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EDITORIAL NOTE.

During the past two or three years a statement purporting to give the relation of wages to cost of production, or the proportion of labor cost to the whole cost, has been going the rounds of the press. This statement has generally been in the following form:

Mr. Carroll D. Wright, the national labor statistician, has figured out that the average rate of wages per year paid in the United States is \$347, and the average product of each laborer is valued at \$1,888. This gives the employer 82.2 per cent, while the man who does the work and produces the results is allowed a paltry 17.8 per cent. In spite of our boasted free country and high wages, the fact remains that the proportion of the proceeds of his labor paid to the American workingman is smaller by far than that paid to any other workingman in any civilized or uncivilized country on the globe.

Sometimes the article varies in its statement, both in percentages quoted and in other essential features, but usually conforms very closely to the foregoing extract, which has been taken literally from one of the newspapers in which it appeared. The prominence given to this statement warrants its notice in the Bulletin. Ordinarily it is not our purpose to use its pages for current items, but the figures quoted and the statement that they are upon the authority of the Commissioner of Labor make this case an exception. The figures themselves are in the main correct; they relate more particularly to the census of 1880 than to any other collection of data. An analysis of the figures and the facts underlying them shows the fallacy of the conclusion drawn from them.

If the aggregate wages paid in the manufacturing and mechanical industries of the United States, as shown by the census of 1880, be divided by the total number of employees to whom the wages were

paid, the quotient will be 347, thus determining the average wages paid to the employees in the manufacturing and mechanical industries of the country as \$347. Dividing the aggregate value of all the products of manufacturing and mechanical industries by the number of employees engaged therein, the quotient is 1,965, showing that the average product per employee was \$1,965. Now, \$347 is 17.7 per cent of the gross value of the per capita product, as stated, leaving a balance, of course, of 82.3 per cent, or \$1,618, which the originator of the statement quoted above assumes goes to the employer. The 82.3 per cent of the total product, or \$1,618 per capita, covers all expenses of production, cost of materials, miscellaneous items, profit, deterioration, interest—everything, in fact, which can be counted as cost of production other than wages. Taking the Eleventh Census—that for 1890—it is found that the value of the gross product per capita for the number of employees engaged in manufacturing and mechanical industries was \$2,204, and the average annual wages per employee, computed for 1890 as already computed for 1880, was \$445. The writer of the statement quoted above would assume, for the Eleventh Census, that while \$445 was paid to labor, \$1,759 went to the employer. As a matter of fact, of the total product per capita, 20.18 per cent went to labor, 55.08 per cent for materials, and 24.74 per cent to miscellaneous expenses, salaries, interest, profits, etc.

All statements like that quoted above are fallacious in their application. While the figures in themselves are in the main fairly correct, and the percentages so, the balance, or 82.2 per cent, does not go to the employer, but, as shown, largely for raw materials; and of the amount paid for raw materials the bulk goes to labor for their production. That the statement emanates from the Commissioner of Labor is an assumption without any authority. From what sources the comparison with workmen of other countries is secured is not known, but the concluding statement in the quoted article is undoubtedly as fallacious as the one which gives to the employer 82.2 per cent of the value of the product.

C. D. W.

INDUSTRIAL COMMUNITIES.^(a)

BY W. F. WILLOUGHBY.

CHAPTER I.

INTRODUCTION.

The growth of the large industry and the creation of special industrial centers constitute two of the most marked industrial changes of recent years. They are the last steps in the evolution of the factory system from the régime of individual handicraft production. This has necessitated the aggregation in one center of large numbers of workingmen, who, with their families, are dependent upon a single industry, and this in turn has given rise to conditions and problems peculiar to such places. The present study deals with the results of an investigation into the conditions of labor and industry in those special industrial centers where a large number of workingmen have been brought together in one place, all dependent upon a single large establishment, and under such conditions as to constitute more or less self-contained communities.

The town of Essen, Germany, the seat of the great iron and steel works of Friedrich Krupp, is the best and most widely known example of this class of industrial communities in Europe. Essen has therefore been taken as the type of communities to be investigated, and the effort has been made to consider all the industrial centers of importance closely approaching it in character.

Inevitably in such centers there have developed systems of special institutions that give to each a special life and character of its own. It has been thought a matter of importance to determine as far as possible what changes have here been introduced into the organization of industry, and the results, beneficial or otherwise, to which they have given rise.

The most important of these results is the enormous development of common interests. Greater interdependence of interests, both between the workingmen themselves and between the workingmen and their employers, is the fundamental result of all recent industrial changes.

a This article is the first of a series upon this subject to be published in successive numbers of the Bulletin. Each article will be complete in itself, giving the results of the investigation as to one or more communities. The investigation was made by the author during personal visits to the several communities dealt with. The author desires to express his sense of obligation to the officials of the companies whose operations furnish the subject-matter of these articles for their courteous assistance, which alone has rendered the study possible.

The larger the industry and the greater the number of employees gathered together in the same place, the greater the interdependence of interests, and the greater the consequent need for joint action.

A second important result is the changed relations between the employers and employed. The last half century has witnessed a radical change of thought in regard to this point. Formerly, in what M. Leroy Beaulieu calls the chaotic period of the large industry, employers were almost of one mind, namely, that their duties toward their employees ceased with the payment of their wages. If obligation there was, they believed that it was on the part of the workingmen for the employment furnished them. To-day much of this is changed. The owners of the means of production, in great part, feel that all should be done that can be, consistent with the financial prosperity of their establishments, to render the conditions of labor favorable. This change between the relations of the employer and employed is most marked in the case of the industrial centers coming within the field of this investigation. It is indeed the dominant fact that gives to these places their special character as distinguished from other industrial localities. The condition of affairs where an industrial undertaking is carried on during successive generations in the same place, and where, as a result, there has grown up around it a class of workingmen who, entering the employment of the establishment as boys, have spent the entire active portion of their lives in its service, tends to create feelings of mutual obligations of exceptional strength. These obligations are mostly on the part of the employers.

To cite but a few of them, there are: The care of public health; the provision against accidents; the erection of dwellings where the workingmen are not already suitably housed; the encouragement of habits of economy and foresight, etc. This by no means implies that employers should look upon employees as persons to be taken care of, or that the expense of institutions for their benefit should be wholly borne by them. There is no doubt that a company can do a great deal in the way of the promotion of institutions and the encouragement of habits of economy among its employees without at all subjecting itself to the charge of paternalism.

In all great industrial establishments one can conceive of but three principal *modi vivendi* between the employers and their employees: First, indifference; second, patronage, where institutions are created for the benefit of employees by the employer, over which he exercises absolute control; third, mutuality, or the encouragement of the organization of institutions by workingmen, the management of which is as far as possible left in their hands.

From a second point of view, then, this is in great part an investigation of institutions that have been freely organized in connection with industrial establishments for the benefit of workingmen. To this end, in the choice of places for investigation, special care was taken to select those that seemed to have institutions the best developed or the

most worthy of study. It is for this reason that European establishments have been selected for investigation. In general, industrial problems are felt in greater intensity in Europe than in America, and consequently greater opportunities are offered for a study of the means that have been devised to meet them.

A study of the report that follows shows that workingmen's institutions in connection with large industrial establishments take the form of: (1) The housing of employees and the provision of facilities by which workingmen are aided to acquire homes of their own; (2) the organization of a public-health service, the maintenance by the company of physicians, the erection and management of hospitals, etc.; (3) the organization of a pension fund for old employees; (4) the organization of mutual-aid societies among the employees for the aid of members in cases of accident, sickness, or death; (5) the organization of cooperative distributive societies, cooperative bakeries, etc.; (6) education; (7) recreation; and occasionally, but, when existing, of great importance, (8) a system of profit sharing or cooperation.

Concerning two of these classes of institutions, the Department of Labor has already published reports, that on the Housing of the Working People and that on Compulsory Insurance in Germany and in Other Countries in Europe. Both of these can be consulted with great profit in connection with the present subject.

The first has confined itself rather strictly to a description of the technical details of the better types of houses erected as workingmen's dwellings, while the building up of the whole community and the policy pursued regarding the provision of workingmen's houses are the features here considered.

The second report relates only to compulsory insurance of workingmen.

In the present investigation, however, there is afforded a study of the best types of privately organized and conducted systems of accident, sickness, and old age pension funds. The question of the relative merits of compulsory and voluntary insurance is one of great importance, and the effort has therefore been made to give in every case not only the results of the practical operation of each, but the general spirit underlying each. In view of the great prominence of the question of workingmen's insurance in Europe at the present time, the opportunity for a comparison of the two systems will be of especial interest and value.

Especial attention should be directed to two other features of the present investigation.

The first of these is the opportunity afforded of comparing past with present conditions. Such a comparison, to be of value, should relate to the same locality, industry, and, if possible, the same establishment, in order to be sure that all elements that should enter into the comparison have been taken account of. The cases where this can be done are exceedingly rare, and the opportunity here afforded is exceptional. The statistical material has therefore been presented in such a way as to show conditions, not only at the present time, but for a period of as

many years as possible. There is thus afforded an opportunity for a statistical comparison of the conditions of the same body of men where the general and physical conditions are the same throughout the period under comparison.

The second feature to which attention is directed is that of the stability of employment. The inability of the workingman at times to find employment is one of the greatest hardships that he has to endure. If the growth of the large industry has the tendency to stability of employment as well as of production, there can be no doubt that its development has rendered a vast service, in this respect, for the improvement of the general condition of wage earners.

It is advisable at this point to state the reasons for the selection in each particular case of the centers that have been investigated. Especial prominence has been given to the coal-mining industry, for reasons that are obvious. Mining occupies a unique position in the industrial world. The location of the mines in the open fields renders the creation of special industrial centers in most cases a necessity. Again, the fact that mining has been, and in all probability will continue to be, carried on during successive generations at the same place, differentiates it widely from manufacturing, strictly speaking. The result of this is that there tends to grow up around the mines a class of workmen among whom the pursuit of mining is almost hereditary. A condition of affairs is created where workmen enter the employ of the mining companies as boys, succeeding their fathers, remain until incapacitated for work through sickness or old age, and are succeeded in turn by their children. The miners are thus almost exclusively recruited from among the surrounding population, and may almost be deemed to have acquired prescriptive rights in the premises, as far as the right of employment is concerned.

To represent this industry, therefore, the two important mining companies of Anzin and Blanzy, the one in northern and the other in southeastern France, have been chosen as the subjects of Chapters II and III, respectively. The reasons dictating their particular selection were that they were the largest mining companies of France, and among the largest in Europe, employing together over 20,000 men; that they have had a continuous existence, the one over one hundred and the other over fifty years; and, more important than all, the character of the workmen's institutions that have developed there renders them especially valuable places for investigation.

It is scarcely necessary to state the reasons for the selection of Essen, Germany, to which Chapter IV is devoted. Essen is the seat of the great iron works of Friedrich Krupp, giving employment to over 25,000 workmen, with institutions there organized for the welfare of the workmen that have earned a world-wide reputation. So firmly is this establishment founded that it presents almost the same elements of stability as those offered by mining companies.

The town of Guise, France, the subject of Chapter V, was selected

because it is an example of a purely self-contained community. It is worthy of study, both as being the most successful example of an industry carried on as an absolutely cooperative enterprise, and as being a most remarkable effort to put into practice many of the essential features of a socialistic régime. Whatever the opinion of the reader may be regarding the principles involved, the mechanism by which the employees were enabled to acquire the ownership of the plant in which they labored, without entailing the slightest pecuniary sacrifice on the part of its owner, their former employer, the method devised for the conduct of the business on principles of strict mutuality, and the means adopted for preventing the ownership of the property from getting into the hands of outsiders, are worthy of the closest study, especially as the scheme has now been in successful operation over fifteen years.

The study of the mining company of Mariemont and Bascoup, in Belgium, to which a part of the final chapter (VI) is devoted, is useful on account of the opportunity afforded of presenting the results of two extremely interesting workingmen's institutions, viz, that of the councils of conciliation and arbitration, organized by the company, and that of the system of old age and invalidity pension funds, which is not peculiar to this one company, but pertains generally to all coal-mining companies in Belgium.

The concluding chapter also gives an account of a number of other industrial villages, which, while not of sufficient importance to warrant detailed descriptions, should yet be accorded brief mention.

The method of investigation pursued has been that of selecting particular places and making in each case a detailed study of the conditions of labor as they exist there. The advantages of this monographic method are evident. In this way only is it possible to investigate in detail all the various elements going to influence the conditions of life and labor surrounding the workingmen; and the subject of this study is the influence that the method of organization of industry, existing in each place selected, has upon the whole life of the individual.

Again, a study of workingmen's institutions to be of value requires an examination of concrete examples of such institutions, their constitutions, organization, and results of operation during a series of years.

It would be a matter of considerable value if exact statistical comparisons could be made of conditions in these special communities with those under the ordinary conditions of production. It is manifest, however, that exterior conditions can not be established with sufficient exactness to make the application of the strict statistical method feasible. This does not, however, prevent the student, after making a study of all the elements entering into the life of the workingmen in the communities described, from making a comparison with conditions as he knows them to exist elsewhere. Such a comparison, if the subtle conditions of the problem are considered, will be of more value than any that could be made by the mere juxtaposition of figures.

CHAPTER II.

COAL MINING COMPANY OF ANZIN, FRANCE.

No industry offers better opportunities for the study of the conditions of labor and industry in the special industrial communities of the nature comprehended within the scope of the present report than that of the mining of coal. The industry is at once one of the most important in America or Europe; one that must be carried on on a large scale, and one the conditions surrounding the conduct of which require the aggregation of a great many workingmen and their families in special industrial communities. Two of the most important mining companies of Europe have, therefore, been selected for a detailed study, that of Anzin in northern and Blanzky in southeastern France. A study of these centers affords a knowledge, not only of the conditions of labor in two particular places where the community of interests of the entire population is as marked as in any on the continent, but of the conditions generally under which coal is mined.

In France the mining of coal is carried on under concessions granted by the central Government, and is under the direct control of its corps of mining engineers. In 1893, the last year for which official figures are obtainable, there were 298 concessions under which operations were actually prosecuted. It must be understood, however, that the same company often possesses a number of concessions of territory. The following table will show the general importance of the coal-mining industry in France during recent years:

PRODUCTION OF COAL AND EMPLOYEES OF COAL MINES IN FRANCE, 1870 TO 1893.

Year.	Production (tons of 2204.6 lbs.).	Total em- ployees.	Year.	Production (tons of 2204.6 lbs.).	Total em- ployees.	Year.	Production (tons of 2204.6 lbs.).	Total em- ployees.
1870.....	13,330,000	82,700	1878....	16,961,000	106,400	1886....	19,910,000	102,400
1871.....	13,259,000	83,600	1879....	17,111,000	102,500	1887....	21,288,000	103,200
1872.....	15,803,000	91,900	1880....	19,362,000	107,200	1888....	22,608,000	105,000
1873.....	17,479,000	105,500	1881....	19,776,000	106,400	1889....	24,304,000	110,900
1874.....	16,908,000	106,300	1882....	20,604,000	108,300	1890....	26,083,000	121,600
1875.....	16,957,000	108,700	1883....	21,334,000	113,000	1891....	26,025,000	131,800
1876.....	17,101,000	110,800	1884....	20,024,000	109,400	1892....	26,179,000	133,200
1877.....	16,805,000	108,900	1885....	19,511,000	101,600	1893....	25,651,000	132,600

Though coal was mined in 1893 in 41 departments, seven departments produced nine-tenths, and of these the two adjoining departments of the Nord and Pas-de-Calais, in the north of France, produced considerably over one-half of the total quantity mined. The mines of the

Coal Mining Company of Anzin are situated in the former of these two departments in the arrondissement of Valenciennes. The company is the most important coal-mining company in France. Alone it produced in 1893 over three-fifths of the coal mined in its department, and one-ninth of the total output for the whole country. The first search for coal in this region was commenced in 1716 by prospectors, who afterwards organized the company of Anzin. Coal was discovered in 1720. The organization of the present company of Anzin, however, was not effected until November 19, 1757. Since that date its existence has been continuous. The following table, giving its annual production since 1757, shows its progress in importance. The figures for the years prior to 1789 represent approximations or estimates based on various data.

PRODUCTION OF COAL OF THE COAL MINING COMPANY OF ANZIN, 1757 TO 1893.

Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).	Year.	Production (tons of 2204.6 lbs.).
1757..	102,000	1780..	238,000	1803..	229,443	1826..	376,936	1849..	614,900	1872..	2,196,495
1758..	101,000	1781..	238,500	1804..	208,382	1827..	400,668	1850..	669,999	1873..	2,191,500
1759..	103,000	1782..	239,000	1805..	225,813	1828..	406,593	1851..	648,062	1874..	1,922,037
1760..	110,000	1783..	240,000	1806..	230,693	1829..	410,632	1852..	705,633	1875..	2,058,558
1761..	119,000	1784..	245,000	1807..	194,188	1830..	508,708	1853..	803,812	1876..	2,063,931
1762..	128,000	1785..	252,000	1808..	252,106	1831..	460,884	1854..	856,295	1877..	2,042,035
1763..	135,000	1786..	260,000	1809..	260,202	1832..	472,959	1855..	947,936	1878..	1,979,454
1764..	146,000	1787..	272,000	1810..	279,865	1833..	541,500	1856..	920,574	1879..	1,980,324
1765..	152,000	1788..	280,000	1811..	268,815	1834..	573,239	1857..	919,187	1880..	2,314,008
1766..	160,000	1789..	290,000	1812..	245,092	1835..	591,836	1858..	950,889	1881..	2,264,955
1767..	165,000	1790..	310,000	1813..	289,840	1836..	623,546	1859..	907,543	1882..	2,215,611
1768..	178,000	1791..	291,000	1814..	293,025	1837..	651,511	1860..	950,700	1883..	2,210,702
1769..	180,000	1792..	275,500	1815..	247,404	1838..	659,644	1861..	958,610	1884..	1,720,306
1770..	175,000	1793..	80,000	1816..	250,044	1839..	707,748	1862..	993,950	1885..	2,070,442
1771..	183,000	1794..	65,000	1817..	226,856	1840..	623,312	1863..	1,053,334	1886..	2,337,439
1772..	190,000	1795..	128,600	1818..	334,482	1841..	643,623	1864..	1,067,017	1887..	2,504,412
1773..	202,000	1796..	138,631	1819..	323,947	1842..	721,030	1865..	1,225,425	1888..	2,595,581
1774..	210,000	1797..	184,791	1820..	330,189	1843..	642,280	1866..	1,348,812	1889..	2,857,693
1775..	220,000	1798..	213,540	1821..	353,783	1844..	597,953	1867..	1,441,002	1890..	3,121,552
1776..	225,000	1799..	248,076	1822..	340,489	1845..	714,755	1868..	1,671,621	1891..	2,933,724
1777..	234,000	1800..	213,840	1823..	318,570	1846..	803,804	1869..	1,606,075	1892..	2,818,529
1778..	236,000	1801..	203,264	1824..	327,327	1847..	774,896	1870..	1,633,818	1893..	2,975,691
1779..	237,500	1802..	216,274	1825..	358,457	1848..	618,502	1871..	1,715,878		

The company has also established several collateral industries that, from their nature, can be carried on in connection with the mining of coal. It thus possesses 340 coke furnaces; three factories for the manufacture of bricks of compressed coal dust; a private railroad 37 kilometers (22.99 miles) long, which is used not only for the transportation of coal, but is also operated as a public road for the conveyance of passengers and freight; a special shop for the repair of cars; another for that of locomotives; a workshop for mechanical constructions; a foundry and boiler shop for the construction as well as the repair of machines used in their works, and various woodworking shops.

The total number of employees during the remoter periods can not be given with the same accuracy and completeness. According to various authorities the number of employees was estimated to be in 1783, 3,110; in 1789 and 1790, 4,000; in 1843, 6,879; in 1850, 8,000, and in 1860, 8,590. The following table shows the total number of employees each year from 1870 to 1894, inclusive, according to whether they were

engaged in the operations of mining proper or in the other collateral services of the company:

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN ENGAGED IN COAL MINING AND OTHER INDUSTRIES, 1870 TO 1894.

Year.	Mining proper.			Other.	Total.	Year.	Mining proper.			Other.	Total.
	Above ground.	Below ground.	Total.				Above ground.	Below ground.	Total.		
1870..	968	8,185	9,153	.....	.....	1883..	1,738	10,117	11,855	2,181	14,036
1871..	1,102	8,481	9,583	.....	.....	1884..	1,381	8,960	10,241	1,770	12,011
1872..	1,293	9,290	10,583	.....	.....	1885..	1,525	8,103	9,628	1,629	11,257
1873..	1,584	9,933	11,517	.....	.....	1886..	1,529	8,182	9,711	1,689	11,400
1874..	1,687	10,300	11,987	.....	.....	1887..	1,488	8,269	9,757	1,643	11,400
1875..	1,637	10,649	12,286	.....	.....	1888..	1,506	8,241	9,747	1,734	11,481
1876..	1,800	10,900	12,700	.....	.....	1889..	1,516	8,433	9,949	1,862	11,811
1877..	1,807	11,074	12,881	.....	.....	1890..	1,564	9,031	10,595	1,814	12,409
1878..	1,830	11,085	12,915	.....	.....	1891..	1,581	9,221	10,802	1,927	12,729
1879..	1,988	11,013	13,001	2,203	15,204	1892..	1,588	9,048	10,636	2,030	12,666
1880..	1,956	10,814	12,770	2,558	15,328	1893..	1,620	9,029	10,649	2,049	12,698
1881..	1,873	10,978	12,851	2,502	15,353	1894..	1,577	9,098	10,675	1,929	12,604
1882..	1,796	10,407	12,203	2,291	14,494						

The following table gives for the years 1883 to 1892, inclusive, the number of employees according to the general division of service:

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN ENGAGED IN COAL MINING, BY NATURE OF WORK PERFORMED, 1883 TO 1892.

[The totals in this table do not agree with those in the preceding table, as they represent the condition of affairs for a particular date rather than an average for the year.]

Year.	Actual work of mining.		Maintenance and repairs.		Transportation.		Filling in exhausted veins.		Overseeing.		Total below ground.		Total above ground.		Grand total.	
	Num. ber.	Per cent.	Num. ber.	Per cent.	Num. ber.	Per cent.	Num. ber.	Per cent.	Num. ber.	Per cent.	Num. ber.	Per cent.	Num. ber.	Per cent.	Num. ber.	Per cent.
1883..	5,475	47.2	1,493	12.9	1,261	10.9	1,361	11.8	271	2.3	9,861	85.1	1,729	14.9	11,590	100
1884..	5,234	53.2	876	8.8	1,162	11.7	1,023	10.3	241	2.5	8,586	86.5	1,344	13.5	9,930	100
1885..	5,786	60.0	510	5.3	995	10.3	581	6.0	230	2.4	8,102	84.0	1,547	16.0	9,649	100
1886..	5,848	61.1	470	4.9	1,012	10.6	482	5.1	232	2.4	8,044	84.1	1,525	15.9	9,569	100
1887..	6,118	63.1	458	4.7	998	10.3	396	4.1	226	2.3	8,196	84.5	1,500	15.5	9,696	100
1888..	6,344	65.0	396	4.0	993	10.2	307	3.1	212	2.2	8,252	84.5	1,509	15.5	9,761	100
1889..	6,547	65.7	374	3.8	1,036	10.4	295	2.9	226	2.3	8,478	85.1	1,483	14.9	9,961	100
1890..	6,974	65.4	444	4.2	1,115	10.5	324	3.0	240	2.2	9,097	85.3	1,566	14.7	10,663	100
1891..	7,004	65.5	407	3.8	1,146	10.7	294	2.7	243	2.3	9,094	85.0	1,604	15.0	10,698	100
1892..	6,793	64.3	416	4.0	1,193	11.3	320	3.0	243	2.3	8,965	84.9	1,597	15.1	10,562	100

a The addition of the total employees below and above ground does not produce the grand total here shown. The figures are given, however, as reported to the Department.

THE GENERAL CONDITIONS OF LABOR.

The aggregation of over 12,000 employees in one locality, who, with their families, are all dependent upon a single industry, and live under practically the same conditions, furnishes an excellent opportunity for the study in detail of the influences surrounding an important body of workmen engaged in one of the principal industries of the country. This description will naturally fall into two parts: First, the general conditions of labor; second, the numerous workmen's institutions, such as pension funds, cooperative stores, mutual aid societies, etc., for which Anzin has been remarkable during the past half century.

The employees of the company are almost invariably obtained from among the population of the surrounding country. For the most part they enter the employment of the company as children. In probably the majority of cases they are the children of present employees; and members of the same family thus appear upon the pay roll of the company during several generations.

Formerly children destined for work below ground were admitted at the age of 10 years. In 1874 the minimum age limit was raised to 12, and again, by the law of November 2, 1892, to 13 years. The minimum age limit for those employed above ground is likewise 13, except that children 12 years of age can be employed provided that they have a certificate showing a certain amount of education and one showing their physical qualification. The new recruits are at first employed in various ways on the surface, such as washing and sorting coal, and are gradually drafted into the work below ground as the need for extra workmen is felt. From that moment, if their conduct is satisfactory, their employment for life is assured. It will be seen further on that stability of employment is one of the characteristics of the conduct of industry on a large scale. Anzin is a remarkable example of this. At the age of 55 years the miner, if he desires to do so, can retire from work on an old-age pension, from a pension fund maintained by the joint efforts of the company and the miners. The period of active labor of a miner at Anzin can thus be estimated to be, on an average, 40 years. The two following tables have been introduced to show the ages of workmen on entering the employment of the company for the years 1888 to 1893, inclusive, and the actual ages of all employees in February, 1892. This date has been taken because the computation had already been made by the company, and nothing would be gained by making a calculation for a later date.

NUMBER AND PER CENT OF EMPLOYEES OF EACH SPECIFIED AGE ENTERING THE SERVICE OF THE COAL MINING COMPANY OF ANZIN, 1888 TO 1893.

Year.	Ages.										Total.
	12 years.	13 years or under 14.	14 years or under 15.	15 years or under 16.	16 years or under 20.	20 years or under 25.	25 years or under 30.	30 years or under 35.	35 years or over.	Un-known.	
1888	16	291	82	27	92	39	43	25	45	60	720
1889	7	399	80	62	209	136	128	90	71	.....	1,182
1890	38	363	77	70	183	140	84	46	36	.....	1,037
1891	14	298	37	15	43	300	27	14	9	.....	757
1892	17	330	41	11	19	217	5	5	1	.....	646
1893	11	359	46	10	15	294	4	3	1	.....	743
Total..	103	2,040	363	195	561	1,126	291	183	163	60	5,085
Per cent of total.	2.03	40.12	7.14	3.83	11.03	22.14	5.72	3.60	3.21	1.18	100

AGE OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, FEBRUARY, 1892.

Age.	Employees.			Age.	Employees.			Age.	Employees.		
	Below ground.	Above ground.	Total.		Below ground.	Above ground.	Total.		Below ground.	Above ground.	Total.
12.....		29	29	30.....	230	7	237	48.....	148	17	165
13.....	151	147	298	31.....	298	10	308	49.....	141	20	161
14.....	373	2	380	32.....	251	15	266	50.....	122	22	144
15.....	445	1	446	33.....	237	19	256	51.....	107	14	121
16.....	393	5	398	34.....	218	24	242	52.....	97	16	113
17.....	450	3	453	35.....	203	12	215	53.....	72	11	83
18.....	358	2	360	36.....	190	7	197	54.....	71	6	77
19.....	384	10	394	37.....	185	13	198	55.....	42	9	51
20.....	412	9	421	38.....	187	12	199	56.....	25	8	33
21.....	365	4	369	39.....	187	10	197	57.....	14	3	17
22.....	385	9	394	40.....	211	12	223	58.....	18	4	22
23.....	348	1	349	41.....	162	17	179	59.....	7	5	12
24.....	322	8	330	42.....	143	14	157	60.....	7	2	9
25.....	340	6	346	43.....	162	12	174	61.....	1	2	3
26.....	337	10	347	44.....	181	20	201	62.....	5	1	6
27.....	296	16	312	45.....	182	8	190				
28.....	294	6	300	46.....	168	12	180	Total.	10,391	661	11,052
29.....	276	14	290	47.....	135	15	150				

It will be noticed from the first of these two tables that a large proportion of the employees of the company enter its service as youths of 13 or 14 years of age. The apparently large number entering between the ages of 20 and 25 years is caused by their return from military duty. The great majority of them had already been in the employ of the company.

The two tables following make a comparison of the ages of workingmen at Anzin with those of all coal miners in France. The law of November 2, 1892, regulating the hours of labor of women and children, divides the workingmen into three classes: (1) Children, 13 or under 16 years; (2) minors, 16 or under 18 years; and (3) adults, 18 years of age or over. The first table compares Anzin for the year 1892 with France for 1893, according to this grouping. The second is a comparison of ages in greater detail. The conditions at Anzin, it will be seen, differ little from those of France generally.

NUMBER AND PER CENT OF EMPLOYEES, BY AGE PERIODS, AT ANZIN AND IN ALL COAL MINES OF FRANCE.

Age periods.	Employees below ground.				Employees above ground.			
	Anzin, 1892.		France, 1893.		Anzin, 1892.		France, 1893.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
13 or under 16 years.	974	9.37	4,412	4.71	α 179	27.08	4,073	10.45
16 or under 18 years.	843	8.11	5,507	5.88	8	1.21	2,823	7.25
18 years or over ...	8,574	82.52	83,766	89.41	474	71.71	32,063	82.30
Total	10,391	100.00	93,685	100.00	α 661	100.00	38,959	100.00

α Includes 29 twelve years of age.

PERCENTAGE OF MINE EMPLOYEES, BY AGE PERIODS, AT ANZIN AND IN ALL COAL MINES OF FRANCE.

[The figures for Anzin are for September 6, 1886; those for France were obtained from the Annales des Mines for 1885.]

Locality.	Age periods.												Total.
	12 or under 16 years.	16 or under 20 years.	20 or under 25 years.	25 or under 30 years.	30 or under 35 years.	35 or under 40 years.	40 or under 45 years.	45 or under 50 years.	50 or under 55 years.	55 or under 60 years.	60 or under 65 years.	65 or over.	
Anzin, 1886.....	8.2	19.6	12.9	14.5	11.2	10.6	9.5	8.2	3.7	1.4	0.15	0.05	100
France, 1885.....	6.6	15.2	11.2	13.7	13.0	11.4	10.0	7.8	5.4	3.3	1.4	1.0	100

The miners, properly so called, in general descend into the mines at 4 o'clock in the morning and return to the surface at 1 or 2 o'clock in the afternoon, or after nine or ten hours below ground. If the time lost in ascending and descending the shaft and a half hour's rest for lunch be deducted, there remains from eight to nine hours' actual labor. On Sundays and holidays all labor is suspended, except in certain cases for repair work. The following table shows the average number of hours present at the mine and the number of hours devoted to actual labor per day during 1891 for each mine employee of the company of Anzin. Both of these classes of information should be considered in determining the duration of labor of coal miners, as the time consumed in reaching their work varies greatly with miners in different mines. The distinction between employees working above and below ground is also made.

NUMBER AND PER CENT OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, BY HOURS ON DUTY AND HOURS OF ACTUAL LABOR, 1891.

[Hours on duty includes time consumed in going to and returning from work.]

Hours of labor per day.	Employees below ground.				Employees above ground.			
	On duty.		At actual labor.		On duty.		At actual labor.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
7.....	5	.06	107	1.21			45	3.10
7½.....	13	.15	75	.85				
8.....	20	.23	205	2.33			22	1.52
8½.....	48	.55	45	.51				
9.....	112	1.27	958	10.85	1	.07	30	2.07
9½.....	644	7.21	443	5.03				
10.....	343	3.89	681	7.73				
10½.....	671	7.62	648	7.36				
11.....	1,062	12.06	2,035	23.08			80	5.52
11½.....	962	10.92	1,003	11.39				
12.....	1,015	11.52	993	11.27			70	4.83
12½.....	1,619	18.38	479	5.44			2	.14
13.....	570	6.47	454	5.15	75	5.17	164	11.31
13½.....	567	6.44	263	2.99			24	1.65
14.....	209	2.37	212	2.41	280	19.31	777	53.59
14½.....	250	2.84	57	.65	10	.69		
15.....	186	2.11	102	1.16	97	6.69	179	12.34
15½.....							20	1.38
16.....	490	5.56	40	.45	152	10.48	21	1.45
16½.....					20	1.38		
17.....	22	.25	12	.14	814	56.14	16	1.10
17½.....								
18.....					1	.07		
Total.....	8,208	100.00	8,308	100.00	1,450	100.00	1,450	100.00

A comparison of average hours of labor per day at Anzin for the year 1891 with the average hours in 1890 for the coal mines of the whole basin in which Anzin is situated (Nord and Pas-de-Calais), and for all the coal mines of France, is made in the following table.

From the comparison here given it is seen that the hours of labor are in general somewhat longer at Anzin than either in its special coal basin or in France. The difference is more pronounced in the case of hours on duty than in that of hours of actual labor.

AVERAGE HOURS OF LABOR PER DAY AT COAL MINES AT ANZIN, IN THE DEPARTMENTS OF NORD AND PAS-DE-CALAIS, AND IN ALL FRANCE.

[The figures for the departments of the Nord and Pas-de-Calais and for France were obtained from 'Une Notice sur le Nombre, les Salaires et la Durée du Travail des Ouvriers des Mines, en 1890, contained in the annual volume Statistique de l'Industrie Minière et des Appareils à Vapeur en France et en Algérie pour l'année 1889.]

Locality.	Average hours per day on duty.			Average hours per day actual labor.		
	Employees below ground.	Employees above ground.	All employees.	Employees below ground.	Employees above ground.	All employees.
Anzin, 1891	9.52	11.47	9.80	9.02	10.20	9.19
Nord and Pas-de-Calais, 1890	9.40	10.50	9.23	8.80	9.50	8.28
France, 1890	9.45	10.46	10.00	8.13	9.39	8.35

There is probably no one feature of the modern system of organization of industry more productive of injurious results to the workingmen than the periodic interruptions to which they are subjected under present conditions in their ability to obtain work. Next to that of the amount of their wages, the question of the regularity of their employment is the one in which workingmen are most interested. The absence of a reasonable certainty of continuous employment means not only a curtailment of their earning capacity, but their demoralization generally. The constancy of employment is, then, a prime element in determining the condition of any particular class of workingmen.

The conditions at Anzin in this respect could scarcely be improved upon. During the entire year the intensity of work is equal. The table that follows shows that in the twenty-four years from 1870 to 1893, inclusive, the mines were operated almost every possible working day. If the tables relating to the number of years the workingmen have been continuously employed that are given further on be considered in connection with this one, it is evident that Anzin includes a practically stable body of workingmen, to whom the evils of lack of employment are almost unknown.

AVERAGE DAYS WORKED BY EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN DURING EACH YEAR, 1870 TO 1893.

Year.	Average days worked.				Year.	Average days worked.			
	Employees below ground.		Em- ployees above ground.	All em- ployees.		Employees below ground.		Em- ployees above ground.	All em- ployees.
	Miners.	Others.				Miners.	Others.		
1870	301	297	333	301	1882	317	303	346	310
1871	299	299	338	303	1883	304	305	345	310
1872	313	321	355	325	1884	243	246	309	254
1873	312	320	353	325	1885	257	261	301	267
1874	307	307	337	311	1886	277	283	314	288
1875	313	308	353	314	1887	282	288	318	292
1876	301	302	349	310	1888	286	288	318	293
1877	292	288	334	294	1889	284	288	323	294
1878	278	278	321	284	1890	283	288	319	293
1879	280	278	320	284	1891	278	285	319	290
1880	308	305	344	311	1892	271	277	317	285
1881	312	305	344	310	1893	278	283	319	288

Whatever advantages the workmen of a particular locality or establishment may enjoy, their wages must, under present conditions, constitute the greatest factor in determining their economic well-being. At Anzin daily wages are but rarely paid. The wages of employees are determined by the amount of work performed, and a settlement is made fortnightly. Miners are paid so much per car of coal mined. The price per car is fixed by the company's engineer and accepted by the miner for a fortnight or for a certain distance along the vein to be mined. Formerly the miner did not transport his own coal nor maintain his passage in repair. The work of the carman was absolutely independent of that of the miner. This gave rise to serious difficulties. Either the miner complained that his coal was not carried away with sufficient rapidity, or the carman complained that a sufficient quantity of coal was not mined to keep him fully employed. This has now been entirely changed, and the present practice is for the miner to have his son or some other member of his family work with him to aid in the transport of his coal. Then, if necessary, his son can aid him in the operation of mining, or, if coal accumulates, he himself can assist in its transport. An additional advantage of the system, moreover, is that young laborers just entering the mine serve an apprenticeship under those most interested in their welfare. Under these conditions it is evident that rates of wages can not be given. In the table that follows are shown the average daily and yearly wages of all mine employees of Anzin according to the three great classes of occupations—miners, laborers below ground other than miners, and laborers above ground—with an average for the three classes combined, for the years 1870 to 1893, inclusive.

While in many industries employing workmen of widely-varying degrees of skill, and earning equally divergent rates of wages, average yearly wages would be absolutely meaningless, this is not true of coal mining. Here the greater part of the work performed falls into a few classes of occupations, all of which require about the same degree of

skill, and in which the wages paid differ but slightly. For practical purposes, therefore, these tables give a sufficiently accurate idea of the wages of miners, as well as the variation of wages during the period covered.

AVERAGE DAILY AND YEARLY WAGES OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, 1870 TO 1893.

Year.	Average daily wages.				Average yearly wages.			
	Employees below ground.		Employees above ground.	All employees.	Employees below ground.		Employees above ground.	All employees.
	Miners.	Others.			Miners.	Others.		
1870.....	\$0.71	\$0.58	\$0.45	\$0.57	\$219.19	\$171.39	\$149.10	\$171.96
1871.....	.75	.61	.45	.58	223.33	181.78	151.34	174.27
1872.....	.80	.64	.49	.62	250.70	204.44	174.71	201.97
1873.....	.92	.72	.56	.70	288.43	229.13	198.94	227.06
1874.....	.90	.71	.55	.69	275.52	218.04	185.37	214.88
1875.....	.92	.72	.56	.70	288.15	222.14	198.94	219.99
1876.....	.92	.73	.57	.71	278.27	220.90	198.03	219.58
1877.....	.92	.70	.56	.66	240.08	202.33	186.30	195.19
1878.....	.81	.67	.55	.65	224.27	185.11	177.81	185.26
1879.....	.79	.65	.54	.64	219.94	181.89	174.16	180.88
1880.....	.82	.67	.55	.66	251.45	205.44	189.22	203.23
1881.....	.82	.67	.61	.66	258.04	207.86	208.47	208.05
1882.....	.85	.69	.60	.68	261.90	211.34	208.54	211.14
1883.....	.87	.73	.66	.71	265.20	218.03	227.87	220.18
1884.....	.85	.73	.70	.72	207.01	179.92	216.79	184.89
1885.....	.85	.76	.60	.73	208.60	196.86	181.61	194.46
1886.....	.84	.76	.61	.73	233.62	214.75	191.49	211.05
1887.....	.85	.76	.58	.73	238.39	218.24	178.47	214.56
1888.....	.85	.77	.60	.74	242.87	220.78	190.00	215.91
1889.....	.89	.80	.61	.77	252.68	232.08	195.99	226.55
1890.....	1.02	.90	.68	.86	287.80	260.90	210.84	253.49
1891.....	1.06	.94	.68	.90	294.56	268.19	216.57	260.55
1892.....	1.06	.94	.67	.89	287.94	260.32	213.21	253.21
1893.....	1.05	.93	.67	.89	291.46	264.76	213.25	256.87

It is scarcely necessary to call attention to the value of a record such as that contained in the table just given. While it can not be used for exact comparison with wages paid elsewhere, inasmuch as it relates to the earnings of several classes of workmen combined, it shows clearly the relative variations in wages of coal-mine employees at Anzin. The showing is a very gratifying one as regards the increasing economic welfare of the laborers. From an average daily wage of 2.96 francs (57 cents) the rate for all employees increased rather slowly during the first decade, being but 3.42 francs (66 cents) in 1880. In the next ten years, however, wages had increased materially, being 4.48 francs (86 cents) in 1890, while during the next three years a still further increase to 4.61 francs (89 cents) was recorded. The significance of this increase is still more apparent if annual wages be contrasted. In 1870 the average for all employees was 890.96 francs (\$171.96). In 1880 the average was 1,053 francs (\$203.23), in 1890 had increased to 1,313.44 francs (\$253.49), and in 1893 was 1,330.94 francs (\$256.87). These figures represent an increase of a little over 49 per cent during the period.

The only possible element that could enter into this showing to vitiate the deduction that a real increase in wages had resulted, not only for all employees combined, but for each of the different classes of workmen entering into the calculation, is that the number of employees in higher-paid classes of work figure to a greater extent in later than

in former years. Reference to the table already given (page 230), showing the number and per cent of workmen according to nature of work done, shows a remarkably similar proportional distribution of the personnel among the different classes of work. There is every reason to believe, therefore, that all classes of workmen have profited in the general increase in wages.

That these figures, however, may serve as an index of the absolute as well as the relative economic condition of the laborers, they need to be completed by, or interpreted in the light of, two important considerations: First, the amount of supplementary advantages enjoyed by the workmen, such as cheap housing, medical attendance, free fuel, etc.; second, the quantity of necessary or usual articles of consumption that their wages will purchase, or, to state it in another way, the relation between the amount of wages and the prices of commodities.

Concerning the first point—that of supplemental advantages—a detailed consideration will be given later on. For the present purpose it is sufficient to insert a table showing, for each of the eleven years from 1883 to 1893, the total and average wages, the total and average value of supplemental advantages, and the proportional addition to wages that the supplementary advantages represent. From this table it will be seen that there has been a fairly constant tendency for the absolute value of supplemental advantages to increase, and that this value represents a slightly increasing proportion of the average amount received as wages. At the present time, speaking in round numbers, it can be said that the supplemental advantages enjoyed by workmen at Anzin represent at least a 10 per cent addition to their wages.

WAGES AND ADVANTAGES SUPPLEMENTARY TO WAGES OF EMPLOYEES OF THE
COAL MINING COMPANY OF ANZIN, 1883 TO 1893.

[The figures showing the amount of wages and advantages supplementary to wages per employee were computed by the Coal Mining Company of Anzin from data which are not known; hence they differ slightly from those computed on the basis of the total number of employees given elsewhere in the report.]

Year.	Wages.	Advantages supplementary to wages.	Total wages and supplementary advantages.	Wages per employee.	Supplementary advantages per employee.	Total wages and supplementary advantages per employee.	Per cent of supplementary advantages of wages.
1883.....	\$2,962,357.00	\$236,372.99	\$3,198,729.99	\$220.18	\$17.34	\$237.52	7.98
1884.....	2,257,135.00	225,665.52	2,482,800.52	184.89	19.55	204.44	9.99
1885.....	2,131,492.00	215,838.65	2,347,330.65	194.46	20.40	214.86	10.12
1886.....	2,305,771.00	220,233.43	2,525,994.43	211.05	19.35	230.40	9.55
1887.....	2,341,283.00	233,929.97	2,575,212.97	214.56	20.55	235.11	9.99
1888.....	2,372,163.00	253,933.89	2,626,096.89	215.91	22.05	237.96	10.70
1889.....	2,532,546.00	206,397.47	2,738,943.47	226.55	22.58	249.13	10.52
1890.....	2,947,777.39	252,043.95	3,229,821.34	253.49	22.53	276.02	9.56
1891.....	3,119,575.74	314,010.78	3,427,586.52	260.55	24.63	285.18	10.08
1892.....	2,995,476.36	321,916.35	3,317,392.71	253.21	25.61	278.82	10.74
1893.....	3,045,421.43	330,098.79	3,375,520.22	256.87	26.01	282.88	10.84

From this table it can be seen, without reproducing the figures which can easily be consulted in the table itself, that the inclusion of the additional element of supplementary advantages accentuates yet more the

increase in earnings shown in the table relating to wages proper. It should be remembered, moreover, that the value of supplementary advantages as here stated indicates only their cost to the company. It is probable that if they had been furnished by the workmen themselves their cost would have been considerably greater. The real value of these supplementary advantages is therefore without doubt in excess of that shown in the table.

Concerning the second point, it is of interest to note the study, with accompanying tables, made by M. Georges Michel, of the *Économiste Français*, on this particular question for the miners of Anzin, and included in his book entitled *Histoire d'un Centre Ouvrier (Les Concessions d'Anzin)*. The most important of his tables—the one in which he has brought into correlation the average prices of commodities with the budget of a typical family, composed of father, mother, and four children, of which the eldest has commenced work, for each decade from 1820 to 1887—is here reproduced. It should be borne in mind that this table is but a calculation based on such data as were obtainable. M. Michel first made the calculation for the period 1880 to 1887, in which it is reasonable to suppose that substantial accuracy was secured. Then, using this as a basis, and taking into account, not only the variation in the prices of commodities and of average earnings, but of changes in the habits of the workmen as well, he was able to calculate the budgets for the preceding decades. The officials of the company, moreover, examined the figures of M. Michel, and after making a few corrections, expressed themselves as satisfied that they represented a substantial approximation to the true condition of affairs.

COST OF LIVING OF A TYPICAL FAMILY OF SIX AT ANZIN, 1820 TO 1887.

Objects of expenditure.	Unit.	1820 to 1830.			1830 to 1840.			1840 to 1850.			1850 to 1860.		
		Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.
Bread	Pound.	2,337	\$0.026	\$60.76	2,337	\$0.028	\$65.44	2,337	\$0.029	\$67.77	2,337	\$0.032	\$74.78
Meat	Pound.	66	.061	4.03	99	.070	6.93	99	.096	9.50	121	.105	12.71
Milk	Quart.	106	.024	2.54	137	.024	3.29	159	.024	3.82	169	.026	4.39
Butter	Pound.	22	.131	2.88	33	.136	4.49	40	.152	6.08	44	.163	7.17
Eggs	Dozen	100	.115	.96	150	.126	1.89	150	.127	1.59	200	.131	2.18
Fruits and vegetables purchased.				3.86			8.69			9.65			9.65
Beer	Gallon.	53	.044	2.33	132	.044	5.81	159	.044	7.00	211	.044	9.28
Alcoholic drinks				.97			.97			.97			1.16
Groceries:													
Oil	Quart.	11	.164	1.80	16	.194	3.10	16	.192	3.07	16	.205	3.28
Coffee	Pound.	18	.219	3.94	22	.218	4.80	26	.178	4.63	26	.218	5.54
Sugar	Pound.	11	.197	2.17	15	.185	2.78	18	.151	2.72	22	.154	3.39
Soap	Pound.	99	.054	5.35	99	.056	5.54	110	.050	5.50	110	.051	5.61
Miscellaneous:				1.93			1.93			2.32			2.32
Haberdashery				1.93			2.32			2.90			3.86
Table utensils				.97			.97			.97			1.93
Furniture				1.54			1.93			1.93			2.32
Clothing				13.51			17.76			19.30			20.27
Hats				1.54			2.32			2.90			3.86
Shoes				2.32			3.86			4.83			5.79
Rent and cultivation of garden.				11.58			13.51			14.48			14.48
Various, saloon, savings, etc.				1.93			3.86			5.79			8.69
Total expenditures.				128.84			161.88			177.72			202.66

COST OF LIVING OF A TYPICAL FAMILY OF SIX AT ANZIN, 1820 TO 1887—Concluded.

Objects of expenditure.	Unit.	1860 to 1870.			1870 to 1880.			1880 to 1887.		
		Quantity.	Price.	Value.	Quantity.	Price.	Value.	Quantity.	Price.	Value.
Bread.....	Pound.	2,315	\$0.032	\$74.08	2,315	\$0.032	\$74.08	2,315	\$0.030	\$69.45
Meat.....	Pound.	176	.118	20.77	254	.144	36.58	254	.166	42.16
Milk.....	Quart.	190	.029	5.51	232	.029	6.73	232	.029	6.73
Butter.....	Pound.	66	.207	13.66	88	.263	23.14	88	.280	24.64
Eggs.....	Dozen.	240	.143	2.80	250	.182	3.79	270	.174	3.92
Fruits and vegetables purchased.				11.58			13.51			11.58
Beer.....	Gallon.	264	.058	15.31	317	.077	24.41	317	.080	25.36
Alcoholic drinks				1.54			1.93			1.93
Groceries:										
Oil.....	Quart.	19	.250	4.75	21	.265	5.57	21	.274	5.75
Coffee.....	Pound.	33	.198	6.53	33	.285	9.41	29	.341	9.89
Sugar.....	Pound.	31	.121	3.75	31	.131	4.06	40	.149	5.96
Soap.....	Pound.	132	.044	5.81	132	.038	5.02	132	.039	5.15
Miscellaneous				4.83			5.79			5.40
Haberdashery				5.79			6.76			6.76
Table utensils				2.32			2.90			2.90
Furniture				2.90			3.86			3.86
Clothing				30.88			42.46			44.39
Hats.....				4.83			5.79			5.79
Shoes.....				8.69			11.58			11.58
Rent and cultivation of garden.				15.44			16.41			16.41
Various, saloon, savings, etc.				14.48			33.78			38.60
Total expenditures.				256.31			337.56			348.21

The main interest in budgets of this character is the information afforded concerning the manner in which the workingman spends his income. Apart from this, however, it is possible, through reference to the column showing the prices of commodities which go to make up the usual articles of consumption of the workman, to determine whether the increase in wages shown in previous tables is counteracted or not through a change in the cost of articles he is accustomed to purchase. The comments of the author, in part, on this table are as follows:

“From these tables it can be seen that the greatest variations occur in the classes—

“First, meat. Workingmen in the north of France can now eat meat almost every day, while fifty years ago meat could not always be had once a week.

“Second, clothing. Although the price of materials for clothing has diminished within later years, the expenditure demanded by this item of the workingmen’s budget has sensibly increased. The same observation applies to all classes of society. Formerly tastes were more simple and the style less changing. To-day the workingman feels called upon to clothe himself and family in a more elegant manner, and to follow, in a measure, the frequent changes of fashion.

“Third, various expenses. This class, in which are included the expenditures for amusements and at the drinking places, has unfortunately greatly increased. We are of the opinion that it now represents 10 per cent of the total family expenditures. It is the drinking houses that absorb all.”

WORKINGMEN'S INSTITUTIONS.

The most important part of an investigation of special laboring communities must necessarily be that of the study of the inhabitants in their mutual relations. Such a grouping of men and women with identical interests gives rise to opportunities for the organization of institutions for mutual and collective action that do not exist elsewhere.

These opportunities can be taken advantage of in three ways; either through the creation by the employer of institutions for the benefit of his employees, through the organization by the employees themselves of institutions for their mutual benefit, or through the cooperation of the employer with his employees for the purpose of securing improved conditions. It is a matter of fundamental importance which of these three policies is in each case pursued. There has been a distinct evolution of sentiment in regard to the question here involved. From the original position that they had no obligation toward their employees other than that of the payment of wages, employers, in many cases, went to the opposite extreme. Though they created admirable institutions for the benefit of their employees, they treated the latter as wards, and retained in their own hands an arbitrary management of their new creations. Since then the workingman has more and more demonstrated his ability to look after his own interests, and, conscious of his own capacities, he has chafed under any species of tutelage. The employer has in many cases responded to this new sentiment, and as far as possible has given over the management of his social institutions into the hands of those for whose benefit they are intended. At the same time the employees are encouraged to organize independent institutions of their own.

This development of self-help and self-reliance by no means resulted in a curtailment of the province or the variety of workingmen's institutions. On the contrary, the development of the association idea has rendered possible the exercise of mutual action in fields that it was impossible for employer-managed institutions to enter.

The workingmen's institutions at Anzin are a notable example of institutions organized on a liberal basis. Whether regarded from the standpoint of the generous sacrifices made by the company for their maintenance, or from that of its liberal attitude regarding the participation of employees in their management, the social institutions of Anzin are the most remarkable of any in France. A study of the constitutions and workings of these institutions will therefore be made in great detail. These institutions are, however, by no means the unique possession of Anzin. Though the same ensemble of institutions exists in no other place in France, each one is but the representative of a class of institutions found at a great many of the other important industrial centers of the country. The study here made will, therefore, be of all the more importance, as it will represent a study, not of institutions that have an isolated existence, but of those that have received a widespread application and approval.

THE HOUSING OF EMPLOYEES.

The provision of dwellings for their employees by the large industrial concerns situated outside of the large cities is, in France, almost universal. "To-day," says M. Georges Picot, in his report on workingmen's houses for the International Exposition at Paris, 1889, "there is not in France a chief of an important industry who has not made efforts to aid in the housing of his employees." To secure this end four combinations have been devised and put into practice by employers:

First. The construction of houses in which their workingmen are lodged free from payment of all rent.

Second. The construction of houses that are afterwards rented to the workingmen at reduced charges.

Third. The construction of houses and their sale to employees.

Fourth. The advancement of money or provision of land to employees to enable them to acquire or build houses of their own.

Each system has its advocates, though the first is rarely practiced. At Anzin the efforts of the company have been directed in all of the last three ways. It has erected houses that it rents at low rates; it has erected others that it sells to employees; it has advanced money to and placed land at the disposal of its employees that they might acquire houses of their own according to their individual tastes and needs. The advantages of adopting several rather than a single device are evident. The inclinations of all workingmen are not similar. Some are satisfied to pay their yearly rent and are unwilling to make the sacrifices necessary to secure homes of their own; others eagerly embrace the opportunity of becoming house owners; and yet others prize highly the privilege of buying or constructing houses upon plans selected by themselves.

In the report on the Housing of the Working People, issued by the Department of Labor, the subject of workingmen's houses in France has been considered at length. The houses at Anzin are among those of which a description has been given. There is thus no necessity of giving an account of them here, further than a bare statement of what has been done in this respect.

The first houses erected by the company for the employees were begun in the year 1826. Since then it has bought or constructed, near all of its mine openings, houses that it rents to its employees. The total number of such houses in 1893 was 2,582.

On account of economy, the system of constructing houses in solid blocks was at first adopted. The great disadvantage of this system from the point of view of morality, however, soon led to its abandonment, and thereafter only isolated houses were built. Regarding these houses at Anzin and their rents, M. Picot, in his report above cited, says: "An excellent type of house has been selected. * * * A cellar, a ground floor with a large sitting room and kitchen, a first floor with two sleeping rooms, a garden of 200 meters (2,152.8 square feet);

such is the house that rents for from 3.50 to 6 francs (\$0.67½ to \$1.16) per month, 42 to 72 francs (\$8.11 to \$13.90) per year. The house costs 2,800 francs (\$540.40). If the interest on this is calculated at 4 per cent, 112 francs (\$21.62), and maintenance and taxes at 44 francs (\$8.49), the rent ought to be 156 francs (\$30.11). The company receives, in general, 72 francs (\$13.90), or a loss of 84 francs (\$16.21) from a normal rent, which is equivalent to a loss, on 2,628 houses (the number at the end of 1888), of 220,752 francs (\$42,605.14) a year. In other words, the company obtains a net gain of 28 francs (\$5.40) from a rent of 72 francs (\$13.90), or 1 per cent on the capital invested. In no other place have we found similar figures or efforts on so large a scale."

In 1867, in order to encourage saving among its workingmen, the company commenced the construction of isolated houses with gardens, which it sold to its employees at the cost of construction and the land. Those first erected were valued at from 2,200 to 2,700 francs (\$424.60 to \$521.10) each, but those erected later were of a better model and cost from 2,700 to 3,550 francs (\$521.10 to \$685.15). Payment for the houses was made in installments until the entire amount was paid. No interest of any kind was charged. Under this arrangement 93 houses had been erected up to 1893, at a total cost of 275,207 francs (\$53,114.95). To supplement its former work, the company decided, in 1869, to commence the advancing of money to the most worthy employees who wished to buy or build houses for themselves. Here the same facility for reimbursement by partial payments was offered. The advances were also without interest. In 1888 the company had advanced a total sum of 1,446,604 francs (\$279,194.57), of which all but 101,140.09 francs (\$19,520.04) had been repaid, and a total of 741 houses had been constructed or otherwise acquired by its employees.

If to the 2,628 houses rented by the company there be added the 93 houses built by it and sold to the workingmen, and the 741 houses acquired through advances made by the company to the employees, there results a total of 3,462 houses that had been provided through the efforts of the company in 1888, and the number remained practically unchanged in 1893. In 1888 the company estimated that it had lost rent to the amount of 84 francs (\$16.21) per year on each of 2,628 houses, or a total of 220,752 francs (\$42,605.14); interest on houses sold and not paid for, 3 per cent on 67,558.12 francs (\$13,038.72), or 2,026.75 francs (\$391.16); interest on sums still due on advances made to build, 1,022.20 francs (\$197.28); making the total cost of its effort for the housing of its employees 223,800.95 francs (\$43,193.58).

OLD-AGE PENSIONS.

The continuous existence, during a long period of years, of a large industrial establishment employing thousands of men gives rise to relations of responsibility on its part for the welfare of its old employees that do not exist where an industry is carried on on a less stable or smaller scale. In a company such as that of Anzin its workingmen

have in great part entered its service as boys to continue in its employ until sickness or old age incapacitates them for work. Sons have succeeded fathers, and are themselves succeeded by their sons. It is difficult for an American to appreciate the importance that the European workingman attaches to this question of the provisions against old age. The heroic measures taken within the last ten years by Germany, in which the fullest powers of the State have been used to secure this end, illustrate the importance of the problem and its acuteness at the present time. In France the efforts made by the company of Anzin to provide for its old employees are the most important made by a private undertaking.

Previous to 1887 the company followed the practice of according to workmen who had grown old in its service, and had become unable to work, a pension for the remainder of their lives, that constituted a direct charge upon the resources of the company. The employees participated in no way in the regulation of these pensions, nor was any portion of their wages during previous years retained to aid in the constitution of an insurance fund. There were serious objections to this system. The workmen did not like the feeling that they were pensioners on the bounty of the company; and the pension being dependent on the financial prosperity of the company, they did not feel the same security that an independent insurance scheme would have offered. Recognizing this, on January 1, 1887, the company inaugurated a new system of old-age pensions. By this system it frankly took its workmen into partnership and provided for the constitution, through mutual sacrifices, of an insurance fund that should be wholly independent of the company's funds or management. Though the company made sacrifices equal in amount to those under the old system, the pension was no longer a bounty but a right to which the workman would acquire a title by years of voluntary sacrifices. This system is the more remarkable, for in 1894 the Government, as we shall see, adopted in toto its principles in framing its law regulating the insurance of miners generally throughout France. The regulations then adopted by the company concerning the granting of pensions might almost be said to have formed a model after which the French law was drawn.

The essential provisions of these regulations may be summarized in the following paragraphs:

Dating from January 1, 1887, the company agreed to deposit in the National Bank for Old-Age Pensions,^(a) in the name of each working-

^a The National Bank for Old-Age Pensions is a State institution created in 1850 and reorganized in 1886 by the law of July 20 and decree of December 28. Its operations are guaranteed by the Government and controlled by a commission organized under the Department of Commerce, Industry, Posts, and Telegraphs. Its object is to enable depositors to secure by small annual payments the right to a life pension, not to exceed 1,200 francs (\$231.60) as a maximum, at the age of 50 years, or later, as the depositor may choose. The especial idea of Parliament was to offer to the ordinary laboring man the means to insure for himself through a small regular deduc-

man who would make an equal payment, a sum equal to $1\frac{1}{2}$ per cent of the wages of the workingman. The two deposits are then recorded in an individual account book, which remains the property of the workingman. For workmen employed below ground the payments of the company commence from the time of their entering upon such work. For those employed above ground the payments of the company commence when the workingmen are at least 18 years of age and have been in the employ of the company during three years. The payments of the company cease when the workingman has reached the age of 50 years. The latter, however, can defer the enjoyment of his pension, if he so desires, by continuing his personal payments. Through these payments the workingman is enabled to acquire the right to an annuity from the National Bank for Old-Age Pensions, on reaching the age of 50 years, for the remainder of his life. In case of permanent disability before reaching that age, he enters into the immediate enjoyment of a pension proportionate to his age and the amount of deposits to his credit.

In addition to these provisions whereby the company agreed to contribute toward the acquisition of pensions by workmen an amount equal to their own payments, the company further provided for the increase of these pensions as a reward for long and faithful service. When a workingman has fulfilled the double condition of being at least 35 years of age and has been ten years without interruption in the employ of the company, a special account is opened with him for the succeeding years of his connection with the company, or until he has reached the age of 55 years, or has been retired on his pension. The total can in no case exceed fifteen years. For each of these years a special supplement to the pension, when due, of 3 francs (58 cents) for workmen below and $1\frac{1}{2}$ francs (29 cents) for those above ground will be added. The total supplementary pension, except in cases of severe injuries or infirmities contracted during work, is not paid unless the workingman remains with the company until he is 50 years of age. The latter, also, can not enter upon the enjoyment of his supplementary pension until he ceases to work for the company. For workmen employed as overseers below ground the supplemental pension is raised

tion from his wages a provision for his old age. To this end the bank receives deposits of the smallest amounts which are increased by the accumulation of interest. With the exception of an amount sufficient to meet the daily payments, all the funds are invested in bonds of the French Government or other obligations guaranteed by the State. All interest thus earned is placed to the credit of the depositors. No deduction is made for the expenses of administration. In case of absolute incapacity to work, as the result of permanent infirmities, the depositor enters immediately into the enjoyment of a pension calculated according to his age and the amount of the payments he has made. Insurance through this institution is purely optional. No engagement, moreover, is entered into by the depositor as regards the amount or frequency of his payments. He can interrupt, diminish, or increase his payments as he desires. A separate account is kept with each depositor. The main use that has been made of this bank is its utilization by large industrial firms and mutual aid societies to provide for the insurance of their employees or members.

from 3 to 4 francs (58 to 77 cents), and for those employed above ground from 1½ to 2 francs (29 to 39 cents). For married workmen living with their wives the supplemental pension is doubled.

Provision is also made in all cases for the payment of pensions to widows of workmen. Transitory provisions make special arrangements for workmen already in the employment of the company but whose ages prevent them from acquiring pensions according to the regular rates provided in the new regulation.

The most important and at the same time admirable provision of the regulation is that whereby the service of the old-age pensions proper is entirely removed from the control of the company. There is thus absolutely no forfeiture principle. Each workman knows exactly where he stands as regards his ultimate right to a pension, and feels furthermore that such pension is in no way dependent upon his remaining in the service of the company. Independence is thus not sacrificed to the slightest extent.

Adherence to these regulations was purely optional. Ninety-five per cent of the workmen, however, recognized the great advantages offered to them and signified their approval. The following table shows the results of the efforts of the company for pensioning its employees, both for the years immediately preceding the adoption of the new plan and for the years succeeding, including 1893. The table following this gives the ages of all pensioners of the company on March 15, 1894.

PENSIONERS AND EXPENDITURES FOR PENSIONS OF THE COAL MINING COMPANY OF ANZIN, 1883 TO 1893.

Year.	Pensions to old employees.			Pensions to widows of employees.			Amount paid by company to National Bank for Old-Age Pensions.	Total amount expended by company for pensions.
	Pensioners.	Total pensions.	Average pension.	Pensioners.	Total pensions.	Average pension.		
1883.....	712	\$25,490.41	\$35.80	651	\$13,426.80	\$20.62	.....	\$38,917.21
1884.....	794	28,431.50	35.81	621	13,417.29	21.61	.....	41,848.79
1885.....	1,098	39,729.10	36.18	633	13,687.98	21.62	.....	53,417.08
1886.....	1,131	41,733.51	36.90	664	14,468.02	21.79	.....	56,201.53
1887.....	1,168	43,339.56	37.10	684	14,714.28	21.51	\$5,899.82	63,953.66
1888.....	1,253	47,923.08	38.24	686	14,857.83	21.66	20,926.55	83,707.46
1889.....	1,279	49,090.82	38.38	725	15,654.84	21.59	26,023.73	90,769.39
1890.....	1,295	49,571.30	38.27	740	15,961.95	21.57	31,436.81	96,970.06
1891.....	1,302	50,746.14	38.97	787	16,616.28	21.11	55,938.73	123,301.15
1892.....	1,368	53,452.52	39.07	804	17,072.34	21.23	55,736.86	126,261.72
1893.....	1,379	54,740.06	39.69	827	17,400.31	21.04	56,775.39	123,015.76

AGE OF EMPLOYEES PENSIONED BY THE COAL MINING COMPANY OF ANZIN, MARCH 15, 1894.

Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.	Age.	Number.
22	1	37	1	47	2	56	58	65	56	74	20	83	5
25	2	38	2	48	7	57	69	66	44	75	13	84	3
27	2	40	2	49	3	58	86	67	60	76	11	85	1
30	1	41	2	50	12	59	75	68	47	77	12	86	1
31	1	42	1	51	30	60	70	69	44	78	8	87	3
33	2	43	6	52	27	61	54	70	41	79	12	88	1
34	2	44	3	53	41	62	65	71	25	80	5	89	1
35	1	45	2	54	58	63	66	72	22	81	7		
36	1	46	1	55	59	64	75	73	27	82	4	Total.	1,363

In explanation of the first of these two tables, it should be noted that the average amount of the pensions shown indicates only the pensions granted by the company as reward for long service. In addition to this, since 1887 the workingmen have been acquiring a pension through the National Bank for Old-Age Pensions. Thus, in the year 1893, the company paid for this purpose the sum of 294,173 francs (\$56,775.39); in connection with this the workingmen have to pay an equal amount; the total amount paid into the national bank being, therefore, 588,346 francs (\$113,550.78).

The year 1893 practically closes the record of voluntary individual efforts on the part of mine owners to pension their old employees or their widows.

Mention has been made of a general law concerning old-age pensions for mine employees. This law was passed June 29, 1894, and by it the insurance of all mine employees was made obligatory.

According to it each mine operator was required to pay into the National Bank for Old-Age Pensions, or into a special institution created by the operator for his own employees or in connection with other mine operators for the mutual insurance of their employees, the organization of which had received the authorization of the Government, on behalf of each workingman the wages of whom did not exceed 2,400 francs (\$463.20) a year, a sum equal to 4 per cent of the latter's wages, half of which was to be deducted from the wages of the workingman and the other half be borne directly by the operators. These payments then were devoted to the ultimate acquisition of an old-age pension according to the regular rules of the National Bank for Old-Age Pensions.

For the company of Anzin and its employees, it will be noticed that the law made necessary but few changes. The company was already making such payments to the amount of 3 per cent of its employees' wages, in addition to the supplemental pensions for length of service. The general effect of the law was to make obligatory upon all mine owners the adoption of a system that had been practiced at Anzin since 1887.

The obligation to maintain aid societies for the aid of sick and injured workingmen was likewise imposed upon mine operators by this law, but this provision should be considered in connection with the account of the mutual aid societies of Anzin that follows.

MUTUAL AID SOCIETIES.

A temporary relief organization is a necessary complement of any system of old-age and invalidity insurance. The latter makes provision for the time when employees, through old age or disability, are unable longer to earn wages. The former provides for temporary incapacity or misfortune. Experience has demonstrated that it is advisable to keep these two services distinct from each other. The basis of a pen-

sion fund, resting as it does on calculations of probabilities according to mortality tables, ages of employees, etc., should be complicated as little as possible by other indeterminate charges.

To meet this want of mutual assistance in cases of sickness and other troubles, there has been developed in almost every commune and village of France one or more mutual aid societies (*sociétés de secours mutuels*). Their organization and operation afford a study of the most interesting institution that has been developed in France for improving the condition of the laboring classes. They are to France what the building associations are to America. Though ministering to different ends, they are similar to our building associations in that they are organized and managed for the most part by the workmen themselves. They bring the workmen together for purposes of mutual aid and action; their methods of operation and control are simple, and their expenses of administration are reduced to a minimum. M. Lafitte, an authority on all matters relating to mutual aid societies, thus tersely states their purposes (*a*): "Mutual aid societies have for their essential objects: To furnish to their members when sick medical attendance and necessary medicines; to pay to them a daily sum of money during their sickness; to secure to them a small pension after they have reached a certain age, and to defray the expense of a suitable burial on their death." To secure this each member pays into the funds of the society a fixed annual sum, as dues, usually divided into monthly or weekly payments.

These societies have had an existence in France for over fifty years. The central Government has encouraged their organization through the enactment of general laws, and a general control is exercised over their operations through a special bureau created in 1852 under the Department of the Interior. Annual reports are made by the societies to this bureau, and it in turn issues an annual report on their operations during the year. The important part that these societies play in the life of the workmen of France is shown in the following statistics of their number and amount of business for 1892, the latest year obtainable:

Number of societies.....	9, 662
Increase during year.....	248
Number of members.....	1, 503, 397
Increase during year.....	31, 112
Receipts during year.....	\$6, 052, 520. 53
Increase.....	138, 846. 90
Assets at end of year.....	37, 816, 056. 58
Increase during year.....	2, 333, 582. 23

The study of the whole question of mutual aid societies in France would be an interesting one. Here only a brief statement of their general character and importance has been given in order that the purpose of the societies that exist at Anzin may be understood.

a Essai d'une Théorie Rationnelle des Sociétés de Secours Mutuels, Paris, 1892.

Seven mutual aid societies have been organized under the patronage of the company. The constitutions of all of these societies are practically identical.

Briefly stated, each constitution provides for the organization of the workmen into a society by which, for the trifling payment of 50 centimes ($9\frac{5}{10}\%$ cents) a month, the members receive the right in case of sickness or accident to free medical attendance and medicines, to a benefit of 1 franc ($19\frac{3}{10}\%$ cents) during each day of their sickness, if such sickness is not more than one year in duration, and to various other relief, such as burial expenses, etc. To accomplish this, however, the receipts of the society from dues have to be largely supplemented from other sources. The company, therefore, turns over to it the amount of all fines collected by it for the infraction of any of its regulations, a practice that removes the criticism often made that fines are levied for selfish purposes, and also makes to it liberal gifts when the receipts of the society are not sufficient to meet its obligations.

In the following tables the combined operations of the seven societies at Anzin during the eleven years from 1883 to 1893 are presented. From the first table it will be seen that the number of employees who are members of the societies is now over 8,000, or 94 per cent of those eligible for membership. The increasing percentage from year to year of those eligible for membership who have become members shows an increasing appreciation of the benefits that the societies offer.

In the table of receipts and expenditures two points are worthy of special attention. The first is the very small percentage that the expense of administration is of the total expenditures of the societies, the average for the period covered being less than 2 per cent. The second is the policy of creating as rapidly as possible a permanent fund, so that the societies may always have on hand an emergency fund and at the same time profit from interest on their investments. In this connection there should be noted a feature that applies to all workmen's institutions whether organized at Anzin or elsewhere in France, and that is, that a system of mutual assessment in case of sickness or death has never found the slightest favor with the workmen. They desire to know in all cases the exact amount of their obligations. In other words, they prefer the system of fixed dues. There are no details of the table that are worthy of special comment. The growth of receipts and expenditures has been normal, corresponding to the growth in membership.

MEMBERSHIP OF MUTUAL AID SOCIETIES AT ANZIN AND DAYS OF SICKNESS AND EXPENDITURE PER ACTIVE MEMBER, 1883 TO 1893.

Year.	Honorary members.	Active members.	Employees eligible but not members.	Employees eligible for membership.	Per cent of active members of eligible employees.	Days of sickness.		Expenditure per active member.
						Total.	Per active member.	
1883.....	59	2,572	5,208	7,780	33	26,751	10.4	\$1.78
1884.....	263	3,170	4,259	7,429	43	28,007	8.9	1.55
1885.....	473	4,670	2,630	7,300	64	40,932	8.8	2.00
1886.....	455	a 5,940	a 1,627	a 7,573	78	60,623	10.2	2.59
1887.....	482	6,296	1,352	7,648	82	63,590	10.1	2.57
1888.....	487	6,544	1,126	7,670	85	74,162	11.3	2.74
1889.....	539	6,902	833	7,735	88	75,498	10.9	2.74
1890.....	525	7,605	1,044	8,649	88	87,202	12.8	8.21
1891.....	573	8,052	1,076	9,128	88	89,019	11.6	2.73
1892.....	551	a 8,199	a 590	a 8,800	93	95,851	11.7	2.99
1893.....	530	8,385	541	8,926	94	114,728	13.7	3.71

a The addition of the active members and employees eligible but not members does not produce the total eligible employees here shown. The figures are given, however, as reported to the Department.

RECEIPTS AND EXPENDITURES OF MUTUAL AID SOCIETIES AT ANZIN, 1883 TO 1893.

Items.	1883.	1884.	1885.	1886.	1887.
RECEIPTS.					
Balance on hand Jan. 1.....	\$1,930.22	\$2,275.83	\$2,918.62	\$6,537.09	\$8,338.72
Dues of honorary members.....	68.32	354.35	683.41	732.03	799.40
Dues of active members.....	4,796.44	4,975.16	8,792.16	12,102.21	12,690.74
Fines turned over by company to the societies.....		1.16	1,700.95	2,527.21	2,241.57
Gifts from the company.....		19.30	1,042.20	1,166.68	1,299.76
Entrance fees.....	7.29	27.84	146.49	247.67	128.25
Interest on funds invested.....	35.73	34.91	119.90	93.95	139.14
Miscellaneous receipts.....	14.73	140.14	494.69	313.33	183.79
Total.....	6,852.73	7,828.69	15,898.42	23,720.17	25,880.37
EXPENDITURES.					
Expenses of administration.....	59.25	86.72	136.32	238.93	259.10
Aid to sick members.....	4,392.59	4,560.98	7,025.30	11,033.23	12,109.74
Expenses for funerals.....	35.69	123.39	183.95	217.90	186.63
Aid to widows, orphans, and families in need.....	34.74	73.34	1,871.13	3,139.43	3,142.85
Other expenses.....	4.63	65.70	145.23	751.92	490.23
Balance on hand Dec. 31.....	2,275.83	2,918.62	6,537.09	8,338.72	9,701.82
Total.....	6,852.73	7,828.69	15,898.42	23,720.17	25,880.37

Items.	1888.	1889.	1890.	1891.	1892.	1893.
RECEIPTS.						
Balance on hand Jan. 1.....	\$9,701.82	\$9,455.45	\$10,807.56	\$8,903.26	\$11,152.59	\$13,004.34
Dues of honorary members.....	710.14	720.28	681.00	833.95	819.96	774.99
Dues of active members.....	13,160.96	13,748.74	15,243.39	16,793.80	18,117.10	17,856.94
Fines turned over by company to the societies.....	2,386.52	2,195.65	2,439.78	3,103.62	2,553.99	6,795.87
Gifts from the company.....		2,528.69	3,396.30	1,779.46	4,272.85	4,517.38
Entrance fees.....	135.97	128.92	173.00	91.24	103.83	46.90
Interest on funds invested.....	264.81	271.27	236.77	264.86	341.07	290.66
Miscellaneous receipts.....	187.62	649.22	350.76	1,375.80	136.98	984.83
Total.....	27,404.76	29,698.22	33,329.06	33,145.99	37,498.37	44,271.91
EXPENDITURES.						
Expenses of administration....	247.81	352.19	385.62	510.88	520.45	643.58
Aid to sick members.....	13,304.21	13,267.50	17,940.64	15,427.55	17,451.74	21,144.21
Expenses for funerals.....	354.73	254.10	334.08	454.52	429.04	825.07
Aid to widows, orphans, and families in need.....	3,320.47	4,548.26	5,220.17	3,976.67	5,666.88	6,729.94
Other expenses.....	722.09	468.61	545.29	1,623.78	425.92	1,769.02
Balance on hand Dec. 31.....	9,455.45	10,807.56	8,903.26	11,152.59	13,004.34	13,160.09
Total.....	27,404.76	29,698.22	33,329.06	33,145.99	37,498.37	44,271.91

The enactment of the law of June 29, 1894, necessitated a number of changes in the organization of these societies. The law made the organization of aid societies for the relief of employees in cases of sickness and accidents obligatory upon all mine operators. While it provided that wherever such societies were already in existence it would not be necessary to organize new societies, it required that they should be reorganized to such an extent as to comply with the provisions of the law. The chief innovation required was that concerning the sources of receipts. While heretofore the company had voluntarily contributed to the resources of the societies through the turning over to them of the product realized from fines, and through gifts from time to time, it was now rendered obligatory upon it to contribute toward the maintenance of the fund to an equal extent with the workingmen. This was in accordance with the provision of the law, which provided that the receipts of such societies should come from the following five sources: (1) A deduction from the wages of each employee, the amount of which is determined by the administration of the society and which can not exceed 2 per cent of his wages; (2) an equal payment by the mine operator; (3) subsidies granted by the State; (4) gifts and legacies, and (5) the product of fines for the infraction of certain regulations relating to the conduct of work below ground.

The law further made certain general provisions regarding the nature of the relief to be granted, for the government of the society through the mutual participation of the members and of representatives of the mine owners, etc. These sections, however, left a great deal of liberty to the individual societies and necessitated but few changes in societies already in existence.

COOPERATIVE DISTRIBUTIVE SOCIETY.

The organization of cooperative stores in the mining centers of France has, in a number of instances, achieved notable success. At Anzin a society was organized as early as 1865, and it is thus one of the first cooperative distributive societies created in France. Its creation was the direct result of the influence of the success of the Rochdale Pioneers in England. Operations commenced in 1865, but the society, properly speaking, had a legal existence only after December 10, 1867, when it took advantage of the law of July 24-29, 1867, to become a legal corporation.

The organization of the society is that of a joint stock company, but on such a basis that all speculative interest in the stock is eliminated. Each member of the society is required to own one, and can not own more than two shares of stock. The value of the shares of stock is 50 francs (\$9.65) each. The society is absolutely independent of control by the company of Anzin. Membership is strictly limited to employees of the company, and only members can trade at the stores. The object of the society has always been to buy merchandise and the

usual articles consumed by miners at wholesale prices, and to sell them to the members in such a way as to bring the purchasers in direct relation with the producer and eliminate as far as possible the profits of the middleman. Largely with the idea of encouraging savings, it has been the steady policy of the society to fix the prices of articles as nearly as possible at the rate charged in neighboring retail stores, great care being taken, however, to in no case exceed those prices. As, with rare exceptions, supplies are purchased directly from the producers without the intervention of the middleman, a considerable profit is accumulated at the end of each year for distribution among the members. After the payment of necessary running expenses the profits remaining go first to the payment of a 5 per cent dividend on the stock, and the residue to purchasers in proportion to the value of their purchases during each year.

From the start the society has developed rapidly. The two following tables show from year to year, since organization, the membership of the society, the amount of capital, the amount of dividends paid, the total value of sales, the amount of profits earned, and the proportion that this latter bears to the value of all sales:

MEMBERS, CAPITAL, AND DIVIDENDS OF THE COOPERATIVE DISTRIBUTIVE SOCIETY OF ANZIN, 1866 TO 1894.

Year.	Members.	Capital.	Divi- dends paid.	Year.	Members.	Capital.	Divi- dends paid.
1866.....	577	\$5,568.05	\$96.04	1881.....	2,544	\$24,549.60	\$1,144.45
1867.....	785	7,575.25	148.43	1882.....	2,625	25,331.25	1,206.16
1868.....	1,180	11,387.00	360.02	1883.....	2,373	22,899.45	1,249.92
1869.....	1,357	13,095.05	654.75	1884.....	2,683	25,890.95	1,223.91
1870.....	1,441	13,905.65	695.28	1885.....	2,928	28,265.20	1,303.94
1871.....	1,630	15,729.50	786.48	1886.....	3,021	29,152.65	1,396.01
1872.....	1,839	17,746.35	835.73	1887.....	3,043	29,364.95	1,412.52
1873.....	2,123	20,486.95	791.50	1888.....	3,123	30,136.95	1,441.57
1874.....	2,166	21,094.90	935.15	1889.....	3,227	31,140.55	1,482.47
1875.....	2,159	20,834.35	962.02	1890.....	3,319	32,023.35	1,535.72
1876.....	2,204	21,268.60	987.82	1891.....	3,366	32,674.90	1,574.28
1877.....	2,127	20,525.55	978.62	1892.....	3,497	33,746.05	1,605.87
1878.....	2,154	20,786.10	978.86	1893.....	3,629	35,019.85	1,684.19
1879.....	2,238	21,596.70	1,016.28	1894.....	3,760	36,284.00	1,753.98
1880.....	2,386	23,024.90	1,077.13				

SALES AND PROFITS OF THE COOPERATIVE DISTRIBUTIVE SOCIETY OF ANZIN,
1866 TO 1895.

[It will be noticed that the profits distributed each year prior to 1872 represent a higher per cent of the value of sales than is indicated in the table. The figures are given, however, as published by the company.]

Year.	Total value of sales.	Profits distributed among purchasers.		Year.	Total value of sales.	Profits distributed among purchasers.	
		Amount.	Per cent of total sales.			Amount.	Per cent of total sales.
1866 { 1st half...	\$13,706.88	\$1,568.12	8	1881 { 1st half...	\$214,046.00	\$25,685.52	12
{ 2d half...	24,617.55	3,001.08	8	{ 2d half...	225,522.22	27,062.66	12
1867 { 1st half...	31,447.31	3,817.62	9	1882 { 1st half...	228,626.55	27,555.19	12
{ 2d half...	35,740.90	4,433.96	9	{ 2d half...	219,201.80	26,304.16	12
1868 { 1st half...	47,698.78	5,823.44	9	1883 { 1st half...	224,236.80	26,908.42	12
{ 2d half...	64,818.98	7,054.75	9	{ 2d half...	231,009.94	27,721.08	12
1869 { 1st half...	66,449.04	8,367.33	7 $\frac{1}{2}$	1884 { 1st half...	224,487.02	29,183.31	13
{ 2d half...	69,696.44	9,245.07	9	{ 2d half...	182,050.66	25,487.09	14
1870 { 1st half...	77,497.93	10,034.51	9	1885 { 1st half...	187,059.38	24,317.73	13
{ 2d half...	82,056.75	9,296.22	8	{ 2d half...	195,318.89	25,391.46	13
1871 { 1st half...	74,988.49	9,825.94	9	1886 { 1st half...	213,454.34	27,749.07	13
{ 2d half...	92,214.59	12,249.07	9	{ 2d half...	213,001.66	27,690.22	13
1872 { 1st half...	140,716.18	14,071.62	10	1887 { 1st half...	214,756.20	26,307.63	12 $\frac{1}{2}$
{ 2d half...	134,393.59	16,119.98	12	{ 2d half...	217,819.39	28,316.52	13
1873 { 1st half...	152,517.72	18,301.96	12	1888 { 1st half...	207,302.22	26,949.29	13
{ 2d half...	174,434.37	20,932.10	12	{ 2d half...	216,531.41	28,149.08	13
1874 { 1st half...	220,550.90	22,055.09	10	1889 { 1st half...	228,109.11	29,654.18	13
{ 2d half...	191,832.25	19,183.23	10	{ 2d half...	438,850.06	57,050.51	13
1875 { 1st half...	168,556.54	16,855.66	10	1890 { 1st half...	460,811.35	59,905.47	13
{ 2d half...	168,657.06	16,865.71	10	{ 2d half...	466,137.66	62,904.41	13
1876 { 1st half...	179,454.40	17,945.44	10	1891 { 1st half...	447,272.11	67,090.81	15
{ 2d half...	181,327.32	18,132.73	10	{ 2d half...	448,248.90	67,237.33	15
1877 { 1st half...	182,211.12	18,221.11	10	1892 { 1st half...	447,272.11	67,090.81	15
{ 2d half...	175,245.52	17,524.55	10	{ 2d half...	448,248.90	67,237.33	15
1878 { 1st half...	177,767.48	17,776.75	10	1893 { 1st half...	447,272.11	67,090.81	15
{ 2d half...	168,130.21	16,494.32	11	{ 2d half...	448,248.90	67,237.33	15
1879 { 1st half...	178,919.95	19,681.19	11	1894 { 1st half...	447,272.11	67,090.81	15
{ 2d half...	176,254.08	21,150.48	12	{ 2d half...	447,272.11	67,090.81	15
1880 { 1st half...	193,371.19	23,204.54	12	1895 { 1st half...	447,272.11	67,090.81	15
{ 2d half...	212,044.84	23,324.93	11	{ 2d half...	447,272.11	67,090.81	15
				Total	10,209,665.54	1,266,332.90	12 $\frac{1}{2}$

During this period, therefore, profits to the amount of 6,561,310.34 francs (\$1,266,332.90) have been distributed among the members, or an amount equal to 12 $\frac{1}{2}$ per cent of the total value of sales. In addition to this all the profits have not been distributed. Considerable sums have been devoted to the acquisition of property in which the business is carried on. The society has constructed commodious quarters for its central store and for three of its most important branches, all of which are now completely paid for. The operating expenses have been about 4 per cent of the cash receipts on sales.

Though the company has interfered in no way in the management of the society, it has looked with great favor on its operations. The effect on the morale of their employees has not been the least of its advantages. Its method of division of profits has furnished a means to the workingman to accumulate savings that he would not have had under the ordinary system of trading at retail stores. The rules of the society absolutely forbidding sales on credit have prevented its members from running in debt. Its meetings and the necessary control over the administration of the affairs of the society have been of real educational advantage to them.

MEDICAL SERVICE.

The company of Anzin has practically assumed the entire burden of the care of its employees and to some extent of their families in cases of accidents or sickness. By direction of the administration in 1867, aid of four kinds was ordered to be granted in such cases, viz, medical attendance, medicines, food for the sick, such as bouillon and wine, and pecuniary aid.

A sharp distinction is made between the different services, and especially between the workmen employed below and those employed above ground, as regards the amount of assistance granted. A special care and solicitude is exercised over the miners proper and the other employees working below ground. In the case of the former the granting of medical assistance is extended to their wives, children, and parents, if living with them at the time. To workmen employed above ground medical attendance is not extended to the other members of the family, though medical supplies are issued for their use. Medical attendance and medical supplies are also granted to all workmen on the pension roll, provided their individual pensions do not exceed 1,000 francs (\$193) per annum. Regarding the granting of pecuniary aid, the company has issued the following regulations and tariff:

First class.—In cases of severe wounds, such as fracture of the femur, tibia, or humerus, accidents to the head affecting the brain, amputation of limb as the result of an accident, serious burns from hot water or explosion of fire damp, or wounds causing the loss of one or both eyes, there will be granted per fortnight to married workmen, 30 francs (\$5.79); to unmarried workmen, other than putters, 15 francs (\$2.89½), and to putters 10 francs (\$1.93).

Second class.—In case of fracture of the clavicle without internal lesion, simple fracture of the forearm, mutilation of the fingers or toes, slight burns, or injuries endangering the sight, to married workmen, 20 francs (\$3.86); to unmarried workmen, other than putters, 10 francs (\$1.93), and to putters, 6 francs (\$1.16).

Third class.—In case of slight injuries of any kind, to married workmen, 10 francs (\$1.93); to unmarried workmen, other than putters, 5 francs (96½ cents), and to putters, 3 francs (58 cents).

For the administration of the health service the company has in its employ eleven physicians, each of whom, with the exception of one, who devotes himself to diseases of the eye, has his particular district. Each has a consultation room, where, during certain hours, he receives all who are able to come to him. The other sick are cared for in their own homes, and a horse and carriage is furnished each physician with which to make his visits.

The expenditures entailed by the maintenance of this medical and relief system is given in a table on page 255.

SAVINGS BANK.

But a few words will be required concerning the encouragement by the company of savings among its employees. Previous to the passage of the act of 1881 creating a national postal savings bank, the company of Anzin, in common with other industrial concerns, stimulated in every way the spirit of saving among its employees. To this end the company created, in 1869, a savings bank in which its employees were encouraged to deposit their savings and upon which they received interest at the rate of 5 per cent for amounts under 2,000 francs (\$386) and 4 per cent for amounts over that sum. The national savings bank created in 1881 offered all necessary inducements and guaranties of security. The company therefore reduced the rate of interest paid to 3 per cent, the same as that paid by the Government, and ceased to encourage deposits in its own bank. Thus the number of depositors, that had reached in 1877 a total of 1,431, with deposits of 1,940,011.77 francs (\$374,422.27), has now sunk to less than one-third that number and the amount of deposits has been correspondingly decreased.

EDUCATION.

The company first began to occupy itself with the provision of school facilities for the children of its employees in 1873. Previous to 1882, the year in which the law providing for free public instruction was passed, the efforts of the company represented a considerable expense. It erected numerous infant and primary schools and, in connection with the latter, workshops for manual training. At the present time, however, it possesses actually but one school, and its total expenditure for schooling in 1888 was 31,875.45 francs (\$6,151.96), divided as follows:

Subsidies to teachers and infant schools	\$4, 046. 14
Fuel for schools.....	134. 02
Prizes in the form of books and savings-bank deposits.....	142. 82
Maintenance of its own school.....	1, 828. 98
Total.....	6, 151. 96

In addition it maintains a special advanced school conducted by its own engineers for the purpose of educating skilled workingmen, the pupils of which are taken from among the best scholars of the primary schools. The company also pays the tuition and board of two of its young workingmen at the school for boss miners at Douai (École des Maîtres-mineurs de Douai).

Four churches have also been erected and are now owned by the company. All are consecrated to the Catholic faith.

MISCELLANEOUS AID TO WORKINGMEN.

In addition to the various ways for aiding workingmen which have been enumerated, the company contributes to their support in a number of ways that can not well be classified. Of these, the principal items

of expense are the furnishing of fuel free to all of its employees, the furnishing of the first working suit to its miners when they commence work below ground, the granting of 50 centimes ($9\frac{5}{10}\%$ cents) per day to wives of workingmen during the latter's period of military service, to which is added 25 centimes ($4\frac{5}{10}\%$ cents) per day for each child they may have, the aiding of orphans until they are of an age to commence work, and the aiding of workingmen generally and their families in cases of distress.

The expenditures of the company for these purposes, as well as for the maintenance of its medical service for the eleven years, 1883 to 1893, inclusive, are given in the following table:

EXPENDITURES OF THE COAL MINING COMPANY OF ANZIN FOR MEDICAL SERVICE, AID, ETC., 1883 TO 1893.

Year.	Medical service (salaries of physicians, medicines, medical supplies, etc.).	Sick and injured.	Old employees, their widows or parents, and orphans.	Employees in need.	Wives and children of employees doing military service.	First working suits, grants to mothers on first communion of their children, etc.	Total expenditures (aid to employees and medical service).	Value of fuel given to employees and pensioners.
1883.....	\$25,908.70	\$11,484.08	\$14,019.78	\$1,397.25	\$1,623.47	\$1,837.57	\$56,270.85	\$87,764.32
1884.....	25,208.13	10,222.69	12,118.64	1,537.88	1,663.61	1,592.44	52,343.39	66,923.60
1885.....	22,338.24	10,009.18	14,240.28	4,447.32	1,399.11	1,042.39	53,476.52	50,845.48
1886.....	24,195.44	11,474.29	11,163.26	2,928.20	1,758.23	1,243.38	52,762.80	63,879.00
1887.....	23,710.02	12,375.26	10,125.12	3,200.76	1,441.27	1,287.43	52,139.86	69,763.71
1888.....	23,946.23	12,819.24	10,185.97	2,696.99	1,640.02	1,208.72	52,497.17	69,312.09
1889.....	24,285.21	13,856.41	10,242.93	4,406.18	1,270.95	1,288.70	55,350.38	71,991.70
1890.....	27,459.79	15,967.15	9,672.24	5,426.46	1,186.28	1,314.33	61,006.25	76,544.96
1891.....	28,643.96	14,790.26	10,211.20	4,430.58	1,560.65	1,376.40	61,013.05	81,069.28
1892.....	30,208.12	17,708.19	9,749.06	2,270.74	2,468.61	1,210.42	63,615.14	84,366.49
1893.....	34,737.99	20,626.65	10,458.47	3,907.96	1,188.97	1,386.36	72,306.40	81,249.91

RECAPITULATION OF THE EXPENDITURES OF THE COAL MINING COMPANY OF ANZIN FOR THE BENEFIT OF ITS EMPLOYEES.

A survey has been made in considerable detail in the foregoing pages of all of the various institutions in which the workingmen of Anzin participate. Concerning the general question of workingmen's institutions it is important to know what is the total expense that the maintenance of these institutions entails upon the company, what pecuniary advantage the sum total of these efforts confers upon the workingmen, and what relation this latter bears to the amount they receive in the way of wages. A recapitulation of the total expenditures of the company for the benefit of its employees has therefore been made in such a way as to bring out these facts for the eleven years, 1883 to 1893.

Following this table is another one similarly constructed, giving the same information for a number of the most important coal mining companies other than that of Anzin. The data for this table were taken from a work entitled *L'Organisation du Travail dans les Mines et Particulièrement dans Les Houillères*, by Charles Ledoux, engineer in chief of mines, Paris, 1890, and relate to the year 1888.

From the second table it is evident that the company of Anzin by no means holds a unique position in respect to the creation by it of workmen's institutions. The existence of institutions such as have been described for Anzin is almost universal among the large coal mining companies of France. Wherever material for a comparison of conditions at Anzin with those existing in other mining centers of France could be obtained, the original statement, that in choosing Anzin for a detailed study a typical center had been selected, seems to be justified.

EXPENDITURES OF THE COAL MINING COMPANY OF ANZIN FOR THE BENEFIT OF EMPLOYEES, BY OBJECTS OF EXPENDITURE, 1883 TO 1893.

Year.	Expenditures for—						Total expenditures.	Expenditures per employee.	Per cent of expenditures of earnings.
	Pensions.	Housing.	Schools.	Medical service.	Free fuel.	Direct pecuniary and other aid.			
1883	\$38,917.21	\$45,159.70	\$8,260.91	\$25,908.70	\$87,764.32	\$30,362.15	\$236,372.99	\$17.34	7.98
1884	41,848.79	44,763.66	7,169.10	25,208.13	66,923.60	27,135.26	225,665.53	19.55	9.99
1885	53,417.08	44,349.28	4,750.29	22,338.24	59,845.48	31,138.28	215,838.65	20.40	10.12
1886	56,201.53	42,324.80	5,255.30	24,195.44	63,679.00	28,567.36	220,223.43	19.35	9.55
1887	63,953.68	42,878.19	5,194.55	23,710.02	69,763.71	28,429.84	233,929.97	20.55	9.99
1888	83,707.45	43,193.66	5,223.51	23,946.23	69,312.09	28,550.94	253,933.88	22.05	10.70
1889	90,789.40	43,125.42	5,160.57	24,285.21	71,991.70	31,065.17	266,397.47	22.58	10.52
1890	96,970.05	42,401.23	5,121.47	27,439.79	76,544.96	33,566.46	232,043.96	22.59	9.56
1891	123,301.15	43,284.97	5,342.35	28,643.96	81,089.26	32,369.09	314,010.78	24.63	10.08
1892	126,261.71	42,221.30	5,452.11	30,208.12	84,366.09	33,407.02	321,916.35	25.61	10.74
1893	128,915.76	42,179.65	5,447.07	34,737.99	81,249.91	37,568.41	330,098.79	26.01	10.84
Total	904,263.79	475,881.86	62,377.23	290,621.83	812,510.12	342,159.98	2,900,431.80	.....	.....
Average for the 11 years.	82,205.80	43,261.99	5,670.66	26,420.17	73,864.55	31,105.45	263,675.62	.....	.....

^a This total is \$12,616.99 more than the sum of the items. The explanation is not known. The figures are given as reported to the Department.

^b See preceding note.

EXPENDITURES OF VARIOUS COAL MINING COMPANIES IN FRANCE FOR THE BENEFIT OF EMPLOYEES, BY OBJECTS OF EXPENDITURE, 1888.

Name of company.	Expenditures for—						Total expenditures.	Expenditures per employee.	Per cent of expenditures of earnings.
	Pensions.	Housing.	Schools.	Medical service.	Free fuel.	Direct pecuniary and other aid.			
Anzin	\$83,707.45	\$43,193.66	\$5,223.51	\$23,946.23	\$69,312.09	\$28,550.94	\$253,933.88	\$22.05	10.70
Douchy	8,051.60	12,886.94	227.16	2,688.77	9,919.10	7,017.55	40,791.12	29.92	13.00
Liévin	181.03	35,291.63	5,298.38	5,519.55	11,904.86	7,786.69	65,952.14	30.02	15.00
Bessèges	8,370.17	.....	7,561.91	7,847.96	20,059.77	22,887.32	66,727.13	28.73	10.92
Blanzy	19,251.48	30,176.03	33,701.11	7,776.97	61,716.86	50,554.56	203,176.99	38.28	10.80
Courrières	3,849.76	21,618.00	5,450.38	8,479.40	24,704.00	7,000.57	71,100.11	20.07	9.00
Béthune .....	.....	.....	.....	.....	.....	.....	96,500.00	31.46	16.00
Nœux .....	.....	.....	.....	.....	.....	.....	114,935.36	28.14	.....
Leus (b) .....	.....	.....	.....	.....	.....	.....	158,453.00	29.92	15.00
Mont Lambert .....	.....	.....	.....	.....	.....	.....	40,144.00	18.34	8.00
Roche-la-Mo- lière et Fir- miny .....	.....	.....	.....	.....	.....	.....	43,260.18	16.02	7.00

^a This includes contributions for religious purposes.

^b The figures given are for 1885.

From the first of these tables it is possible to follow in a very clear way the progress of institutions and work undertaken by the company of Anzin for the benefit of its employees. Taken in its entirety, the

average expenditure per member has steadily increased. From a sum of 89.83 francs (\$17.34) in 1883 the amount increased every year, with the exception of 1886, until it stood at 134.77 francs (\$26.01) in 1893.

If the table be still further examined in order to determine the particular items of expenditure that are responsible for this increase, it will be seen that the item of pensions accounts for the entire augmentation. Pensions have increased from 201,643.57 francs (\$38,917.21) in 1883 to over three times that sum, or 667,957.30 francs (\$128,915.76) in 1893. This fact is but illustrative of the direction toward which more than any other the attention of employers and employees alike throughout France has been turned during the past decade for the improvement of the condition of the working classes. The one great aim of those trying to better the condition of these classes is to insure that in some way or other provision shall be made for workingmen after they have become old and incapacitated for labor. At the present time very nearly a consensus of opinion has been reached that this can only be accomplished through an insurance system to be maintained through the mutual efforts of employers and their employees.

The final column of this table has been introduced in order to show, from year to year, the relative value of these supplemental advantages as compared with the amount the workingmen receive in the way of wages, strictly speaking. It is a matter of considerable importance in considering the whole question of workingmen's institutions, to determine whether with their development the tendency is for the workingmen to receive a larger or smaller portion of their reward in this indirect way, or directly, through the payment of cash wages. The information here afforded is direct upon this point. Though the absolute value of the supplementary advantages per member has increased from 89.83 francs (\$17.34) in 1883 to 134.77 francs (\$26.01) in 1893, this represents but a slightly greater percentage of wages in later than in earlier years. In the year 1883 the percentage of supplementary advantages of wages, 7.98, seems to have been abnormally low. In 1884, however, it was 9.99, or less than 1 per cent less than it was ten years later, in 1893, when the percentage of supplementary advantages of wages was 10.84.

CONCLUSION.

A position has now been gained from which it is possible to make a general survey of the life of miners and other mine employees at Anzin. Until 13 years of age the future workingman attends a school supported by the joint efforts of the State and the mining company of Anzin. When 13 he enters the employ of the company, and is assigned to light surface work, such as sorting or washing coal. In the course of a few years he is drafted below ground and commences his actual life as a miner. Meanwhile he has become a member of a mutual aid society, from which he is entitled to receive certain benefits in case of sickness or accident. If at all industrious he can

commence the acquisition of a house and a garden of sufficient size to allow him to raise vegetables for his own consumption; and in 15 or 20 years, or when he is 35 or 40 years of age, he will have made all the necessary payments and have become the absolute owner of the property. If a miner proper his average daily wages are 5.45 francs (\$1.05) per day, or 1,510.15 francs (\$291.46) per year; if not, his wages will vary from an average of 4.84 francs (93 cents) to 3.46 francs (67 cents) per day, or 1,371.81 francs (\$264.76) to 1,104.94 francs (\$213.25) per year, according to whether he is employed below or above ground. His supplies he will purchase at the stores of the cooperative society of which he is a member, and on which he receives at the end of each half year a participation in profits to the extent of 12 or 13 per cent of the value of his purchases. Fuel, a no inconsiderable item of expense, he receives free from the company.

In the meantime, through payments of an amount equal to 2 per cent of his wages to the National Bank for Old-Age Pensions, the company making payments of a like amount, he is acquiring the right to a modest pension after he has reached the age of 50 years for the remainder of his life. If, however, as is frequently the case, he does not desire to cease work, he can postpone the enjoyment of his pension, in which case its amount will be considerably increased.

Of all the data available, however, for determining the success of the means employed for improving the condition of workingmen of a particular establishment, those of the stability of employment are, undoubtedly, of the greatest significance. The desire on the part of employers for a stable body of employees has been the inspiration of almost all the institutions created or encouraged by the former for the latter's welfare. As far as such an index is obtainable, statistics of the length of time that workingmen continue in the employment of a company will register the extent to which the advantages there offered are appreciated.

Stability of employment is not only a desirable result; it is indispensable to the continued working of the various institutions that have been described. A slight inspection, for example, of the plans upon which pension funds are organized, or of the conditions which regulate the acquisition of homes by workingmen, shows that without such stability their successful operations would be impossible. It is therefore of prime importance that all available information bearing on this point should be sought.

The most perfect stability is that which corresponds to the case where an establishment recruits its employees from young workingmen who remain in its employ continuously until incapacitated by sickness or old age. The ratio of stability in this case would correspond with the mortality and invalidity table of such workingmen.

The elements involved in the presentation of information concerning stability of employment relate to the ages of employees on commencing

work, the number of years that they have been employed, and the number leaving the service of the establishment and for what reason. Information on all these points has been secured for the mining company of Anzin.

In the six tables that follow are presented all the facts necessary for establishing the stability of the personnel at Anzin. In the main the tables are self-explanatory and call for but little comment. In them is shown a continuity and stability of employment which, under the conditions of modern industry, it would seem almost impossible to exceed. This is the more remarkable when one considers that Anzin is in the center of the greatest coal-mining region of France and in close proximity to the coal mines of Belgium, and it would be easy for a miner to go from mine to mine in search of employment.

By reference to the table on page 231, giving the ages of employees when they commenced work for the company of Anzin, it will be seen that the service of the company is almost exclusively recruited by the engagement of youths under 15 years of age. During the six years from 1888 to 1893, 49.29 per cent of the total number of new working-men employed were under that age, and if there be omitted those recorded as commencing work between the ages of 20 and 25, as the result of the completion of their terms of military service, the statement can be made that nearly two-thirds of the employees of the company enter its service as children between the ages of 13 and 14 years.

The first three tables that follow show in detail the ages and length of service of all employees. It is important to know their ages, for, as can be seen in the present case, practically all of those who have been employed but a short time are so youthful that their longer employment would be impossible.

The fourth table is in the nature of a summary, with the element of age, however, omitted. It shows that 12.17 per cent of all employees below ground have been employed 30 years, 27.63 per cent 20 years, and 60.10 per cent 10 years or over. The percentages of all employees are 12.32, 27.83, and 59.82, respectively. If, in calculating these percentages, all employees under 30 years of age be omitted, it will be seen that the very high percentage of 94.58 have been employed 10 years, 63.59 per cent have been employed 20 years, and 28.14 per cent 30 years or more.

The second table on page 263 shows a calculation of the stability of employment on three different dates, in order to determine if there has been any material difference in this respect in recent years. An establishment that is constantly adding to the number of its employees is of course constantly increasing the number of employees that have been employed but a short time, an element which should be taken into consideration in attempting to make any comparisons.

The final table is an analysis of the reasons for which employees left the service of the company. The number leaving voluntarily bears but

an insignificant relation to the total number of employees. Much the larger number leaving resulted from death, old age, or from the necessity of entering the military service.

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN AT WORK BELOW GROUND,
BY AGES AND YEARS OF SERVICE, FEBRUARY, 1892.

Age.	Years of service.													Total.
	Under 1.	1 or under 2.	2 or under 5.	5 or under 10.	10 or under 15.	15 or under 20.	20 or under 25.	25 or under 30.	30 or under 35.	35 or under 40.	40 or under 45.	45 or under 50.		
12														151
13	141	8	2											378
14	138	224	16											445
15	55	132	258											393
16	43	39	310	1										450
17	50	28	232	140										358
18	24	22	66	246										384
19	23	22	39	300										412
20	19	19	22	351	1									365
21	9	2	16	331	7									385
22	9	2	6	90	278									348
23	4	1	2	44	297									322
24	5	1	6	28	282									340
25	3	1	3	20	310	3								337
26	5	5	7	27	237	56								296
27	3	3		29	69	192								284
28	3	5	47	239										276
29	3		1	12	26	234								280
30			1	19	24	234	2							295
31			4	13	25	223	29							251
32	4	1	1	14	23	97	113							237
33	2		1	12	86	63	123							218
34	4	1		13	20	39	141							203
35	1		1	6	12	29	142	12						190
36	1		2	5	13	24	92	53						185
37			1	9	13	21	61	80						187
38		3	11	12	32	44	85							187
39				7	15	18	32	115						211
40	1		9	10	32	37	82	39	1					162
41				3	9	17	23	55	55					143
42			1	4	5	16	23	18	76					162
43			1	1	9	16	19	21	95					181
44			1	7	11	26	8	20	108					182
45			2	3	11	22	7	14	114	9				168
46					10	16	22	10	94	16				135
47				1	5	13	13	6	31	66				148
48				3	1	17	15	9	33	70				141
49				2	7	16	18	7	20	71				122
50				1	4	12	8	8	21	67	1			107
51				2	4	5	6	13	16	38	23			97
52					4	14	9	5	9	16	40			72
53					4	2	6	6	5	10	36	3		71
54					2	7	10	5	5	7	31	4		42
55					1	3	8		3	2	8	17		25
56					2	2	4	1	4		3	9		14
57					2	2	1	2	2		1	4		18
58					1	4				1	3	9		7
59					1		1	1	1			3		7
60						2		3				2		1
61											1			5
62					1	2	1		1					
Total.	552	519	1,069	2,006	1,845	1,528	1,107	500	694	373	147	51		10,391

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN AT WORK ABOVE GROUND,
BY AGES AND YEARS OF SERVICE, FEBRUARY, 1892.

Age.	Years of service.											Total.	
	Under 1.	1 or under 2.	2 or under 5.	5 or under 10.	10 or under 15.	15 or under 20.	20 or under 25.	25 or under 30.	30 or under 35.	35 or under 40.	40 or under 45.		45 or under 50.
12	29												29
13	138	8	1										147
14	2		1										2
15			3										3
16	2		2	1									5
17			1	1									2
18			2	1	7								10
19		2	1	2	4								9
20	2	1	2	4	4								14
21			1	4	4								9
22					4								4
23		1			1								2
24		1	1	2	4								8
25	1		2	3	3								6
26	1			3	6								10
27		1		5	5	10							16
28	2			2	1	1							6
29		1	1	2	2	8							14
30			1	1	1	4							7
31			1	1	3	5							10
32		1		6	5	5	2						15
33			5	1	7	5	5						19
34			1	6	3	3	7						24
35	1		1	2	2	3	1	2					12
36				1	2	2	2	2					7
37				2	3	1	3	4					13
38	1			2	2	1	4	4					12
39				1	2	2	2	2	1				10
40		1	1	1	1	2	1	4	1				12
41		2		2	3	3	3	5	2				17
42				5	1	1	2	3	3				14
43				1	1	3	1	1	5				12
44				5	3	3	4	1	4				20
45					2	2	1	5	5				8
46				2	1		2	7					12
47				1	1	1	5	1	3	3			15
48					2	2	2	1	2	8			17
49				1		4	5	5	1	9			20
50				1	2	6	5	1	1	6			22
51				2	2	2	2	2	2	5	1		14
52					2	2	3	2	1	3	3		16
53					1	2	3	1	1	1	1		11
54				1	1	1	1	2			1		6
55				1	2		3	1		1	1		9
56				1		2	2	1		1		2	8
57					1							2	3
58							1	1				2	4
59					2	1		1	1				5
60					1	1		1					2
61					1	1							2
62								1					1
Total.	179	18	26	72	77	86	66	41	42	40	8	6	661

EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, AT WORK BELOW AND ABOVE GROUND, BY AGES AND YEARS OF SERVICE, FEBRUARY, 1892.

Age.	Years of service.													Total.
	Under 1.	1 or under 2.	2 or under 5.	5 or under 10.	10 or under 15.	15 or under 20.	20 or under 25.	25 or under 30.	30 or under 35.	35 or under 40.	40 or under 45.	45 or under 50.		
12	29												29	
13	279	16	3										288	
14	140	224	16										380	
15	55	132	359										446	
16	45	39	313	1									398	
17	50	28	234	141									453	
18	24	22	67	247									360	
19	23	24	40	307									394	
20	21	20	24	355	1								421	
21	9	2	16	335	7								369	
22	9	2	7	94	282								394	
23	4	1	2	44	298								349	
24	5	2	7	30	286								330	
25	4	1	5	20	313	3							346	
26	6	5	7	30	243	56							347	
27	3	4		29	74	202							312	
28	5	5	47	241	1	1							300	
29	3	1	2	14	28	242							290	
30			2	20	25	238	2						287	
31	4		5	14	28	228	29						308	
32	2	2	1	20	24	102	115						266	
33	2		2	13	43	68	128						256	
34	4	1	5	19	23	42	148						242	
35	2		2	8	14	32	143	14					215	
36	1		2	6	13	26	94	55					197	
37			1	11	16	22	64	84					198	
38	1	3	11	14	33	44	89	4					199	
39			8	17	20	34	117	1					197	
40	1	1	10	11	33	39	83	43					223	
41		2		5	12	20	23	60	57				179	
42			1	4	10	17	25	21	79				157	
43			1	2	10	19	20	22	100				174	
44			1	12	14	29	12	21	112				201	
45			2	3	11	24	7	15	119	9			190	
46				2	11	16	24	10	101	16			180	
47				2	6	14	18	7	34	69			150	
48				3	3	19	17	10	35	78			165	
49				3	7	20	23	7	21	80			161	
50				2	6	18	13	9	22	73	1		144	
51				4	4	7	8	13	18	43	24		121	
52					4	16	12	7	10	21	43		113	
53					5	4	9	7	6	11	38	3	83	
54				1	3	7	11	5	7	7	32	4	77	
55				1	3	3	11	1	3	3	9	17	51	
56				1	2	4	4	3	4	1	3	11	33	
57					3	1	2	2	2		1	6	17	
58					1	4	1	1	1	1	3	11	22	
59				1	2	2		1	2	1		3	12	
60					1	2	3					2	9	
61					1	1					1		3	
62					1	2		1	1				6	
Total.	731	537	1,095	2,078	1,922	1,614	1,173	541	736	413	155	57	11,952	

NUMBER AND PER CENT OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN AT WORK BELOW AND ABOVE GROUND, BY YEARS OF SERVICE, FEBRUARY, 1892.

Years of service.	Employees below ground.	Employees above ground.	Total.	Employees below ground (per cent).	Employees above ground (per cent).	Total (per cent.).
Under 1 year	552	179	731	5.31	27.08	6.61
1 or under 2 years	510	18	537	4.99	2.72	4.86
2 or under 5 years	1,069	26	1,095	10.29	3.93	9.91
5 or under 10 years	2,006	72	2,078	19.31	10.89	18.80
10 or under 15 years	1,845	77	1,922	17.76	11.65	17.39
15 or under 20 years	1,528	86	1,614	14.71	13.01	14.60
20 or under 25 years	1,107	66	1,173	10.65	9.99	10.61
25 or under 30 years	500	41	541	4.81	6.20	4.90
30 or under 35 years	694	42	736	6.68	6.36	6.66
35 or under 40 years	373	40	413	3.59	6.05	3.74
40 or under 45 years	147	8	155	1.41	1.21	1.40
45 or under 50 years	51	6	57	.49	.91	.52
Total	10,891	661	11,052	100.00	100.00	100.00

NUMBER AND PER CENT OF EMPLOYEES OF THE COAL MINING COMPANY OF ANZIN, BY YEARS OF SERVICE, SEPTEMBER 6, 1886, DECEMBER 31, 1889, AND FEBRUARY, 1892.

Years of service.	Number.			Per cent.		
	September 6, 1886.	December 31, 1889.	February, 1892.	September 6, 1886.	December 31, 1889.	February, 1892.
Under 1 year		732	731		6.84	6.61
1 or under 2 years		540	537		5.04	4.86
2 or under 5 years		1,092	1,095		9.64	9.91
5 or under 10 years		1,838	2,078		17.16	18.80
10 or under 15 years		1,915	1,922		17.88	17.39
15 or under 20 years		1,792	1,614		16.74	14.60
Total under 20 years	6,649	7,849	7,977	69.85	73.30	72.17
20 or under 25 years	892	1,034	1,173	9.37	9.66	10.61
25 or under 30 years	755	635	541	7.93	5.93	4.90
30 or under 35 years	660	683	736	6.94	6.38	6.66
35 or under 40 years	339	338	413	3.56	3.16	3.74
40 or under 45 years	162	131	155	1.70	1.22	1.40
45 or over	62	38	57	.65	.35	.52
Total	9,519	10,708	11,052	100.00	100.00	100.00

EMPLOYEES LEAVING THE SERVICE OF THE COAL MINING COMPANY OF ANZIN, BY REASONS FOR LEAVING, 1889 TO 1893.

Year.	Voluntarily.				Dis- missed.	To enter mili- tary service.	Pen- sioned.	Died.	Total.	Per cent of employees leaving voluntarily and dismissed of total employees.
	To enter service in—		Not speci- fied.	Total.						
	Other mines.	Neigh- boring in- dustrial establish- ment.								
1889	54	10	167	231	53	34	33	21	372	2.4
1890	97	37	53	187	85	299	29	37	637	2.2
1891	55	46	64	165	120	304	96	74	759	2.2
1892	103	31	48	182	75	277	192	56	782	2.0
1893	81	19	46	96	72	330	117	79	694	1.3
Total	340	143	378	861	405	1,244	467	267	3,244	2.0
Per cent ..	10.5	4.4	11.6	26.5	12.5	38.4	14.4	8.2	100.0	.....

In conclusion, attention should be drawn to a point concerning which a study such as the one just made affords information of more than usual value. The material has been presented in such a way as to furnish an opportunity for a statistical comparison of present with former conditions of a body of men, the general and physical conditions of whose labor have remained practically identical. The evidence afforded by such a comparison is irresistible that there has been a steady betterment of the condition of the coal miners of Anzin in almost every element that enters into their life. The age at which they commence work has been advanced, and they consequently enjoy a longer period of schooling. Their hours of labor have been steadily reduced. Average wages have constantly advanced, while there is every reason to believe that the amount of commodities that they will purchase has increased in like or greater ratio. The single matter of housing shows an enormous increase in comfort. A contrasting of the types of houses erected by the company at different periods shows a striking advance by each period over the preceding one. From a dweller in a barrack apartment the miner has become the occupier of an individual cottage with garden attached, and in many cases the owner of his own home. The uncertainties of a possible lack of employment or the cares and anxieties of sickness and approaching old age have been lessened. At the same time the workingman enters more into public life. He comes more into contact with his fellowmen through the exercise of his political rights, and through his participation in the management of the mutual benefit, cooperative, and recreative societies of which he is a member.

The comparisons which have been made throughout the report with conditions elsewhere indicate that the experience of Anzin has been repeated in the other great coal mining centers of France.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

CONNECTICUT.

Eleventh Annual Report of the Bureau of Labor Statistics of the State of Connecticut for the year ending November 30, 1895. Printed by order of the General Assembly. Samuel B. Horne, Commissioner. 280 pp.

This report treats of the following subjects: Poor relief, 101 pages; building and loan associations, 12 pages; condition of manufactures, 66 pages; strikes and lockouts, 14 pages; manual training, 46 pages; laws relating to labor and the first annual report of the State board of mediation and arbitration, 19 pages.

POOR RELIEF.—The object of this inquiry was to ascertain the number of poor in the State and the cost of their maintenance. The statistics for 21 selected towns, covering the years from 1875 to 1894, inclusive, were collected by agents of the bureau. Schedules were also sent by mail to the selectmen of the 168 towns in the State asking for information concerning the number of poor assisted and the expense incurred for the same during the years 1892 and 1894. The amounts reported are only the expenditures by the State and the different towns. They do not include the charity dispensed by individuals or private boards of relief of any character.

The lack of a uniform system of distributing aid and of recording the different transactions, and the paucity of data, especially for the earlier years, render the statistics somewhat incomplete. These and various other matters concerning the advisability of certain classes of relief, the increase or decrease in the numbers assisted and the amounts expended, and the methods prevailing in the different towns, are explained in the text. The two statements that follow present the totals given for the 21 selected towns, the 168 towns, and for the State.

PERSONS AIDED AND EXPENSES FOR POOR RELIEF IN 21 SELECTED TOWNS, 1875 TO 1894.

[The following are the 21 towns, the facts for which are shown in this table: Bridgeport, Colchester, Danbury, East Haddam, Fairfield, Glastonbury, Hartford, Litchfield, Meriden, Middletown, Milford, New Britain, New Haven, New London, Norwich, Plainfield, Tolland, Torrington, Vernon, Waterbury, and Windham.]

Year.	Persons aided.			Expenses.			Total expense to each dollar of assessed value of all property.
	In institutions.	Outside relief.	Total.	In institutions.	Outside relief.	Total.	
1875	496	502	998	\$53,836.74	\$68,017.83	α\$151,856.57	\$.00135
1876	643	871	1,514	72,001.62	93,729.77	α 196,731.39	.00170
1877	890	1,144	2,034	105,322.97	164,569.08	α 301,392.05	.00170
1878	1,003	1,355	2,358	131,545.60	150,870.00	α 314,215.60	.00184
1879	1,169	1,171	2,340	125,531.93	145,060.54	α 302,592.47	.00173
1880	1,252	1,045	2,297	127,452.95	119,420.43	α 279,573.38	.00156
1881	1,456	1,597	3,053	136,569.30	127,566.99	α 297,136.29	.00163
1882	1,637	2,370	4,007	160,467.86	116,885.64	α 310,853.50	.00167
1883	1,653	2,666	4,319	173,248.64	125,701.95	α 352,950.59	.00175
1884	1,829	3,344	5,173	166,476.77	140,364.65	α 341,341.42	.00179
1885	2,141	4,385	6,526	182,737.49	165,187.48	α 382,924.97	.00199
1886	2,056	4,258	6,314	193,819.94	159,725.96	α 389,045.90	.00199
1887	2,126	3,553	5,679	223,852.13	163,890.75	α 423,732.88	.00215
1888	2,223	3,794	6,017	216,650.03	163,011.34	α 416,161.37	.00209
1889	2,209	3,736	5,945	205,881.67	156,890.34	α 399,772.01	.00195
1890	2,285	4,406	6,691	234,219.74	178,222.03	α 412,441.77	.00194
1891	2,318	3,792	6,110	234,348.06	183,995.70	α 418,343.76	.00194
1892	3,973	4,075	8,048	244,138.39	152,768.59	α 396,906.98	.00179
1893	3,311	3,678	6,989	228,963.56	166,238.23	α 395,221.79	.00154
1894	4,582	6,210	10,792	255,331.14	197,794.25	α 453,125.39	.00182

α No division could be made of the expenses incurred by the city of Bridgeport prior to 1890; the amounts are included in the total, but no corresponding distribution given.

PERSONS AIDED AND EXPENSES FOR POOR RELIEF FOR THE STATE, 1892 AND 1894.

Items.	By the 168 towns of the State.		By the State.		Total.	
	1892.	1894.	1892.	1894.	1892.	1894.
Almshouses:						
Persons aided.....	2,942	3,535	α 350	312	3,292	3,847
Net expense of maintenance.....	\$178,563.44	\$203,322.88	α \$6,707.39	\$4,180.16	\$185,270.83	\$207,503.04
Hospitals, homes, etc.:						
Persons aided.....	2,271	2,526	α 1,239	1,414	3,500	3,940
Expenses.....	\$185,775.48	\$187,347.37	α \$216,245.02	β \$190,567.07	\$402,020.50	\$377,914.44
Outside relief:						
Heads of families aided.....	2,990	4,464	(c)	(c)	2,990	4,464
Other persons aided...	4,189	5,478	(c)	(c)	4,189	5,478
Paid for rent.....	\$31,266.13	\$39,827.22	.....	.....	\$31,266.13	\$39,827.22
Paid for other relief...	\$290,900.33	\$363,273.25	α d \$2,399.65	d \$6,097.23	\$293,299.98	\$369,370.48
Total persons aided	12,392	16,003	α 1,639	1,726	14,031	17,729
Total expense	\$686,505.38	\$793,770.72	α \$225,352.06	\$200,844.49	\$911,857.44	\$994,615.18

α For one year and three months.
 β Not including \$19,500 appropriated to build hospitals.
 c Included in number for almshouses.
 d Including expenses of State board of charities, the remainder being amount paid to towns for support of paupers chargeable to the State.

BUILDING AND LOAN ASSOCIATIONS.—In accordance with laws enacted during June, 1895, the building and loan associations of the State come under the supervision of the banking department, and statements as to their condition in the future will be found in the report of the bank commissioners. Comparative figures, however, are furnished

for each of the 16 associations, for which data were given in the fourth annual report. The totals are shown in the following statement:

ASSETS OF BUILDING AND LOAN ASSOCIATIONS AT THE CLOSE OF THE FISCAL YEARS 1894 AND 1895.

Items.	1894.	1895.
Mortgage loans	\$704, 523. 13	\$686, 723. 39
Stock loans	28, 443. 84	40, 603. 52
Cash on hand	48, 285. 14	58, 010. 04
All other assets	9, 352. 91	195, 298. 06
Total	790, 605. 02	980, 635. 01

CONDITION OF MANUFACTURES.—Under this title individual reports from 1,000 establishments, grouped by industries, are published and an extended analysis made of the returns for each industry. The totals of the summary for all industries are as follows:

Establishments reporting	1, 000
Employees July 1, 1892	115, 139
Employees July 1, 1894	98, 617
Employees July 1, 1895	112, 002
Establishments advancing wages since July 1, 1894	33
Establishments reducing wages since July 1, 1894	28
Establishments restoring former rates	106

There were many establishments reported in 1895 that were not in existence in 1892. These establishments reported 1,509 employees. Subtracting this number from the total for 1895, the actual decrease was 4,646 and the percentage of decrease 4.04.

The changes in rates of wages reported were only those that were general in character. There were 2,624 employees affected by advances in wages, the average of the percentages of increase being 8.52. The employees affected in establishments reducing wages numbered 1,287, the average of the percentages of decrease being 8.53. There were 20,190 employees affected by the restoration of wages to a former rate, the average of the percentages of increase being 8.5. The average weekly hours of labor in the 1,000 establishments for the year ending July 1, 1895, not considering the days closed, were 58.07; deducting hours lost by reason of days closed, the average was 54.46.

STRIKES AND LOCKOUTS.—An historical statement is made for each labor disturbance that occurred during the year.

MANUAL TRAINING.—The treatment of this subject is confined to a textual discussion which includes a description of various institutions for manual training in Connecticut and elsewhere.

LABOR LAWS AND MEDIATION AND ARBITRATION.—The laws relating to labor enacted at the January session of the legislature, 1895, are reproduced, and a short account given of the action of the board of mediation and arbitration in assisting in a compromise of a strike of the iron molders employed by the Russell & Erwin Company, of New Britain, Conn.

IOWA.

Sixth Biennial Report of the Bureau of Labor Statistics for the State of Iowa, 1894-95. W. E. O'Brien, Commissioner. Printed by Order of the General Assembly. 199 pp.

The report presents individual tabulations of returns from 4,160 working men and women engaged in different industries throughout the State. The questions for which the answers were presented were designed to show the actual condition of the laboring classes. No totals for the State or conclusions are presented, the individual reports only being given as a fair and unbiased showing of actual conditions. In addition to the individual tabulations, quotations are given from answers made by workmen to questions concerning the desirability of labor organizations, foreign immigration, the character of work that is preferable (piece or time), and what action would be of the greatest benefit to the wage earners of the country.

MONTANA.

Second Annual Report of the Bureau of Agriculture, Labor, and Industry of Montana for the year ended November 30, 1894. James H. Mills, Commissioner; A. C. Schneider, Chief Clerk. v, 191 pp.

In the extended introductory, reference is made to various subjects, such as methods of work of the bureau, disturbed industrial conditions, free public employment offices, and protection of human life by means of fire escapes. The following subjects are treated in the report proper: Wages and cost of living, 32 pages; investment, wages, and production, 16 pages; precious and semiprecious metals, 8 pages; agriculture and stock growing, 40 pages; miscellaneous, 49 pages.

WAGES AND COST OF LIVING.—The schedule used in collecting the statistics from wage earners contained 48 questions, designed to cover all material facts of public interest relating to the economic and social condition of the workmen. All employees receiving \$2,000 or more per annum were excluded, and the presentation limited to those coming clearly under the denomination of "wage earners." The results are summarized for 80 occupations and for the principal labor-employing counties. The tables show the percentage of the total number replying affirmatively or otherwise to the different questions, with the average and aggregate wages, expenses, etc.

The opinions and suggestions of wage earners given in reply to the query, "What legislation, if any, would, in your opinion, promote the general welfare, particularly of wage earners following your vocation?" are reproduced in full.

The mileage, number of employees, working time, and average pay of the different classes of employees are given for each railroad in the State.

The average daily wages of employees in and around mines, mills, and smelters, as computed from statements made by employees in nine counties of the State and covering the occupations of 2,085 men, are given as follows:

AVERAGE DAILY WAGES OF EMPLOYEES OF MINES, MILLS, AND SMELTERS.

Occupation.	Average wages per day.	Occupation.	Average wages per day.	Occupation.	Average wages per day.
Mine employees:		Employees in mines, smelters, and quartz mills—continued.		Employees in mines, smelters, and quartz mills—concluded.	
Miners	\$3. 37	Bricklayers and masons	\$5. 33	Furnacemen's help-ers	\$2. 62
Pumpmen	4. 00	Carpenters	4. 01	Laborers	2. 72
Timbermen	3. 75	Charge wheelers ..	2. 50	Machinists	4. 02
Station tenders ..	3. 50	Concentrator men ..	3. 00	Machinists' helpers ..	2. 85
Carmen	3. 12	Crushermen	3. 19	Millmen	3. 37
Employees in mines, smelters, and quartz mills:		Cooling floor men ..	3. 00	Refiners	5. 00
Foremen	4. 74	Dippers	4. 00	Roasters	2. 93
Amalgamators	4. 08	Dynamo tenders ..	3. 50	Skimmers	4. 25
Blacksmiths	3. 85	Engineers	3. 85	Trammers	2. 27
Blacksmiths' help-ers	2. 73	Fremen	3. 00	Weighers	2. 44
Batterymen	3. 75	Feeders	3. 09	Vannermen	3. 00
Boilermakers	4. 12	Furnacemen	3. 35		

The cost of living is indicated by a presentation of the average rates of board at hotels and boarding houses, average prices of articles of food, and details of receipts and expenses for representative families in different sections of the State.

A list of the labor organizations of the State is accompanied with statistics of the membership.

INVESTMENT, WAGES, AND PRODUCTION.—Reports from 146 manufacturers and 183 establishments engaged in various industries containing information concerning investment, product, employees, wages, hours of work, etc., are grouped and published in detail. As far as possible the average wages for the various classes of labor in the different industries for 1893 and 1894 are placed in comparison.

PRECIOUS AND SEMIPRECIOUS METALS.—The statistical presentation under this title consists of extended quotations from the reports of the United States assay office at Helena, Mont., and the Director of the Mint.

AGRICULTURE AND STOCK GROWING.—Comparative figures are given for 1893 and 1894 of the number and wages of employees of stock growers and farmers; also acreage of land owned and fenced, with character, quantity, and value of the different agricultural products. The number of the different classes of farm animals that perished during the winter and that were killed by wolves are shown, and details concerning the wool clip of 1893 and 1894.

NEBRASKA.

Fourth Biennial Report of the Bureau of Labor and Industrial Statistics of Nebraska for 1893 and 1894. J. B. Erion, Deputy Commissioner. 530 pp.

The report opens with a treatise on the practical utility of industrial statistics and the requirements of the bureau. The subjects treated in the report may be grouped as follows: Mortgage indebtedness, 141 pages; free public employment office, 6 pages; farms, homes, mortgages, and manufactures, 29 pages; valuation of real estate, live stock, steam engines, railroad and sleeping-car property, and telegraph lines, 42 pages; Nebraska's surplus products, 30 pages; assessed valuations, 7 pages; acres under cultivation, 7 pages; irrigation, 72 pages; miscellaneous, 182 pages.

MORTGAGE INDEBTEDNESS.—The number and amount of mortgages filed on different classes of property and the number satisfied is shown for each county by months from June, 1893, to May, 1894; also by county totals for the calendar years 1892 and 1893 and for the twelve months ending May 31, 1894, with the number of sheriffs' sales and other deeds of foreclosure.

VALUATION OF REAL ESTATE, LIVE STOCK, STEAM ENGINES, RAILROAD AND SLEEPING-CAR PROPERTY, AND TELEGRAPH LINES.—These values are shown by county totals. The real estate values show the true and assessed value for 1890 and the value of improved and unimproved property for 1893. The other values are for 1893 only, and show the number, total, and average value of live stock and steam engines with the value of railroad and sleeping-car property and telegraph lines in the State.

NEBRASKA'S SURPLUS PRODUCTS; ASSESSED VALUATIONS; ACRES UNDER CULTIVATION.—The quantity of different farm products marketed is given by counties under the title "Nebraska's surplus." The assessed value of property, total assessment in dollars, total levy in mills and how apportioned, are shown by counties for 1893. The acres under cultivation in different farm products for 1893 are also shown by county totals.

IRRIGATION.—Statistics under this title show the miles of completed and proposed irrigating canals and acres irrigated, with the size of the canals and the cost of construction. The statistics are accompanied by an instructive treatise on this subject.

MISCELLANEOUS.—The presentations under this title consist of quotations from other publications, and the results of some original investigations concerning agricultural, educational, and other conditions as existing in Nebraska; also a compilation of the laws of the State pertaining to labor, irrigation, etc.

NEW YORK.

Twelfth Annual Report of the Bureau of Statistics of Labor of the State of New York for the year 1894. Transmitted to the legislature February 4, 1895. Thomas J. Dowling, Commissioner. 675 pp.

The subjects treated in this report are as follows: Part I, labor organizations, 423 pages; Part II, prison-made goods, 18 pages; Part III, strikes, lockouts, and boycotts, 77 pages; Appendix, 126 pages. The appendix contains a list of the bureaus of labor in the United States and the proceedings of the tenth annual convention of the National Association of Officials of Bureaus of Labor Statistics.

PART I, LABOR ORGANIZATIONS.—The bureau sent to each trade organization in the State a letter of inquiry containing the following questions: Date of organization; number of members at time of organization; number of members at present time; rate of wages previous to organization; rate of wages at present time; hours of labor per day previous to organization; hours of labor per day at present time. Is improved machinery used in your trade or calling? Has the use of machinery increased the number employed in your trade or calling; and what per cent? Has the use of machinery decreased the number employed in your trade or calling; and what per cent? In your opinion has a reduction of wages been prevented by the fact of the existence of your organization? Have the general conditions in your trade or calling been improved owing to the existence of your organization? Has your organization rendered any aid, financially or otherwise, to its members during the past year? How much? The answers of the various organizations to these questions are printed in detail.

Returns were received from 695 organizations. The following statement shows the results of the summarization of the detail tables which present the statistics relative to wages and hours of labor:

WAGES AND HOURS OF LABOR PRIOR TO ORGANIZATION AND IN 1894, BY INDUSTRIES.

Industries.	Wages, number of organizations reporting—				Hours of labor, number of organizations reporting—			
	Increase.	Decrease.	No change	Total.	Increase.	Decrease.	No change	Total.
Building.....	136	18	51	205	.....	177	30	207
Cigars, cigarettes, and tobacco.....	31	3	7	41	.....	40	9	49
Clothing.....	30	2	6	38	1	27	12	40
Coachmen and livery-stable employees.....	3	.....	1	4	.....	1	4	5
Food products.....	8	1	10	19	2	12	5	19
Furniture.....	1	1	3	5	.....	3	3	6
Glass and terra cotta.....	4	.....	2	6	.....	3	3	6
Hats, caps, and furs.....	1	1	1	3	.....	2	2	4
Hotel and restaurant employees.....	4	1	2	7	.....	5	2	7
Iron and steel.....	25	13	21	64	.....	20	45	65
Leather.....	6	3	1	10	.....	1	12	13
Malt and spirituous liquors and mineral waters.....	16	1	1	18	1	12	5	18
Marine.....	2	2	4	8	.....	1	5	6
Metals.....	2	2	2	6	.....	.....	6	6
Musicians and musical instruments.....	10	.....	3	13	.....	3	10	13

WAGES AND HOURS OF LABOR PRIOR TO ORGANIZATION AND IN 1894, BY INDUSTRIES—Concluded.

Industries.	Wages, number of organiza- tions reporting—				Hours of labor, number of organizations reporting—			
	In- crease.	De- crease.	No change	Total.	In- crease.	De- crease.	No change	Total.
Printing, binding, engraving, stereotyp- ing, and publishers' supplies	21	2	11	34	.....	17	20	37
Railroad employees (steam)	57	3	25	85	.....	2	27	80
Railroad employees (street surface)	1	.....	1	2	.....	2	.....	2
Stone workers	13	1	6	20	.....	19	3	22
Street paving	3	.....	6	9	.....	3	6	9
Textiles	8	1	1	10	.....	8	2	10
Theatrical	3	.....	.....	3	.....	2	2	4
Wood workers	11	.....	1	12	.....	10	2	12
Miscellaneous	6	2	8	16	.....	9	8	17
Total	402	62	174	638	.....	6	404	657

There were 49 divisions of working time reported by 656 organizations. Eight hours constituted a day's work in 42 branches of trade, and the eight-hour day was enjoyed by 48,411 members of 169 organizations. The number is nearly one-third of the 155,843 members reported. The daily hours of work and the number of members observing the indicated working time is shown for each organization reported.

Four hundred and seventy-four organizations, with a membership of 121,957, report \$511,817.59 as having been expended in benefits during the year, of which amount \$106,801.69 was to assist those out of work, \$60,207.98 to assist the sick, \$93,437.92 in cases of death, \$89,150.04 to support strikes, \$10,676.74 donated to other labor organizations, and \$151,543.22 not classified.

Out of 695 organizations, 371 report that improved machinery is used, 235 report that it is not, and 39 failed to answer the question. Sixty-three organizations report that the introduction of machinery has increased the working force, while 208 state that it has resulted in a reduction of the number of employees, and 47 failed to answer the question.

Five hundred and forty-four organizations reported that the existence of the organization had prevented a reduction in wages, and 96 reported that it had not, while 22 failed to answer the question, and 33 reported that there had been no attempt at reduction of wages. Six hundred and twenty-two organizations reported that the general conditions of labor in their trades had been improved by the existence of the union, 49 that the union had not improved general conditions, while 24 failed to answer the question.

There were 667 organizations that reported their membership as 46,455 at the date of organization, and at the time of reporting in 1894 691 organizations reported their membership at 155,843.

Extended quotations are made from remarks contained in the reports of organizations relative to desired legislation, immigration, and miscellaneous subjects affecting labor.

PART II, PRISON-MADE GOODS.—A law was enacted limiting the number of prisoners engaged in the manufacture of brooms and brushes made of broom corn to 5 per cent of the total number in the State engaged in that industry. This part of the report deals mainly with an investigation ordered by this enactment to determine whether the number employed was in excess of the 5 per cent permitted. The number being found too large, the governor of the State accordingly ordered that it be reduced. The sale of prison-made goods is also discussed.

PART III, STRIKES, LOCKOUTS, AND BOYCOTTS.—These statistics cover the labor disturbances reported as having occurred in the State during the nine years from 1885 to 1893, inclusive, the information being published in detail for each strike, lockout, and boycott.

The details are summarized in the following statements:

RESULTS OF STRIKES, LOCKOUTS, AND BOYCOTTS, BY YEARS, 1885 TO 1893.

Year.	Establishments involved in strikes which were—			Total establishments involved.	Number of persons engaged.	Number of persons who lost positions.
	Successful.	Compromised or partly successful.	Unsuccessful.			
1885	1,202	207	211	1,620	52,442	.....
1886	1,125	847	1,714	3,686	175,369	6,399
1887	792	190	755	1,677	54,240	8,241
1888	501	83	443	1,027	24,092	2,271
1889	873	109	392	1,374	52,783	4,203
1890	5,580	170	512	6,262	93,894	5,220
1891	3,727	78	685	4,490	61,599	3,531
1892	1,541	87	770	2,398	35,824	1,997
1893	1,719	89	225	2,033	27,545	2,374
Total	17,000	1,860	5,707	24,567	557,788	34,236

GAINS AND LOSSES FROM STRIKES, LOCKOUTS, AND BOYCOTTS, BY YEARS, 1885 TO 1893.

Year.	Loss in wages.	Cost to labor organizations.	Estimated gain in wages.	Number engaged and who received increase of wages where wages were involved.	Loss to employers.
1885	\$921,934.50	\$171,689.13	\$906,153.88	10,601	\$416,426.00
1886	3,303,281.55	579,857.25	2,403,616.90	31,198	2,606,404.00
1887	2,103,616.45	239,692.78	998,693.55	11,512	1,166,766.20
1888	1,033,653.99	135,357.05	410,053.68	3,269	390,730.00
1889	588,114.81	66,063.23	663,819.76	10,624	533,366.95
1890	1,457,554.32	143,123.85	3,122,883.10	42,097	549,874.43
1891	1,071,113.37	284,057.85	787,022.66	22,194	374,946.50
1892	846,766.34	241,784.06	497,181.06	7,977	355,215.90
1893	395,341.45	34,535.34	535,164.17	7,887	102,680.10
Total	11,681,376.78	1,896,165.54	10,324,588.76	147,959	6,496,410.08

NORTH CAROLINA.

Eighth Annual Report of the Bureau of Labor Statistics of North Carolina for the year 1894. B. R. Lacy, Commissioner. 304 pp.

The report treats of the following subjects: Statistics of and letters concerning cotton, woolen, and other factories, 86 pages; agricultural statistics and views of farmers, 100 pages; reports from and views of mechanics, 61 pages; the fishery industry, 9 pages; statistics of employees and wages of railroads, 5 pages; organized labor, 17 pages; miscellaneous, 26 pages.

STATISTICS OF AND LETTERS CONCERNING COTTON, WOOLEN, AND OTHER FACTORIES.—These statistics were obtained by means of a circular letter. Reports were received from a number of factories engaged in various industries in different sections of the State. These reports relate to the character of goods manufactured, number of spindles and looms, days in operation, hours constituting a day's work, advisability of reducing working time, average daily wages, etc. The data are presented in detail for each establishment, arranged by counties. The facts are summarized by counties for some industries, but no general average for the State is attempted.

AGRICULTURAL STATISTICS AND VIEWS OF FARMERS.—The information given under this title was obtained from the best and most influential farmers in the State. The wages and other compensation of farm laborers and their condition morally, socially, and financially are shown. The individual returns are presented in full and the averages given by counties and for the State. The averages for the State show that the working day for the year is about nine hours, and the average wages per month for laborers, \$9, with extras for married men. The average for women was \$5 and for children \$3 per month. About 66½ per cent of the farmers report a decrease in wages, and the remainder say there has been no change. Numerous letters from farmers and others in different sections of the State expressing views on various phases of agricultural pursuits follow the statistics.

REPORTS FROM AND VIEWS OF MECHANICS.—This presentation covers information concerning the condition of trade, wages, methods of payment, effect of labor-saving machinery on wages, apprenticeship and age at which children should engage in the different trades, cost of living, and social and moral conditions. The individual reports are published and summarized by trades. The statistics are accompanied by letters from a number of mechanics expressing views as to the legislation needed for the elevation of the labor classes.

STATISTICS OF EMPLOYEES AND WAGES OF RAILROADS.—These statistics show the number of the different classes of employees and the average daily wages for each class for each railroad of the State.

ORGANIZED LABOR.—The chapter on this subject is composed of letters from various labor organizations in the State, describing the organization and setting forth its objects and purposes; also expressing views on various subjects pertaining to labor.

NORTH DAKOTA.

Third Biennial Report of the Commissioner of Agriculture and Labor to the Governor of North Dakota for the two years ending June 30, 1894.
Nelson Williams, Commissioner. 332, lxiii pp.

In addition to introductory remarks concerning the methods of collecting and the use of statistics, the first 24 pages of this report contain copies of letters from a number of persons who have had experience in the cheese and creamery business of the State, giving reasons for the decline of the industry during the past two or three years. Attention is also called to a pamphlet issued under the direction of the bureau containing information concerning the Russian thistle. The subjects treated in the report may be grouped as follows: Agricultural statistics, 59 pages; financial and census statistics, 131 pages; cost of producing wheat and remarks of farmers, 159 pages; cost of producing corn, world's crop of wheat, 9 pages; industrial statistics, 11 pages.

AGRICULTURAL STATISTICS.—The average yield per acre, and in some instances the value of the different crops and other farm products, are shown in detail by county and State totals. Comparisons are made of the yearly production, acreage, and average yield per acre of the principal products, by county totals, from 1888 to 1893, inclusive, and the number and size of farms given, with the acreage under cultivation for 1893 and 1894. The totals for some of the products enumerated are as follows:

ACREAGE AND PRODUCTION OF VARIOUS AGRICULTURAL PRODUCTS, 1893.

Product.	1893.				Total product (bushels).	Acres sown, 1894.
	Acres sown.		Acres harvested.			
	Number.	Average yield per acre (bushels).	Number.	Average yield per acre (bushels).		
Wheat.....	3,019,253	10.51	2,902,301	10.93	31,732,169	3,087,643
Oats.....	502,447	20.89	483,844	21.70	10,498,451	548,369
Barley.....	227,250	17.57	218,255	18.30	3,993,236	258,252
Flax.....	57,467	5.75	53,336	6.19	330,214	110,365
Rye.....	40,959	8.98	38,236	9.62	367,976	52,099
Corn.....	15,582	α 15.80	.....	.....	245,734	38,696
Potatoes.....	15,783	82.31	.....	.....	1,299,090	19,627

α The figures here apparently should be 15.77; those given are, however, according to the original.

FINANCIAL AND CENSUS STATISTICS.—The number of persons assessed and the number and assessed value of live stock and of all personal property is given by county and State totals. Assessed valu-

ation of real property, debts, and cash in treasury are shown for the different political subdivisions of the State.

COST OF PRODUCING WHEAT AND REMARKS OF FARMERS.—The statistics concerning the cost of production of wheat were obtained by means of circulars addressed to representative farmers in different sections of the State. The acreage sown to wheat by the farmers who furnished information as to cost in the different years was as follows: 1891, 9,734 acres; 1892, 11,496 acres; and 1893, 125,253 acres. The total acreage sown in wheat in the entire State for the same years was as follows: 1891, 2,847,125; 1892, 2,873,089; and 1893, 3,019,253. The average cost per acre and the total for each item of cost are shown in detail for each return, and the totals and averages for counties and the State summarized. The results are computed separately for the wheat sown and harvested by the use of—first, drills and binders; second, broadcast and binders; third, drills and headers; and fourth, broadcast and headers. The numerous items enumerated in the report as entering into the total cost should be considered before comparing the results with other computations concerning the cost of production. It is stated that the results shown for 1893 can be taken as an approximately correct average for that year, but the figures for 1891 and 1892 can not be regarded as so accurately representative, as the answers for those years were not numerous enough to give safe averages. The average cost per acre and per bushel by the four methods enumerated is as follows:

AVERAGE COST OF PRODUCING WHEAT, 1891, 1892, AND 1893.

Sown and harvested by—	1891.		1892.		1893.	
	Per acre.	Per bushel.	Per acre.	Per bushel.	Per acre.	Per bushel.
Drills and binders	\$9.990	\$0.347	\$7.878	\$0.463	\$6.741	\$0.562
Broadcast and binders.....	9.084	.391	8.169	.473	6.922	.573
Drills and headers.....	7.429	.397	6.281	.535	5.442	.364
Broadcast and headers.....	7.869	.372	6.496	.413	5.628	.692
Average.....	9.253	.365	7.601	.471	6.621	.581

INDUSTRIAL STATISTICS.—The number of partners and stockholders, capital invested, cost of materials, and value of product are shown for a number of establishments that reported for different industries in 1892 and 1893.

PENNSYLVANIA.

Annual Report of the Secretary of Internal Affairs of the Commonwealth of Pennsylvania. Vol. XXII, 1894. Part III, Industrial Statistics. Albert S. Bolles, Chief of Bureau. 974 pp.

This report, the Twenty-second Annual of the Bureau of Industrial Statistics of Pennsylvania, treats of the following subjects: Women in industry, 237 pages; building trades, 446 pages; strikes, 13 pages;

manufacture of pig iron, 128 pages; statistics of manufactures, 113 pages; mine accidents, 26 pages.

WOMEN IN INDUSTRY; BUILDING TRADES.—The presentations concerning these subjects consist of quotations from numerous letters from women employees in different industries and from men engaged in the building trades. These letters pertain to the treatment of employees, wages, apprenticeship, etc. Tabulations are also given for a number of reports from women engaged in various industries, presenting information concerning nationality, cost of board, wages, time of payment, comparative wages of men, hours of work, and pay for time lost by sickness or vacation. The reports tabulated for the building trades show the range of wages from 1890 to 1894 and answers to numerous questions concerning wages, hours of labor, apprenticeship, etc. The tabulations give detailed information as to conditions prevailing in different industries throughout the State.

STRIKES.—A short history is given of the most notable strikes that occurred in the State during the year. The total estimated loss in wages from strikes and lockouts in Pennsylvania from 1881 to 1894 is given as \$25,179,210. The industry, locality, number of persons engaged, date of beginning and ending, and other facts are shown for the strikes and lockouts that occurred in the State during 1894.

MANUFACTURE OF PIG IRON.—A detailed description and a historical sketch are given of the pig-iron industry of the State. The results of chemical analyses are shown for the different kinds of ore, the production is compared with the production of other States, and the present status of the industry and the methods and cost of manufacture are treated.

STATISTICS OF MANUFACTURES.—Facts are given relative to the number of persons employed, wages paid, and value of product for 412 manufacturing plants for which returns were received for 1894 and comparative figures given for 1892 and 1893. Reports were not secured from all the plants in the State, but from a sufficient number, it was believed, to form correct general deductions. The results are summarized as follows:

EMPLOYEES, WAGES, AND VALUE OF PRODUCT OF 412 MANUFACTURING ESTABLISHMENTS, 1892, 1893, AND 1894.

Items.	1892.	1893.	1894.	Per cent of decrease.	
				1892 to 1893.	1893 to 1894.
Average number of employees	149,690	132,653	116,310	11.38	12.32
Total wages.....	\$72,575,550	\$60,629,740	\$48,268,005	16.46	20.39
Value of product.....	\$286,402,751	\$236,919,298	\$191,492,115	17.28	19.17

Various reasons are given for the decrease in the different industries. The following statement is presented to show the decrease in employees by industries:

EMPLOYEES OF 412 MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES, 1892, 1893, AND 1894.

Industry.	1892.	1893.	1894.
Iron.....	103, 471	92, 890	79, 829
Carpets.....	4, 648	4, 097	3, 623
Hosiery.....	1, 786	1, 547	1, 513
Woolen.....	5, 390	4, 543	4, 001
Cotton.....	3, 818	3, 490	3, 093
Glass.....	7, 239	6, 579	5, 152
Miscellaneous.....	23, 338	19, 507	19, 099
Total.....	149, 690	132, 653	116, 310

MINE ACCIDENTS.—The statistics relating to accidents in coal mines were obtained from the reports of the mine inspectors, and are as follows:

ACCIDENTS IN COAL MINES, 1889 TO 1893.

	1889.	1890.	1891.	1892.	1893.
Anthracite coal:					
Product per employee, tons.....	242	281	360	352	342
Fatal accidents.....	384	378	427	396	455
Employees to each fatal accident.....	312	311	288	327	303
Employees to each nonfatal accident.....	120	116	122	127	129
Tons mined to each fatal accident.....	101, 490	106, 260	103, 923	115, 501	103, 691
Tons mined to each nonfatal accident.....	39, 051½	39, 729	44, 253½	44, 817½	44, 134
Bituminous coal:					
Product per employee, tons.....	565	609	564	590	531
Fatal accidents.....	105	146	237	133	131
Employees to each fatal accident.....	581	458	312	592	1, 624
Employees to each nonfatal accident.....	203	177	235	200	236
Tons mined to each fatal accident.....	329, 101	273, 420	176, 319	350, 199	331, 465
Tons mined to each nonfatal accident.....	114, 803	107, 609½	133, 081½	118, 515½	125, 497

The principal provisions of the different laws that have regulated mining and mine inspection in the State are quoted. The methods of enforcing the various provisions and the effect the enactments have had in preserving the health and lives of those engaged in mining are discussed, numerous quotations being made from the reports of the different inspectors.

RHODE ISLAND.

Eighth Annual Report of the Commissioner of Industrial Statistics, made to the General Assembly at its January Session, 1895. Henry E. Tiepke, Commissioner. viii, 327 pp.

This report contains the result of an investigation of the textile manufactures of the State, the condition of skilled labor in that branch of industry, and the retail prices of food and fuel. These three subjects were chosen in 1893 as the basis of a permanent line of inquiry which should annually cover certain specific subjects. The space allotted to each subject in the report for 1894 is as follows: Employees returns, textile industries, 224 pages; retail prices, 43 pages; statistics of manufactures, textile industries, 55 pages.

EMPLOYEES RETURNS, TEXTILE INDUSTRIES.—These returns show for each of 2,299 employees in the cotton, woolen, and mixed textile industries numerous facts concerning their civil and social conditions. The returns are summarized by towns and for the State. The totals for some of the items shown for all three branches of the industry are as follows:

Number of returns.....	2, 299
Married	1, 559
Single	690
Widowers	50
Native born.....	827
Foreign born	1, 472
Largest number in family	15
Smallest number in family	2
Number owning homes.....	245
Number free from incumbrance.....	88
Number hiring tenements (39 also own homes)	1, 373
Highest daily wages	\$6.00
Lowest daily wages.....	.40
Number receiving an increase in wages during the year.....	32
Number receiving a decrease in wages during the year.....	1, 367
Number unemployed during a portion of the year.....	1, 692

RETAIL PRICES.—The average retail prices of different articles of food and fuel are shown by cities, towns, counties, and for the State. The summary for the State is as follows:

AVERAGE RETAIL PRICES OF FOOD AND FUEL FOR THE STATE, 1894.

Articles.	1894.			
	January.	April.	July.	October.
Apples, per peck.....	\$0. 438	\$0. 532	\$0. 304	\$0. 243
Beans, per peck .....	. 661	. 640	. 669	. 655
Beef (soup or corned), per pound .....	. 071	. 068	. 070	. 066
Beef (roasting), per pound.....	. 136	. 131	. 138	. 132
Bread, per loaf.....	. 074	. 074	. 072	. 066
Butter, per pound.....	. 335	. 289	. 264	. 304
Cabbage, per pound .....	. 021	. 026	. 020	. 019
Cheese, per pound.....	. 159	. 160	. 152	. 155
Coal (white ash stove), per ton.....	6. 450	6. 280	5. 710	5. 650
Codfish, per pound .....	. 072	. 073	. 072	. 072
Corn meal, per pound .....	. 026	. 026	. 026	. 026
Cracked wheat, per pound .....	. 053	. 035	. 048	. 048
Crackers (common), per pound.....	. 076	. 074	. 074	. 073
Dried apples, per pound.....	. 134	. 140	. 154	. 125
Eggs, per dozen.....	. 338	. 188	. 224	. 289
Fresh fish (cod), per pound .....	. 094	. 095	. 092	. 090
Fresh fish (haddock), per pound .....	. 080	. 082	. 082	. 079
Flour (family), per barrel.....	4. 830	4. 630	4. 510	4. 180
Hams (smoked), per pound .....	. 125	. 120	. 142	. 131
Kerosene oil, per gallon.....	. 700	. 099	. 098	. 097
Lard, per pound.....	. 116	. 107	. 107	. 110
Mackerel (salt), per pound .....	. 132	. 123	. 124	. 127
Milk, per quart .....	. 059	. 055	. 053	. 059
Molasses, per gallon .....	. 517	. 512	. 507	. 507
Mutton, per pound .....	. 106	. 105	. 123	. 097
Oatmeal, per pound .....	. 049	. 048	. 050	. 049
Onions, per quart .....	. 043	. 041	. 050	. 042
Pickles, per quart.....	. 130	. 129	. 132	. 130
Pork (salt), per pound .....	. 117	. 105	. 106	. 110
Potatoes, per peck .....	. 250	. 236	. 260	. 222
Raisins, per pound .....	. 105	. 101	. 101	. 099
Rye meal, per pound .....	. 081	. 081	. 081	. 080
Salt, per pound.....	. 017	. 017	. 016	. 016
Soap (hard), per pound.....	. 052	. 052	. 053	. 052
Sugar, per pound.....	. 052	. 051	. 051	. 052
Tea (common), per pound.....	. 453	. 444	. 440	. 440
Tripe, per pound.....	. 079	. 069	. 072	. 070
Vinegar, per gallon.....	. 245	. 245	. 246	. 241
Wood (sawed and split), per cord	7. 620	7. 400	7. 690	7. 540

STATISTICS OF MANUFACTURES, TEXTILE INDUSTRIES.—The bureau secured reports from 121 manufacturers, covering the operations of their establishments during 1893 and 1894. Fifty-six of these reports were for the cotton industry, 44 for the woolen industry, 10 for print works, dyeworks, and bleacheries, 8 for hosiery and knit goods, and 3 for silk and silk goods. The statistics are given in detail for each industry. A summary for the 121 establishments is presented in the following statement:

STATISTICS OF 121 MANUFACTURING ESTABLISHMENTS, 1893 AND 1894.

Items.	1893.	1894.	Increase (+) or decrease (—).	
			Amount.	Per cent.
Establishments	121	121		
Private firms	58	57	—1	—1.72
Partners:				
Male	96	86	—10	—10.42
Special	7	19	+12	+171.43
Total	103	105	+2	+1.94
Corporations	63	64	+1	+1.59
Stockholders:				
Male	702	786	+84	+11.97
Female	347	382	+35	+10.09
Banks, trustees, etc	84	104	+20	+23.81
Total	1,133	1,272	+139	+12.27
Total partners and stockholders	1,236	1,377	+141	+11.41
Capital invested	\$37,578,111	\$39,113,530	+\$1,535,419	+4.09
Employees:				
Greatest number	30,352	28,618	—1,734	—5.71
Smallest	26,570	20,822	—5,748	—21.63
Average	28,704	25,773	—2,931	—10.21
Total wages	\$10,466,032	\$8,436,246	—\$2,029,786	—19.39
Average annual wages	\$364.62	\$327.33	—\$37.29	—10.23
Average days in operation	282.05	251.68	—30.37	—10.77
Cost of materials used	\$27,496,995	\$21,130,276	—\$6,366,719	—23.15
Value of goods made and work done	\$48,405,877	\$37,404,848	—\$11,001,029	—22.72

TENNESSEE.

Fourth Annual Report of the Bureau of Labor, Statistics, and Mines to the Forty-ninth General Assembly of the State of Tennessee. January, 1895. John E. Lloyd, Commissioner. 200 pp.

The contents of the report are grouped as follows: Introduction, 54 pages; statistics of mines and mine inspection, 56 pages; miscellaneous, 86 pages.

INTRODUCTION.—A short sketch is given of the financial and industrial depression, which is followed by articles on the relation between capital and labor, arbitration, and the importance of statistics, also recommendations concerning additional legislation pertaining to the work of the bureau. Sketches are also given of the Chicago strike and the coal miners' great strike of April 21, 1894.

STATISTICS OF MINES AND MINE INSPECTION.—There was reported as mined in Tennessee during the year 1894, 2,471,437 tons of coal, show-

ing an increase over 1893 of 1,041,469 tons. The mines of the State gave employment to 2,799 miners, 274 labor miners, 251 trappers, 112 drivers, and 328 men employed in offices, shops, and yards.

The number of the different classes of employees, number of accidents, animals, and locomotives in use, kegs of powder used, wages, and quantity of coal mined are shown for each mine, the mines being grouped for the three districts into which the State is divided.

The report of inspection, in addition to giving the locality of the mines and names of the superintendents, shows the method of ventilating, condition of air courses, condition of entries and doors, also the cubic feet of air per minute at inlet and outlet, and remarks concerning the general condition of the mine at time of inspection and additions or changes required by the inspector. The results are shown for two inspections made during the year.

The names of the men who received injuries resulting fatally are given with the name and location of the mine, also the testimony given and the verdict of the coroner's jury in each case. The report also shows the result of the analysis of the coal for each mine in the State.

MISCELLANEOUS.—Under this head are grouped articles on different subjects. The phosphate deposits of the State are treated with considerable detail. This mineral was first discovered in Lewis County, Tenn., during the latter part of 1893, and the deposits are now shown to be quite extensive. The article is accompanied with a tabular description of the different phosphate beds. In an article on "manganese" it is stated that the first manganese mined in the United States was mined in Tennessee in 1837, but comparatively nothing has been done to develop the deposits, though manganese of a high grade exists in large quantities in nearly every county in east Tennessee. The different varieties of marble found in the State are described in an article on that subject. The names and locations of the different cotton and woolen mills in the State are shown; also a synopsis of the statistics of farms, homes, and mortgages for the State, as published by the Eleventh Census of the United States. An appendix gives the report on the Chicago strike by the United States Strike Commission.

WEST VIRGINIA.

Report of the Commissioner of Labor of the State of West Virginia, 1893-1894. John M. Sydenstricker, Commissioner. 211 pp.

This is the first annual report of the commissioner of labor of West Virginia, and covers the year ending June 30, 1894. The introductory, which refers to the needs of the bureau, and gives a copy of the law under which it was organized, is followed by a discussion of the "functions and value of labor statistics," and the volume is closed with a treatise on the "financial and industrial depression." The statistics

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presented are grouped as follows: Laborers' statistics, 23 pages; railroad statistics, 4 pages; coal-mine operators' statistics, 11 pages; manufacturing and mechanical industries, 33 pages; agricultural statistics, 13 pages; coal, coke, and oil statistics, 31 pages; building and loan associations, 30 pages; farms, homes, and mortgages, 19 pages.

LABORERS' STATISTICS.—The individual reports of 189 laborers engaged in various occupations in different sections of the State are given in full. The information was collected by correspondence, and consists of replies to questions concerning nativity, residence, name of employer, occupation, hours of labor, earnings of self and family, cost of living, character of employment of wife and children, education of children, deductions from wages, apprenticeship, increase or decrease in wages, and cost of living, savings, debts, etc.

RAILROAD STATISTICS.—Statistics are given in detail for each of 25 railroads, showing for the State the miles of road, the average number of employees during the year, the total number at the time of making the report, the number of each class of employees, and the average monthly and total wages for the year.

MANUFACTURING AND MECHANICAL INDUSTRIES.—Reports are published in full for each of 77 establishments showing answers to questions concerning the value of buildings, land, and machinery, cost of materials, value of product, and details concerning employees and wages. In addition the report of the Eleventh Census of the United States relating to manufacturing and mechanical industries is reproduced.

AGRICULTURAL STATISTICS.—The bureau secured reports from a number of farmers in different sections of the State which are published in detail, by counties, and contain information pertaining to the size, the entire value of farms, and the value of the portion used in farming operations, value of personal property and of farm products, expenses of farming, yield, and value of different crops, etc.

COAL, COKE, AND OIL STATISTICS.—The statistics concerning the production for each of these industries in the State are shown in detail by totals for districts and counties, with percentages of increase or decrease. It is stated that the State ranks fourth in the coal-producing States of the country. The product increased from 672,000 short tons in 1873 to 10,708,578 short tons in 1893. The coke product increased from 138,755 short tons in 1880 to 1,062,076 short tons in 1893, and the petroleum from 120,000 barrels in 1876 to 8,445,412 barrels in 1893. A list of the names and addresses of the coal operators of the State is given, with statistics concerning investment, thickness of seam, days mines were worked during the year, output, number of miners and other employees, and total wages paid different classes.

BUILDING AND LOAN ASSOCIATIONS.—The reports for 56 associations in the State are shown in detail, and convenient summaries made of the statistics for a number of representative associations.

NINTH REPORT ON THE ANNUAL STATISTICS OF MANUFACTURES IN MASSACHUSETTS.

The Annual Statistics of Manufactures, 1894. Ninth Report. xvi, 229 pp. (Issued by the Bureau of Statistics of Labor, Horace G. Wadlin, Chief.)

This report consists of an introduction, 3 pages; tables presenting the statistics in detail, 165 pages; the analysis, 83 pages. There are also 49 pages devoted to an industrial chronology of the State, which gives for each town and city the principal events affecting the industrial establishments during 1894.

The statistics are not shown for all the manufacturing and mechanical industries of the State, the report being confined to a comparison of returns from the same establishments reporting for the different years. Comparisons are made for 4,093 establishments for 1893 and 1894, for 3,073 establishments for the five years from 1890 to 1894, inclusive, and for 857 establishments for the ten years from 1885 to 1894, inclusive. The statistics presented in this synopsis have been selected principally from those given for 1893 and 1894, to which the major portion of the report is devoted.

Reports were received from 4,436 establishments for 1894; of this number 4,093 are compared with reports for 1893. These reports are grouped in 75 classified industries, and reflect the industrial conditions prevailing in the State during the two years.

The 4,093 establishments were conducted during 1894 by 3,183 private firms and 869 corporations, which were managed by 43,337 individuals, of whom 5,056 were partners and 38,281 stockholders. Of the partners 95.63 per cent were males, 2.49 per cent females, and 1.88 per cent estates, etc. Of the stockholders 56.45 per cent were males, 32.55 per cent females, and 11 per cent banks, trustees, etc. Considering the partners and stockholders in the aggregate, 61.02 per cent were males, 29.05 per cent were females, and 9.93 per cent banks, trustees, etc.

The increase or decrease in capital invested, wages paid, stock used, and goods made and work done in 1894 as compared with 1893 are shown in the two statements which follow for each of the 9 leading industries of the State, and for the remaining 66, of the 75 referred to above, considered together.

STATISTICS OF MANUFACTURES IN 75 INDUSTRIES, 1893 AND 1894.

Industries.	Year.	Estab-lish-ments.	Capital in-vested.	Wages paid.	Stock used.	Goods made and work done.
Boots and shoes	1893	638	\$26,084,810	\$20,477,354	\$49,901,149	\$84,425,319
	1894	638	26,125,879	20,082,006	48,536,031	82,479,517
Carpetings	1893	11	7,993,248	1,589,019	4,787,252	7,427,385
	1894	11	7,277,249	1,329,350	3,621,574	5,760,705
Cotton goods	1893	148	115,110,469	24,547,036	46,150,475	85,829,812
	1894	148	114,013,597	21,863,643	41,893,414	74,985,327
Leather.....	1893	141	7,939,915	2,797,042	11,381,709	16,063,980
	1894	141	8,344,321	2,722,360	10,997,498	15,563,653
Machines and machinery	1893	322	30,447,599	8,613,264	9,095,079	25,387,721
	1894	322	30,414,153	7,276,856	7,964,667	21,774,080
Metals and metallic goods	1893	327	19,924,066	6,628,730	10,585,088	22,361,691
	1894	327	19,367,325	6,591,555	9,186,323	19,363,367
Paper and paper goods	1893	98	24,497,673	4,082,892	14,914,112	23,682,331
	1894	98	24,881,825	3,961,597	13,570,057	22,217,777
Woolen goods	1893	115	25,233,739	5,747,269	16,377,058	27,778,635
	1894	115	24,094,185	4,887,984	13,019,911	22,284,858
Worsted goods	1893	21	13,738,952	3,334,653	10,434,830	16,240,380
	1894	21	15,225,680	2,908,940	8,587,957	13,947,789
Other industries (66)	1893	2,273	160,150,654	44,678,678	146,612,728	243,740,268
	1894	2,273	147,903,412	39,483,794	129,834,604	218,367,401
Total.....	1893	4,093	431,121,145	122,495,937	320,239,480	552,938,022
	1894	4,093	417,647,636	111,103,085	287,212,036	496,144,574

DECREASE IN MANUFACTURES IN 1894 AS COMPARED WITH 1893 IN 75 INDUSTRIES.

Industries.	Decrease in—							
	Capital.		Wages.		Stock used.		Goods made and work done.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
Boots and shoes ...	α\$41,069	α0.16	\$395,348	1.93	\$1,365,118	2.74	\$1,945,802	2.30
Carpetings	715,999	8.96	259,669	16.34	1,165,678	24.35	1,666,680	22.44
Cotton goods.....	1,096,872	.95	2,683,393	10.93	4,257,061	9.22	10,844,485	12.63
Leather.....	α404,406	α5.09	74,682	2.67	384,211	3.38	500,327	3.11
Machines and machinery	33,446	.11	1,336,408	15.53	1,130,412	12.43	3,613,641	14.23
Metals and metallic goods.....	556,761	2.79	37,175	.56	1,398,765	13.21	2,998,324	13.41
Paper and paper goods.....	α384,152	α1.57	121,295	2.97	1,244,055	9.01	1,465,054	6.19
Woolen goods.....	1,139,544	4.52	859,285	14.95	3,357,147	20.50	5,493,677	19.78
Worsted goods.....	α1,496,728	α10.82	430,713	12.92	1,646,373	17.70	2,892,591	17.81
Other industries (66)	12,247,242	7.65	5,194,884	11.63	16,778,124	11.44	25,372,867	10.41
Total.....	13,473,509	3.13	11,392,852	9.30	33,027,444	10.31	56,793,448	10.27

α Increase.

The term "capital invested" used in compiling these statistics does not mean merely cash capital or capital stock, but includes all forms of capital devoted to production, such as notes, bills receivable, and value of land, machinery, and stock on hand or in process of manufacture. Inasmuch as some of the elements included as capital are variable from year to year, it follows that apparently wide fluctuations in the amount of capital invested will sometimes appear in the returns. A reduction in capital does not, of course, imply retrogression.

Four of the 9 leading industries show an increase and 5 a decrease in the amount of capital invested, the decrease for the 75 industries amounting to 3.13 per cent. A decrease is shown for wages, stock used, and value of goods made and work done in each of the 9 selected and for the total of the 75 industries.

The following comparative statement presents statistics for 1893 and 1894 concerning the number of employees and the average yearly wages paid in each of the 9 selected industries, and in the 66 other industries considered together. This and the two following statements, giving statistics of employees, include wage earners only; officers, clerks, or other salaried persons are not included.

EMPLOYEES AND AVERAGE WAGES IN 75 INDUSTRIES, 1893 AND 1894.

Industries.	Year.	Estab-lish-ments.	Number of employees.			Average wages per year.
			Average.	Smallest.	Greatest.	
Boots and shoes.....	1893.....	638	41,253	31,506	49,744	\$496.38
	1894.....	638	40,863	32,154	48,151	491.45
Carpetings.....	1893.....	11	4,335	1,917	5,081	366.56
	1894.....	11	3,744	1,933	4,667	355.06
Cotton goods.....	1893.....	148	71,506	59,729	76,711	343.29
	1894.....	148	68,235	55,164	76,094	320.42
Leather.....	1893.....	141	5,666	3,866	7,289	493.65
	1894.....	141	5,723	4,521	7,129	475.27
Machines and machinery.....	1893.....	322	15,806	11,772	19,108	544.94
	1894.....	322	13,581	10,688	16,140	535.81
Metals and metallic goods.....	1893.....	327	13,067	10,299	15,172	507.29
	1894.....	327	11,754	9,580	13,628	560.79
Paper and paper goods.....	1893.....	98	9,924	8,244	11,012	411.42
	1894.....	98	9,685	8,148	10,787	409.89
Woolen goods.....	1893.....	115	15,520	11,215	17,989	379.31
	1894.....	115	14,261	10,163	16,703	342.75
Worsted goods.....	1893.....	21	9,404	6,979	10,790	a 354.28
	1894.....	21	9,222	5,590	11,275	b 314.89
Other industries (66).....	1893.....	2,272	94,337	68,734	115,917	b 437.36
	1894.....	2,272	86,545	68,432	105,595	457.28
Total.....	1893.....	4,093	280,868	214,261	328,763	436.13
	1894.....	4,093	263,398	206,423	310,107	421.81

a Figures here apparently should be \$354.60; those given are, however, according to the original.
 b Figures here apparently should be \$473.36; those given are, however, according to the original.

The total for the 75 industries given in the above statement shows a decrease for 1894 in the average, greatest, and smallest number of persons employed, and in the average annual wages. The decrease in the average wages amounted to \$14.32, or 3.28 per cent.

Considering the total for the 75 industries, the per cent of males and females of the whole number employed at each specified weekly rate of wages is shown in the following statement:

PER CENT OF MALES AND FEMALES OF THE WHOLE NUMBER EMPLOYED AT SPECIFIED WEEKLY WAGES, 1893 AND 1894.

Weekly wages.	1893.		1894.	
	Males.	Females.	Males.	Females.
Under \$5.....	37.64	62.36	36.51	63.49
\$5 or under \$6.....	34.47	65.53	35.42	64.58
\$6 or under \$7.....	45.39	56.61	48.11	51.89
\$7 or under \$8.....	57.03	42.97	58.77	41.23
\$8 or under \$9.....	63.50	36.50	66.02	33.98
\$9 or under \$10.....	79.03	20.97	81.25	18.65
\$10 or under \$12.....	84.85	15.15	87.08	12.92
\$12 or under \$15.....	93.25	6.75	93.28	6.72
\$15 or under \$20.....	97.02	2.98	96.82	3.18
\$20 or over.....	99.07	.93	98.00	2.00
Total.....	66.28	33.72	65.49	34.51

From the above statement it appears that the proportion of males in each wage class increases after the "\$5 or under \$6" wage limit is passed, while the proportion of females correspondingly declines.

In the following statement, which comprises the 75 industries, the total number of males, the total number of females, and the total number of employees of both sexes are each considered as representing 100 per cent, and the number of employees in each wage class constitutes parts of this aggregate.

PER CENT OF THE TOTAL MALES AND FEMALES EMPLOYED AT SPECIFIED WEEKLY WAGES, 1893 AND 1894.

Weekly wages.	1893.			1894.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under \$5.....	7.50	24.41	13.20	8.56	28.27	15.36
\$5 or under \$6.....	4.79	17.89	9.21	5.71	19.76	10.56
\$6 or under \$7.....	7.55	19.37	11.54	8.86	18.14	12.06
\$7 or under \$8.....	9.00	13.33	10.46	9.72	12.95	10.84
\$8 or under \$9.....	8.69	9.82	9.07	8.72	8.51	8.65
\$9 or under \$10.....	12.87	6.71	10.79	12.25	5.33	9.96
\$10 or under \$12.....	14.67	5.15	11.46	14.05	3.95	10.56
\$12 or under \$15.....	17.10	2.43	12.15	16.04	2.19	11.26
\$15 or under \$20.....	13.36	.81	9.13	11.91	.74	8.06
\$20 or over.....	4.47	.08	2.99	4.18	.16	2.79
Total.....	100.00	100.00	100.00	100.00	100.00	100.00

The following comparative statement shows the average proportion of business done and the average number of days in operation for the 9 selected industries and for the 66 other industries considered together, in 1893 and 1894. The proportional amount of business done was computed by considering the maximum production—that is to say, the greatest amount of goods that can be turned out with the present facilities—as representing 100 per cent.

AVERAGE PROPORTION OF BUSINESS DONE AND AVERAGE DAYS IN OPERATION IN 75 INDUSTRIES, 1893 AND 1894.

Industries.	Number of establishments.	Average proportion of business done.		Average days in operation.	
		1893.	1894.	1893.	1894.
Boots and shoes.....	638	59.19	59.76	275.99	279.16
Carpetings.....	11	69.27	61.55	247.53	259.15
Cotton goods.....	148	85.97	79.58	281.87	273.08
Leather.....	141	61.60	63.34	280.09	291.59
Machines and machinery.....	322	60.12	53.84	287.42	283.30
Metals and metallic goods.....	327	59.96	56.93	267.91	266.91
Paper and paper goods.....	98	74.72	61.65	278.37	273.21
Woolen goods.....	115	75.43	73.81	265.01	262.70
Worsteds.....	21	77.05	75.33	278.53	270.90
Other industries (66).....	2,272	59.49	57.29	280.27	278.53
Total.....	4,093	61.49	59.06	278.40	275.63

In the 4,093 establishments making returns in each year, the proportion of business done in 1893 is represented by 61.49 per cent, and in 1894 by 59.06 per cent. Fifteen industries reported a larger proportion of business done in 1894.

The average number of days in operation during 1893 was, for all

industries, 278.40, and during 1894, 275.63, a decrease of 2.77 days, or 0.99 per cent. Thirty-six of the 75 industries considered show an increase in the average number of days in operation in 1894 as compared with 1893.

The actual product per \$1,000 of capital invested in each of the 9 leading industries of the State, with the average product per employee, the percentages of industry product paid in wages, and the percentages devoted to other expenses, is shown in the following statement for 1894.

By industry product is meant the actual result of the productive forces in the industry; that is, the added value created above the value of stock and materials consumed. This product was obtained by deducting from the total value of goods made and work done the value of stock used. In the division of the proceeds of each industry, one part of the industry product is paid to the labor force in the form of wages. The balance constitutes a fund from which are paid freights, insurance, interest on loans and stock, rents, commissions, salaries, etc., in fact, all expenses other than those for stock and wages. The remainder, if any, is the profit of the employer.

INDUSTRY PRODUCT, WAGES, AND PROFIT AND EXPENSES IN NINE SPECIFIED INDUSTRIES, 1894.

Industries.	Industry product.	Wages.	Profit and expense fund.	Industry product.		Per cent of industry product.	
				Per \$1,000 of capital.	Average per employee.	Paid in wages.	Devoted to profit and expenses.
Boots and shoes	\$33,943,486	\$20,082,006	\$13,861,480	\$1,299.23	\$330.67	59.16	40.84
Carpetings	2,139,131	1,329,350	809,781	293.95	571.35	62.14	37.86
Cotton goods	33,091,913	21,863,643	11,223,270	290.25	454.97	66.07	33.93
Leather	4,566,155	2,722,360	1,843,795	547.22	797.16	59.62	40.38
Machines and machinery	13,809,413	7,276,856	6,532,567	454.05	1,016.82	52.69	47.31
Metals and metallic goods	10,177,044	6,591,555	3,585,489	525.47	865.34	64.77	35.23
Paper and paper goods	8,647,720	3,961,597	4,686,123	347.56	894.75	45.81	54.19
Woolen goods	9,265,047	4,837,984	4,377,063	384.53	649.68	52.76	47.24
Worsted goods	4,759,632	2,903,940	1,855,892	312.62	516.14	61.01	38.99

The following comparative statement shows the value of goods made and work done as reported by 857 identical establishments in each year from 1885 to 1894, inclusive:

VALUE OF GOODS MADE AND WORK DONE, 1885 TO 1894.

Year.	Value.	Increase.	
		Amount.	Per cent.
1885	\$209,500,026		
1886	239,261,482	\$29,761,456	14.21
1887	253,590,055	14,328,573	5.99
1888	261,009,722	7,419,667	2.93
1889	270,018,630	9,008,908	3.45
1890	280,482,516	10,463,886	3.88
1891	284,042,915	3,560,399	1.27
1892	296,563,113	12,520,198	4.41
1893	271,222,640	α 25,340,473	α 8.54
1894	239,816,588	α 31,406,052	α 11.58

α Decrease.

In the following comparative statement a similar showing is made for 3,073 identical establishments reporting in each of the five years from 1890 to 1894, inclusive:

VALUE OF GOODS MADE AND WORK DONE, 1890 TO 1894.

Year.	Value.	Increase.	
		Amount.	Per cent.
1890	\$508, 142, 367		
1891	517, 274, 796	\$9, 132, 429	1.80
1892	547, 924, 725	30, 649, 929	5.93
1893	504, 017, 695	α 43, 907, 030	α 8.01
1894	449, 675, 930	α 54, 341, 765	α 10.78

α Decrease.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

Report of the Royal Commission on the Liquor Traffic in Canada.
vi, 1,003 pp.

The object of this commission, which was authorized March 14, 1892, was to obtain the fullest and most reliable data possible respecting "the effect of the liquor traffic upon all interests affected by it in Canada; the measures which have been adopted in this and other countries with a view to lessen, regulate, or prohibit the traffic; the results of these measures in each case; the effect that the enactment of a prohibitory liquor law in Canada would have in respect of social conditions, agricultural business, industrial and commercial interests, of the revenue, requirements of municipalities, provinces, and of the Dominion, and also as to its capability of efficient enforcement; all other information bearing upon the question of prohibition."

The report proper comprises one volume of 1,003 pages. Numerous witnesses were examined by the commission in the provinces of Ontario, Manitoba, the Northwest Territories, British Columbia, and in the United States. The evidence is contained in five volumes, having a total of 5,617 pages.

The interests affected by the liquor traffic in Canada are so varied, numerous, and extensive, and the data available so limited, that the commission was unable to do more than refer to the most prominent of these interests and to supply such information in regard to them as they were able to procure.

During the five years from 1889 to 1893 there were manufactured in the Dominion, on an average each year, 4,538,000 gallons of whisky and 17,150,000 gallons of beer and ale. Estimating the value of the whisky at 60 cents and of the beer and ale at 30 cents per gallon, and of the cattle feed and refuse products sold at \$800,000, the total value of the annual product of the establishments manufacturing spirits and beer would be \$8,667,800.

To illustrate further the extent of the interests affected by the industry, an estimate is presented of the values of the products of other industries, such as cooperage, fuel, certain farm crops, transportation, etc., affected by the traffic. The estimates of the various amounts paid

annually by the distilleries and breweries in the Dominion are summarized as follows:

Raw materials, the products of the farm.....	\$2,382,765
Wages.....	1,194,046
Fuel.....	170,000
Transportation.....	450,000
Casks, bottles, cases, etc.....	206,455
Capsules, corks, etc.....	76,186
Printing, advertising, show cards, etc.....	79,897
Repairs, blacksmiths' work, etc.....	47,005
Insurance.....	151,685
Taxes, gas, water supplies, etc.....	123,118
Ice.....	36,757
Sundries.....	121,992
Total.....	5,039,906

There was paid annually \$1,038,671 for imported materials, leaving \$4,001,235 as the sum paid for Canadian products, wages, etc.

There are, based on an average for five years, 2,001,318 gallons of spirits, malt liquors, and wines imported annually into the Dominion, which are valued at \$1,736,897.

Taking an average of the total amount of spirits, wine, and malt liquors entered for consumption for the five years ending with June, 1893, it was found to be 21,676,749 gallons per annum. The average population for the same period was 4,834,876, making the per capita consumption 4.48 gallons. The valuation of the annual consumption was placed at \$15,030,064. Taking an average of the quantities of wine, spirits, and malt liquors entered for consumption in the five years ending 1893, but excluding cider and native wines, and taking an average of the retail prices, the calculation shows the sum of \$39,879,854 to be paid for liquor by the consumers.

The total annual Government revenue derived from the traffic, based on the reports for five years, is given at \$7,101,557.22.

How much of the crime, poverty, and insanity of the country is to be attributed to the use of intoxicating liquors could not be accurately determined.

The average number of convictions per year to each 1,000 of population for different offenses is shown in the following statement:

CONVICTIONS PER 1,000 OF POPULATION, 1881 TO 1893.

Periods.	For drunkenness.	For offenses against liquor laws.	Total.	All convictions.
Five years ending 1885.....	2.49	0.42	2.91	7.14
Five years ending 1890.....	2.72	.69	3.41	7.87
Three years ending 1893.....	2.46	.48	2.94	7.40

In summarizing, it is stated that the statistics show—

1. An increase in the number of insane.
2. A decrease in the number of commitments to the common jails, and of those remaining therein.

3. A decrease in the number of population in the reformatories of Ontario and Quebec.

4. A decrease in the number of those arrested for offenses in the principal cities and towns, more particularly in those arrested for drunkenness.

5. An increase in the number of convictions for offenses of all kinds, comparing the five years ended 1890 with the five years ended 1885, but a decrease in the convictions per 1,000 of the population in the three years ended 1893 as compared with those for the five years ended 1890, and a steady reduction in the yearly ratios from 1889 to 1893.

The returns for the earlier years for which the statistics are given are supposed to be less accurate than those for the later ones.

6. Taking the statistics of convictions for drunkenness for the whole Dominion, it will be found that the average for the five years ended 1885 was 2.49 per 1,000 of the population. In the five years ended 1890, during the greater portion of which the Scott act^(a) was in force in a large number of counties in Ontario, the average was 2.72 per 1,000 of the population. In the three years ended 1893, the average per 1,000 fell to 2.46. The highest ratios were in the years 1889 and 1890. These were the years immediately following the abandonment of the Scott act throughout the counties in Ontario. In them the ratio was 2.94, and from that point there was a gradual reduction until, in 1893, the ratio reached 2.35 per 1,000.

7. The statistics of the committals to, and those remaining in, the penitentiaries of the Dominion show a large decrease in the period between 1880 and 1893.

It was found impracticable to make a summarization of the legislation affecting the liquor traffic or of the results of such legislation. The elaborate detail presentation concerning this, as well as the other features of the inquiry, should be consulted to obtain a correct idea of the subjects discussed.

Annual Report of the Bureau of Industries for the Province of Ontario, 1894. C. C. James, Secretary. Published by Ontario Department of Agriculture. xvi, 339 pp.

This report is for the year 1894, and presents statistics on the following subjects: Weather and the crops, 58 pages; live stock, the dairy, and the apiary, 42 pages; values, rents, and farm wages, 39 pages; loan and investment companies, 28 pages; chattel mortgages, 4 pages; municipal statistics, 174 pages.

WEATHER AND THE CROPS.—Tables giving temperature, sunshine, and precipitation, as observed at various well-distributed points throughout the province, furnish an interesting exhibit of weather conditions for the years 1893 and 1894, also the average for thirteen years (1882 to 1894) for temperature and precipitation, and for twelve years (1883 to 1894) for sunshine.

There were 23,038,974 acres of land assessed in the rural area of the province during 1894, of which 12,292,610 acres were cleared, there remaining 7,859,714 acres in woodland and 2,886,650 acres in swamp,

^a The Canadian temperance law of 1878, based on the principle of local option.

marsh, or waste land. There were 2,703,241 acres in pasture during the year and 8,215,153 in crops. The average number of acres per year sown in crops during the period from 1882 to 1894, inclusive, was 7,655,848. The acreage and yield of the principal crops is shown in the following statement:

ACREAGE AND YIELD OF FARM PRODUCTS, 1894.

Products.	Acres.	Yield in bushels.	
		Total.	Average per acre.
Fall wheat	778,992	16,512,106	21.2
Spring wheat	290,016	3,367,854	14.6
Barley	486,261	10,980,404	22.6
Oats	2,330,766	69,867,716	30.0
Rye	90,144	1,886,606	15.4
Pease	785,007	14,022,888	17.9
Corn, for husking	267,348	16,275,352	60.9
Corn, for silo and fodder	111,361	α1,049,764	α9.43
Buckwheat	145,268	2,534,335	17.4
Beans	59,281	827,514	14.0
Potatoes	167,253	17,163,130	102.6
Mangel-wurzels	27,670	11,532,127	416.8
Carrots	11,196	3,716,140	332.2
Turnips	147,657	61,694,487	417.8
Hay and clover	2,576,943	α3,575,200	α1.39

α Tons.

LIVE STOCK, THE DAIRY, AND THE APIARY.—Some of the totals for the statistics of 1894, given under this title, are shown in the following summarized statement:

Horses, number	674,777
Hogs, number	1,142,133
Horned cattle, number	2,099,301
Sheep, number	2,015,805
Wool clip:	
Number of fleeces	1,092,467
Pounds of wool	6,235,036
Pounds of wool per fleece	5.71
Poultry, number of fowls	7,552,662
Cheese factories:	
Number reporting	1,011
Milk used, pounds	1,027,577,831
Cheese made, pounds	97,284,547
Gross value of cheese	\$9,441,247
Creameries:	
Number reporting	39
Butter made, pounds	1,072,517
Value of butter	\$224,605
Apiary outfit:	
Hives of bees, number	200,094
Value of outfit	\$1,051,574

VALUES, RENTS, AND FARM WAGES.—The total values of farm property for 1894 are summarized in the following statement:

Farm land	\$587,246,117
Buildings	204,071,566
Implements	51,530,172
Live stock on hand	111,547,652
Total	954,395,507

The total value of live stock sold during the year amounted to \$31,935,589. Based upon market prices, the total value of crops for the year aggregated \$94,055,392.

The average value of a rented farm, including buildings, in 1894 was \$5,297; the average rental \$238, or 4.49 per cent of the value of land and buildings. The area of a rented farm averaged 127 acres, with 90 acres cleared.

The average annual wages for farm laborers in 1894 is given at \$156 with board, and \$247 without board. The average monthly wages for the working season are reported at \$16.55 with, and \$25.61 without board. Domestic servants on farms average \$6.23 per month.

LOAN AND INVESTMENT COMPANIES.—The following statement gives totals for the loan and investment companies of the province as reported for the years 1893 and 1894:

LOAN AND INVESTMENT COMPANIES, 1893 AND 1894.

Items.	1893.	1894.
Number of companies	86	89
Capital subscribed.....	\$88,582,985	\$94,047,711
Liabilities to stockholders.....	49,285,824	50,582,921
Liabilities to the public.....	84,916,664	86,958,820
Total liabilities.....	134,202,488	137,541,741
Secured loan assets.....	118,040,915	120,229,818
Property assets.....	16,161,573	17,311,923
Total assets.....	134,202,488	137,541,741

CHATTEL MORTGAGES.—During the year ending December 31, 1894, there were 21,759 chattel mortgages, representing \$11,220,205, on record in the province and undischarged. Of this number 11,687, representing \$3,446,884, were against farmers. In 1893 the chattel mortgages numbered 19,722 and represented \$9,333,385, of which 10,684, representing \$3,059,857, were against farmers.

MUNICIPAL STATISTICS.—The details presented for the municipal statistics of the province for the year 1893 are summarized in the following statement:

Population	1,910,059
Total assessed valuation.....	\$825,530,052.00
Taxes imposed for all purposes	12,522,660.00
Rate per head.....	6.56
Mills on the dollar.....	15.17
Bonded debt.....	48,083,243.00
Rate per head.....	a 28.17
Floating debt.....	6,796,422.00
Interest paid on loans and debentures	2,508,691.00

a Figures here apparently should be \$25.17; those given are, however, according to the original.

Die Arbeitseinstellungen im Gewerbebetriebe im Jahre 1893 (Beilage der "Statistischen Monatschrift," 1894). *Die Arbeitseinstellungen im Gewerbebetriebe in Österreich Während des Jahres 1894.* Herausgegeben vom Statistischen Departement im k. k. Handelsministerium. 31, 128 pp.

The Austrian Government has been collecting statistics of strikes each year since 1891. Those for the years 1891 and 1892 were printed by the Government, but not for general distribution. The report for 1893 was published in the form of a supplement to the monthly statistical bulletin, *Statistische Monatschrift*. The last report, for 1894, is the first that appeared in the form of a special report of the bureau of statistics of the Imperial Ministry of Commerce.

The statistics for 1891 and 1892 appeared in Bulletin No. 1 of the Department of Labor, in an article on strikes in Austria. The article was prepared from data obtained from Volume XI of the foreign reports of the British Royal Commission on Labor. The statistics presented in the present article are obtained from the above-mentioned official reports of the Austrian Government.

The strike statistics in these reports do not cover agricultural, forestry, or mining industries. These will be separately treated in a report soon to be published by the Austrian Minister of Agriculture.

The statistics for the two years here presented were collected according to such different methods, that it will be necessary to show the information in separate tables for each year. The report for 1893 embraces but two general tables, one showing strikes according to localities, and the other by industries affected. The essential features of the second are reproduced in the following table:

STRIKES IN 1893, BY INDUSTRIES.

Industries.	Strikes.	Estab-lish-ments.	Employees.			Cause or object.			Result.		
			Total.	Strik-ers.	Days lost.	For in-crease of wages or that and other de-mands	Against reduc-tion of wages.	All other.	Suc-ceeded	Suc-ceeded partly.	Failed.
Building	10	249	12,405	9,892	209,155	7	.....	3	.....	6	4
Brewing	7	16	1,225	222	3,067	7	.....	.....	1	2	4
Stonecutting	1	135	700	700	52,500	1	.....	.....	.....	1	.....
Dyeing, bleach- ing, and finish- ing	7	18	1,291	1,182	19,109	5	.....	2	4	1	2
Board sawing	1	1	44	19	38	1	.....	.....	.....	.....	1
Printing	3	3	48	31	88	.....	3	.....	.....	.....	3
Paper-box mak- ing	1	1	85	70	350	1	.....	.....	.....	1	.....
Cement	1	1	30	27	54	.....	1	.....	.....	.....	1
Piano	1	1	55	55	935	1	.....	.....	.....	.....	1
Wood turning	10	37	570	370	10,153	7	.....	3	1	2	7
Ribbon printing	1	1	196	150	1,350	1	.....	.....	.....	1	.....
Gas and water works	1	1	33	33	66	1	.....	.....	.....	.....	1
Glass and ce- ramics	9	229	3,617	2,051	32,580	2	6	1	.....	2	7
Rubber goods	2	2	1,053	243	3,298	2	.....	.....	.....	2	.....
Hats	3	3	574	248	534	.....	2	1	1	.....	2
Cartographing and litho- graphing	1	1	39	22	396	.....	.....	1	.....	.....	1

STRIKES IN 1893, BY INDUSTRIES—Concluded.

Industries.	Strikes.	Estab-lish-ments.	Employees.			Cause or object.			Result.		
			Total.	Strik-ers.	Days lost.	For in-crease of wages or that and other de-mands	Against reduction of wages.	All other.	Suc-ceeded	Suc-ceeded partly.	Failed.
Coal handling...	1	1	1,000	1,000	12,000	1				1	
Leather.....	14	48	1,963	1,790	50,634	12	1	1	1	10	3
Machinery.....	8	8	2,175	222	1,040	2		6	1	1	6
Metal.....	18	56	1,685	1,299	14,493	6	2	10	6	5	7
Mineral oil and lard refining, and candle making.....	1	1	232	190	1,520	1				1	
Flour milling....	2	9	88	78	1,452			2		1	1
Paper ruling....	1	1	29	8	16			1			1
Cleaning works..	1	1	20	20	40	1			1		
Tailoring.....	3	256	502	489	2,415	3				3	
Shoemaking.....	4	4	681	526	1,778	4			2		2
Sulphuric acid and fertilizing works.....	1	1	83	40	40	1					1
Textiles.....	43	43	14,128	6,423	90,771	22	8	13	12	9	22
Furniture and cabinetmaking	11	36	546	523	6,577	9		2	2	3	6
Linen goods....	1	1	81	42	672	1				1	
Bricks and tiles	2	2	156	6	10	1	1		1		1
Painting and decorating....	1	36	100	50	400			1		1	
Whitewashing..	1	4	105	99	990	1				1	
Total.....	172	1,207	45,539	28,120	518,511	101	20	51	33	55	84

The report for 1894 goes more into details concerning strikes, with the exception, however, that industries are given in more comprehensive groups. The tables embrace information concerning each strike, with separate recapitulations according to localities and industries, the number and character of strikes according to the months in which they began, the results of strikes according to their duration, and the results by causes. The information contained in these tables is also much more carefully analyzed in the text preceding them than in the report for 1893. The two following tables give the same information as that for 1893, though somewhat more in detail, concerning strikes in 1894:

STRIKES IN 1894, BY INDUSTRIES.

Industries.	Strikes.	Estab-lish-ments.	Total em-ployees.	Strikers.	Strikers reem-ployed.	New em-ployees after strikes.
Stone, glass, china, and earthen ware..	22	130	7,717	6,415	6,235	104
Metal and metallic goods.....	23	38	4,606	2,752	2,522	165
Machinery and instruments.....	7	7	579	194	103	45
Wooden and caoutchouc goods.....	23	1,593	12,818	9,793	9,579	104
Leather, hides, brushes, and feathers...	9	19	765	641	421	107
Textiles.....	34	46	10,467	6,317	5,624	529
Paper hanging.....	1	145	422	194	194	
Wearing apparel and millinery.....	9	22	837	668	511	114
Paper.....	1	1	25	24	23	
Food preparations.....	7	97	1,021	299	283	14
Chemical works.....	2	2	1,612	1,268	468	932
Building trades.....	11	358	18,921	14,975	14,397	34
Printing and publishing.....	5	5	152	85	60	24
Power, heat, and light station.....	1	1	168	104		109
Transportation.....	2	2	509	249	50	118
Other industries.....	2	2	99	97	97	
Total.....	159	2,468	60,718	44,075	40,567	2,390

DURATION AND RESULTS OF STRIKES IN 1894, BY INDUSTRIES.

Industries.	Duration of strikes.					Results of strikes.					
	10 days and under.	11 to 20 days.	21 to 30 days.	31 to 40 days.	Over 40 days.	Succeeded.		Succeeded partly.		Failed.	
						Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Stone, glass, china, and earthen ware.....	17	2	1	.....	2	6	27.27	10	45.46	6	27.27
Metal and metallic goods.....	15	3	1	3	1	6	26.09	6	26.09	11	47.82
Machinery and instruments.....	4	3	.....	.....	.....	.....	.....	.....	.....	7	100.00
Wooden and caoutchouc goods.....	16	3	1	1	2	8	34.78	6	26.09	9	39.13
Leather, hides, brushes, and feathers.....	5	2	.....	.....	2	3	33.33	1	11.11	5	55.56
Textiles.....	25	6	1	.....	2	2	5.88	10	29.41	22	64.71
Paperhanging.....	.....	1	.....	.....	.....	.....	.....	1	100.00	.....	.....
Wearing apparel and millinery.....	6	1	.....	1	1	4	44.45	3	33.33	2	22.22
Paper.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Food preparations.....	7	.....	.....	.....	.....	2	28.57	2	28.57	3	42.86
Chemical works.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2	100.00
Building trades.....	9	1	1	.....	.....	4	36.36	2	18.18	5	45.46
Printing and publishing.....	3	2	.....	.....	.....	3	60.00	.....	.....	2	40.00
Power, heat, and light station.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Transportation.....	2	.....	.....	.....	.....	.....	.....	1	50.00	1	50.00
Other industries.....	2	.....	.....	.....	.....	1	50.00	1	50.00	.....	.....
Total.....	115	24	5	5	10	39	24.53	43	27.04	77	48.43

CAUSES OF STRIKES IN 1894, BY INDUSTRIES.

Industries.	Against reduction of wages.	For increase of wages.	For regular payments.	For reduction of hours.	For discharge of foremen, etc.	Against discharge of employees.	For reinstatement of discharged employees.	Against obnoxious rules.	For Labor Day, May 1.	Other causes.	Total.
Stone, glass, china, and earthen ware.....	2	17	.....	4	.....	.....	.....	.....	5	9	37
Metal and metallic goods.....	4	12	.....	6	4	7	5	.....	6	10	54
Machinery and instruments.....	.....	3	.....	.....	2	.....	4	.....	.....	1	10
Wooden and caoutchouc goods.....	5	14	.....	8	.....	1	5	.....	4	10	47
Leather, hides, brushes, and feathers.....	.....	5	.....	3	2	.....	1	.....	2	4	17
Textiles.....	3	16	1	8	3	7	7	.....	5	21	71
Paperhanging.....	.....	1	.....	1	.....	.....	.....	.....	1	.....	3
Wearing apparel and millinery.....	2	7	.....	3	2	4	1	.....	1	6	26
Paper.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Food preparations.....	.....	4	.....	3	1	.....	.....	.....	.....	5	13
Chemical works.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Building trades.....	.....	5	2	4	.....	.....	2	1	.....	3	17
Printing and publishing.....	1	.....	.....	1	1	2	1	.....	.....	2	8
Power, heat, and light station.....	.....	1	.....	.....	1	1	.....	.....	.....	1	4
Transportation.....	.....	2	.....	1	.....	.....	.....	.....	.....	1	4
Other industries.....	1	1	.....	1	.....	1	.....	.....	.....	.....	4
Total (a).....	18	88	3	43	16	23	28	1	24	74	318

a A considerable number of strikes were due to two or three causes, and the facts in such cases have been tabulated under each cause. Hence the totals for this table necessarily do not agree with those for the last table on page 295.

An analysis of these tables shows that a very large proportion of all the strikes occurred in the groups of building trades, wooden and caoutchouc goods, stone, glass, china, and earthen ware, and textiles. The exact extent to which each group figures is shown in the following statement of percentages:

Industries.	Per cent of strikes.	Per cent of days lost.
Building trades.....	33.98	23.14
Wooden and caoutchouc goods	22.21	49.85
Stone, glass, china, and earthen ware.....	14.55	5.48
Textiles	14.33	8.05
Other industries.....	14.93	13.48

The duration of strikes was, in general, very short. Out of a total of 159 strikes, 115 lasted less than 11 days. The longest strike lasted 136 days, while the average duration was 11.68 days.

In giving the causes of strikes, the Austrian bureau has adopted a peculiar method of presentation. As strikes may, and usually do, result from a variety of causes, it has been thought preferable to use the cause instead of the strike as the unit. The table, therefore, shows the number of times that each cause figured as the incentive to a strike. Thus there is shown a total of 318 causes for 159 strikes.

It will be seen that the demands for an increase of wages and for a reduction of hours are by far the most frequent causes of strikes. Of the total of 318 causes, 88, or 27.67 per cent, were due to the former, and 43, or 13.52 per cent, to the latter cause.

The bureau has, however, also made a calculation of the causes of strikes according to the more usual method of using the strike as the unit. Such a presentation, together with the percentage of strikes due to each cause, is given in the following statement:

PER CENT OF STRIKES DUE TO EACH SPECIFIED CAUSE, 1894.

Cause.	Strikes.	
	Number.	Per cent.
Against reduction of wages.....	11	6.92
Against reduction of wages in connection with various other demands.....	7	4.40
For increase of wages	21	13.21
For increase of wages and reduction of hours.....	9	5.66
For increase of wages and reduction of hours in connection with other demands.....	24	15.09
For increase of wages in connection with other demands, but not including reduction of hours.....	34	21.38
For regular payments	2	1.26
For regular payments in connection with other demands.....	1	0.63
For reduction of hours	3	1.89
For reduction of hours in connection with other demands, but not including increase of wages.....	7	4.40
For discharge of foremen or superintendents	6	3.77
For discharge of foremen or superintendents in connection with other demands not specified above.....	3	1.89
For reinstatement of discharged employees.....	13	8.18
For reinstatement of discharged employees in connection with other demands not specified above.....	5	3.14
For Labor Day, May 1.....	1	0.63
Other demands	12	7.55
Total	159	100.00

It is thus seen that 21, or 13.21 per cent of all strikes, were due to the single demand for higher wages; 33, or 20.75 per cent, to demands for higher wages and shorter hours alone and in connection with other demands, and 34, or 21.38 per cent, to demands for higher wages in connection with other demands, not including reduction of hours.

Regarding the results of strikes, the first table for 1894 shows that 39, or 24.53 per cent of all strikes, were successful; 43, or 27.04 per cent were partly successful, and 77, or 48.43 per cent, were failures.

The most important information, however, that can be obtained concerning the results of strikes is that where they are shown according to the causes for which strikes were undertaken. It is possible to obtain this for the first time for the year 1894. This is done in the following table:

RESULTS OF STRIKES, BY CAUSES, 1894.

Cause.	Succeeded.			Succeeded partly.			Failed.			Total.		
	Strikes.	Estab-lish-ments	Strik-ers.	Strikes.	Estab-lish-ments	Strik-ers.	Strikes.	Estab-lish-ments	Strik-ers.	Strikes.	Estab-lish-ments	Strik-ers.
Against reduction of wages	10	25	1,525	-----	-----	-----	8	9	430	18	34	1,955
For increase of wages...	20	74	3,122	31	314	7,510	37	1,684	12,779	88	2,072	23,411
For regular payments..	3	3	162	-----	-----	-----	-----	-----	-----	3	3	162
For reduction of hours.....	15	41	1,788	8	210	467	25	2,013	26,674	43	2,264	28,929
For discharge of foremen, etc.....	2	2	98	-----	-----	-----	14	14	1,062	16	16	1,160
Against discharge of employees	6	6	479	-----	-----	-----	17	18	1,851	23	24	2,330
For reinstatement of discharged employees	3	3	154	1	1	63	24	24	3,184	28	28	3,401
Against obnoxious rules.....	1	9	295	-----	-----	-----	-----	-----	-----	1	9	295
For Labor Day, May 1.	6	10	4,498	1	11	488	17	1,732	10,690	24	1,753	15,676
Other causes.	29	40	7,089	8	83	1,554	37	1,943	25,434	74	2,066	234,221
Total (b).	95	213	19,210	44	619	10,082	179	7,437	82,104	318	8,269	111,540 (a)

a These figures do not represent the totals as shown by the other columns; they are, however, given as reported.

b A considerable number of strikes were due to two or three causes, and the facts in such cases have been tabulated under each cause. Hence the totals for this table necessarily do not agree with those for some of the preceding tables.

As already explained, the systems of presentations of results for 1893 and 1894 differ so materially that a comparison of one year with another is difficult. However, from figures for the four years given in the last report, a reasonably accurate idea may be gained of the cause of strikes in Austria during that period, namely, 1891 to 1894, inclusive.

The following statement shows the number of strikes, strikers, establishments, etc., for each year:

STRIKES BY YEARS, 1891 TO 1894.

Items.	1891.	1892.	1893.	1894.
Strikes	104	101	172	159
Establishments affected	1,917	1,519	1,207	2,468
Employees in establishments	40,486	24,621	45,539	60,718
Strikers	14,025	14,123	23,120	44,075
Percentage of strikers of total employees	34.64	57.36	61.75	72.59
Total days lost.....	247,086	150,992	513,511	566,463

The above figures are significant. They show a decided and almost steady increase from year to year in the number of strikers, the percentage of employees striking, and the number of working days lost. Comparing the figures for 1891 and 1894, it is found that in every case they are greater for the last year than for the first year.

The last table, prepared from material contained in the reports, shows the number and percentage of strikes according to the principal causes and their results:

PER CENT OF STRIKES, BY CAUSES AND RESULTS, 1891 TO 1894.

Causes and results.	1891.		1892.		1893.		1894.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
CAUSES.								
For increase of wages	26	25.00	19	18.81	38	22.09	21	13.21
Against reduction of wages	16	15.39	19	18.81	20	11.63	11	6.92
For increase of wages in connection with reduction of hours and other demands	28	26.92	32	31.69	63	36.63	67	42.13
Reduction of hours alone, or in connection with other demands except increase of wages	7	6.73	9	8.91	5	2.91	10	6.23
For and against discharge of employees	7	6.73	15	14.85	21	12.21	19	11.95
Other causes	20	19.23	7	6.93	25	14.53	31	19.50
RESULTS.								
Succeeded	19	18.63	26	25.74	33	19.18	39	24.53
Succeeded partly	29	28.43	29	28.71	55	31.93	43	27.04
Failed	54	52.94	46	45.55	84	48.84	77	48.43
Total strikes	104	100.00	101	100.00	172	100.00	159	100.00

a For two strikes results are not reported, hence they are omitted under "Strikes by results."

The above table shows that the percentage of strikes resulting from demands in reference to wages alone has decreased materially during the four-year period, while that of strikes resulting from demands for increase of wages in connection with reduction of hours and other demands has steadily increased. At the same time, the percentage of successful strikes has increased, while there was a corresponding decrease in the number of failures.

Fourth Annual Report of the Department of Labor of New Zealand. Hon. W. P. Reeves, Minister of Labor. 67 pp.

This report, which is for the year ending March 31, 1895, treats of the condition of the labor market; assistance rendered by the department in procuring employment; the establishment of labor colonies on State farms; the effect of certain features of the factory inspection and shops and shop-assistant's acts of 1894; labor disturbances; methods of dealing with the unemployed; reports of factory inspectors and wages and employees in various industries.

During the year the department assisted 2,007 married and 1,023 single men in finding employment. The total number of men assisted in this manner since the organization of the department is as follows:

MEN ASSISTED IN PROCURING EMPLOYMENT.

Year.	Number.	Persons dependent on them.
June 1, 1891, to March 31, 1892.....	2, 593	4, 729
April 1, 1892, to March 31, 1893.....	3, 874	7, 802
April 1, 1893, to March 31, 1894.....	3, 371	8, 002
April 1, 1894, to March 31, 1895.....	3, 080	8, 883
Total	12, 868	29, 416

Of the men assisted during the year ending March 31, 1895, there were 894 sent to private employment and 2,136 to Government works. The nonemployment of 3,004 of the number was due to slackness of trade and similar causes, while sickness was given as the reason for 26 cases. Of the persons dependent on those assisted, 2,007 were wives, 330 parents and others, and 6,546 children.

The provision of the factory inspection law of New Zealand, which makes it compulsory that the written permit of the inspector be conspicuously fastened to the wall of the room in which overtime is being worked, is proving a great safeguard. The requirement of the same law that all goods given out as piecework to be done in a private dwelling, or in any place not registered as a factory, shall have attached to it a printed label describing the place where the work was done and stating that it is an unregistered workshop, which label shall not be removed before the goods are finally sold, has had good effect in preventing owners of factories giving out material to be made up by people whose dwellings are unfit to be used as workshops for the manufacture of clothing. It has probably not prevented poor women from obtaining work, because where any two persons (such as mother and daughter, or two friends) choose to work together they can register as a factory, and their workshop be under proper inspection.

The number of persons working under the factories act was 29,879, of whom 22,324 were men and 7,555 women. This was an increase of 4,028 over the year ending March 31, 1894, the difference being mainly

caused by the wider grasp of the new act in including as factories all places where two persons work at a handicraft. The prior act made three persons the minimum for factory employment.

Histoire Économique de la Propriété, des Salaires, des Denrées et de Tous les Prix en Général, depuis l'An 1200 jusqu'en l'An 1800. Par le Vicomte G. d'Avenel. 2 vols.: xxvii, 726, 916 pp.

This work was at first undertaken as a purely private enterprise by the Vicomte d'Avenel. After awarding to it the Rossi prize in 1890 and in 1892, the Academy of Moral and Political Sciences, unable to publish it on account of its size, earnestly recommended that the Comité des Travaux Historiques, au Ministère de l'Instruction Publique, issue the work in the collection of Documents Inédits sur l'Histoire de France. Accepted by the latter, it therefore now appears as a public document.

The nature of the work is essentially documentary. In general the author may be said to have undertaken much the same work as that done for Great Britain by Mr. Thorold Rogers in his *History of Agriculture and Prices in Great Britain*. Of the 1,669 pages embraced within the two volumes, 521 pages only are devoted to introductory remarks and critical analysis, the remaining 1,148 pages consisting of quotations of prices, rents, etc. Of these latter pages all but 33 consist of a mere enumeration of particular quotations of prices, values, and rents. Each quotation shows the source whence derived, the locality, the date, the measure of the period, the quantity expressed in the measure now in use, the price expressed in the old measure quoted and the corresponding price expressed in the modern measure, and finally, the price in francs per unit of the measure in use at the present time. All the quotations concerning each article are given in one place, according to their dates, thus affording for each article a series of quotations in chronological order covering the entire period from 1201 to 1800. These general tables relate to (1) the value of different kinds of agricultural lands, (2) the value of houses at Paris and elsewhere in France, (3) the revenues derived from land, (4) the rents of houses, and (5) the prices of ordinary farm products and of bread.

In the concluding 33 pages the attempt is made to calculate the average value and revenue-producing power of land at different periods and the course of average prices of the more important cereals, both for particular provinces of France and for the whole country generally. The tables showing the average price of wheat for each year for which quotations could be obtained during the period 1201 to 1800, the same for rye, barley, and oats during the period 1601 to 1800, and for all four grains by periods 1201 to 1800, are of such general importance as to warrant their reproduction. As regards the single article of wheat, the second volume contains a chart prepared by M. Levasseur,

based on material contained in the present as well as other publications, showing graphically the course of prices during these six centuries.

AVERAGE PRICE PER BUSHEL OF WHEAT IN FRANCE, 1201 TO 1800.

Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.
1201	\$0.208	1326	\$0.493	1409	\$0.294	1488	\$0.228	1566	\$1.087
1202	.522	1327	.489	1410	.393	1489	.171	1567	.971
1203	.162	1328	.507	1411	.274	1490	.335	1568	.974
1211	.331	1329	.459	1412	.137	1491	.214	1569	.946
1220	.277	1331	.360	1413	.192	1492	.182	1570	.771
1222	.324	1332	.452	1414	.207	1494	.159	1571	.914
1224	.171	1333	.584	1415	.270	1495	.171	1572	1.090
1226	.524	1334	.371	1416	.358	1496	.173	1573	2.069
1228	.303	1335	.127	1417	.176	1497	.236	1574	1.508
1229	.174	1337	.326	1418	.442	1498	.202	1575	.963
1233	.204	1338	.154	1419	1.422	1499	.336	1576	1.032
1237	.595	1339	.407	1420	1.032	1500	.202	1577	.736
1238	.317	1340	.325	1421	.883	1501	.339	1578	.749
1239	.473	1341	.535	1422	1.035	1502	.268	1579	.849
1241	.171	1342	.224	1423	.737	1503	.127	1580	1.075
1247	.441	1343	.569	1424	.282	1504	.211	1581	.771
1249	.372	1344	.608	1425	.457	1505	.812	1582	1.002
1250	.743	1345	.292	1426	.443	1506	.117	1583	1.007
1251	.218	1346	.748	1427	.600	1507	.156	1584	1.109
1253	.394	1347	.540	1428	1.311	1508	.262	1585	1.112
1255	.280	1348	.758	1429	.609	1509	.197	1586	2.227
1256	.583	1349	.565	1430	.707	1510	.093	1587	2.888
1258	.398	1350	2.049	1431	.509	1511	.155	1588	1.396
1259	.318	1351	1.133	1432	.745	1512	.150	1589	.936
1260	.205	1353	.318	1433	.694	1513	.188	1590	1.651
1261	.554	1354	.619	1434	.476	1514	.250	1591	2.380
1263	.224	1355	.330	1435	.243	1515	.468	1592	2.312
1264	.148	1356	.511	1436	.274	1516	.311	1593	1.733
1265	.373	1357	.212	1437	.579	1517	.322	1594	1.209
1268	.112	1358	.958	1438	1.133	1518	.594	1595	3.177
1269	.596	1359	.915	1439	.851	1519	.201	1596	2.985
1271	.628	1360	.529	1440	.361	1520	.237	1597	1.849
1272	.602	1361	1.059	1441	.265	1521	.587	1598	1.554
1273	.136	1362	.826	1442	.437	1522	.461	1599	.582
1276	.152	1363	.628	1443	.468	1523	1.326	1600	5.263
1277	.182	1364	.928	1444	.238	1524	.624	1601	.741
1278	.197	1365	.516	1445	.208	1525	.368	1602	3.28
1281	.333	1366	.644	1446	.190	1526	.207	1603	1.823
1282	.581	1367	.488	1447	.205	1527	.528	1604	1.350
1284	.080	1368	.318	1448	.119	1528	.580	1605	1.084
1285	.762	1369	.897	1449	.214	1529	.777	1606	1.024
1287	.240	1370	.680	1450	.136	1530	.549	1607	.853
1288	.169	1371	1.450	1451	.179	1531	1.606	1608	1.455
1289	.250	1372	.310	1452	.112	1532	.756	1609	.890
1290	.484	1373	.536	1453	.120	1533	.418	1610	1.033
1291	.642	1374	1.048	1454	.236	1534	.335	1611	.934
1293	.662	1375	.345	1455	.616	1535	.531	1612	.978
1294	.516	1376	.316	1457	.335	1536	.420	1613	.738
1295	.645	1378	.374	1458	.280	1537	.424	1614	.986
1296	.380	1379	.224	1459	.226	1538	.298	1615	.759
1297	.302	1380	.192	1460	.172	1539	.618	1616	1.035
1298	.484	1381	.162	1461	.542	1540	.360	1617	.921
1299	.884	1382	.272	1462	.183	1541	.414	1618	1.172
1300	1.020	1384	.258	1463	.148	1542	.375	1619	.697
1301	.350	1385	.340	1464	.125	1543	.517	1620	.829
1302	.380	1386	.227	1465	.154	1544	.671	1621	.704
1303	.373	1387	.169	1466	.245	1545	.433	1622	1.242
1304	1.192	1388	.214	1467	.144	1546	.461	1623	1.366
1305	.466	1389	.364	1468	.127	1547	.315	1624	1.691
1307	.569	1390	.380	1469	.144	1548	.394	1625	.931
1309	.367	1391	.441	1470	.087	1549	.551	1626	1.649
1310	.216	1392	.478	1471	.141	1550	.390	1627	1.032
1311	.687	1393	.596	1472	.095	1551	.823	1628	1.107
1312	.571	1394	.498	1473	.154	1552	.456	1629	.970
1313	1.711	1395	.150	1474	.226	1553	.457	1630	1.353
1314	.363	1396	.336	1475	.134	1554	.509	1631	2.322
1315	.840	1397	.289	1476	.277	1555	.482	1632	1.763
1316	1.472	1398	.309	1477	.252	1556	.324	1633	1.479
1317	.388	1399	.340	1478	.280	1557	.550	1634	.868
1318	.534	1400	.171	1479	.092	1558	.507	1635	1.453
1319	.547	1401	.320	1480	.463	1559	.558	1636	1.898
1320	.612	1402	.224	1481	.375	1560	.679	1637	1.887
1321	.381	1403	.316	1482	.539	1561	.608	1638	1.109
1322	.779	1404	.185	1484	.291	1562	.947	1639	1.523
1323	.408	1405	.414	1485	.208	1563	1.408	1640	.808
1324	.728	1406	.284	1486	.405	1564	.534	1641	1.225
1325	.306	1408	.196	1487	.240	1565	1.017	1642	1.142

AVERAGE PRICE PER BUSHEL OF WHEAT IN FRANCE, 1201 TO 1800—Concluded.

Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.	Year.	Price.
1643.....	\$1.645	1674.....	\$0.730	1705.....	\$0.513	1735.....	\$0.469	1768.....	\$1.093
1644.....	1.466	1675.....	1.268	1706.....	.465	1736.....	.549	1769.....	1.190
1645.....	.933	1676.....	.877	1707.....	.450	1737.....	.881	1770.....	1.105
1646.....	.741	1677.....	.607	1708.....	.669	1738.....	.736	1771.....	1.166
1647.....	1.189	1678.....	1.175	1709.....	2.198	1739.....	.954	1772.....	1.173
1648.....	1.039	1679.....	.973	1710.....	1.800	1740.....	1.109	1773.....	1.017
1649.....	1.570	1680.....	.928	1711.....	.833	1741.....	1.148	1774.....	.881
1650.....	1.598	1681.....	1.161	1712.....	1.298	1742.....	.745	1775.....	.964
1651.....	2.223	1682.....	.789	1713.....	1.460	1743.....	.529	1776.....	.789
1652.....	1.777	1683.....	.643	1714.....	1.060	1744.....	.565	1777.....	.871
1653.....	1.264	1684.....	.811	1715.....	.654	1745.....	.471	1778.....	.865
1654.....	.821	1685.....	1.058	1716.....	.670	1746.....	.548	1779.....	.921
1655.....	.816	1686.....	.541	1717.....	.561	1747.....	.827	1780.....	.762
1656.....	.771	1687.....	.709	1718.....	.610	1748.....	.640	1781.....	.914
1657.....	.780	1688.....	.420	1719.....	.760	1750.....	.834	1782.....	.958
1658.....	.835	1689.....	.663	1720.....	.999	1751.....	.885	1783.....	.922
1659.....	1.508	1690.....	.611	1721.....	.548	1752.....	.860	1784.....	1.290
1660.....	1.919	1691.....	.823	1722.....	.736	1753.....	.801	1785.....	1.020
1661.....	1.847	1692.....	.913	1723.....	1.027	1754.....	.573	1786.....	.866
1662.....	1.977	1693.....	1.713	1724.....	1.181	1755.....	.549	1787.....	.769
1663.....	1.050	1694.....	2.590	1725.....	1.398	1756.....	.830	1788.....	1.827
1664.....	1.074	1695.....	.671	1726.....	.926	1757.....	.724	1789.....	1.362
1665.....	1.004	1696.....	.754	1727.....	.619	1758.....	.993	1790.....	1.159
1666.....	.947	1697.....	.739	1728.....	.523	1759.....	.846	1791.....	.861
1667.....	.881	1698.....	1.370	1729.....	.635	1761.....	.602	1793.....	2.112
1668.....	.576	1699.....	1.805	1730.....	.533	1762.....	.743	1794.....	.633
1669.....	.888	1700.....	.990	1731.....	.718	1763.....	.709	1795.....	1.067
1670.....	.550	1701.....	1.694	1732.....	.635	1765.....	.648	1796.....	1.051
1671.....	.888	1702.....	.719	1733.....	.415	1766.....	1.036	1798.....	.886
1672.....	.780	1703.....	.835	1734.....	.619	1767.....	.877	1800.....	1.041
1673.....	.745	1704.....	.723						

AVERAGE PRICE PER BUSHEL OF RYE, BARLEY, AND OATS IN FRANCE, 1601 TO 1800.

Year.	Prices.			Year.	Prices.		
	Rye.	Barley.	Oats.		Rye.	Barley.	Oats.
1601.....	\$0.586	\$0.463	\$0.363	1655.....	\$0.316	\$0.161	\$0.211
1602.....	.650			1656.....	.488		.563
1603.....	.696		.462	1657.....	.527		.240
1604.....	.521			1659.....			.235
1605.....	.406	.236	.163	1660.....	.549	.422	.311
1610.....	.422	.292	.260	1661.....	.781		
1614.....	.988	.209		1662.....	.897		.380
1615.....	.461	.311	.250	1663.....	.456		.248
1617.....	.952		.181	1664.....	.657		.241
1618.....		.581	.313	1665.....	.414	.811	.350
1619.....	.883		.294	1668.....			.426
1620.....	.633	.214	.198	1670.....	.313	.250	.172
1621.....	.718		.220	1673.....	.664	.541	
1623.....	.830		.305	1675.....	.449	.816	.210
1625.....	.533		.257	1676.....	.761	.527	.363
1626.....	1.049	.835	.482	1677.....	.184		.126
1627.....	1.088		.476	1678.....			.201
1628.....	.939			1680.....	.390	.320	.237
1629.....	.716		.254	1685.....	.511	.428	.241
1630.....	.879	.410	.276	1688.....	.354		.231
1631.....	1.739		.555	1690.....	.269	.171	.285
1632.....	.718			1691.....	.460		
1633.....	.888		.363	1692.....			.378
1634.....			.245	1694.....	2.547		
1635.....	.568	.360	.397	1695.....	.507	.327	.205
1637.....	.684		.481	1697.....	.258		.151
1638.....			.340	1698.....		1.094	.340
1639.....	.571		.341	1700.....	.685	.499	.238
1640.....	.319	.213	.183	1701.....	.575	.866	.281
1641.....	.752	.752	.441	1702.....	.362		.199
1643.....	1.226	1.226	.397	1704.....			.182
1644.....			.501	1705.....	.353	.212	.141
1645.....	.822	.822	.428	1706.....	.162		.150
1647.....			.112	1708.....	.260		.263
1648.....			.372	1709.....	1.349	1.881	1.628
1650.....	1.083	.898	.452	1710.....	1.093	.614	.305
1651.....	.432	.290	.250	1711.....	.744		
1652.....			.557	1713.....	1.338		.483
1653.....		.316	.561	1715.....	.413	.278	.233
1654.....			.189	1716.....	.373		

AVERAGE PRICE PER BUSHEL OF RYE, BARLEY, AND OATS IN FRANCE, 1601 TO 1800—Concluded.

Year.	Prices.			Year.	Prices.		
	Rye.	Barley.	Oats.		Rye.	Barley.	Oats.
1719.....	\$0.437		\$0.127	1766.....	\$0.841	\$0.612	\$0.223
1720.....	.489	\$0.456	.299	1767.....	.499	.435	.236
1725.....	.862	.573	.288	1768.....		.543	.262
1726.....	.424	.348	.194	1769.....		.526	.234
1727.....			.165	1770.....	1.007	.624	.349
1730.....	.294	.282	.248	1771.....	1.017	.735	.245
1735.....	.220	.178	.162	1772.....		.519	.418
1736.....			.145	1773.....		.781	.550
1738.....	.648			1774.....		.628	.425
1739.....	.518	.452	.192	1775.....		.796	.256
1740.....	.622	.345	.258	1776.....		.624	.486
1741.....		.475	.256	1777.....		.535	.482
1745.....	.236	.168	.165	1778.....		.705	.572
1746.....			.152	1779.....		.781	.439
1747.....	.575	.517	.340	1780.....		.552	.476
1748.....	.379		.359	1781.....		.826	.494
1750.....	.441	.258	.193	1782.....		.881	.548
1751.....	.538	.412	.257	1783.....		.632	.506
1752.....	.765	.680	.700	1784.....		.717	.614
1755.....	.349	.305	.189	1785.....		.898	.620
1756.....	.843			1786.....		.690	.591
1758.....	1.058		.204	1787.....		.618	.429
1760.....	.689	.309	.260	1788.....		.642	.420
1761.....	.353	.340	.129	1789.....		.921	.620
1762.....	.581	.449	.195	1790.....		.815	.555
1763.....	.371	.367	.187	1795.....		.742	.630
1764.....	.784	.286	.137	1800.....		.639	.505
1765.....	.469	.303	.210				

AVERAGE PRICE PER BUSHEL OF WHEAT, RYE, BARLEY, AND OATS IN FRANCE, 1201 TO 1800, BY PERIODS.

Period.	Prices.				Period.	Prices.			
	Wheat.	Rye.	Barley.	Oats.		Wheat.	Rye.	Barley.	Oats.
1201-1225.....	\$0.258	\$0.129	\$0.088	\$0.104	1526-1550.....	\$0.476	\$0.272	\$0.252	\$0.163
1226-1250.....	.280	.256	.109	.092	1551-1575.....	.816	.612	.408	.289
1251-1275.....	.394	.340	.131	.087	1576-1600.....	1.360	1.068	.595	.422
1276-1300.....	.436	.417	.237	.090	1601-1625.....	.969	.680	.313	.255
1301-1325.....	.589	.408	.272	.156	1626-1650.....	1.292	.884	.612	.367
1326-1350.....	.456	.340	.272	.204	1651-1675.....	1.088	.585	.388	.306
1351-1375.....	.612	.340	.224	.181	1676-1700.....	.918	.612	.442	.238
1376-1400.....	.317	.190	.136	.136	1701-1725.....	1.007	.612	.592	.272
1401-1425.....	.490	.238	.204	.129	1726-1750.....	.748	.456	.326	.204
1426-1450.....	.456	.313	.214	.160	1751-1775.....	.901	.714	.499	.299
1451-1475.....	.221	.156	.105	.071	1776-1800.....	1.020	.714	.517	.469
1476-1500.....	.272	.204	.110	.136			.816	.680	.612
1501-1525.....	.272	.224	.164	.109					

Conseil Supérieur du Travail, Ministère de l'Agriculture, de l'Industrie et des Travaux Publics. 1^{re} Session, 1892: Application des Articles 4, 6, et 7 de la Loi du 13 décembre, 1889. 2^e Session, 1893, 1894, 1895. 1^{re} Partie: Minimum de Salaire. 2^e Partie: Durée du Travail dans les Briqueteries. 3^e Partie: Règlements d'Ateliers. 4^e Partie: Statistiques du Travail.

By royal order of April 7, 1892, the King of Belgium created, under the Department of Agriculture, Industry, and Public Works, a superior council of labor, to consist of 16 representatives of the employers of labor, 16 representatives of the laborers themselves, and 16 members selected on account of their special familiarity with industrial and social questions, or 48 members in all. The duties of this council were

specified to be: To give advice on all propositions relative to labor legislation; to investigate and report upon questions concerning labor conditions, such as apprenticeship, industrial education, factory rules, hygiene, and security of workingmen in factories and workshops; the organization of insurance against accidents; or, in a word, all matters concerning the relations between labor and capital, and, finally, to report upon the best means for the organization of a statistical service for the methodical collection of information concerning labor.

In pursuance of these instructions the council up to the present time has issued five reports, as enumerated above.

The first of these represents an investigation concerning the modifications that should be introduced in articles 4, 6, and 7 of the law of December 13, 1889, regulating the hours of labor and conditions of employment of men, women, and children in industrial establishments. The councils of industry and labor, created by the law of August 16, 1887, in all of the more important industrial centers of Belgium, were first called upon for a report on this question; and on the basis of the information thus obtained the superior council of labor prepared various propositions embodying the recommendations upon which its members were agreed. The reports of the different councils of industry and labor and the report of the deliberations and recommendations of the superior council make up the contents of the volume. No attempt is made to present the information gathered in a statistical form.

The second report presents a discussion had by the superior council of labor concerning a proposition making it obligatory upon the Government to insert in all contracts for public works a provision requiring the contractors to pay to their employees wages not inferior to a minimum amount as determined by the Government; in other words, to fix a minimum wage for all workingmen engaged on work for the Government. This proposition was finally rejected, expression being given at the same time to the opinion that the Government ought to encourage the payment of just wages. The fixing of minimum wages was declared to be the province of labor organizations, and it was highly desirable that labor should be better organized and therefore in a position to look after its own rights without the intervention of the State.

The third report relates to a consideration of the regulation of the employment of children in brick and tile works.

In the fourth report is given the results of an investigation of the question as to how far the State ought to intervene in the way of regulating the character of shop rules, the imposition of fines for their infraction, etc. A schedule of inquiries covering this subject was first addressed to all the councils of industry and labor, the answers to which served as a basis for the discussions by the council. The council incorporated their conclusions in the proposed law, the nature of which was to designate the points that ought to be covered by a set of shop rules, to provide means for their publicity, methods of enforcement, etc.

The fifth report of the council is devoted to a consideration of the

proper means of establishing in Belgium a service for the collection of statistics of labor. There is first given a reprint of a paper by Mr. Hector Denis, professor at the University of Brussels, on the organization of labor statistics. This is followed by special reports on the collection of labor statistics in the United States, in England, in Germany, Switzerland, France, and Italy. The report of the deliberations of the council follows, with the recommendation for the creation of a special statistical bureau for the collection of labor statistics.

Hygiène et Sécurité des Travailleurs dans les Ateliers Industriels: Législation Française et Étrangère. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. C. Moron, Directeur de l'Office du Travail. 659 pp.

In this work the French labor bureau has made the effort to present a compendium of the laws and decrees of France and other countries, including the United States, which relate to the hygiene, security, and general conditions of labor of workingmen in industrial establishments. There is not included, however, such special legislation as relates to the conduct of particularly dangerous industries, as, for instance, those requiring the use of poisons, as lead, copper, sulphur, and phosphorous compounds, the regulation of steam engines, or the regulation of mining, transportation, the manufacture of explosives, etc. Legislation concerning these subjects will form the subject-matter for a subsequent report.

The present work consists of two distinct parts. In the first part is given an analysis and general study of the legislation of each country relating to the conditions under which industry must be carried on in order to show the successive stages through which this legislation has passed. Here the legislation of each country is treated under the following heads:

1. General sanitary regulations.
2. The regulation of dangerous and unhealthy industries, or those constituting a nuisance.
3. The employment of women and children.
4. The employment of adults.
5. The sanitation and security of workshops.
6. The responsibility of employers for accidents to their employees; insurance of workingmen against accidents.
7. The application of labor laws; their enforcement; inspection services; penalties.

In the second part there is reproduced in chronological order according to the date of their enactment, either in extenso or in summary form, the texts of laws and decrees of each country separately, relating to the matters analyzed in the preceding part. In the case of the United States, however, an exception is made. Instead of reproducing

the laws, reference is made to the compilation of labor laws issued by the United States Department of Labor, and two tables are introduced showing the regulations of each State concerning the employment of women and children, the inspection of factories, etc.

In general, all laws enacted prior to January 1, 1895, are included. Two detailed indexes are provided. The first, or analytical index, furnishes a list of the laws and decrees of each country according to the methodical order adopted in the analysis, with reference to the pages where they are analyzed. The second, or chronological index, gives a list of the laws and decrees of each country according to the order of the date of their enactment, with reference to the pages where they are reproduced.

The bureau announces its intention to continue the work here begun by the publication of periodical bulletins reproducing new legislation as it is enacted.

Les Syndicats Ouvriers aux États-Unis. Par M. Isidore Finance. Extrait du Rapport des Délégués Ouvriers, Exposition Internationale de Chicago, 1893. Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. 214 pp.

This volume is a portion of the official report of a delegation of workmen who visited America on the occasion of the World's Fair at Chicago in 1893, under the auspices of the French Government, to study the conditions of labor in the United States. It is devoted entirely to a history and description of those labor organizations in the United States which are of a national character. Two brief chapters are given, the one concerning the general history of the attempts of workmen to form organizations, and the other on the general labor legislation of the United States, especially as it relates to the right of association. Each individual national labor organization is then taken up in turn in a separate chapter, and an account given of its organization, its principles, the dates and places of its annual conventions, and other important facts in its history. The histories of 57 organizations, commencing with those of the Knights of Labor and of the American Federation of Labor, are given in this way. Two concluding chapters give a description of the principles and work of building trades' councils, a sample workingman's budget (that of an employee of the building trades of New York City earning \$3.50 per day), and brief comments on some general features of the condition of organized labor in the United States.

The work appears to be based on original sources. It should be said that M. Finance, the author, is the chief of the division in the Office du Travail which relates particularly to labor legislation and labor organizations.

Étude sur les Derniers Résultats des Assurances Sociales en Allemagne et en Autriche: 1^e Partie, Accidents, 1894. 2^e Partie, Maladie, Invalidité, et Vieillesse, 1895. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. C. Moron, Directeur de l'Office du Travail. 180, 229 pp.

The French labor bureau from the moment of its creation has followed closely the results of the operation of the laws of Germany and Austria providing for the compulsory insurance of workingmen against accidents, sickness, and old age and invalidity. The present volume is but the last of a series of special reports showing the results of the operation of the systems of insurance in these two countries. The prior volumes of this series are:

1. *Statistique des Accidents du Travail, d'après les rapports officiels sur l'assurance obligatoire en Allemagne et en Autriche, 1892.* 124 pp.
2. *Résultats Financiers de l'Assurance Obligatoire contre les Accidents du Travail en Allemagne et en Autriche, 1892.* 110 pp.
3. *Résultats Statistiques de l'Assurance Obligatoire contre la Maladie en Allemagne, 1893.* 134 pp.
4. *Résultats Statistiques de l'Assurance Obligatoire contre la Maladie en Autriche, 1893.* 147 pp.

These reports are not special studies, but are rather the summaries and analyses of the provisions of the laws relating to the insurance of workingmen, and the methodical presentation of the results of the systems as given in the annual official reports of the central insurance bureau of each country.^(a)

The object of this report is to continue the work thus begun, and to present the results obtained since the last year comprehended in the prior reports. In the entire series there is, therefore, given not only an analysis of the various laws of Germany and Austria providing for the compulsory insurance of workingmen, but statistics of their operations since the inauguration of the system down to the latest date for which official data were obtainable.

Congrès International des Accidents du Travail et des Assurances Sociales.

1. *Comptes-Rendus et Rapports du 1^{er} Congrès à Paris, 1889,* 2 vols.
2. *Comptes-Rendus et Rapports du 2^e Congrès à Berne, 1891,* 1 vol.
3. *Comptes-Rendus et Rapports du 3^e Congrès à Milan, 1894,* 2 vols.
4. *Bulletin du Comité Permanent, 1890-1895,* 6 vols. E. Gruner, Secrétaire Général.

A number of special congresses in relation to social questions were organized in connection with the International Exposition of Paris in

^a Amtliche Nachrichten des Reichsversicherungsamts, Berlin.

Die Gebarung und die Ergebnisse der Arbeiter-Unfallversicherungsanstalten, Wien.

Die Gebarung und die Ergebnisse der Krankheitsstatistik der Krankenkassen, Wien.

1889. Of these that in relation to accidents to labor and social insurance has been productive of by far the most important results. Two succeeding congresses have been held, the one at Berne in 1891, and the other at Milan in 1894. In addition to the published reports of these meetings, the permanent committee of the congress has published a quarterly bulletin since 1890. In these eleven volumes, representing the work of the congress up to the present time, is presented the most valuable body of literature relating to the question of accidents to labor and the insurance of workingmen against sickness, accidents, and old age that exists in any language.

Bulletin de la Société Française des Habitations à Bon Marché. M. Fleury-Ravarin, Secrétaire Général. 1890-1895, 6 vols.

The Société Française des Habitations à Bon Marché was founded at Paris December 17, 1889, as the direct result of the Congrès International des Habitations à Bon Marché held in connection with the International Exposition of Paris of that year. Its object is to encourage the construction by individuals, manufacturers, or local societies, of sanitary and cheap houses for workingmen, or the improvement of existing houses. It seeks especially to diffuse information concerning the best means for enabling workingmen to become the owners of their own homes.

To do this its mode of action is to place at the disposition of individuals or societies, plans, models of constitutions, forms of official papers, contracts of loan, sale, etc., and to act as a technical consulting commission whose advice, when sought, will be given gratuitously concerning any plans for the organization of societies or for the provision of workingmen's houses. All direct work by it in the way of making loans, the purchase of ground, or the erection of houses is formally prohibited by its constitution.

Its most important work is, therefore, the publication of a bulletin which has appeared regularly four times a year since 1890. The greater portion of the contents of this bulletin is given up to detailed descriptions of the operations of societies or individuals for the provision of workingmen's houses. These accounts embrace not only a general description of the extent of the work, but statements in detail of the cost of erection of the buildings, accompanied by elaborate architectural plans, copies of the constitutions of the societies, or the conditions under which they are occupied or can be acquired, and analyses of the financial results obtained. In this way the society not only presents information concerning what has been accomplished in the past, but reproduces plans, models of constitutions, etc., which may serve as an encouragement and guide to others wishing to undertake operations in the same field.

Bulletin de la Participation aux Bénéfices. Publié par la Société pour l'Étude Pratique de la Participation du Personnel dans les Bénéfices. 17^e Année, 1895.

The society for the practical study of profit sharing was organized in 1879, with the sole purpose, as indicated by its constitution, to disseminate information concerning all efforts for the practical application of profit sharing to industrial enterprises. As its principal means of action it has regularly published since its creation a bulletin, appearing four times a year, in which, in addition to other matter, it notices all additions to its technical library of works relating to profit sharing, and gives accounts of the operations of industrial concerns in which profit sharing is practiced.

Bulletin de l'Institut International de Statistique. Tome VIII, 1^{re} Livraison. Luigi Bodio, Secrétaire Général. cxvii, 343 pp.

This first part of Volume VIII of the publications of the International Statistical Institute is entirely devoted to a report of the proceedings, including the reproduction of the papers read, of the fourth session of the International Statistical Institute, held at Chicago, September 11-15, 1893. The list of papers or memoirs here presented is as follows:

1. Comparability of trade statistics of various countries, by A. E. Bateman.
2. Rapport fait au nom du comité pour la statistique de la navigation maritime [Report of the committee on statistics of maritime navigation], by A. N. Kiaer.
3. Results of recent investigations on prices in the United States, by Prof. F. W. Taussig.
4. The character and volume of the money of the United States, 1878-1893, by Maurice L. Muhleman.
5. Currency reform in Austria-Hungary, by Dr. Julius Mandello.
6. The national bank currency, by Charles A. Conaut.
7. Rapport fait au nom du comité des prix [Report of the committee on prices], by John B. Martin and R. H. Inglis Palgrave.
8. Rapport fait au nom du comité de la propriété foncière [Report of the committee on real estate], by P. G. Craigie.
9. Contribution statistique à la comparaison entre les transports par la navigation intérieure et par les chemins de fer [A contribution concerning the comparative statistics of transportation by internal waterways and railroads], by E. Cheysson.
10. Some recent results in railway statistics in the United States, by Henry C. Adams.
11. Geographical concentration, an historic feature of American agriculture, by John Hyde.
12. Railway statistics as applicable to earnings of passenger trains with a view of determining approximate revenue and deciding as to

number and time of trains to be run for the accommodation of the public, by M. Riebenack.

13. Railway freight traffic statistics, by C. P. Leland.

14. The course of wages in the United States since 1840, by Carroll D. Wright.

15. Bericht über die Fortschritte der Statistik in Oesterreich seit 1891 [Report on the progress of statistics in Austria since 1891], by Dr. Franz von Juraschek.

16. Ueber die Berechnung eines internationalen Sterblichkeitsmasses (Mortalitäts-Index) [Concerning the calculation of an international death rate (index of mortality)], by Joseph Körösi.

17. Die internationale Classificierung der Berufsarten [An international classification of occupations], by Joseph Körösi.

18. Liste des diagrammes et cartogrammes sur la femme en France, exposés à Chicago dans le "Woman Building," à la "World Fair" [List of diagrams and charts relating to woman in France, exhibited at Chicago in the Women's Building of the World's Fair], by Victor Turquan.

19. Census classifications of occupations in the United States, by Davis R. Dewey.

20. Statistical data for the study of the assimilation of races and nationalities in the United States, by Richmond Mayo-Smith.

21. The geographical distribution of the population of the United States, by Henry Gannett.

22. The condition and mode of statistics of marriage and divorce, by Samuel W. Dike.

23. Nomenclature des professions: Rapport sur les observations faites par différents directeurs de services statistiques, à propos du projet de nomenclature des professions présenté à leur examen par l'Institut International de Statistique (session de Vienne, 1891) [Nomenclature of occupations: Report on the observations made by different directors of statistical bureaus in regard to the proposition for a nomenclature of occupations presented to them for examination by the International Statistical Institute, Vienna meeting, 1891], by Dr. Jacques Bertillon.

24. Projet de nomenclature des professions [Proposed nomenclature of occupations], by Dr. Jacques Bertillon.

25. A preliminary report on anthropometry in the United States, by Edward Mussey Hartwell.

26. Remarks on the theory of anthropometry, by Franz Boas.

27. On the application to individual school children of the means derived from anthropological measurements by the generalizing method, by W. Townsend Porter.

28. Anthropometric statistics of Amherst College, by Edward Hitchcock.

29. An anthropometrical study of the effects of gymnastic training on American women, by Claës J. Enebuske.

30. Sur une statistique internationale du recensement de la population [Concerning an international census of population], by Dr. Jacques Bertillon.

31. Trois projets de nomenclature des maladies (causes de décès, causes d'incapacité de travail) [Three propositions for a nomenclature of diseases (causes of death, causes of incapacity to labor)], by Dr. Jacques Bertillon.

32. De la méthode à suivre pour dresser une statistique scientifique de la récidive [Concerning the proper mode of compiling scientific statistics of relapsed criminals], by L. Bodio.

Bulletin de l'Institut International de Statistique. Tome IX, 1^{re} Livraison. Luigi Bodio, Secrétaire Général. viii, 124, 54, 125-151 pp.

This bulletin contains the following contributions:

1. Die Lebenskosten belgischer Arbeiter-Familien früher und jetzt: Ermittelt aus Familien-Haushaltrechnungen und vergleichend zusammengestellt [The cost of living of Belgian workingmen's families in former times and at the present day: Based on accounts of household expenses kept by workingmen's families, with similar budgets combined], by Dr. Ernst Engel.

2. Bulletin bibliographique—Annonces des publications statistiques [List of publications relating to statistics].

3. Nécrologies—Friedrich von Hardeck, Henry Heylyn Hayter.

The contribution of Dr. Engel constitutes the introductory chapter of a proposed comprehensive study of the cost of living of workingmen in each of the principal countries of Europe and in the United States. The part here published contains, therefore, not only a very detailed consideration and analysis of the question in Belgium but a valuable introduction giving a general statement of the methods pursued and of the history and literature of all previous attempts to collect and present information concerning the cost of living of workingmen's families.

Album de Statistique Graphique de 1894. Ministère des Travaux Publics. xv pp., 21 charts.

This is the fifteenth issue of an annual album published since 1879 by the minister of public works, showing by means of graphic charts the equipment and operation of railways, the amount and nature of internal water commerce and of maritime commerce, and the operations of the postal and telegraph services.

DECISIONS OF COURTS AFFECTING LABOR.

[This subject, begun in Bulletin No. 2, will be continued in successive issues, dealing with the decisions as they occur. All material parts of the decisions are reproduced in the words of the courts, indicated, when short, by quotation marks, and when long, by being printed solid. In order to save space immaterial matter, needed simply by way of explanation, is given in the words of the editorial reviser.]

DECISIONS UNDER STATUTORY LAW.

CONSTITUTIONALITY OF MECHANIC'S LIEN LAW.—The constitutionality of the mechanic's lien law of Indiana was called in question, and its validity was sustained by the supreme court of the State, November 19, 1895, in the case of *Smith et al. v. Newbauer et al.*, reported in volume 42 of the *Northeastern Reporter*, page 40.

An action was brought by John A. Newbauer and others against Henry B. Smith and others for the foreclosure of a mechanic's lien. From a judgment in favor of the plaintiffs by the circuit court of Blackford County, the defendants appealed to the supreme court, basing the appeal on the ground, among others, that the circuit court erred in overruling their demurrer to the complaint. In passing upon the validity of the statute Chief Justice Howard, delivering the opinion of the court, said:

In support of the demurrer to the complaint it is first contended that the mechanic's lien law of this State is invalid, as repugnant to section 1, article 14, of the Constitution of the United States, which provides that no State shall deprive any person of life, liberty, or property without due process of law. This contention is based upon the provisions of section 3 of the mechanic's lien law (sec. 7257, Rev. Stat., 1894; sec. 1690, Elliott's Supp.), which provides that any person wishing to acquire such a lien upon any property shall file in the recorder's office, "at any time within sixty days after performing such labor or furnishing such materials," notice of his intention to hold such lien. This notice—the only one provided for in the statute—is insufficient, say counsel, to secure that due process of law referred to by the Federal Constitution before the fixing of a lien upon the citizen's property. Under the law as enacted, counsel contend, anyone may perform labor or furnish material in the construction of a building for a landowner, without such owner's knowledge or consent, and then secure a lien upon the land and building by notice filed after the work is done or materials furnished. It is said that the property owner should have notice at or before the doing of the work or the supplying of the materials, so that he may, if he wishes, prevent the doing of such work or the furnishing of such materials, and so keep his property free of the lien.

It has often been held that every statute under which a contract is made enters into and forms a part of such contract. The appellants, in the contract for the erection of the dwelling house upon their property, are therefore chargeable with knowledge of, and are bound by, all the provisions of our mechanic's lien law then in force. By the terms of the agreement entered into, the contractors were to furnish all materials necessary for the construction of the building. This was notice that such materials were to be furnished; and the law under which the contract was made was further notice that the building and ground upon which it was to be erected would be liable to a lien for the value of the materials so furnished. The only uncertainty left was whether those who should furnish the material would claim the lien therefor. That uncertainty is provided for in the statute, which requires that the notice of intention to hold the lien be filed in the recorder's office within sixty days. The owner has, consequently, ample means of protection, and is not liable to a lien without notice, nor to have his property taken without due process of law.

It is intimated that the law hampers the freedom of action of the property owner; that he may desire to pay the contractor in advance, or to pay him by an exchange of other property for the erection of the buildings; and that it may be an inconvenience, or induce the contractor to bid higher for the work, if payment is to be delayed for sixty days after the work is done. These, however, are considerations that should be addressed to the legislature and not to the courts. Besides, it is to be remembered that without the right to a lien on the property laborers and material men would in many cases have no security for their toil or the materials furnished by them. The laborer is worthy of his hire, and the seller of goods ought to be paid for them. As the law stands, all parties are secured in their rights. The owner, by seeing that laborers and material men are paid, or by keeping back for sixty days from the contractor sufficient to make such payment, is in no danger of having to pay twice for his building; while at the same time the man whose labor or materials have gone into the building can look to the building itself, and to the ground upon which it stands, for his security. The property owner enjoys the benefit of this work and of this material, and it is but just that he should be charged for at least sixty days, with the responsibility of seeing that they are paid for.

CONSTITUTIONALITY OF PROPOSED LAW REGULATING THE PAYMENT OF WAGES.—By resolution of the house of representatives of the legislature (general court) of Massachusetts, the supreme judicial court of that State was required to give its opinion upon the following important question of law: "Is it within the constitutional power of the legislature to extend the application of the present law, relative to the weekly payment of wages by corporations, to private individuals and partnerships, as provided in the bill entitled 'An act relative to the weekly payment of wages,' now pending before the general court?"

The opinion of the court, given in reply to the above question, on May 6, 1895, was to the effect that under part 2, chapter 1, section 1, article 4, of the State constitution, which provides that full power and authority shall be given to the general court to make and ordain all

manner of wholesome and reasonable laws, so as the same be not repugnant or contrary to the constitution, as they shall judge to be for the good of the Commonwealth, the legislature has power to extend the application of the present law, relative to the weekly payment of wages by corporations, to individuals and partnerships, and that such legislation is not in conflict with the declaration of rights (articles 1, 12) nor with the fourteenth amendment to the Constitution of the United States.

In the course of the opinion, which is reported in full in volume 40 of the *Northeastern Reporter*, page 713, the court said:

Your question implies that in your opinion the present law relating to the weekly payment of wages by certain corporations to their employees is constitutional, and your inquiry is whether it is within the constitutional power of the legislature to extend the law to private individuals and to partnerships.

We are not informed of the nature of the doubts which your request implies. It is well known that in some of the States of this country legislation similar to that proposed has been held unconstitutional by the courts, sometimes on the ground that it is partial in its character, but more frequently on the ground that it interferes with what is called the liberty of contract, which, it is said, either as a privilege or as property, is secured to the inhabitants of a State by its constitution, or by the Constitution of the United States.

The legislative power granted to the general court by the constitution of Massachusetts is perhaps more comprehensive than that found in the constitutions of some of the other States. The constitution of Massachusetts (part 2, chap. 1, sec. 1, art. 4) provides as follows: "And further, full power and authority are hereby given and granted to the said general court, from time to time, to make, ordain, and establish all manner of wholesome and reasonable orders, laws, statutes, and ordinances, directions and instructions, either with penalties or without, so as the same be not repugnant or contrary to this constitution, as they shall judge to be for the good and welfare of this Commonwealth, and for the government and ordering thereof, and of the subjects of the same, and for the necessary support and defense of the government thereof," etc. There is not in the constitution of Massachusetts anything which in terms relates to the freedom or liberty of contract, as there is concerning the liberty of the press. The constitution declares that "all men are born free and equal, and have certain natural, essential, and unalienable rights; among which may be reckoned the right of enjoying and defending their lives and liberties; that of acquiring, possessing, and protecting property; in fine, that of seeking and obtaining their safety and happiness;" and it is also declared that "no subject shall be arrested, imprisoned, despoiled, or deprived of his property, immunities, or privileges, put out of the protection of the law, exiled, or deprived of his life, liberty, or estate, but by the judgment of his peers, or the law of the land." (Declaration of Rights, articles 1, 12.) This last declaration was taken from *Magna Charta*, and in substance it has been incorporated in the fourteenth amendment of the Constitution of the United States, in form as follows: "No State shall make or enforce any laws which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws."

There has never been at any time in Massachusetts an absolute right in its inhabitants to make all such contracts as they pleased. Some contracts have always been held void at common law, and some contracts valid at common law have been declared void by statute. Our statute of frauds prevents the enforcement in the courts of many kinds of contracts, unless they are shown by a writing, and prohibits the making of certain contracts, and this statute was passed for the protection of persons against fraud and perjury. Seamen have sometimes been regarded as a class of persons who could not be trusted to make their own contracts without supervision, and statutes have been passed making regulations concerning their wages and shipping contracts. (Rev. Stat. U. S., tit. 53.) Wages to a certain amount due for personal labor and services have been exempt from attachment, probably on the ground that it was thought that workmen generally need their wages for their support. Usury laws furnish perhaps the best known illustration of the regulation by statute of the price to be paid for the use of a commodity, but the validity of these laws usually has been regarded as an exception to the general rule. Rev. Stat. Mass., tit. 12, entitled "Of the regulation of trade in certain cases," show various forms of interference by the legislature with what may be called the freedom of trade or of contracts concerning the sale of commodities. The regulation of the subject of fire insurance, and the prohibition of the sale of oleomargarine made in imitation of yellow butter, and the requirement that an agreement to make a will must be in writing, are some of the most recent instances in Massachusetts of the prohibition or regulation of contracts by statute. The constitutionality of much of this legislation has never been questioned, and, when questioned, it generally has been sustained.

In *Frisbie v. United States*, 15 U. S. Supreme Court, 586, that court says: "While it may be conceded that, generally speaking, among the inalienable rights of the citizen, is that of the liberty of contract, yet such liberty is not absolute and universal. It is within the undoubted power of the Government to restrain some individuals from all contracts, as well as all individuals from some contracts. It may deny to all the right to contract for the purchase or sale of lottery tickets; to the minor the right to assume any obligations, except for the necessities of existence; to the common carrier the power to make any contract releasing himself from negligence; and, indeed, may restrain all engaged in any employment from any contract in the course of that employment which is against public policy. The possession of this power by Government in no manner conflicts with the proposition that, generally speaking, every citizen has a right freely to contract for the price of his labor, services, or property."

The decisions of various courts of this country upon the authority of the legislature of a State to prescribe rates for transportation by railroad companies, and in some instances for the use of elevators, have proceeded on the ground that these were public employments; and it is implied in all or nearly all of these decisions that the legislature could not constitutionally prescribe the rates of compensation to be paid for services or for the use of property in exclusively private employments. It is manifest, however, from the examples we have given that the regulation of contracts by statute, not amounting to a determination of rates or prices, has not been confined to public employments, or to business which may be said to be affected with a distinct public interest. The legislation on this subject relates to a great variety of contracts, and has been passed, some of it to promote the public

health or public morals or the public convenience, some of it for the protection of individuals against fraud, and some of it for the protection of classes of individuals against unfair or unconscionable dealing. The considerations which may influence the legislature to determine what legislation of this character is required by good public policy, or in the words of the constitution, what laws are "for the good and welfare of this Commonwealth, and for the government and ordering thereof, and of the subjects of the same," are not for us to weigh, except so far as may be necessary to determine whether the legislation proposed is repugnant or contrary to the constitution. The legislation on similar subjects in Great Britain and in other foreign countries which have no written constitution limiting the powers of the legislature is not in all respects pertinent to the present inquiry; but, considering the history of legislation in England concerning servants or laborers from the earliest times, and the statutes which in modern times have been passed in several foreign countries and many of the States of this country regulating the employment of laborers in factories, we can not say, as matter of law, that the legislation proposed is so plainly not wholesome or reasonable that the general court may not judge it to be for the good and welfare of the Commonwealth. We know of no reason derived from the constitution of the Commonwealth or of the United States why there must be a distinction made in respect to such legislation between corporations and persons engaged in manufacturing, when both do the same kind of business. The existing statutes on the subject, relating to manufacturing corporations, we do not regard as having been passed necessarily in amendment of their charters. They relate to all the corporations described, whether there is any power reserved in the legislature to amend their charters or not, and they do not purport to have been passed for the purpose of restricting the corporate powers of the corporations.

Without attempting to define the limits of the power of the general court in Massachusetts to control the right of its inhabitants to make contracts generally, we can not say that a statute requiring manufacturers to pay the wages of their employees weekly is not one which the general court has the constitutional power to pass, if it deems it expedient to do so. We have not examined in detail the provisions of the bill referred to, nor considered whether the bill may not need amendment to make its meaning clear; but the question submitted, we think, should be answered in the affirmative.

UNLAWFUL PAYMENT OF WAGES.—The Cumberland Glass Manufacturing Company and John F. Perry were convicted before the court of quarter sessions, Cumberland County, N. J., of unlawful payments to employees, in violation of the first section of an act approved March 12, 1880, entitled "An act to secure to workmen the payment of wages in lawful money." (Supplement to the Revision of the Statutes of New Jersey, p. 771.)

The case was carried before the supreme court of the State, which decided, on November 7, 1895, that if a workman agrees with his employer to take pay for his work in part in merchandise, the merchandise so furnished does not constitute a ground of set-off; it is a payment, and goes in diminution of the claim for work; also, that such a

bargain is in violation of the first section of the act above referred to. The court, however, retained the case for future consideration as to the power of the legislature to prevent a workman from contracting as to the character of the compensation to be given him for his work.

The decision of the supreme court, delivered by Chief Justice Beasley, as published in volume 33 of the Atlantic Reporter, page 210, is as follows:

The defendants were convicted before the Cumberland quarter sessions upon an indictment charging them with being engaged in the manufacture of glass, and with unlawfully paying to one John M. Quigg, a workman in the employ of the corporate defendant, the sum of \$81.71 in store goods and merchandise, as and for the wages earned by him while in the employ of said corporation. At the trial it was shown that the workman above named, at the time of his engagement, entered into the following agreement, to wit: "Bridgeton, N. J., July 28, 1890. In consideration of the Cumberland Glass Manufacturing Company furnishing me with groceries, merchandise, and money, I hereby agree to work for them at glass blowing for the blast of 1890 and 1891; and, should I fail to do so, I hereby waive any plea in defense of my obtaining goods and money under false pretenses." The work in question was done and the goods furnished under that contract.

The act alleged to have been violated was the statute entitled "An act to secure to workmen the payment of wages in lawful money," passed in 1880. The first section of this law makes it unlawful "for any glass manufacturer, iron master, foundry man, collier, factory man, employer, cranberry grower, or his agent or company, their agents or clerks, to pay the wages of workmen or employees by them employed in either store goods, merchandise, printed, written, verbal orders or due bills of any kind." By the fourth section it is provided as follows, viz: "That any glass manufacturer, iron master, foundry man, collier, factory man, employer or company offending against the provisions of this act, the same shall be a misdemeanor, and punishable by a fine of not less than ten dollars, or more than one hundred dollars for each and every offense, or imprisonment not to exceed the term of thirty days, at the discretion of the court; but nothing in this act shall apply to or affect any private individual giving orders as aforesaid on a store in the business or profits whereof he has no interest, directly or indirectly, or to the offset of any debt due from such workman to any glass manufacturer, iron master, foundry man, collier, factory man, employer or company where the said debt is voluntarily contracted by the employee or to the payment of any debt due from such workman to any glass manufacturer, iron master, foundry man, collier, factory man, employer, or company."

By an act approved March 13, 1888 (P. L., p. 174), the fourth section of the original was amended so as to eliminate from it the proviso or restrictive clause just recited; and it was the validity of this supplement that forms the topic of the discussion in the briefs of counsel. This argument proceeded on the assumption that the primary act conferred upon the defendants the right to set off merchandise that it had furnished to the employee, and that, if that provision was in force, the defendants were guiltless. But the court is of the opinion that this discussion is irrelevant to the case before us. As has appeared, the exceptive clause in section 4 of the original act relates to set-offs or debts due from the employee to the employer. In the present instance the merchandise furnished did not constitute offsets or debts. By force

of the contract between the parties, they were payments, pure and simple. The legal doctrine on this subject is entirely clear. A set-off is a counter demand growing out of an independent transaction for which an action may be maintained by the defendant against the plaintiff. As, therefore, the defense in this case could not be successfully rested on the last clause of section 4 of the original act, it becomes of no importance for present purposes whether that clause has been repealed or not. It would be a pure waste of time for the court to supererogate on that subject.

Before closing this branch of the case it is proper to say that we have found no ground on which the conviction of the defendant Perry can be rested. This man's only connection with the transaction is that he was the bookkeeper and a stockholder of the glass company. On account of such relationship he is not responsible for the violation of the act by the company. It is section 4 that denounces the punishment, and, by its express terms, it is the act of the employer himself, and not the act of his agent, that is made the punishable misdemeanor. With respect to this party the judgment must be reversed.

These results dispose of the case so far as it is exhibited in the briefs of counsel; but there is another problem that must be resolved before the court can finally decide upon the alleged criminality of the defendant. That question is whether the legislature, in enacting the law of 1888, did not exceed its authority. It is obvious that the general effect of this statute is to prevent a workman who is entirely sui juris from stipulating as to the character of the compensation to be given him for his work. The inquiry thus arising is one of great importance, touching, as it does, one of the essential rights of the citizen and the extent of the legislative authority, and therefore should not be settled except upon the fullest consideration. The result is that the case will be retained, so that counsel can send in briefs on the point thus reserved.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—In an action by Charles Mitchell against the Northern Pacific Railroad Company to recover damages for injuries received while in the performance of his duty as an employee of said company, through the negligence of fellow-servants, the United States circuit court, district of Minnesota, fifth division, decided on October 31, 1895, that under section 1, chapter 13, of the laws of 1887 of Minnesota, Mitchell was entitled to recover damages.

The opinion of the court, delivered by Judge Nelson, as published in volume 70 of the Federal Reporter, page 15, is as follows:

By consent of parties, this case was submitted to a referee to report findings of fact and conclusions of law; and, upon confirmation thereof by the court, judgment to be entered accordingly. The referee reported in substance that plaintiff, on the 25th day of February, 1893, was employed as a car cleaner for defendant at Staples, Minn., and while so engaged inside a passenger coach on a side track, another coach was kicked in against it at a dangerous and unusual rate of speed by a switching crew, consisting of a locomotive engineer, fireman, foreman, and helpers; that, by reason thereof, plaintiff was injured, without negligence on his part; and damages were awarded him in the sum of \$1,500.

Exceptions were filed to the report by defendant's counsel, and, upon due consideration of the case, I am of opinion that there is sufficient evidence to warrant the findings of fact and conclusions of law arrived at by the referee, and the amount awarded is not excessive. The report of the referee is therefore confirmed, and judgment will be entered accordingly.

The general rule, in the absence of a controlling statute, is that an employee, in the performance of certain specified duties, assumes all the natural and ordinary risks and hazards incident thereto, and those arising from the negligence or carelessness of his fellow-servants are no exception. Mitchell and those composing the switching crew were fellow-servants, and defendant would not be liable unless plaintiff comes within the provisions of the statute of Minnesota, modifying the common-law rule, which reads as follows: "Every railroad corporation owning or operating a railroad in this State shall be liable for all damages sustained by any agent or servant thereof, by reason of the negligence of any other agent or servant thereof, without contributory negligence on his part, when sustained within this State."

This statute has been construed to apply, not to all railroad employees, but only to those exposed to and injured by the dangers peculiar to the use and operation of railroads. (*Pearson v. Railroad Company*, 49 N. W., 302; 47 Minn., 9, and cases cited.)

The question, then, is, Does the plaintiff come within this rule? It has been held that a car repairer or section man injured by the act of a fellow-servant in carelessly and negligently running him down with a car can recover for such injury, as being exposed to the hazards and dangers incident to railroading; and I see no reason why this plaintiff, under the circumstances, was not exposed in like manner. I hold that the plaintiff is within the terms of the Minnesota statute, and therefore can recover in this action.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—Section 193, article 7, of the constitution of Mississippi, which establishes the responsibility of railroad corporations for injuries of employees, provides that "knowledge, by any employee injured, of the defective or unsafe character or condition of any machinery, ways, or appliances shall be no defense to an action for injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars or engines voluntarily operated by them."

This constitutional provision was construed by the supreme court of Mississippi, in the case of *Buckner v. Richmond and Danville Railroad Company et al.*, on May 27, 1895, and it was held as not precluding such knowledge by an employee, as a fact controlling the degree of care to be exercised by him under the circumstances, from being admissible to show contributory negligence.

The decision in this case is reported in volume 18 of the *Southern Reporter*, page 449. In the opinion, delivered by Judge Campbell, the following language is used in regard to the effect of the provision referred to:

The effect of this is not to destroy the defense of contributory negligence by a railroad company, but to merely abrogate the previously

existing rule that knowledge by an employee of the defective or unsafe character of the machinery or appliances shall not, of itself, bar a recovery. The law was that knowledge by an employee of defective appliances, which he voluntarily used, precluded his recovery for an injury thus received. The constitution destroys that rule, and the mere fact that the employee knew of the defect is not a bar to a recovery; but knowledge by an employee of defects is still an element or factor—and a very important one—in determining whether, with the knowledge he had, he used that degree of caution required in his situation with reference to the appliances causing his injury. The constitution did not have the effect to free employees of railroad companies from the exercise of ordinary caution and prudence. It does not license recklessness or carelessness by them, and give them a claim to compensation for injuries thus suffered. They, like others not employees, must not be guilty of contributory negligence, if they would secure a right of action for injuries. The fact of knowledge of defects shall not, as heretofore, be a defense, but the same rule that applies to others applies to them. They must use the degree of caution applicable to the situation, for the absence of this is negligence, and, if it contributed to the injury, no recovery can be had by an employee, any more than by one not an employee. It was not the purpose of the makers of the constitution to place employees on a more favorable footing as to this than others, but simply to free them from the bar before held to arise from the fact of knowledge of defective conditions. It is not a defense, but it is a fact or circumstance for consideration, among others, in order to determine the presence or absence of contributory negligence, which is yet a defense, as it was before, but is not to be made out against an employee by the mere fact of his knowledge.

THE FELLOW-SERVANT ACT OF TEXAS.—Chapter 24 of the acts of 1891 of Texas, entitled “Fellow-servants,” provided, in section 2, “that all persons who are engaged in the common service of such railway corporations and who, while so engaged, are working together at the same time and place to a common purpose, of same grade, neither of such persons being intrusted by such corporations, with any superintendence or control over their fellow-employees, are fellow-servants with each other; provided, that nothing herein contained shall be so construed as to make employees of such corporation, in the service of such corporation, fellow-servants with other employees of such corporation, engaged in any other department or service of such corporation. Employees who do not come within the provisions of this section shall not be considered fellow-servants.”

The chapter above referred to was repealed by chapter 91 of the acts of 1893, by which the section quoted was practically reenacted and its scope extended so as to include, in addition to the employees of any railway corporation, the employees of the “receiver, manager, or person in control thereof.”

The foregoing legislation was considered by the court of civil appeals of Texas, November 6, 1895, in the case of the San Antonio and Aransas

Pass Railway Company *v.* Keller (vol. 32, Southwestern Reporter, p. 847), brought before the court, on appeal by the company, from the judgment of the district court of Bexar County, by which \$5,000 had been awarded Keller, a car repairer employed by the company, as compensation for injuries received by him in a collision while on a car under orders to proceed to the scene of a wreck to assist in repairing damages.

The court of civil appeals held that the repeal of the act of 1891, under which Keller's right to recover damages accrued, by the act of 1893, which substantially reenacted it and amplified its scope, did not deprive him of any right he had already acquired; also that in the trial of the case it was proper for the jury to consider the reasonable value of the time lost, the necessary money expended for medical attendance, the physical and mental pain, and for such injuries as were permanent to award such a sum as would be a fair compensation therefor; also that a car repairer working in a separate yard from a "hostler" is not a fellow-servant of such hostler nor of the switchmen in such other yard, particularly while on a car under orders to proceed to another place and assist in repairing damages caused by a wreck.

In the course of the opinion affirming the judgment of the lower court, delivered by Judge Fly, it is said:

We conclude from the statement of facts that in December, 1892, appellee, who was a healthy man, in full possession of the faculties of his body, and was an employee of appellant, receiving from \$1.50 to \$1.75 per day, was injured by reason of a collision of the cars of appellant. The collision occurred on account of the failure of appellant to properly light its yards, and by the negligence of its employees who were not the fellow-servants of appellee. The injuries received by appellee were permanent, and have totally incapacitated him from labor. He has suffered great bodily pain since the injuries were inflicted. He was 45 years old when injured, and had a life expectancy of 24 years.

The right to recover damages accrued under the act of 1891, and the repeal of that law by the act of 1893 did not deprive appellee of any right he had already acquired. Not only had the right accrued, but the suit was filed before the enactment of the law of 1893. The latter act was simply an amplification of the scope of the law, and there was evidently no intention on the part of the legislature to interfere with rights acquired under the provisions of the amended statute. The only material difference between the acts of 1891 and 1893 was the extension of the scope of the law so as to include within its purview railway corporations operated by a receiver, manager, or any other person. There was at the time of the repeal of the former act a reenactment of the provisions upon which the right of action of appellee is founded. It is a familiar rule of construction that when statutes are repealed by acts which substantially retain the provisions of the old laws, the latter are held not to have been destroyed or interrupted in their binding force.

The following charge was given by the court: "Should you find for the plaintiff under the foregoing instructions, then, in measuring the damages, if any, he has sustained, you may take into consideration the reasonable value of the time lost, if any, consequent upon his inju-

ries; the necessary sums of money, if any, expended by him for medical attendance and medicines, if any, rendered necessary by his injuries; the physical and mental pain, if any, consequent upon his injuries received; and if you believe from the testimony plaintiff's injuries, if any, are permanent, and will disable him to labor and earn money in the future, you may, in addition to the above, find such sum as will be a fair compensation for his future diminished capacity to labor and earn money." The charge gives the correct measure of damages.

Appellee was not a fellow-servant of either Kinchelow or the switchman. They were not "working together at the same time and place, to a common purpose." While engaged in their ordinary every day labor they were not fellow-servants. Kinchelow, who was in charge of the engine when the collision took place, was the "hostler," whose duty it was to receive incoming locomotives, and carry them to the roundhouse, and take outgoing locomotives from the roundhouse and deliver them to the engineers. Appellee was a car repairer, working in a separate yard. The switchman was also in another department of the service, and had no labor in common with appellee. At the time the collision occurred and the injuries were inflicted appellee was on a car, under orders to proceed to Beeville to assist in repairing damages caused by a wreck, and the mere statement of this fact demonstrates that he was not working at that time and place to a common purpose with either the "hostler" or switchman.

DECISIONS UNDER COMMON LAW.

EMPLOYERS' LIABILITY.—In the case of *Burke et al. v. Anderson*, the United States circuit court of appeals, seventh circuit, on October 7, 1895, affirmed the judgment of the United States circuit court for the western district of Wisconsin, by which \$4,000 damages were awarded T. Knut Anderson for personal injuries caused by an explosion of dynamite under the following circumstances: Matthew C. Burke was a contractor, engaged in making a roadbed for a railroad, and his codefendant, John Burke, had sole charge of the work for him as general manager and superintendent. The work was carried on by blasting the frozen ground with dynamite and other explosives and afterwards breaking it up with picks, John Burke having personal charge of the blasting. Anderson, a common laborer, unfamiliar with the use of explosives, was hired by John Burke and set to work digging with a pick at a spot where the blasting had been done the day before, without warning or knowledge of possible danger. Anderson was injured by an explosion caused by striking with his pick a piece of dynamite remaining from the blast, which was found to have been negligently conducted.

The court held that, as Matthew C. Burke had created the risk due to the presence of explosives for his own purposes, and was bound not only to exercise the utmost care and every available precaution against possible injury to the workmen, but to give them warning of the risk,

and as Anderson was ignorant of the risk when he undertook the work of digging, Burke was liable to him for the injury suffered.

The decision delivered by Judge Seaman, as reported in volume 69 of the Federal Reporter, page 814, is based on the following reasoning:

The question in this case upon which the liability of the principal defendant, Matthew C. Burke, depends, is this: What is the rule of care to be applied to an employer of labor who uses explosives or other dangerous means in the prosecution of the work in which the laborer is engaged? The liability of Matthew C. Burke is asserted on the doctrine of respondeat superior, and based upon the alleged negligence of John Burke (1) in so carrying on the blasting, or using the dynamite and powder, that an unexploded portion was left in the ground; and (2) in sending the plaintiff into the place where this danger lurked, without warning of its existence and without sufficient precautions to guard against injury. The counter proposition, on which Matthew C. Burke claims exemption from any liability, is substantially this: That the work of blasting and removing any unexploded charge was "not the personal duty of the master, but only the work of an operative," and consequently any negligence therein of John Burke was in the character of fellow-servant, a risk assumed by the plaintiff, which precludes recovery against the master.

This conflict must be resolved in accordance with the general rule which is clearly pronounced in the recent decision by the Supreme Court of the United States in the case of *Mather v. Billston* (156 U. S., 391). In affirming the judgment, the court, speaking unanimously through Mr. Justice Field, states the doctrine applicable here:

"All occupations producing articles or works of necessity, utility, or convenience may undoubtedly be carried on, and competent persons, familiar with the business, and having sufficient skill therein, may properly be employed upon them; but in such cases, where the occupation is attended with danger to life, body, or limb, it is incumbent on the promoters thereof and the employers of others thereon to take all reasonable and needed precautions to secure safety to the persons engaged in their prosecution; and for any negligence in this respect, from which injury follows to the persons engaged, the promoters or the employers may be held responsible and mulcted to the extent of the injury inflicted. The explosive nature of the materials used in this case * * * was well known to the employers, and was a continuing admonition to them to take every precaution to guard against explosions. Occupations, however important, which can not be conducted without necessary danger to life, body, or limb, should not be prosecuted at all without all reasonable precautions against such dangers afforded by science. The necessary danger attending them should operate as a prohibition to their pursuit without such safeguards. * * * If an occupation attended with danger can be prosecuted by proper precautions without fatal results, such precautions must be taken by the promoters of the pursuit or employers of laborers thereon. Liability for injuries following a disregard of such precautions will otherwise be incurred, and this fact should not be lost sight of. So, too, if persons engaged in dangerous occupations are not informed of the accompanying dangers, by the promoters thereof, or by the employers of laborers thereon, and such laborers remain in ignorance of the dangers and suffer in consequence, the employers will also be chargeable for the injuries sustained."

In the case at bar the only explicable cause of injury to the plaintiff was the presence in the ground of some remnant of the explosives

which had been employed in blasting. The danger was not inherent in his work; was not one to be anticipated in the labor with pick and spade in a gravel cut for which he was hired; it was not of natural or purely accidental origin, but was produced by the act or requirement of the master in using a dangerous agency to advance his undertaking. Except for the explosive materials carried there for the master's purposes, the plaintiff could have worked safely in the place to which he was assigned. The testimony is undisputed that he had engaged in the work only three days before, had no experience in or knowledge of the use or danger of explosives thus employed, and had no information or suspicion that danger was incurred by digging in this ground. He obeyed the express order of the superintendent to enter and work there, relying, as he had a right to rely, upon the implied assurance of the master that the place was reasonably safe; that there was no other danger there "than such as was obvious and necessary." The master provides the place for his servants to work, and if his acts create special danger, he is not alone chargeable with the positive duty to exercise the utmost care and every available precaution against possible injury to those who are to work there; but if danger impends notwithstanding the precautions taken, he is further obligated to give due information and timely warning to those in his service who are ignorant of its extent before calling upon them to incur the risk.

In respect of the employment of the plaintiff and the directions for his work, it is unquestionable and conceded that the superintendent represented the master as vice-principal. In the same relation he is chargeable with knowledge of the danger in using explosives, and with the duty to protect employees and notify them of risk. If the plaintiff was not informed of the peril which compliance with the order involved, or it was not clearly apparent, the risk thus created can not be held to have been contemplated in the service in which he was engaged, and therefore it was not one assumed by him in his employment. The instructions requested on behalf of the principal defendant, and the theory of the whole defense as well, rest upon the claim that the operation of blasting was common labor, and not the work of a superintendent or vice principal; that its performance by the superintendent was in the character of a fellow-servant, and the master was not liable for any neglect therein beyond the exercise of ordinary care in selecting his servants. In the same connection it is argued that the use and care of the explosives was not a personal duty of the master.

It is sufficient that the risk was created by the master or for his purposes; that there is legitimate finding by the jury of negligence on the part of those engaged in the performance, causing the injury; and, finally, that the plaintiff was ignorant of the risk, and had not assumed it. The doctrine which exempts the master from liability arising out of the negligence of fellow-servants is based upon the assumption by the servant of the ordinary risks of his employment, in which the negligence of fellow-servants is included, but it has no application to risks which are not contemplated by him in entering upon the service, and certainly can not govern for this extraordinary risk interposed by the master without warning.

EMPLOYEES' LIABILITY—MINING COMPANIES.—In the case of *Western Coal and Mining Company v. Ingraham*, the United States circuit court of appeals, eighth circuit, on September 16, 1895, affirmed the judgment of the circuit court of the United States for the western

district of Arkansas, by which damages were awarded Ingraham for injuries received while in the performance of his duty as an employee of the mining company, under the following circumstances: The roof of the mine had been timbered or propped by other miners months before the plaintiff, Ingraham, went to work in the mine, who was set to work by the mining boss "pulling a pillar" in the mine, and, while so at work, the timbers or props which supported the roof of the mine in the room in which he was at work and which were set by other miners two months or more before he commenced work, were knocked down by a mule attached to a car used to haul coal out of the mine, and thereupon rocks and slate fell from the roof of the mine upon the plaintiff and inflicted the injuries complained of. The props would not have been knocked down or fallen if they had been properly set in the first instance, and an inspection of them by a reasonably capable mining boss or inspector would have disclosed the fact that they were insufficiently and defectively set, and rendered the mine insecure and dangerous to work in. The mule which knocked the props down was ungovernable and vicious, and that fact was known to the defendant. The plaintiff was in the exercise of due care when he was injured, and no negligence of his, in any degree, contributed to the accident.

The decision in this case is reported in volume 70 of the Federal Reporter, page 219. The opinion of the court was delivered by Judge Caldwell, who in the course of it said:

The contention of the defendant is that the defect in the timbering of the mine was the result of the negligence of the miners, who opened and timbered the room, and of the pit or mine boss, and that, as these persons were the fellow-servants of the plaintiff, he can not recover. But upon the conceded facts of the case the fellow-servant doctrine has no application to this case. The issue was whether the defendant had discharged his duty to the plaintiff in furnishing him with a reasonably safe place in which to work. The mine had been timbered long before the plaintiff went to work therein, and the accident resulted from a defect in that timbering. It is not claimed that the plaintiff had anything to do with this timbering, or that it was any part of his duty to inspect or repair the same. Whatever may be the duty of coal miners with reference to timbering the slopes and roofs of the rooms from which they remove coal, the rule is well settled that, after a mine is once opened and timbered, it is the duty of the owner or operator to use reasonable care and diligence to see that the timbers are properly set, and keep them in proper condition and repair. For this purpose it is his duty to provide a competent mining boss or foreman to make timely inspections of the timbers, walls, and roof of the mine, to the end that the miners may not be injured by defects or dangers which a competent mining boss or foreman would discover and remove. This is a positive duty which the master owes the servant. A neglect to perform this duty is negligence on the part of the master, and he can not escape responsibility for such negligence by pleading that he devolved the duty on a fellow-servant of the injured employee. It is an absolute duty which the master owes his servant to exercise reasonable care and diligence to provide his servant with a reasonably safe place in which to work, having regard to the kind of work and the conditions under

which it must necessarily be performed; and whenever the master, instead of performing this duty in person, delegates it to an officer or servant, then such officer or servant stands in the place of the master, and the negligence of such officer or servant is the negligence of the master; and any servant injured by such negligence may recover from the master for such injury regardless of the relation the injured servant sustained to the officer or servant whose negligence resulted in inflicting the injury.

Upon the facts of the case, therefore, and the issue as it was presented to the jury, the question whether the "pit boss" was a fellow-servant of the plaintiff was wholly immaterial, and the court might well have rejected all evidence and all instructions relating to that question. It was not the negligence of the pit boss, but the negligence of the master in not furnishing a reasonably safe place to work that was complained of. The duty rested on the master to exercise reasonable care and diligence to furnish the plaintiff a reasonably safe place in which to work, and the master is not relieved from responsibility for failing to perform this duty because he saw proper, instead of performing it himself, to intrust its performance to a servant who neglected the duty. The servant's negligence in such cases is the negligence of the master.

Upon the subject of the part the mule played in the accident * * * it would require a great stretch of the rule which the defendant attempts to invoke to say the plaintiff should have anticipated that this mule might at some time be brought to the room in the mine where the plaintiff was at work, and that, while there, the mule would come in contact with the timbers which supported the roof of the mine, and knock them down, because they were insecurely set, and that as a result of all this the roof would fall, and he might be injured, and that, anticipating all this, he ought to have quit the defendant's service. The case does not call for any discussion of what is a primary, proximate, or remote cause. Here all the causes of the accident, whether remote or proximate, were the result of the defendant's negligence, which the plaintiff was not required to anticipate.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—In an action by Hattie Frost against the Oregon Short Line and Utah Northern Railway Company to recover damages for the death of her husband, James W. Frost, who was an engineer in the employ of said company and who was killed in a collision in Montana while in the performance of his duty, the plaintiff recovered a verdict, whereupon the railway company moved for a new trial, basing the motion on the refusal of the court to instruct the jury to bring in a verdict for the defendant on the ground that the company was not liable for the death of Frost, the engineer, as his death was due to the negligence of a fellow-servant, and on the instruction given by the court to the jury to the effect that the employee through whose negligence the collision occurred was the representative of the company, and that his acts and negligence were the acts and negligence of the company.

The motion for a new trial was denied by the United States circuit court, district of Montana, S. D., on September 24, 1895. The circumstances of the case and the decision of the court rendered by

Judge Knowles are reported in volume 69 of the Federal Reporter, page 936. A synopsis of the same is herewith given, as follows: On February 1, 1891, one of defendant's passenger trains, termed "No. 5," on which James W. Frost was engineer, was running northward on the railroad track of the defendant toward the city of Butte, Mont., and on the same day there was another train, termed "No. 32," running southward on said track from said city of Butte to Dillon, Mont. Train No. 5 was running on schedule time and train No. 32 was behind time. The train dispatcher of the company, having his office at Pocatello, Idaho, finding that train No. 32 was behind time, sent an order by telegraph to the conductor of said train, directed to a station on the line of the road called Glenn, to go to Dillon, using the time of train No. 5. At the same time he sent an order to Dillon to the conductor of train No. 5 to stop at Dillon 2.45 P., for train No. 32. The telegraph operator, Stuerer, at Dillon did not give the conductor of train No. 5 this order, as he was required, and he did not change the signals at the Dillon Station, as required by the rules of the company. Signal white, which was displayed, signified that the track was clear. Had he displayed red, as he should have done, it would have indicated that the train was to stop for orders. In consequence of this failure to give the conductor of train No. 5 the order of the train dispatcher, and of his failure to display the signal red, train No. 5 proceeded north from Dillon on the regular schedule time, and at a short distance north from said place collided with said train No. 32, and on account of this collision Engineer Frost received such injuries as caused his death. It seems that the telegraph operator, Stuerer, received the dispatch from the train dispatcher at Pocatello, repeated the same back to said train dispatcher, and received the dispatch "O. K.," which indicated that the order received at Dillon was correct. Upon this state of facts the court rendered its decision, from which the following is quoted:

Under these circumstances there can be no doubt but that the said Frost was killed on account of the negligence of said telegraph operator at Dillon.

The point involved in the position taken by the court is: Was the telegraph operator at Dillon a fellow-servant of Frost, or was he, in the matter of notice of a change of running time of the train upon which Frost was an engineer, performing a duty which the said railway company was required to perform itself, and could not intrust to another without said other person representing the said company and acting for it? If the said operator was only a fellow-servant of Frost in the matter of giving notice of the change of the time of running trains, then the company was not liable for his negligence. Frost, as an employee of the said railway company, undertook as one of the risks of his employment, that he would suffer the consequences arising from the negligence of a fellow-servant in a common employment with him, and that the railway company should not be responsible therefor.

It is conceded that it was the duty of the railway company to establish the time for running trains, the hour of their departure and arrival

at stations, and their speed. This is usually done by the train dispatcher establishing what is termed a "time-table." This is the act certainly of the company. If a time-table is changed temporarily, this must be done by the train dispatcher. He acts in both cases in the name of the superintendent of the company or of its road. A railway company, however, does not perform its whole duty to its employees when it establishes a time-table, either general or temporary. It should exercise reasonable care, under all the circumstances, to bring this time-table to the notice of all persons who are charged by it with the operating of trains on its railway track. The notice of a temporary change in a time-table is as necessary as the notice of the general time-table. There is more danger to be apprehended from the establishment of a temporary time-table when a general one has been in use than from the establishing of a general time-table in the first place.

When the act to be performed is one which it was the duty of the railway company, as master, to execute, can it, in any way, transfer this duty to another, and exonerate itself from liability in case this other person is negligent in its performance? I think, under established Federal authority, it can not.

Under what head of the list of duties required of a master toward his servant shall we place the duty of a railroad company to establish time-tables, and give notice thereof to those engaged in managing and running trains? I apprehend we must class that duty under the head of the obligation of the master to provide a suitable place for his servant to work in. This being the case, the duty of giving notice to those running a train devolves upon the railroad company, and those who undertake or are intrusted with this office personally represent it. A master can not delegate the duty of providing a safe place in which his servant is called upon to work, so as to escape responsibility, if there is a want of proper care in providing such place.

In this case it is admitted that the establishing of a temporary time-table is the work of the railroad company, and the duty of giving notice of any time-table, general or temporary, devolves upon it. How can it be claimed then that in one case more than another this duty of the master can be turned over to a fellow-servant of those who are operating his trains, and be relieved from liability? The duty of giving notice in both classes of time-tables is the duty of the master, and the master can not delegate his duty to another without being responsible for his negligence. Under this rule the telegraph operator Stuerer at Dillon must be considered as representing the company in the duty assigned him of giving notice of the temporary change of the time-table, or in transmitting the notice, intrusted to him to deliver to the conductor of train No. 5, of the change in the time-table. In doing this duty he was not a fellow-servant of those operating the road, but a personal representative of the company, for whose negligence the company was responsible.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES.—The supreme court of Pennsylvania decided, on October 7, 1895, in the case of *Elkins v. Pennsylvania Railroad Company*, that a railroad company is responsible for injuries suffered by one of its brakemen, through a defect in the steps of a freight car, while acting as one of a crew sent to a shipper's

yards to shift cars preparatory to their being taken into the company's trains.

The circumstances of the case, and opinion of the court, delivered by Judge McCullom, reported in volume 33 of the *Atlantic Reporter*, page 74, are as follows:

The plaintiff was injured while in the service of the defendant company as a brakeman. The injury he received was due to a defect in the step of a freight car on which he was attempting to get, in the performance of the duties of his employment. It is settled by the verdict that no fault of his contributed in producing it. The car belonged to, and was in the yard of, the Atlantic Refining Company. The plaintiff was one of a crew sent into the yard by the defendant company to shift some cars there. The superintendent of the refining company directed what cars should be shifted, and where they should be placed. It was while the crew were engaged in the work they were sent to do that the plaintiff received the injury for which he seeks compensation in this action. The cause of it has already been stated. If he had received it from the same cause while transporting the car from one point to another on the defendant company's road, the liability of his employer to compensate him for it could not be successfully questioned. In the recent case of *Dooner v. Canal Company* (164 Pa. Stat., 17; 30 Atl., 269) this subject was fully considered in an opinion by our brother Dean, who in the course of it said: "The measure of duty of the receiving road, as to cars turned over to it for transportation by connecting roads, is settled by many cases. It is bound to make such inspection as the nature of the transportation requires, and if it pass and haul cars faulty in construction, or dangerously out of repair, it is answerable to its own employees who are thereby injured."

If the defendant company is responsible to its employees for the condition of the cars it receives for transportation over its own lines, why is it not so for the condition of the cars it requires them to shift from one place to another on the tracks and in the yard of the refining company? They are as clearly in its service in the latter case as in the former. Their work is of the same nature in one case as in the other, and the risks attending it are the same. No sufficient reason appears for discriminating between the liability of a railroad company for injuries to its employees in handling upon its own line the cars of another corporation which are "faulty in construction, or dangerously out of repair," and its liability to them for injuries in handling such cars by its orders elsewhere. It is not the ownership of the cars, or of the line on which they are moved, that imposes the liability upon the company, but it is the handling or shifting of them by its orders.

The defendant company was not bound to shift the cars in the yard of the refining company without a previous inspection of them. If the latter refused to allow an inspection, the former could have properly declined to engage in the work of shifting them. But, having done the work, it is responsible to its employees for injuries caused by the unsafe condition of the cars they were required to handle.

CONTRACT OF EMPLOYMENT.—In the case of *Hermann v. Littlefield* (reported in volume 42 of the Pacific Reporter, page 443) the supreme court of California decided, on October 9, 1895, that a contract by which an employee agrees to devote his whole time and services to the interest of his employer is not broken by doing a little work for other parties on holidays and at night, such work not resulting in damage to the employer; also, that when a person performing labor at an agreed price and for a stated time continued in the same employment after the expiration of the term without a new agreement, it is presumed that the terms of the original contract were continued, and the original contract is admissible as evidence in a suit by the employee to recover the wages earned since the expiration of the time covered thereby.

The facts in the case are stated in the opinion delivered by Judge Garoutte, which is as follows:

This is an action in assumpsit for work and services performed by plaintiff in assisting defendant in conducting and carrying on the business of an architect. Judgment went for plaintiff, and this appeal is prosecuted from such judgment, and from the order denying the motion for a new trial.

In the year 1887 the parties entered into a written contract, by the terms of which Hermann agreed to give his services "as a draftsman and assistant architect during the necessary and reasonable working hours of each working day, for the term of three years." Hermann also agreed "to devote his whole time and services to the interest of Littlefield's business as a draftsman and assistant architect, to use at all times his utmost reasonable exertion in and for the true and best interests of Littlefield's business, as if he were a partner with him." This agreement expired in due course of time, and plaintiff continued to remain in the employment of the defendant, and performed the same character of services thereafter as before such expiration. By his answer, defendant claimed that plaintiff had made a substantial default in the performance of the terms of the contract upon his part to be performed, and asked for damages. The court, by its finding of fact, declared, in effect, that plaintiff had performed the contract as agreed upon, and further found that during the time of his employment he performed work for persons not clients of defendant, from which employment he had received the compensation of \$178; and it thereupon deducted that sum from the amount found due to plaintiff, and ordered judgment for the balance.

It is contended that the court committed an error in admitting the original written contract in evidence. We think there is no weight in the contention. The writing was clearly admissible, as showing the terms of the contract under which plaintiff performed the labor. It is elementary that when a person performing labor at an agreed price and for a stated time continues in the same employment after the expiration of the term, without a new agreement, it is presumed by the law, in the absence of anything to the contrary, that the terms of the original contract are continued; and the fact that the present action is one in the nature of assumpsit in no way deprives the plaintiff of the right to introduce the contract in evidence.

The findings of fact as to the performance of the contract by plaintiff are fully supported by the evidence. We see nothing in the record dis-

closing any substantial breach thereof. Plaintiff appears to have done some work for other parties during Sundays, holidays, and at night; but the amount of this labor was trivial, with a single exception, and in no way resulted in damage to defendant, nor in any way interfered with his business. We see no more cause of complaint by defendant in this regard than though plaintiff had passed the time so occupied in harmless amusement. The court allowed the defendant the benefit of the money received by the plaintiff from this outside work. Whether or not there was justification for this action of the court is immaterial upon the present appeal, for certainly there can be no cause of complaint upon the part of defendant based thereon. A modification of the judgment in this respect could hardly be desired by him.

**EXTRACT RELATING TO LABOR FROM THE NEW CONSTITUTION
OF SOUTH CAROLINA.**

The new constitution of the State of South Carolina, ratified December 4, 1895, in a convention held at the city of Columbia, contains the following provisions relating to labor:

ARTICLE V, SECTION 33. Circuit courts and all courts inferior thereto and municipal courts shall have the power, in their discretion, to impose sentence of labor upon highways, streets, and other public works upon persons by them sentenced to imprisonment.

ARTICLE IX, SECTION 15. Every employee of any railroad corporation shall have the same rights and remedies for any injury suffered by him from the acts or omissions of said corporation or its employees as are allowed by law to other persons not employees, when the injury results from the negligence of a superior agent or officer, or of a person having a right to control or direct the services of a party injured, and also when the injury results from the negligence of a fellow-servant engaged in another department of labor from that of the party injured, or of a fellow-servant on another train of cars, or one engaged about a different piece of work. Knowledge by any employee injured of the defective or unsafe character or condition of any machinery, ways or appliances shall be no defense to an action for injury caused thereby, except as to conductors or engineers in charge of dangerous or unsafe cars or engines voluntarily operated by them. When death ensues from any injury to employees, the legal or personal representatives of the person injured shall have the same right and remedies as are allowed by law to such representatives of other persons. Any contract or agreement, expressed or implied, made by any employee to waive the benefit of this section shall be null and void; and this section shall not be construed to deprive any employee of a corporation, or his legal or personal representative, of any remedy or right that he now has by the law of the land. The general assembly may extend the remedies herein provided for to any other class of employees.

ARTICLE XII, SECTION 6. All convicts sentenced to hard labor by any of the courts of this State may be employed upon the public works of the State or of the counties and upon the public highways.