plumbers' supplies, finding it necessary to cut down product, discharged a number of employes, among them some union moulders, retaining in their employment many other moulders connected with the union, who

worked several days and left in a body. The exact number of men engaged in the strike could not be ascertained, the estimates of those who participated in it varying from thirty to seventy-five. A considerable amount of rioting occurred between the strikers and their sympathizers on the one hand, and the strike breakers on the other; on several occasions firearms were used by both sides and one man and a boy were seriously wounded by bullets. The city police were kept busy protecting the works, and dispersing the crowds that, morning and evening, gathered about the streets leading to them. On one occasion a bomb was exploded near a wagon on which a number of strike breakers were riding to the factory. The strikers ceased their active opposition to the operation of the works about one month after they had quit work, and thereafter no disorder occurred. None of the strikers were taken back. The wage loss could not be ascertained.

FEBRUARY 18—Twenty assistants to the moulders employed in the Sanitary Bathtub Co.'s works, at Bayway, quit work because the men whose helpers they had been were discharged and replaced by others at a lower rate per tub. The places of the assistants were taken by new men.

FEBRUARY 27—The carpenters of Hammonton formed a union on this date consisting of fifteen members, and notified their employers that, beginning with March 1, wages would have to be advanced to \$3 per day of nine hours; failing to receive assurance from them of agreement to this rate, the men went on strike; all were back to work again within a few days, the employers having agreed to the advance.

FEBRUARY 27—Fifteen drivers, members of local union No. 475, International Brotherhood of Teamsters, Newark, struck for an increase which would bring their wages up from \$13.50 to \$15.00. The five employers for whom the men worked agreed to pay the rate demanded, and the men returned to their duties at noon the same day. The strike lasted five hours, and the wage loss was \$15.

MARCH 3—Five hundred employes of the United States Express Company at Jersey City, Hoboken and Communipaw, went out on strike because the company had violated an alleged unwritten law of the express business which is that when a vacancy occurs in the class of employes known as messengers, the position should be given to the employe longest in the service who was competent to fill it. The strike was brought about by the appointment of a man who had been in the company's employment for a comparatively short time. The strike ended next day by the company's agreeing to appoint another man to the choice position. The wage loss was approximately \$850.

MARCH 3—About 100 rivet heater boys employed in the yards of the New York Shipbuilding Co., at Camden, went on strike because their demand for a shorter work day was refused; others were employed in their places.

MARCH 3—Ten carpenters employed by Andrew Hockanson, at Woodcliff, went on strike because of dissatisfaction with the wages they were receiving. The employer asked for police protection, fearing personal violence at the hands of the strikers. None of them returned and other men were employed in their places.

MARCH 8—The drivers and helpers of Adams Express Co., in Jersey City, Hoboken and Communipaw, about 500 in number, quit work on this date, and declared that their reasons for doing so were, that the company had discharged upwards of 100 drivers since the settlement of the strike of October and November without any explanation of why such action was taken; that contrary to the agreement entered into when the previous strike was settled, union men were not receiving the same fair treatment that was accorded to non-union employes, and also that the understanding regarding the hours of work had been entirely ignored. The demands made by the strikers called for the re-employment of all discharged drivers and helpers; the removal of the other grievances complained of, and full liberty for the walking delegates of the union to visit the men at any time on the express company's platform for the purpose of collecting dues and transacting other business of the local union. The company declined to treat with the strikers or to in any way recognize the union, claiming that a large proportion of its membership was made up of irresponsible boys, who, when tired of working, are given to trumping up trivial grievances that have no real basis, for the purpose of bringing on a strike.

On March 17th, the union employes of the United States, and the Wells Fargo Co.'s quit work in sympathy with the Adams men, and the number on strike grew to 1,500. New drivers and helpers were employed by all three companies, and an order issued by officials of the companies notifying its old employes that those of them who failed to report for work on the 21st, might consider themselves discharged, resulted in the return of so large a number that the strike was practically abandoned on March 25. The strike was a total failure. The wage loss was approximately \$31,000.

MARCH 13—One hundred employes of the Edible Products Co., of Bayonne, quit work because the firm had increased the working time from 9 hours to 10 hours per day. Other men were employed in their places.

MARCH 15—Eighty-five men, and 35 women, employed in the Clifton branch mill of the York Silk Co., went on strike because a demand they had made for an increase of about 25 per cent. in prices was refused. The strikers stood together for a time, but practically all had returned by April 11th without having gained anything. The strike lasted four weeks, and the wage loss was, as reported, \$7,000.

MARCH 18—Fifty employes of the William M. Crane Co., manufacturers of gas stoves and appliances at Bayonne, went on strike to enforce their

demand for the recognition of a union they had formed. This was refused and all returned to work four hours later. The wage loss as reported was \$120.

MARCH 18—Eight masons and five helpers employed on the Paterson High School were ordered by their union to quit because of some disagreement with the contractor for the fireproofing work, who employed some non-union workmen. The matter was finally settled by the contractor agreeing to withdraw all his men until the work which the strikers had in hand was finished. This necessitated the loss of four working days by the ten employes of the objectionable contractor. Their wage loss was approximately \$150.

MARCH 25—One hundred and forty-two machinists employed by the Standard Motor Construction Co., at Jersey City, went on strike to enforce a demand for an eight hour work day, a minimum wage rate of \$3.00 per day, recognition of a union just organized, and making the establishment a closed shop. The strike lasted until July 26, a period of four months, and was a total failure. The wage loss, as reported, was \$39,760.

MARCH 27—Thirty-five women and eight men employed in the R. H. H. Steel Laundry, at Jersey City, quit work because the firm refused to discharge a forewoman to whom they objected. Others were employed in their places, and none of the strikers returned.

APRIL 3—One hundred painters employed at Roselle, Westfield, Cranford and Scotch Plains quit work to enforce a demand made by the union for a wage rate of \$3.75 a day. They were receiving \$3.50 per day, and refused an offered increase of fourteen cents. Some of the contractors agreed to the demand when made, but the greater number held out for several days, some employing non-union workmen to replace the strikers. All finally agreed to the new scale and the strike ended. The wage loss was approximately \$600.

APRIL 3—Thirty plumbers, members of a local union at Perth Amboy, struck for an increase of wages amounting to 20 cents per day. They had been receiving \$4.20, and demanded \$4.40 per day, which the employers refused to pay. The strike lasted five days, and resulted in an agreement to pay the wages demanded. The wage loss was estimated at \$700.

APRIL 4—Eight workmen employed in the sawdust mill of J. E. Carlock, Jersey City, quit work because a newly employed man had been started as a driver, while the strikers contended that he should have commenced in the yard at the harder and more disagreeable part of the business, and work upward to the position of driver. The strikers abandoned their contention and returned to work after being idle five hours. The wage loss, as reported, was \$10.

APRIL 5—Forty-five caulkers and chippers employed in the plant of the New York Shipbuilding Co., at Camden, went out on strike because

a new foreman recently appointed over them had made such reductions in the piece prices as to seriously affect their earnings. After one day's idleness the matter was settled by a compromise satisfactory to the men. The wage loss was \$130.

APRIL 11—About 200 laborers employed in works of the Ostrander Fire Brick Company's works at Keasby, quit work because of dissatisfaction with their wages. An advance of 25 cents per day was demanded, but all returned to work on the 13th, after having been promised a small increase in wages. The strike lasted two days, and the wage loss, as reported, was \$600.

APRIL 13—Sixty employes of the Richardson & Boynton Co., manufacturers of stoves and heaters at Dover, quit work to enforce a demand they had made for shorter working hours at the same wages. The action of these sixty men made it necessary to close down the entire plant in which 600 men were employed. The strike lasted three weeks, and the men concerned in it returned on the same terms as they had before going out. The wage loss of strikers and those who were forced into idleness by their action was, as reported, \$28,000.

MAY 1—Seventy-five members of the Masons and Bricklayers Union, of New Brunswick, went on strike on this date to enforce a demand they had made for an increase of 40 cents per day in wages. They had been receiving \$4.40 per day and asked for \$4.80, which the employers refused to pay. The strike lasted two weeks and ended in a compromise under which 20 cents increase per day was allowed. The wage loss was \$3,900.

MAY 1—Eighty bricklayers, masons and their helpers, of Plainfield, struck for an increase of wages; the masons and bricklayers demanded an increase which would bring their wages up from \$4.80 to \$5.20 per day. The helpers were receiving \$2.80 and wanted \$3.20 per day. The strikers returned on May 23, at the old rate of wages, but under an agreement that, commencing September 1, the masons should receive \$5 and the helpers \$3 per day. The wage loss was approximately \$5,600.

MAY 1—The union machinists affiliated with District 15, International Federation of Machinists, which covers the territory of New York City and Hudson County, N. J., inaugurated a strike on this date for the establishment of an eight hour work day with the pay then being received for working time varying from 9 to 10 hours, and also for the recognition of the union. Both the union officials and the officers of the Metal Trades Association, an organization of employers, had been preparing for the strike for several months, and the strike was begun with both sides apparently prepared for a long struggle. The number of men involved directly in the strike could not be accurately ascertained, but the estimates of the union officials placed the total at about 8,000, of which number 1,000 were employed in the machine shops of Jersey City, Hoboken and Bayonne. The union boiler makers connected with the machine shops also struck

for an increase in wages of 50 cents per day. Their pay at the time was \$3.25, and the demand was for \$3.75. This brought the number on strike in New Jersey up to approximately 1,300.

None of the employers agreed to the terms submitted by the men; in some instances shops were closed down entirely, but the larger plants were enabled to continue operating with the parts of their working forces that refused to join in the strike. In the effort to prevent the employment of new men, the strikers established pickets about some of the plants, but there was no violence or rioting of any kind. The striking machinists sent circulars to all parts of the county conveying notice of the existence of a strike; this was decided upon as the most effective means of off-setting the employers advertising for other workmen. Notwithstanding the fact that strike benefits were paid to the workmen in need of such help, many returned to work on the old terms after having been idle three weeks, but a majority of the men held out until well into the month of June, but by July 1st the strike was ended. Nothing had been gained, and the wage loss was estimated at \$90,000.

MAY 1—Seven boat builders employed in the works of the Electric Launch Co., at Bayonne, quit work because of the firm's refusal to grant an eight hour workday. The strike, which was unsuccessful, lasted two weeks, the men resuming work under the old conditions on May 15. The wage loss, as reported, was \$250.

MAY 5—Six employes of the Barnett-Katchin Iron and Brass Works, Newark, struck for a reduction of working hours from 57 hours to 53 hours per week, with the same wages as were being paid for the longer working time. The strike was successful, and the men returned after four days idleness. The wage loss, as reported, was \$75.

MAY 6—About 50 operatives employed in the factory of Miller, Bass and Manda, women's cloak manufacturers, at Asbury Park, went on strike for increased prices, and the recognition by the firm of the union of which the operatives were members. The firm refused to make any concession, and numbers of other employes joining the strikers, the plant was closed indefinitely on May 27. The wage loss could not be ascertained correctly, but estimates placed that of the active participants in the strike at \$1,250.

MAY 9—Ninety machinists and helpers employed in the works of the Babcock & Wilcox Co., at Bayonne, went on strike for an eight hour work day with the same pay that was then being received for nine hours. The strike lasted eight days, and was unsuccessful. The wage loss, as reported, was \$2,160.

MAY 12—Thirty-five laborers employed by the gas department of the Public Service Corporation, laying a main in Millburn, struck for an increase of twenty-five cents a day in wages; they had been receiving \$1.50

per day and demanded \$1.75. The entire gang was discharged and a new one hired to take its place.

MAY 15—Thirty-five girls employed in the yarn department of F. F. Pels Mill, at New Durham, struck for a ten hour workday; they had been working ten and one-half hours. The strike was not successful, and all had returned to work within six days. The wage loss was approximately \$120.

MAY 17—The union carpenters employed by the Land and Loan Co., on two buildings at Little Silver, quit work on orders from a walking delegate because some non-union men were employed on the job.

MAY 19—Thirty-five employes of the Manufacturers Can Co., of Newark, went out on strike because of a reduction in piece price for a new article which affected the wages of only three men. The others joined the strike in sympathy with these. The matter was satisfactorily adjusted, and the men returned after being idle five days. The wage loss was approximately \$400.

MAY 19—Seven pressmen employed in three printing offices at New Brunswick struck for a recognition of their recently formed union, and for an increase in wages. All the other printing offices in the city conceded some part of the demands, and after one day's idleness the three offices affected by the strike also agreed to the same terms. The strikers did not gain all that was aimed at, but higher wages were secured than had heretofore been paid.

MAY 21—Six men out of the 235 employes of the Cornish Co., manufacturers of pianos and organs, at Washington, N. J., struck for a readjustment in piece prices. After four days idleness, all but one man returned on the old terms. The wage loss, as reported, was \$60.

MAY 27—Fifteen machinists and boiler makers, employed at the Perth Amboy Dry Dock Co., went on strike for shorter hours and more pay; the firm refused to grant these demands and other workmen were secured in their places.

JUNE 2—Forty milk producers, whose product was sold at the Supplee Company's creamery, at Columbus, united in an agreement to refuse to deliver any more milk unless they were paid one-half cent more per quart, making the net wholesale price  $3\frac{1}{2}$  cents. The company, without delay, agreed to increase demanded.

JUNE 6—Thirty laborers employed by a contractor at Westfield on laying cement gutters and road repairs, quit work on this date because they had not been paid for the previous two weeks work. After remaining idle one day, the overdue wages were paid and the men returned to work. The wage loss was \$45.

JUNE 6—One hundred and four union carpenters employed in Camden and its vicinity struck to enforce a demand they had made for an increase of five cents, which would bring their wages up to 50 cents an hour. An association of employers, known as the "Builders Exchange," refused to grant any increase in wages over the rates then prevailing and notified the strikers that a failure to return to work within three days would result in the employment of non-union men in their places. Practically all building operations in or about Camden were brought to a standstill by the strike, which was not entirely ended until about June 30. One contractor after another made terms with the union men, and a compromise of the wage question satisfactory to both sides was effected. The wage loss was approximately \$5,000.

JULY 6—About 600 laborers employed in the Oranges became involved in a strike which started among the quarrymen of East Orange; street laborers and excavators of the vicinity joined in the movement, the object of which was to secure a minimum wage rate of \$1.75 per day of eight hours work. The strike was marked by several outbreaks of violence, and the constant attention of the police was required to protect strike-breakers who had been employed to take the strikers' places. On July 23, a compromise agreement was reached between the strikers and their employers, under which the quarrymen were to receive 20 cents per hour until July 1, 1912, with an increase of one cent an hour for each succeeding year until the limit of 25 cents per hour was reached. The strike lasted 14 days, and was partly successful; the wage loss was \$14,000.

JULY 17—Thirty moulders employed in the Macy Stove Works, at Perth Amboy, went on strike for an increase of 25 cents per day in the wages of those of their number who were being paid by the day. The strike lasted two days, and resulted in the day workers receiving the increase demanded for them. The wage loss, as reported, was \$190.

JULY 18—Sixty-eight men employed in the plant of the New Brunswick Piano Box Works, at New Brunswick, went on strike for a Saturday half-holiday. The strike lasted two days, and resulted in a victory for the men. The wage loss, as reported, was \$247.

JULY 18—Thirty-five motormen and conductors employed on the lines of the New Jersey and Pennsylvania Traction Co., which are partly in Trenton, went on strike for an increase of pay which would give them a uniform rate of 25 cents per hour. The strike lasted only one day, the men agreeing to return to work pending the settlement of the wage question by arbitration. A board of arbitrators representing both sides was appointed, and after due deliberation a decision was rendered fixing 24 cents per hour as the established wage rate for the year. This was a partial victory for the men. The wage loss was \$70.

JULY 28—Two hundred drivers employed by the Fuller Express Co. of Jersey City, struck because one of their number had been discharged

and the company officials refused to reinstate him. The strike lasted five hours and resulted in the return of the discharged man to work with the others. The wage loss was approximately \$200.

AUGUST 3—One hundred employes of the Quaker City Morocco Co., of Camden, quit work because the foreman of one of the departments of the works had been discharged for absence from duty. The strike was settled within a couple of hours by the re-employment of the deposed foreman. The wage loss was approximately \$40.

AUGUST 19—Forty employes of the James A. Bannister Co., of Newark, manufacturers of boots and shoes, quit work because the firm had discharged an incompetent workman. The strike lasted five days, and ended with the voluntary return of the men. The wage loss, as reported, was \$750.

AUGUST 22—Forty-five employes of Oscar Schmidt, Inc., manufacturer of musical instruments at Newark, went on strike to enforce a demand for increase of wages. The strike lasted three weeks, and ended with the return of the men without any wage increase. The wage loss was, as reported, \$1,800.

AUGUST 28—One hundred men employed by the Wheeler Condenser Co., manufacturers of machinery at Carteret, went on strike because of the employment of some non-union men. The strike was settled by a compromise, the details of which could not be learned. The wage loss was, as reported, \$500.

SEPTEMBER 2—Eighty employes of the Continental Silk Co., at Phillipsburg, went on strike against a proposed reduction in piece prices which affected the interests of about one-half of their number. On September 5 a compromise satisfactory to both sides was agreed upon, and all returned to work. The strike lasted  $2\frac{1}{2}$  days, was partly successful, and the wage loss was, as reported, \$400.

SEPTEMBER 2—Fifty Polish laborers employed by the Berwind-White Coal Co., at the foot of Sixth street, Jersey City, struck in sympathy with some bargemen of the same concern, and refused to resume work when that strike was declared off. A number of other foreign laborers were employed to take the places of the men who had quit, and several riots broke out among them during the progress of the strike. In one of these outbreaks, a strike-breaker received a stab wound from which he died a few days later. A schedule of grievances, the particulars of which were not reported, was formulated by the strikers, and efforts were made by the Jersey City authorities and some of the superior police officers to bring the parties together, but without success. About September 11, approximately one-half of the strikers had returned to work, but the remainder were not re-employed until September 30. One-half the number were idle two weeks, and the remainder four weeks. The strike was a total failure, and the wage loss was, as nearly as could be ascertained, \$1,800.

SEPTEMBER 5—One hundred girls employed in the Newark Embroidery Works, at Newark, quit work because the firm had increased the charge for cotton thread from 10 to 15 cents per week. It is a custom of the handkerchief trade to require the operators to pay for the thread, and the firm in justification of the increase stated that the girls had not been paying the full cost of that material. The strike lasted ten days, and was a total failure; the wage loss, as reported, was \$1,000.

SEPTEMBER 5—One hundred and twenty employes of the Summit Silk Co., at Summit, went on strike to enforce a demand they had made for an increase in piece prices for weaving of two cents per yard. On September 11, the mills were closed but were reopened on September 23, with the statement that the places of the strikers who failed to return within a reasonable time thereafter would be filled by new men. This announcement not producing the results expected, a proposal was made by the company to arrange a schedule of prices in accordance with the scale being paid in ten other mills doing the same class of work; or, as an alternative proposition, the company agreed to grant an increase of one-half cent a yard on all grades of silk regardless of the prices being paid elsewhere. Both offers were rejected. The strike finally resulted in a compromise on October 16. The time idle was six weeks, and the wage loss approximately \$7,000.

SEPTEMBER 15—Fifty employes of "The Brown Company," manufacturers of gas and electric fixtures at Newark, went on strike because the firm refused to sign a joint agreement with two unions in which their workmen held membership. The position taken by the firm was that their men do not work on buildings or any place other than the factory, and that therefore they have no real interest in being allied with the building trades unions as was the case. Such connection was liable to force them into sympathetic strikes, thereby affecting all the factory work on which only they were employed. The company reports that new men had been employed after the strikers had been given four days notice to return. On September 30 the strike was still on, although all who had not returned had been permanently discharged, and would not under any circumstances be re-employed. The strike lasted two weeks of September, and the wage loss for that time was \$3,500.

SEPTEMBER 20.—Twenty men employed in the hay and grain mill of Carscallen & Cassidy, at Jersey City, went on strike to force the re-employment of a man who had been discharged for drunkenness. After two days idleness the strike was abandoned and the men whose places were still unfilled returned to work; the wage loss was \$60.

SEPTEMBER 20.—Two hundred teamsters employed by the Burns Bros. Coal Co., at Jersey City, went on strike to secure the reinstatement of one of their number who had been discharged for allowing his team to stand idle for twenty minutes while he was in a saloon. The business of the company was brought to a complete standstill. In a row between

the strikers, one of their number was shot and died of his injuries in a hospital. The strike ended on September 23 in a complete victory for the men. The discharged teamster was reinstated, and all returned to work. The strike lasted three days, and the wage loss was approximately \$1,400.

SEPTEMBER 21—Two hundred and forty miners and laborers employed in the New Jersey Zinc Co.'s plant, at Franklin Furnace, went on strike because eighteen fellow employes had been discharged. The workmen had organized a union a short time before, and the discharge of the men was, they supposed, part of a plan to break it up. On September 25 all but a few of the miners returned to work, and the strike, which had lasted three days, was practically ended. The discharged men were not re-employed, and the places of about fifty others were filled by new men. The wage loss was approximately \$1,320.

SEPTEMBER 26—Because of a change from day work to piece work, 200 unskilled men employed by the Edison Storage Battery Co., at West Orange, went on strike, believing that the change would result in their earning less wages. The restoration of the day work system was demanded, and refused by the company officials; after one week's idleness the strikers returned unconditionally. The wage loss, as reported, was \$2,000.

TABLE No. 13.

Strikes and Lockouts.

The table that follows is a summary of the essential facts relating to the strikes of the year as set forth in the preceding textual notes. The purpose or purposes for which the strikes were undertaken, the number of persons directly involved, the aggregate number of days lost from work, the aggregate loss of wages, and the results reached, whether successful, partly successful, or total failures, are all given on the table under their proper headings. On this summary, the strikes are classified according to the causes for the advancement of which they were undertaken.

TABLE No. 13.

Strikes and Lockouts, from October 1, 1910, to September 30, 1911.

CAUSE OF STRIKES.	Number of Strikes.	Number of Persons Involved.	Aggregate Number of Days Idle.	Aggregate Wages Lost.	Result of Strikes.		
					Successful.	Partly Successful.	Failure.
For increase in wages.....	21	1,588	22,134 (1)	\$52,308 (2)	8	5	5
Against discharge of fellow workmen.....	13	1,174	2,170 (3)	4,450 (4)	4	..	9
Against working with non-union men.....	6	188	223 (5)	1,322 (6)	4	1	1
Against reduction in wages.....	4	260	1,420	1,930	2	1	1
For reduction of working hours.....	4	201	1,314 (7)	28,195 (8)	1	..	3
Increase in wages and reduction in working hours.....	2	815	9,300 (9)	16,000 (10)	1	1	1
Increase in wages, reduction of working hours and recognition of union.....	2	2,065	110 (11)	225 (12)	..	2	..
Dissatisfaction over the promotion of an employe.....	2	508	504	860	1	..	1
For establishment of 8-hour work day.....	2	97	504	2,410	..	..	2
For increase in wages and recognition of union.....	2	57	.... (13)	1,250 (14)	..	1	1
For an 8-hour work day and recognition of union.....	1	8,000	26,000	90,000	..	..	1
Against discharge of fellow workmen and for recognition of union.....	1	1,500	16,500	31,000	..	..	1
Against using new machinery and for recognition of union.....	1	550	8,100	26,000	..	..	1
For an 8-hour work day, minimum wage rate, recognition of union and closed shop....	1	142	13,632	39,760	..	..	1
Against change from day to piece work.....	1	200	1,200	2,000	..	..	1
Against increase in working time.....	1	100	.... (15)	....	1	..	1
To enforce the observation of union rules.....	1	75	.... (16)	750	1	..	..
For Saturday half holiday.....	1	68	136	247	1	..	..
Misunderstanding among employes.....	1	60	210	350	..	..	1
In sympathy with other strikers.....	1	50	1,500	1,800	..	..	1

TABLE No. 13—(Continued.)  
 Strikes and Lockouts, from October 1, 1910, to September 30, 1911.

CAUSE OF STRIKES.	Number of Strikes.	Number of Persons Involved.	Aggregate Number of Days Idle.	Aggregate Wages Lost.	Result of Strikes.		
					Successful.	Partly Successful.	Failure.
Refusal of firm to sign joint agreement with unions.....	1	50	600	3,500	..	..	1
For recognition of union.....	1	50	20	120	..	..	1
For discharge of objectionable forewoman.....	1	43	..... (17)	.....	..	..	1
Because overdue wages had not been paid.....	1	30	30	45	1	..	..
Increase in wages and re-employment of discharged workman.....	1	25	75	150	1	..	..
Totals.....	74	17,886	115,982	\$304,702	25	11	38

- No report of number of days idle received from 7 strikes involving 235 persons.
- No report of wage loss received from 5 strikes involving 120 persons.
- No report of number of days idle received from 2 strikes involving 95 persons.
- No report of wage loss received from 2 strikes involving 95 persons.
- No report of number of days idle received from 2 strikes involving 140 persons.
- No report of wage loss received from 1 strike involving 40 people.
- No report of number of days idle received from 1 strike involving 100 persons.
- No report of wage loss received from 1 strike involving 100 persons.
- No report of number of days idle received from 1 strike involving 15 persons.
- No report of wage loss received from 1 strike involving 15 persons.
- No report of number of days idle received from 1 strike involving 2,000 persons.
- No report of wage loss received from 1 strike involving 2,000 persons.
- No report of number of days idle received from 2 strikes involving 57 persons.
- No report of wage loss received from 1 strike involving 7 persons.
- No report of number of days idle or of wages lost received from 1 strike involving 100 persons.
- No report of number of days idle received from 1 strike involving 75 persons.
- No report of number of days idle or of wages lost received from 1 strike involving 43 persons.

The total number of strikes that occurred during the twelve months covered by the record was, as shown by the above table, 74; for the next preceding twelve months the number recorded was 112; the decrease in the number of strikes for the present year is, therefore, 38, or a small fraction less than 34 per cent. Twenty-one strikes, or 28.4 per cent. of the total number that occurred, were for "increase in wages;" 13, or 17.5 per cent. of the total number were against the "discharge of fellow workmen;" 6 were "against working with non-union men;" 4 "against reduction of wages;" 4 to "secure a reduction of working hours," and 3 for the double purpose of "increasing wages and reducing working hours." The total number of persons directly involved as participants in these 74 strikes was 17,886; the aggregate number of days idle that were reported was 115,982, or an average of 6.5 days for each person involved; the aggregate amount lost in wages, was, so far as reported, \$304,702.

Twenty-five out of the 74 strikes were successful; 11 were partly successful, and 38 were total failures. The number of persons involved in the strikes of the year is correct as given on the table, but as shown by the foot notes, there were seventeen strikes relating to which no report could be obtained of either the number of days idle, or the wage loss; had these been reported the totals of these items would have been much larger.

By localities the strikes were divided over the State as shown in the following table.

CITY OR TOWN.	Number.
Jersey City .....	14
Newark .....	9
Bayonne .....	6
Camden .....	5
Perth Amboy .....	5
Paterson .....	4
New Brunswick .....	3
Trenton .....	2
Westfield .....	2
Atlantic City .....	1
Harrison .....	1
Soho .....	1
Marion .....	1
Gibbsboro .....	1
Elizabeth .....	1
Bayway .....	1
Hammonton .....	1
Woodcliff .....	1
Clifton .....	1
Roselle .....	1
Kearby .....	1
Dover .....	1
Plainfield .....	1
Asbury Park .....	1
Millburn .....	1
New Durham .....	1
Little Silver .....	1
Washington .....	1
Columbus .....	1

CITY OR TOWN.	Number.
East Orange .....	1
Carteret .....	1
Phillipsburg .....	1
Summit .....	1
Franklin Furnace .....	1
West Orange .....	1
Total.....	76

The chronological record of strikes for the twelve months ending September 30, 1911, is as follows:

October .....	2	April .....	6
November .....	6	May .....	14
December .....	5	June .....	3
January .....	5	July .....	5
February .....	7	August .....	4
March .....	10	September .....	9

The comparatively large number of strikes reported for May is due to the fact that working agreements, particularly in the building trades and some lines of factory employment, usually terminate on May 1, whether such contracts extend over one or more years, and such strikes as may result from disagreement over the terms of renewal are almost certain to be started during that month.







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