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OF THE

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No. 5—JULY, 1896.

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CONVICT LABOR.

In February, 1887, the Commissioner of Labor published a report on the subject of convict labor in the United States, known as the Second Annual Report of the Commissioner of Labor. The investigation, the results of which were published at that time, was made in accordance with a joint resolution of Congress approved August 2, 1886, authorizing and directing the Commissioner of Labor to make a full investigation as to the kind and amount of work performed in the penal institutions of the various States and Territories of the United States and the District of Columbia, as to the methods under which convicts were employed, and as to all the facts pertaining to convict labor and the influence of the same upon the industries of the country. The inquiry, conducted in accordance with the Congressional authorization, reached all penal institutions of all grades in the States and Territories and the District of Columbia in which the inmates were in any degree employed in productive labor. The data gathered at that time covered as nearly as possible the fiscal year of each institution ending in 1886. The facts, therefore, were more nearly for the calendar year 1885. To bring recent facts into comparison with those collected in 1886 the Department of Labor has just completed an investigation covering the more important information concerning the employment of convicts, and the results of this recent investigation are contained in this number of the Bulletin of the Department. This information relates generally to the year 1895; so that we have a ten-year comparison of certain facts. In Delaware, Idaho, Montana, Utah, and Wyoming, in 1885, there were no convicts employed in productive labor; therefore, these States are omitted from the present inquiry. This second inquiry, however, comprehends only penal institutions of the grade of State penitentiaries or prisons. In the report for 1885-86, which consisted of 604 pages, all penal institutions of whatever grade in which the convicts were employed upon productive work or manufactures of any kind were investigated

and the results given in a series of sixteen general tables, with an analysis. The results of State investigations previously made were also given, and there was a discussion of the advantages and disadvantages of various systems and plans for the employment of convicts. That report also contained extensive historical notes giving the leading facts of the employment of convicts among the early nations and of the plans and means of utilizing convict labor in recent times in various countries of the world. It also contained all the convict labor laws then in force in the various States and Territories. The present report is confined to convict labor in institutions of the grade of State penitentiaries and an abstract of the various laws relating to convict labor enacted in the different States and Territories since the report of 1885-86.

In the report of ten years ago it was found that the total value of all products of, and work performed in, all the penal institutions of all grades was \$28,753,999, while the value of goods produced and work done at that time in the penal institutions now considered was \$24,271,078. It will thus be seen that all other institutions, or those of a lower grade than the State penitentiary, were then of little consequence. For this reason the present investigation has been confined to the high-grade institutions.

In 1885 there were four plans or systems followed in the employment of convicts, and they are described in brief as—

1. The contract system, under which a contractor employs convicts at a certain agreed price per day for their labor, the prisoners working under the immediate direction of the contractor or his agents. Under this system the institutions usually furnish to the contractor the power necessary and even the machinery for carrying on the work.

2. The piece-price system, which is simply a modification of the contract system. Under this system the contractor furnishes to the prison the materials in a proper shape for working, and receives from the prison the manufactured articles at an agreed piece price, the supervision of the work being wholly in the hands of the prison officials.

3. The public-account system, under which the institution carries on the business of manufacturing like a private individual or firm, buying raw materials and converting them into manufactured articles, which are sold in the best available market.

4. The lease system, under which the institution leases the convicts to a contractor for a specified sum and for a fixed period, the lessee usually undertaking to clothe, feed, care for, and maintain proper discipline among the prisoners while they perform such labor as may have been determined by the terms of the lease.

These four systems are still followed, with some modifications here and there, especially in a few States where, by law, convicts must be employed in the production of things used by the State in its various institutions—penal, charitable, etc.

The results of the present investigation are presented in eight tables and a section giving the abstracts of the various State laws enacted

since 1885. These tables are so brief and comprehensive in themselves that they need but little analysis.

Table I shows the fiscal years in each State and for each institution for which the facts have been reported.

Table II shows the systems of work in vogue, both in 1885 and in 1895, in each institution comprehended in this report. By examining the last two columns the changes in system are easily seen. It will be noticed that the changes are chiefly from contract to public account or piece price, and from lease to contract or public account. There have not been many changes, however.

Table III states the number of convicts in prisons and penitentiaries in 1895, by systems of work, designating them under those employed in productive labor, those engaged in prison duties, and those who are idle and sick, and the total number, classifying them by sex, under each of these designations. Out of this table is drawn Table IV, which gives a more interesting and important statement.

Table IV consolidates the number in each State under all systems, both for 1885 and 1895. Looking at the total line in Table IV, it is seen that the number of convicts in the prisons of the grade under consideration in 1885 was 41,877, while for 1895 the number rose to 54,244. It is interesting to observe that, in 1885, of these numbers 1,967 were females, while the number of females in 1895 was 1,988, an increase of only 21. In 1885 the number engaged in productive labor was 30,853, being 73.7 per cent of the total number of convicts at that time, while in 1895 the number engaged in productive labor was 38,415, or 70.8 per cent of the total number of convicts. While there was thus a decrease in the proportion of convicts employed in productive labor, it will be seen that there was also a decrease in the proportion of those engaged in prison duties, for in 1885 the total so engaged was 8,391, or 20 per cent of the whole number of convicts, while in 1895 there were 8,804 so engaged, being 16.2 per cent of the whole number. When we come to the idle and sick, an increase in the proportion in the ten years is observed. In 1885 the number was 2,633, or 6.3 per cent of the whole, while in 1895 the number of idle and sick was 7,025, being 13 per cent of the whole. Undoubtedly this proportional increase is in the number of idle, this state of affairs being brought about by changes in the laws relating to the employment of convicts.

Table V is an analytical table giving the kind of goods produced or work done, both in 1885 and 1895, and the value thereof, for each State and for each system. An examination of this table shows the shifting of the industries in the State prisons of the country during the ten years.

Table VI shows the value of goods produced or work done, by systems of work, for the two years under consideration, but the values are consolidated for each State for the various prisons covered by the investigation.

Table VII summarizes these totals for the whole country. This table is reproduced here as a part of this text analysis.

SUMMARY OF VALUE OF GOODS PRODUCED OR WORK DONE BY SYSTEMS OF WORK, 1885 AND 1895.

Systems of work.	Value.	
	1885.	1895.
Public-account system.....	\$2,063,892.18	\$4,888,563.36
Contract system.....	17,071,265.69	8,190,799.70
Piece-price system.....	1,484,230.52	3,795,483.24
Lease system.....	3,651,690.00	2,167,626.03
Total.....	24,271,078.39	19,042,472.33

By this brief table one can note the general changes in values. Under the public-account system there were produced in the United States in 1885 goods to the value of \$2,063,892.18, but under this system in 1895 there were produced goods to the value of \$4,888,563.36, being an increase of more than 100 per cent. This system has become more popular in recent years, hence the increase. Looking at the next line we find that under the contract system there has been a decrease of about 50 per cent, the decrease being from \$17,071,265.69 to \$8,190,799.70. This system (the contract) has become offensive during the past few years, and legislatures have sought to change their plans from that either to the public-account system or to the piece-price system; under the latter the value of goods has increased from \$1,484,230.52 in 1885 to \$3,795,483.24 in 1895, an increase of over 150 per cent. Under the lease system the values show the effect of agitation in the Southern States, where that system more generally prevailed in 1885, for there the value of goods produced or work done decreased from \$3,651,690 to \$2,167,626.03 in 1895, a decrease of 40.6 per cent. But the totals show a great change, the decrease being from \$24,271,078.39 in 1885 to \$19,042,472.33 in 1895, a decrease of 21.5 per cent.

Table VIII summarizes the value of goods produced or work done, by States, without regard to system, and this table shows clearly in what communities there has been an increase or decrease in the value of products in the various State prisons. There has been an increase in 16 States and Territories and a decrease in 25 States and Territories. The increase occurs in the following-named States and Territories: Alabama, Connecticut, Florida, Maryland, Massachusetts, Minnesota, Missouri, New Hampshire, New Mexico, Rhode Island, South Carolina, Texas, Vermont, Virginia, Washington, and Wisconsin. A decrease occurs in the following-named States and Territories: Arizona, Arkansas, California, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Mississippi, Nebraska, Nevada, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, and West Virginia. There seems to be no influence arising from geographical location to affect this increase or decrease. Some effort has been made to ascertain the causes of decrease

in the value of product or of work performed, and the results are fairly satisfactory. In Arizona it is ascertained that the prisoners are not engaged in productive labor, but are employed in prison improvements only. In Arkansas there has been a change of system, which works a decrease, while values have been lowered. In California the convicts have been employed in enlarging the prison and in cultivating a farm for their own benefit. This is at the State Prison at Folsom. At the State Prison at San Quentin there has been a discontinuance, by act of legislature, of all industries which in any way entered into competition with free labor. In Colorado there has been a discontinuance, by act of legislature, of all industries which entered into competition with free labor in that State. The decrease in Georgia has been very large, but no satisfactory explanation thereof has been given. In the State Penitentiary of Illinois a stone contractor threw up his contract in 1893, resulting in a loss of product. There is a small force in the shoe factory, while a cooper shop has been removed from the prison; and no barbed-wire goods are now made. At the Southern Penitentiary of Illinois there has been a change of system from contract to public account, which change very generally results in a loss in the value of goods made. At the State Prison (north) in Indiana contractors refused to renew their contracts, the knitting factory was closed, and the chair factory and cooper shop ran on half time. At the State Prison (south) the contractors also refused to renew their contracts. At the State Reformatory for Women in Indiana the principal industry has been almost discontinued, because it was found impossible to compete with those doing the same work outside of the prison by machinery. The small decrease in Iowa occurred at the State Penitentiary at Anamosa by reason of lower prices being realized for goods made, and by the industrial depression affecting prices. In Kansas the principal industry was discontinued because of depression in business. The decrease in Kentucky was caused by the failure of the contractors in 1893, since which time all convicts have been employed in but two industries. In Louisiana the decrease was on account of the low selling value of the goods made, while the smaller production and decrease in the selling value of goods accounts for the loss in the State of Maine. In Michigan the decrease is owing to causes affecting the State Prison, where the convicts were not steadily employed in 1895, 200 able convicts being idle for nine months. In Mississippi there was a change from the lease to the public-account system in 1894, but no positive explanation is given why this change should have resulted in a loss of \$80,000 in the value of goods. In Nebraska the reason given is the depression in business and the impossibility of leasing convicts in several industries, such as the manufacture of agricultural implements and clothing, and laundering, which were carried on before. In Nevada the convicts were employed at improvements and repairs of the prison. The manufacture of shoes was discontinued, and there was no demand for stone. In New Jersey the decrease was probably owing to a State law restrict-

ing the number of convicts to 100 in any one industry, to smaller production, and to a decrease in the selling value of goods. This was at the State Prison, while at the Essex County Penitentiary the apparent decrease was owing to an error in the report made to the Department in 1885. The decrease in New York of over \$2,800,000 in the value of goods produced and work done, was largely owing to changes in legislation. At the Auburn Prison there was no decrease. At the Sing Sing State Prison a change of system, a lowering of the selling value of goods, a less number of convicts employed, and the legislation of 1889, restricting the number of convicts in any one industry, account for the decrease at that point, and the same causes operated at the Clinton Prison, convicts there being employed in less profitable industries. A change in the system of employment accounts for the decrease at the State Reformatory, while at the Albany County Penitentiary a change in the nature of the product—it being from shoes to less profitable industries—satisfies the inquiry there. The decrease at the Erie County Penitentiary and the Kings County Penitentiary resulted from legislation restricting the number of convicts in any one industry, and from a change of system from contract to piece price, while at the Monroe County and Onondaga County Penitentiaries a change of system from contract to public account was responsible. The decrease of about \$70,000 in the value of products at the State Penitentiary of North Carolina has not been explained. At the Ohio Penitentiary the decrease came from a lowering of the price of goods and legislation requiring the prison-made goods to be stamped. At the Oregon State Penitentiary the decrease was on account of the general decline in business. In Pennsylvania, at the Eastern Penitentiary, the discontinuance of the hosiery industry because of inventions outside, and a smaller number of convicts employed, account for the loss there; while at the Western Penitentiary the decrease was owing to a change of system from contract to public account, the convicts not being steadily employed. The other prisons of State grade in Pennsylvania which show a loss are those for the counties of Berks, Chester, Delaware, Northumberland, Philadelphia, and Schuylkill. In these, smaller production and a decline in the selling value of goods account for the decrease in the value of products, although in Philadelphia County, in addition to these reasons, there has been a change in the quality of goods made, and on account of dullness of trade the convicts have frequently been idle. The figures for the State of South Dakota for 1895 are shown in connection with those for 1885 for Dakota Territory. In Tennessee the decrease in value of production resulted from smaller output and a decline in selling values. The decrease in West Virginia of about \$33,000 is not explained.

A study of the abstracts of legislation since the report of 1885-86 in the different States and Territories, which follow immediately after Table VIII, will give a clearer insight into the character of the changes referred to above.

When the value of goods produced is given there should be no misunderstanding as to what is meant; for instance, the total value of goods produced or work done in the United States, for the various States and Territories, in all the State prisons and penitentiaries, for 1895, was \$19,042,472.33. The same difficulty occurs here that occurs in census work in stating the value of products. The sum just given represents the value of the goods after the materials have been manipulated by the convicts. It does not represent the value which has been added by them, but represents the value of the materials on which work has been bestowed and the work itself. Under the public-account system prison officials purchase the materials and convert them, by the labor of convicts, into goods, which they sell. The value given includes, therefore, the value of the materials purchased plus the labor expended upon them by the prisoners. In purchasing materials the prison officials in many instances purchase the finished products of manufacturers outside of prisons. They purchase everything that is essential for conversion into certain articles. So the contractors working under the contract system take to the prisons the materials, which there, by the labor of the convicts, they convert into finished goods. The value reported to the Department, therefore, covers the value of these materials, whether the finished products of some other manufacturers or purely raw materials plus the labor expended upon them. These explanations, if clearly understood, will prevent any misunderstanding on the part of the reader of this report, and they are equally applicable to the values reported for 1885. The \$19,042,472.33 does not represent the labor of the convicts themselves. In 1885 the total wages paid by contractors and lessees to States and counties for the labor of convicts, from which resulted a product of the value of \$28,753,999, was only \$3,512,970, or \$1 of convict-labor wages to \$8.19 of finished product of convict labor. There is reason to believe that the ratio at the present time is less than that for 1885. At the present time in all probability the total value of the labor expended by the convicts in the State penitentiaries and prisons of the country, considered in this report, does not exceed \$2,500,000.

TABLE I.—DATE OF ENDING OF FISCAL YEAR.

[The returns made for what has been termed, for brevity's sake, "1895," in all these tables, were really for the dates shown herewith.]

State.	Locality.	Fiscal year ending—	State.	Locality.	Fiscal year ending—
Alabama	Wetumpka	Aug. 31, 1894	New York	Sing Sing	Sept. 30, 1895
Arizona	Yuma	Dec. 31, 1895	New York	Dannemora	Sept. 30, 1895
Arkansas	Little Rock	Oct. 31, 1894	New York	Elmira	Sept. 30, 1895
California	Folsom	June 30, 1895	New York	Albany	Oct. 31, 1895
California	San Quentin	June 30, 1895	New York	Buffalo	Sept. 30, 1895
Colorado	Cañon City	Nov. 30, 1895	New York	Brooklyn	July 31, 1895
Connecticut	Wethersfield	Dec. 31, 1895	New York	Rochester	Sept. 30, 1895
Florida	Tallahassee	Dec. 31, 1895	New York	Syracuse	Oct. 30, 1895
Georgia	Atlanta	Oct. 1, 1895	North Carolina	Raleigh	Dec. 31, 1895
Illinois	Joliet	Sept. 30, 1895	Ohio	Columbus	Oct. 31, 1895
Illinois	Chester	Sept. 30, 1895	Oregon	Salem	Dec. 31, 1895
Indiana	Michigan City	Oct. 31, 1895	Pennsylvania	Philadelphia	Dec. 31, 1895
Indiana	Jeffersonville	Oct. 31, 1895	Pennsylvania	Allegheny City	Dec. 31, 1895
Indiana	Indianapolis	Oct. 31, 1895	Pennsylvania	Philadelphia	Dec. 31, 1895
Iowa	Fort Madison	June 30, 1895	Pennsylvania	Reading	Dec. 31, 1895
Iowa	Anamosa	June 30, 1895	Pennsylvania	West Chester	Sept. 30, 1895
Kansas	Lansing	June 30, 1895	Pennsylvania	Media	Dec. 31, 1895
Kentucky	Frankfort	Nov. 30, 1895	Pennsylvania	Lancaster	Nov. 30, 1895
Louisiana	Baton Rouge	Feb. 28, 1895	Pennsylvania	Allentown	Dec. 31, 1895
Maine	Thomaston	Nov. 30, 1895	Pennsylvania	Norristown	Dec. 31, 1895
Maryland	Baltimore	Nov. 30, 1895	Pennsylvania	Easton	Dec. 31, 1895
Massachusetts	Boston	Sept. 30, 1895	Pennsylvania	Sunbury	Dec. 31, 1895
Massachusetts	Concord Junction	Sept. 30, 1895	Pennsylvania	Philadelphia	Dec. 31, 1895
Massachusetts	Sherborn	Sept. 30, 1895	Pennsylvania	Pottsville	Dec. 31, 1895
Michigan	Jackson	June 30, 1895	Rhode Island	Howard	Dec. 31, 1895
Michigan	Ionia	June 30, 1895	South Carolina	Columbia	Oct. 31, 1895
Minnesota	Stillwater	July 31, 1895	South Dakota	Sioux Falls	June 30, 1894
Mississippi	Jackson	Sept. 30, 1895	Tennessee	Nashville	Dec. 31, 1895
Missouri	Jefferson City	Dec. 31, 1895	Texas	Huntsville and Rusk	Oct. 31, 1894
Nebraska	Lancaster	Dec. 31, 1895	Vermont	Windsor	June 30, 1895
Nevada	Carson City	Dec. 31, 1895	Vermont	Rutland	June 30, 1895
New Hampshire	Concord	Apr. 30, 1896	Virginia	Richmond	Sept. 30, 1895
New Jersey	Trenton	Oct. 31, 1895	Washington	Walla Walla	Sept. 30, 1895
New Jersey	Caldwell	Apr. 30, 1896	West Virginia	Moundsville	Sept. 30, 1895
New Mexico	Santa Fe	Mar. 4, 1895	Wisconsin	Waupun	Sept. 30, 1895
New York	Auburn	Sept. 30, 1895			

TABLE II.—SYSTEMS OF WORK IN 1885 AND 1895.

State.	Institution.	Locality.	1885.	1895.
Alabama	State Penitentiary	Wetumpka	Lease	Lease and public account.
Arizona	Territorial Prison	Yuma	Public account	Public account.
Arkansas	State Penitentiary	Little Rock	Lease	Contract and public account.
California	State Prison	Folsom	Public account	Public account.
California	State Prison	San Quentin	Piece price and public account.	Public account.
Colorado	State Penitentiary	Cañon City	Public account	Public account.
Connecticut	State Prison	Wethersfield	Contract	Contract.
Florida	State Penitentiary	Tallahassee	Lease	Lease.
Georgia	State Penitentiary	Atlanta	Lease	Lease.
Illinois	State Penitentiary	Joliet	Contract	Contract and public account.
Illinois	Southern Penitentiary	Chester	Contract	Public account.
Indiana	State Prison (north)	Michigan City	Contract	Contract.
Indiana	State Prison (south)	Jeffersonville	Contract	Contract.
Indiana	State Reformatory for Women.	Indianapolis	Piece price.	Piece price.
Iowa	State Penitentiary	Fort Madison	Contract	Contract.
Iowa	State Penitentiary	Anamosa	Public account	Public account.
Kansas	State Penitentiary	Lansing	Public account and contract.	Public account and contract.
Kentucky	State Penitentiary	Frankfort	Lease and public account.	Piece price.
Louisiana	State Penitentiary	Baton Rouge	Lease	Lease.
Maine	State Prison	Thomaston	Public account	Public account.
Maryland	Penitentiary	Baltimore	Contract	Contract.
Massachusetts	State Prison	Boston	Contract	Piece price and public account.
Massachusetts	Reformatory	Concord Junction.	Piece price	Piece price.
Massachusetts	Reformatory Prison for Women.	Sherborn	Piece price	Piece price and public account.
Michigan	State Prison	Jackson	Contract and piece price.	Contract and public account.

TABLE II.—SYSTEMS OF WORK IN 1885 AND 1895—Concluded.

State.	Institution.	Locality.	1885.	1895.
Michigan.....	State House of Correction and Reformatory.	Ionia.....	Contract.....	Public account and contract.
Minnesota.....	State Prison.....	Stillwater.....	Contract.....	Contract and public account.
Mississippi.....	State Penitentiary.....	Jackson.....	Lease.....	Public account.
Missouri.....	State Penitentiary.....	Jefferson City.....	Contract.....	Contract.
Nebraska.....	State Penitentiary.....	Lancaster.....	Lease.....	Lease.
Nevada.....	State Prison.....	Carson City.....	Public account.....	Public account.
New Hampshire.....	State Prison.....	Concord.....	Contract.....	Contract.
New Jersey.....	State Prison.....	Trenton.....	Piece price.....	Piece price and public account.
New Jersey.....	Essex County Penitentiary.	Caldwell.....	Public account.....	Public account.
New Mexico.....	Territorial Penitentiary.	Santa Fe.....	Lease.....	Public account.
New York.....	Auburn Prison.....	Auburn.....	Public account and contract.	Piece price and public account.
New York.....	Sing Sing State Prison	Sing Sing.....	Contract.....	Public account and piece price.
New York.....	Clinton Prison.....	Dannemora.....	Public account.....	Public account and piece price.
New York.....	State Reformatory.....	Elmira.....	Contract and public account.	Piece price and public account.
New York.....	Albany County Penitentiary.	Albany.....	Contract.....	Piece price.
New York.....	Erie County Penitentiary.	Buffalo.....	Contract.....	Public account and piece price.
New York.....	Kings County Penitentiary.	Brooklyn.....	Contract.....	Piece price.
New York.....	Monroe County Penitentiary.	Rochester.....	Contract.....	Piece price and public account.
New York.....	Onondaga County Penitentiary.	Syracuse.....	Contract.....	Piece price.
North Carolina.....	State Penitentiary.....	Raleigh.....	Public account and lease.	Public account.
Ohio.....	Penitentiary.....	Columbus.....	Contract, piece price, and public account.	Contract and piece price.
Oregon.....	State Penitentiary.....	Salem.....	Contract and public account.	Contract and public account.
Pennsylvania.....	Eastern Penitentiary.	Philadelphia.....	Public account and piece price.	Public account.
Pennsylvania.....	Western Penitentiary	Allegheny City.	Contract.....	Public account and piece price.
Pennsylvania.....	Philadelphia County House of Correction.	Philadelphia.....	Public account.....	Public account.
Pennsylvania.....	Berks County Prison.	Reading.....	Public account.....	Public account.
Pennsylvania.....	Chester County Prison	West Chester.....	Public account.....	Public account.
Pennsylvania.....	Delaware County Prison.	Media.....	Public account.....	Public account.
Pennsylvania.....	Lancaster County Prison.	Lancaster.....	Public account.....	Public account.
Pennsylvania.....	Lehigh County Prison	Allentown.....	Public account.....	Public account.
Pennsylvania.....	Montgomery County Prison.	Norristown.....	Piece price.....	Piece price.
Pennsylvania.....	Northampton County Prison.	Easton.....	Public account.....	Public account.
Pennsylvania.....	Northumberland County Prison.	Sunbury.....	Public account.....	Public account.
Pennsylvania.....	Philadelphia County Prison.	Philadelphia.....	Public account.....	Public account.
Pennsylvania.....	Schuylkill County Prison.	Pottsville.....	Public account.....	Public account.
Rhode Island.....	State Prison and Providence County Jail.	Howard.....	Contract.....	Contract.
South Carolina.....	Penitentiary.....	Columbia.....	Contract, public account, and lease.	Contract, public account, and lease.
South Dakota.....	State Penitentiary.....	Sioux Falls.....	Contract (a).....	Public account.
Tennessee.....	State Penitentiary.....	Nashville.....	Lease.....	Lease.
Texas.....	State Penitentiary.....	Huntsville and Rusk.	Public account and contract.	Public account and contract.
Vermont.....	State Prison.....	Windsor.....	Contract.....	Contract.
Vermont.....	House of Correction.....	Rutland.....	Contract.....	Public account.
Virginia.....	State Penitentiary.....	Richmond.....	Contract.....	Contract and public account.
Washington.....	Penitentiary.....	Walla Walla.....	Lease.....	Public account.
West Virginia.....	Penitentiary.....	Moundsville.....	Contract.....	Contract.
Wisconsin.....	State Prison.....	Waupun.....	Contract.....	Contract and public account.

a Dakota Territory.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895.
PUBLIC-ACCOUNT SYSTEM.

Marginal number.	Name of institution.	Locality.	Employed in productive labor.		
			Male.	Female.	Total.
ARIZONA.					
1	Territorial Prison	Yuma	158	2	160
CALIFORNIA.					
2	State Prison	Folsom	743		743
3	State Prison	San Quentin	717		717
COLORADO.					
4	State Penitentiary	Cañon City	163		163
ILLINOIS.					
5	Southern Penitentiary	Chester	517		517
IOWA.					
6	State Penitentiary	Anamosa	363		363
KANSAS.					
7	State Penitentiary	Lansing	a 825	a 16	a 841
MAINE.					
8	State Prison	Thomaston	89		89
MICHIGAN.					
9	State House of Correction and Reformatory.	Ionia	b 378		b 378
MISSISSIPPI.					
10	State Penitentiary	Jackson	894	10	904
NEVADA.					
11	State Prison	Carson City	10		10
NEW JERSEY.					
12	Essex County Penitentiary	Caldwell	212		212
NEW MEXICO.					
13	Territorial Penitentiary	Santa Fe	107		107
NEW YORK.					
14	Clinton Prison	Dannemora	c 670		c 670
15	Erie County Penitentiary	Buffalo	d 230		d 230
NORTH CAROLINA.					
16	State Penitentiary	Raleigh	1,000	40	1,040
PENNSYLVANIA.					
17	Eastern Penitentiary	Philadelphia	194	23	217
18	Western Penitentiary	Allegheny City	e 830		e 830
19	Philadelphia County House of Correction.	Philadelphia	508	87	595
20	Berks County Prison	Reading	103		103
21	Chester County Prison	West Chester	19		19
22	Delaware County Prison	Media	38	2	40
23	Lancaster County Prison	Lancaster	51		51
24	Lehigh County Prison	Allentown	30		30
25	Northampton County Prison	Easton	40		40
26	Northumberland County Prison	Sunbury	49		49
27	Philadelphia County Prison	Philadelphia	32		32
28	Schuylkill County Prison	Pottsville	48		48
SOUTH DAKOTA.					
29	State Penitentiary	Sioux Falls	84		84

a Including those under the contract system.

b Including 78 under the contract system.

c Including those under the piece-price system.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895.

PUBLIC-ACCOUNT SYSTEM.

Engaged in prison duties.			Idle and sick.			Total.			Marginal number.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
			5		5	163	2	165	1
160		160	24		24	927		927	2
447	12	459	108	3	111	1,272	15	1,287	3
100	15	115	346		346	609	15	624	4
222		222	6		6	745		745	5
114	25	139	40		40	517	25	542	6
			30	1	31	a 855	a 17	a 872	7
37	4	41	21		21	147	4	151	8
124		124	69		69	b 571		b 571	9
36		36	50		50	980	10	990	10
62		62	5	1	6	77	1	78	11
45	14	59				257	14	271	12
40	1	41	1		1	148	1	149	13
273		273	64		64	c 1,007		c 1,007	14
55	40	95	417	11	428	d 702	51	d 753	15
75	35	110	50	8	58	1,125	83	1,208	16
97	2	99	1,112		1,112	1,403	25	1,428	17
174	23	197	131	1	132	e 1,135	24	e 1,159	18
319	93	412	201	23	224	1,028	293	1,231	19
14	4	18				117	4	121	20
3		3	2		2	24		24	21
3		3	1		1	42	2	44	22
46	3	49	2		2	99	3	102	23
12		12	78		78	120		120	24
3		3	7		7	50		50	25
20	2	22	21	8	29	90	10	100	26
19	45	64	213	1	214	261	46	310	27
13	6	19	13		13	74	6	80	28
28	2	30	3		3	115	2	117	29

d Including 30 under the piece-price system.
 e Including 140 under the piece-price system.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895—Continued.

PUBLIC-ACCOUNT SYSTEM—Concluded.

Marginal number.	Name of institution.	Locality.	Employed in productive labor.		
			Male.	Female.	Total.
	TEXAS.				
1	State Penitentiary.....	Huntsville and Rusk.	a 3,760	62	a 3,822
	VERMONT.				
2	House of Correction.....	Rutland.....	42		42
	WASHINGTON.				
3	Penitentiary.....	Walla Walla.....	264		264
	Total.....		13,168	242	13,410

CONTRACT SYSTEM.

	ARKANSAS.				
4	State Penitentiary.....	Little Rock.....	b 749	b 12	b 761
	CONNECTICUT.				
5	State Prison.....	Wethersfield.....	303		303
	ILLINOIS.				
6	State Penitentiary.....	Joliet.....	b 1,199	b 43	b 1,242
	INDIANA.				
7	State Prison (north).....	Michigan City.....	655		655
8	State Prison (south).....	Jeffersonville.....	475		475
	IOWA.				
9	State Penitentiary.....	Fort Madison.....	280		280
	MARYLAND.				
10	Penitentiary.....	Baltimore.....	610	21	631
	MICHIGAN.				
11	State Prison.....	Jackson.....	b 447		b 447
	MINNESOTA.				
12	State Prison.....	Stillwater.....	c 357		c 357
	MISSOURI.				
13	State Penitentiary.....	Jefferson City.....	1,105	30	1,135
	NEW HAMPSHIRE.				
14	State Prison.....	Concord.....	167		167
	OHIO.				
15	Penitentiary.....	Columbus.....	d 1,038		d ,038
	OREGON.				
16	State Penitentiary.....	Salem.....	b 158		b 158
	RHODE ISLAND.				
17	State Prison and Providence County Jail.	Howard.....	136		136
	SOUTH CAROLINA.				
18	Penitentiary.....	Columbia.....	e 894		e 894

a Including 2,136 under the contract system.

b Including those under the public-account system.

c Including 120 under the public-account system.

CONVICT LABOR.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895—Continued.

PUBLIC-ACCOUNT SYSTEM—Concluded.

Engaged in prison duties.			Idle and sick.			Total.			Marginal number.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
208	6	214	89	.....	89	a 4, 057	68	a 4, 125	1
40	3	43	.....	1	1	82	4	86	2
126	4	130	22	.....	22	412	4	416	3
2, 915	339	3, 254	3, 131	58	3, 189	19, 214	639	19, 853	

CONTRACT SYSTEM.

46	.....	46	80	2	82	b 875	b 14	b 889	4
108	5	113	14	.....	14	425	5	430	5
311	11	322	51	2	53	b 1, 561	b 56	b 1, 617	6
144	.....	144	53	.....	53	852	.....	852	7
200	.....	200	140	.....	140	815	.....	815	8
105	.....	105	115	.....	115	500	.....	500	9
64	5	69	3	.....	3	677	26	703	10
163	1	164	198	1	199	b 808	2	b 810	11
17	6	131	12	2	14	c 494	8	c 502	12
448	12	460	553	11	564	2, 106	53	2, 159	13
13	2	15	1	.....	1	181	2	183	14
387	33	420	627	.....	627	d 2, 052	33	d 2, 085	15
221	.....	221	17	3	20	b 396	3	b 399	16
12	2	14	5	.....	5	153	2	155	17
55	40	95	21	4	25	e 970	44	e 1, 014	18

d Including those under the piece-price system.

e Including 247 under the public-account system and 438 under the lease system.

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TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK,
1895—Continued.

CONTRACT SYSTEM—Concluded.

Marginal number.	Name of institution.	Locality.	Employed in productive labor.		
			Male.	Female.	Total.
VERMONT.					
1	State Prison.....	Windsor.....	134		134
VIRGINIA.					
2	State Penitentiary.....	Richmond.....	a 918	a 82	a 1,000
WEST VIRGINIA.					
3	Penitentiary.....	Moundsville.....	352		352
WISCONSIN.					
4	State Prison.....	Waupun.....	b 423	c 11	d 434
	Total.....		10,400	199	10,599

PIECE-PRICE SYSTEM.

INDIANA.					
5	State Reformatory for Women.....	Indianapolis.....		32	32
KENTUCKY.					
6	State Penitentiary.....	Frankfort.....	900	20	920
MASSACHUSETTS.					
7	State Prison.....	Boston.....	a 513		a 513
8	Reformatory.....	Concord Junction.....	577		577
9	Reformatory Prison for Women.....	Sherborn.....		a 150	a 150
NEW JERSEY.					
10	State Prison.....	Trenton.....	a 486	a 10	a 496
NEW YORK.					
11	Auburn Prison.....	Auburn.....	a 847	a 59	a 906
12	Sing Sing State Prison.....	Sing Sing.....	f 1,033		f 1,033
13	State Reformatory.....	Elmira.....	g 898		g 898
14	Albany County Penitentiary.....	Albany.....	700		700
15	Kings County Penitentiary.....	Brooklyn.....	825	30	855
16	Monroe County Penitentiary.....	Rochester.....	h 281		h 281
17	Onondaga County Penitentiary.....	Syracuse.....	160		160
PENNSYLVANIA.					
18	Montgomery County Prison.....	Norristown.....	16		16
	Total.....		7,236	301	7,537

LEASE SYSTEM.

ALABAMA.					
19	State Penitentiary.....	Wetumpka.....	i 1,508		i 1,508
FLORIDA.					
20	State Penitentiary.....	Tallahassee.....	582		582
GEORGIA.					
21	State Penitentiary.....	Atlanta.....	2,357	67	2,424
LOUISIANA.					
22	State Penitentiary.....	Baton Rouge.....	1,037	35	1,072

a Including those under the public-account system.

b Including 77 under the public-account system.

c Under the public-account system.

d Including 88 under the public-account system.

e Including 11 under the public-account system.

CONVICT LABOR.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895—Continued.

CONTRACT SYSTEM—Concluded.

Engaged in prison duties.			Idle and sick.			Total.			Marginal number.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
21	6	27	-----	-----	-----	155	6	161	1
118	10	128	247	-----	247	a 1,283	a 92	a 1,375	2
54	14	68	105	-----	105	511	14	525	3
73	13	86	95	-----	95	b 591	e 24	d 615	4
2,668	160	2,828	2,337	25	2,362	15,405	384	15,789	

PIECE-PRICE SYSTEM.

-----	4	4	-----	-----	-----	-----	36	36	5
96	9	105	85	12	97	1,081	41	1,122	6
164	-----	164	23	-----	23	a 700	-----	a 700	7
411	-----	411	39	-----	39	1,027	-----	1,027	8
-----	153	153	-----	15	15	-----	a 318	a 318	9
170	12	182	294	5	299	a 950	a 27	a 977	10
256	32	288	27	8	35	a 1,130	a 99	a 1,229	11
295	-----	295	46	1	47	f 1,374	1	f 1,375	12
316	-----	316	43	-----	43	g 1,257	-----	g 1,257	13
201	65	266	12	2	14	913	67	980	14
95	35	130	132	5	137	1,052	70	1,122	15
43	43	86	20	4	24	h 344	47	h 391	16
50	15	65	100	2	102	310	17	327	17
15	4	19	49	-----	49	80	4	84	18
2,112	372	2,484	870	54	924	10,218	727	10,945	

LEASE SYSTEM.

-----	-----	-----	4	65	69	i 1,512	65	i 1,577	19
31	19	50	50	-----	50	663	19	682	20
-----	-----	-----	-----	-----	-----	2,357	67	2,424	21
46	2	48	7	-----	7	1,090	37	1,127	22

f Including 662 under the public-account system.
 g Including 136 under the public-account system.
 h Including 12 under the public-account system.
 i Including 536 under the public-account system.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895—Concluded.

LEASE SYSTEM—Concluded.

Marginal number.	Name of institution.	Locality.	Employed in productive labor.		
			Male.	Female.	Total.
1	NEBRASKA.	Lancaster	168		168
	State Penitentiary.....				
2	TENNESSEE.	Nashville	1,100	15	1,115
	State Penitentiary.....				
	Total.....				
			6,752	117	6,869

TABLE IV.—CONVICTS IN 1885 AND 1895.

Marginal number.	State.	Employed in productive labor.						Engaged in prison duties.		
		1885.			1895.			1885.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
3	Alabama.....	525	11	536	1,508		1,508	3	15	18
4	Arizona.....	93		93	158		158	49		49
5	Arkansas.....	518		518	749	12	761	35	11	46
6	California.....	1,026		1,026	1,460		1,460	697	29	726
7	Colorado.....	150		150	163		163	135	5	140
8	Connecticut.....	205		205	303		303	62	4	66
9	Florida.....	181		181	582		582	50	5	55
10	Georgia.....	1,520	40	1,560	2,357	67	2,424			
11	Illinois.....	1,625	15	1,640	1,716	43	1,759	547	28	575
12	Indiana.....	1,150	167	1,317	1,130	32	1,162	115	7	122
13	Iowa.....	495		495	643		643	162	11	173
14	Kansas.....	723		723	a 825	a 16	a 841	109	13	122
15	Kentucky.....	967	25	992	900	20	920	135	3	138
16	Louisiana.....	773	25	798	1,037	35	1,072	18	16	34
17	Maine.....	133		133	89		89	27	3	30
18	Maryland.....	422		422	610	21	631	70	26	96
19	Massachusetts.....	639	235	874	1,090	150	1,240	434	75	509
20	Michigan.....	834		834	825		825	292	1	293
21	Minnesota.....	318		318	357		357	53	10	63
22	Mississippi.....	765	22	787	894	10	904	15	10	25
23	Missouri.....	876		876	1,105	30	1,135	594		594
24	Nebraska.....	194		194	1,168		1,168	98	3	101
25	Nevada.....	75		75	10		10	32		32
26	New Hampshire.....	114		114	167		167	10	2	12
27	New Jersey.....	793	9	802	698	10	708	119	29	148
28	New Mexico.....	84		84	107		107	16		16
29	New York.....	4,221	85	4,306	5,644	89	5,733	1,105	224	1,329
30	North Carolina.....	943	40	983	1,000	40	1,040	72	25	97
31	Ohio.....	1,305		1,305	1,038		1,038	594	24	618
32	Oregon.....	210		210	158		158	53		53
33	Pennsylvania.....	1,809	19	1,828	1,958	112	2,070	931	311	1,242
34	Rhode Island.....	162		162	136		136	73		73
35	South Carolina.....	724	43	767	894		894	58		58
36	South Dakota.....	c 55		c 55	84		84	c 35	c 3	c 38
37	Tennessee.....	1,251	23	1,274	1,100	15	1,115	27	22	49
38	Texas.....	2,629	42	2,671	3,760	62	3,822	248	3	251
39	Vermont.....	134		134	176		176	17	9	26
40	Virginia.....	751	57	808	918	82	1,000	205	11	216
41	Washington.....	45		45	264		264	30		30
42	West Virginia.....	205		205	352		352	35	6	41
43	Wisconsin.....	353		353	423	11	434	74	13	87
	Total.....	29,995	858	30,853	37,556	859	38,415	7,434	957	8,391

a Including those engaged in prison duties.

b Included in those employed in productive labor.

TABLE III.—CONVICTS IN PRISONS AND PENITENTIARIES, BY SYSTEMS OF WORK, 1895—Concluded.

LEASE SYSTEM—Concluded.

Engaged in prison duties.			Idle and sick.			Total.			Marginal number.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
90	6	96	39	.....	39	297	6	303	1
40	4	44	360	25	385	1,500	44	1,544	2
207	31	238	460	90	550	7,419	238	7,657	

TABLE IV.—CONVICTS IN 1885 AND 1895.

Engaged in prison duties—Conc'd.			Idle and sick.						Aggregate.						Marginal number.
1895.			1885.			1895.			1885.			1895.			
Male.	Fe-male.	Total.	Male.	Fe-male.	Total.	Male.	Fe-male.	Total.	Male.	Fe-male.	Total.	Male.	Fe-male.	Total.	
.....	.....	.....	7	3	10	4	65	69	535	29	564	1,512	65	1,577	3
.....	.....	.....	15	.....	15	5	.....	5	157	.....	157	163	2	165	4
46	.....	46	.....	.....	.....	80	2	82	553	11	564	875	14	889	5
607	12	619	56	.....	56	132	3	135	1,779	29	1,808	2,199	15	2,214	6
100	15	115	10	.....	10	346	.....	346	295	5	300	609	15	624	7
108	5	113	10	.....	10	14	.....	14	277	4	281	425	5	430	8
31	19	50	.....	.....	.....	50	.....	50	231	5	236	363	19	382	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	1,520	40	1,560	2,357	67	2,424	10
533	11	544	71	1	72	57	2	59	2,243	44	2,287	2,306	56	2,362	11
344	4	348	33	3	36	193	.....	193	1,298	177	1,475	1,667	36	1,703	12
219	25	244	22	.....	22	155	.....	155	679	11	690	1,017	25	1,042	13
(b)	(b)	(b)	24	.....	24	30	1	31	856	13	869	855	17	872	14
96	9	105	12	.....	12	85	12	97	1,114	28	1,142	1,081	41	1,122	15
46	2	48	7	2	9	7	.....	7	798	43	841	1,090	37	1,127	16
37	4	41	8	.....	8	21	.....	21	168	3	171	147	4	151	17
64	5	69	21	.....	21	3	.....	3	513	26	539	677	26	703	18
575	153	728	128	1	129	62	15	77	1,201	311	1,512	1,727	318	2,045	19
287	1	288	189	.....	189	267	1	268	1,315	1	1,316	1,379	2	1,381	20
125	6	131	29	1	30	12	2	14	400	11	411	494	8	502	21
36	.....	36	.....	.....	.....	50	.....	50	780	32	812	980	10	990	22
448	12	460	150	35	185	553	11	564	1,620	35	1,655	2,106	53	2,159	23
90	6	96	12	.....	12	39	.....	39	304	3	307	297	6	303	24
62	.....	62	21	2	23	5	1	6	128	2	130	77	1	78	25
13	2	15	4	.....	4	1	.....	1	128	2	130	181	2	183	26
215	26	241	100	.....	100	294	5	299	1,012	38	1,050	1,207	41	1,248	27
40	1	41	.....	.....	.....	1	.....	1	100	.....	100	148	1	149	28
1,584	230	1,814	799	66	865	861	33	894	6,125	375	6,500	8,089	352	8,441	29
75	35	110	5	.....	5	50	8	58	1,020	65	1,085	1,125	83	1,208	30
387	33	420	51	.....	51	627	.....	627	1,950	24	1,974	2,052	33	2,085	31
221	.....	221	9	.....	9	17	3	20	272	.....	272	396	3	399	32
738	182	920	622	56	658	1,830	33	1,863	3,362	366	3,728	4,526	327	4,853	33
12	2	14	3	.....	3	5	.....	5	238	.....	238	153	2	155	34
55	40	95	20	2	22	21	4	25	802	45	847	970	44	1,014	35
28	2	30	.....	.....	.....	3	.....	3	e93	c3	e93	115	2	117	36
40	4	44	.....	.....	.....	360	25	385	1,278	45	1,333	1,500	44	1,544	37
208	6	214	.....	.....	.....	89	.....	89	2,877	45	2,922	4,057	68	4,125	38
61	9	70	5	.....	5	.....	1	1	156	9	165	237	10	247	39
118	10	128	.....	.....	.....	247	.....	247	956	68	1,024	1,283	92	1,375	40
126	4	130	7	.....	7	22	.....	22	82	.....	82	412	4	416	41
54	14	68	15	.....	15	105	.....	105	255	6	261	511	14	525	42
73	13	86	16	.....	16	95	.....	95	443	13	456	591	24	615	43
7,902	902	8,804	2,481	152	2,633	6,798	227	7,025	39,910	1,967	41,877	52,256	1,988	54,244	

c Dakota Territory.

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895.

ALABAMA—PUBLIC-ACCOUNT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
.....	Brick.....	\$3,682.45
.....	Erecting and improving build- ings.....	38,913.48
.....	Farming.....	22,316.88

ALABAMA—LEASE SYSTEM.

Mining, coal.....	\$192,000.00	Mining, coal.....	\$622,463.00
Farming.....	17,400.00	.....	.....
Stone, broken.....	5,000.00	.....	.....

ARIZONA—PUBLIC-ACCOUNT SYSTEM.

Building and repairing prison.....	\$25,000.00	Building and repairing prison....	\$6,000.00
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ARKANSAS—PUBLIC-ACCOUNT SYSTEM.

.....	Farming.....	\$46,467.82
.....	Repairing prison.....	3,134.00
.....	Wood chopping.....	4,417.23

ARKANSAS—CONTRACT SYSTEM.

.....	Farming, etc.....	\$82,273.24
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ARKANSAS—LEASE SYSTEM.

Brick.....	\$26,000.00
Bricklaying, carpentering, etc.....	23,250.00
Cigars.....	50,000.00	.....	.....
Farming.....	64,000.00	.....	.....
Mining, coal.....	37,200.00	.....	.....
Wood chopping.....	30,000.00	.....	.....

CALIFORNIA—PUBLIC-ACCOUNT SYSTEM.

Bags, jute.....	\$101,318.52	Bags, jute (grain).....	\$174,114.13
Stone, quarried and dressed.....	21,020.00	Stone, quarried and dressed.....	8,652.00
Brick.....	4,075.04	Improvements to prison.....	100,000.00

CALIFORNIA—PIECE-PRICE SYSTEM.

Furniture.....	\$43,277.87	.....	.....
Harnesses.....	17,500.00	.....	.....
Leather, tanning.....	9,000.00	.....	.....
Sashes, doors, and blinds.....	225,000.00	.....	.....

COLORADO—PUBLIC-ACCOUNT SYSTEM.

Brick.....	\$10,000.00	Brick.....	\$1,900.00
Lime.....	20,000.00	Lime.....	5,420.94
.....	.....	Farming.....	3,208.50
.....	.....	Stone, quarried.....	1,691.08

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

CONNECTICUT—CONTRACT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Boots and shoes.....	\$109,000.00	Boots and shoes.....	\$242,375.00

FLORIDA—LEASE SYSTEM.

Naval stores.....	\$100,000.00	Naval stores.....	\$69,648.00
.....	.....	Building railroad.....	24,375.00
.....	.....	Improvements, etc.....	3,900.00
.....	.....	Mining, phosphate.....	185,250.00

GEORGIA—LEASE SYSTEM.

Brick.....	\$172,000.00	Brick.....	\$6,000.00
Farming.....	18,000.00	Farming.....	31,436.00
Lumber.....	34,000.00	Lumber.....	136,980.00
Building railroad.....	62,000.00	Ditching and clearing land, wood chopping, etc.....	3,000.00
Lime.....	7,000.00	.....	.....
Mining, coal and iron ore (and making pig iron).....	142,000.00	.....	.....
Mining, iron ore.....	25,000.00	.....	.....

ILLINOIS—PUBLIC-ACCOUNT SYSTEM.

.....	.....	Brick.....	\$15,140.00
.....	.....	Brooms.....	24,560.00
.....	.....	Chairs.....	183,150.00
.....	.....	Cigars.....	22,507.00
.....	.....	Cooperage.....	89,105.00
.....	.....	Harnesses.....	158,643.00
.....	.....	Hollow ware.....	128,367.40
.....	.....	Hosiery.....	86,289.60
.....	.....	Pearl button blanks.....	7,501.16
.....	.....	Stone.....	58,272.16

ILLINOIS—CONTRACT SYSTEM.

Boots and shoes.....	\$1,530,000.00	Boots and shoes.....	\$158,000.00
Barrels, etc.....	375,000.00	Willow ware.....	97,000.00
Brick.....	25,000.00	.....	.....
Fence wire, barbed.....	318,000.00	.....	.....
Harnesses and saddlery.....	149,000.00	.....	.....
Hollow ware.....	10,000.00	.....	.....
Hosiery and overalls.....	98,000.00	.....	.....
Stone and marble (dressed) and monuments.....	500,000.00	.....	.....

INDIANA—CONTRACT SYSTEM.

Boots and shoes.....	\$275,000.00	Boots and shoes.....	\$311,205.00
Saddletrees.....	10,000.00	Saddletrees.....	15,187.00
Chairs and baby cradles.....	168,000.00	Chairs.....	91,566.50
Boots and shoes, men's and women's.....	297,716.40	Bicycles.....	52,365.00
Brooms.....	31,300.00	Brushes and wire goods.....	72,440.00
Hardware, fancy.....	390,000.00	Cooperage.....	73,572.00
Hosiery and cloth goods.....	205,293.92	Hollow ware.....	183,364.50
Tierces, pork and lard.....	174,497.50	.....	.....

INDIANA—PIECE-PRICE SYSTEM.

Cane-seating chairs.....	\$5,460.00	Cane-seating chairs.....	\$1,132.00
Family sewing.....	2,600.00	Family sewing.....	2,316.30
Laundering.....	5,200.00	Laundering.....	1,138.78
Overalls and shirts.....	3,085.50	Overalls and jumpers.....	3,133.80
Toeing stockings.....	147.75	.....	.....

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

IOWA—PUBLIC-ACCOUNT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Farming	\$2,000.00	Farming.....	\$1,800.00
Stone, dressed	15,000.00	Stone, dressed.....	80,768.40
.....	.....	Masonry work.....	11,175.00
.....	.....	Stone, broken	1,500.00

IOWA—CONTRACT SYSTEM.

Agricultural implements	\$120,590.00	Agricultural implements.....	\$159,870.00
Chairs	100,000.00	Chairs	90,216.00
Boots and shoes.....	161,000.00	Erecting buildings	1,550.00

KANSAS—PUBLIC-ACCOUNT SYSTEM.

Building and repairing prison.....	\$153,000.00	Building and repairing prison....	\$59,000.00
Clothing (for convicts)	24,964.72	Clothing (for convicts)	14,700.00
Mining, coal.....	85,630.05	Mining, coal.....	92,624.25

KANSAS—CONTRACT SYSTEM.

Boots and shoes.....	\$70,125.00	Shoes.....	\$26,361.00
Wagons	720,000.00	Furniture	28,360.00
.....	Horse collars	20,040.00

KENTUCKY—PUBLIC-ACCOUNT SYSTEM.

Building prison.....	\$37,200.00
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KENTUCKY—PIECE-PRICE SYSTEM.

.....	Bedsteads	\$17,800.00
.....	Chairs.....	152,728.00

KENTUCKY—LEASE SYSTEM.

Brooms	\$30,000.00	.....	.....
Building railroad	152,000.00	.....	.....
Chairs, tables, etc	18,000.00	.....	.....
Laundering	1,380.00	.....	.....
Mining, coal.....	175,000.00	.....	.....
Shoes	24,900.00	.....	.....
Wagon driving	10,000.00	.....	.....

LOUISIANA—LEASE SYSTEM.

Farming	\$56,000.00	Farming, repairing levee, repair- ing railroad, and pantaloons.	\$165,647.85
Repairing levee	42,000.00	.....	.....
Repairing railroad	254,000.00	.....	.....

MAINE—PUBLIC-ACCOUNT SYSTEM.

Carriages and sleighs	\$45,000.00	Carriages, wagons, and sleighs...	\$14,590.00
Harnesses	27,000.00	Harnesses	9,572.00
.....	.....	Brooms and brushes	18,764.13
.....	.....	Furniture	900.00

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

MARYLAND—CONTRACT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Marble, dressed	\$150,000.00 ^c	Marble, dressed	\$140,000.00
Shoes, women's and girls'	125,000.00	Shoes, men's, boys', and youths' ...	420,000.30
Stoves and hollow ware	120,000.00	Iron hollow ware	120,000.00

MASSACHUSETTS—PUBLIC-ACCOUNT SYSTEM.

.....	.....	Brushes	\$14,119.06
.....	.....	Butter	874.34
.....	.....	Harnesses	19,946.00
.....	.....	Laundering	3,308.80
.....	.....	Poultry, eggs, etc	115.69
.....	.....	Shoes, men's	128,139.20
.....	.....	Trunks	8,844.00

MASSACHUSETTS—CONTRACT SYSTEM.

Beds, spring and mantel	\$71,415.70	.....	.....
Moldings, wooden	7,584.30	.....	.....

MASSACHUSETTS—PIECE-PRICE SYSTEM.

Boots and shoes, men's and boys' ..	\$199,720.00	Buttons	\$7,920.77
Clothing, knit goods, and laundering.	23,250.00	Chairs	294,120.00
Harnesses and saddlery	66,250.00	Shirts	100,607.75
Pantaloon	52,512.00	Shoes, men's	384,870.90
.....	.....	Shoes, women's	72,066.75

MICHIGAN—PUBLIC-ACCOUNT SYSTEM.

.....	.....	Boxes, etc	\$7,040.61
.....	.....	Brooms, etc	31,530.59
.....	.....	Chairs, etc., caned	4,295.00
.....	.....	Clothing	2,148.35
.....	.....	Furniture	76,632.00

MICHIGAN—CONTRACT SYSTEM.

Agricultural implements	\$290,000.00	Agricultural implements	\$135,000.00
Boots and shoes	45,000.00	Hosiery, gloves, and mittens	38,500.00
Chairs	28,778.00	Monuments	40,830.00
Cigars	165,000.00	Wagons	72,000.00
Wagons	300,000.00

MICHIGAN—PIECE-PRICE SYSTEM.

Brooms	\$35,000.00
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MINNESOTA—PUBLIC-ACCOUNT SYSTEM.

.....	Binding cord	\$150,000.00
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MINNESOTA—CONTRACT SYSTEM.

Sashes, doors, and blinds	\$50,000.00	Boots and shoes	\$175,000.00
Threshing machines	195,500.00	.....	.....

MISSISSIPPI—PUBLIC-ACCOUNT SYSTEM.

.....	.....	Clothing (for convicts)	\$9,506.00
.....	.....	Farming	232,400.00
.....	.....	Shoes (for convicts)	2,160.00

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

MISSISSIPPI—LEASE SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Building railroad.....	\$82,000.00		
Farming and clearing land.....	156,000.00		
Gravel digging.....	8,000.00		
Lumber.....	10,000.00		
Wagons, furniture, brick, etc.....	68,000.00		

MISSOURI—CONTRACT SYSTEM.

Harnesses and saddlery.....	\$150,000.00	Harnesses, saddlery, and whips...	\$148,790.00
Overalls.....	45,000.00	Overalls.....	37,340.00
Saddletrees.....	175,000.00	Saddletrees.....	37,345.00
Boots and shoes.....	765,000.00	Brick.....	17,394.50
		Coats.....	2,430.00
		Erecting buildings.....	5,504.50
		Jackets.....	1,260.00
		Shoes.....	929,357.47
		Stone, dressed.....	1,074.50
		Stone, quarried.....	3,566.50

NEBRASKA—LEASE SYSTEM.

Harnesses and collars.....	\$27,000.00	Harnesses, collars, etc.....	\$30,080.00
Agricultural implements.....	68,000.00	Cooperage.....	39,560.25
Brooms and trunks.....	4,000.00	Stoves.....	2,796.00
Clothing.....	15,000.00		
Laundering.....	6,000.00		
Stone, dressed.....	28,000.00		

NEVADA—PUBLIC-ACCOUNT SYSTEM.

Stone, quarried and dressed.....	\$7,766.37	Stone, quarried and dressed.....	\$307.96
Boots and shoes.....	13,605.65	Improvements to prison.....	10,300.00

NEW HAMPSHIRE—CONTRACT SYSTEM.

Bedsteads.....	\$100,000.00	Chairs.....	\$128,862.50
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NEW JERSEY—PUBLIC-ACCOUNT SYSTEM.

Clothing (for convicts).....	\$970.20	Clothing, shoes, etc. (for convicts).....	\$5,959.60
Stone, quarried and crushed.....	2,317.90	Stone, broken.....	3,500.00
		Erecting buildings.....	1,123.00

NEW JERSEY—PIECE-PRICE SYSTEM.

Brushes, scrub, shoe, and stove....	\$34,560.00	Brushes.....	\$85,455.60
Hosiery.....	10,800.00	Hosiery, cotton.....	15,861.30
Collars, cuffs, shirts, and laundering	232,084.40	Mats and matting.....	46,408.49
Pantaloon (coarse) and working	129,000.00	Pantaloon, common.....	78,243.20
shirts.....		Shirts, men's coarse.....	95,186.88
Shoes, men's, girls', and children's..	180,000.00	Shoes, infants'.....	73,530.04

NEW MEXICO—PUBLIC-ACCOUNT SYSTEM.

		Brick.....	\$6,075.25
		Clothing.....	660.00
		Erecting and improving buildings.	21,485.55
		Farming.....	1,260.00
		Lime.....	250.00
		Road making.....	960.80
		Sewer pipe.....	2,000.00
		Shoes.....	230.00
		Well digging.....	400.00

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

NEW MEXICO—LEASE SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Stone, quarried, ditch digging, etc.	\$16,000.00		

NEW YORK—PUBLIC-ACCOUNT SYSTEM.

Brooms.....	\$19,328.54	Brooms.....	\$4,090.00
Clothing, men's and boys'	328,714.19	Clothing, men's and boys'	298,547.68
Brushes, scrub and shoe	46,028.99	Baskets, willow and rattan	9,267.00
Shoes, men's.....	235,785.76	Boots and shoes, men's	2,158.20
		Brush fiber and curled hair products.	74,156.90
		Candy and tobacco pails.....	39,327.48
		Clothing for State institutions.....	18,442.59
		Clothing, women's.....	100,300.60
		Erecting and improving buildings.	31,200.00
		Farming.....	1,500.00
		Hardware.....	74,048.48
		Pins and combs, horn.....	3,207.65
		Shirts, men's white.....	2,998.88
		Shoes for State institutions.....	10,258.98
		Toys and novelties.....	39,162.22
		Wooden shovels.....	76.25

NEW YORK—CONTRACT SYSTEM.

Bolts, iron.....	\$45,000.00		
Boots and shoes, men's.....	862,400.00		
Boots and shoes, men's and women's	225,000.00		
Brushes, scrub, shoe, etc.	54,000.00		
Hames, wooden.....	35,000.00		
Hardware, saddlery.....	445,000.00		
Hollow ware.....	120,000.00		
Horse collars.....	48,215.00		
Laundering.....	a 300,000.00		
Shoes, men's and women's.....	1,587,500.00		
Shoes, women's and boys'	577,500.00		
Stoves.....	603,960.00		

NEW YORK—PIECE-PRICE SYSTEM.

		Bags.....	\$82,650.00
		Bolts, iron.....	28,000.00
		Brooms.....	60,000.00
		Brushes, scrub, shoe, and stove	81,067.50
		Buttons.....	24,371.60
		Cane-seating chairs.....	103,708.80
		Chairs.....	81,282.00
		Clothing, men's, youths', and boys'	50,000.00
		Clothing, women's.....	110,626.00
		Curled hair and brush fiber.....	23,602.14
		Furniture.....	90,737.00
		Hollow ware.....	60,000.00
		Hosiery.....	119,000.00
		Iron castings.....	48,000.00
		Machinery and tools.....	10,636.31
		Marble, dressed and polished.....	39,462.00
		Pantaloons.....	62,080.00
		Pins, horn.....	10,325.00
		Plumbers' supplies, etc.....	130,814.00
		Rags, seamed, skirted, and asorted.	45,000.00
		Shirts, men's.....	232,702.00
		Shirts, men's laundered.....	134,205.75
		Shoes, men's and boys'	176,807.70
		Stone, crushed.....	2,500.00
		Umbrellas.....	90,000.00
		Wooden goods.....	102,191.22

a Value of shirts made and laundered.

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

NORTH CAROLINA—PUBLIC-ACCOUNT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Brick	\$13,725.40	Brick	\$15,000.00
Farming	18,714.41	Farming	165,000.00
Building governor's mansion	11,000.00	Wagons, etc	10,000.00
Building railroad	6,500.00	.....	.....
Ditching on State lands	6,347.13
Shoes	4,785.19

NORTH CAROLINA—LEASE SYSTEM.

Building railroad	\$200,000.00
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OHIO—PUBLIC-ACCOUNT SYSTEM.

Brooms	\$13,403.39
Extension-table slides	50,836.13
Hosiery	30,510.32	.....	.....
Tinware	4,332.67	.....	.....

OHIO—CONTRACT SYSTEM.

Hardware, saddlery	\$135,939.00	Hardware, saddlery	\$101,300.00
Stoves	60,060.00	Stoves	42,173.00
Barrels, pork	36,000.00	Brooms and brushes	77,640.00
Bolts, nuts, etc.	99,910.00	Farm and garden tools	81,348.60
Boots and shoes, men's	62,000.00	Hardware, wagon, and foundry work	101,735.60
Cane-seating chairs	18,000.00	Shafts and spokes	40,000.00
Carriage bodies, shafts, etc.	75,700.00	.....	.....
Carriages, children's	31,500.00	.....	.....
Cigars	2,681.00	.....	.....
Harnesses	46,500.00	.....	.....
Hollow ware and castings	209,884.00	.....	.....
Tools, carpenters' and joiners'	44,558.00	.....	.....

OHIO—PIECE-PRICE SYSTEM.

Cigars	\$29,575.00	Cigars	\$71,485.00
Brooms	3,900.00	Bolts, nuts, etc.	180,241.50
Carriage gear	625.00	Chairs	36,248.48
Hollow ware and castings	6,104.00	.....	.....
Tools, carpenters' and joiners'	5,444.00	.....	.....

OREGON—PUBLIC-ACCOUNT SYSTEM.

Brick	\$12,000.00	Brick	\$6,000.00
.....	.....	Improvements to prison	1,657.12
.....	Stoves	13,876.21

OREGON—CONTRACT SYSTEM.

Stoves	\$108,000.00	Stoves	\$22,500.00
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TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

PENNSYLVANIA—PUBLIC-ACCOUNT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Brooms.....	\$304.50	Brooms, etc.....	\$132.39
Cane-seating chairs.....	7,416.50	Cane-seating chairs.....	6,265.56
Carpeting.....	17,122.00	Carpeting.....	4,153.48
Carpeting, rag.....	27,094.60	Carpeting, rag.....	40,718.73
Carpeting, rag and ingrain.....	23,470.40	Carpeting, rag and ingrain.....	7,500.00
Cigars.....	16,243.00	Cigars.....	5,155.47
Hosiery.....	339.75	Hosiery.....	85,951.72
Baskets.....	181.34	Blacksmithing.....	4,783.20
Boots and shoes.....	1,485.64	Blankets.....	652.00
Boots and shoes, men's and women's.....	50,442.00	Brushes, etc.....	1,555.46
Carpeting, rag and jute.....	7,810.14	Brushes, scrubbing.....	2,820.50
Checks, cotton.....	6,385.94	Carpentering.....	6,399.98
Hosiery, cotton.....	1,590.00	Carpeting, ingrain.....	603.20
Hosiery, woolen and cotton.....	3,965.00	Checks.....	63.34
Nets, fishing.....	381.81	Clothing.....	10,639.75
Shoes, men's.....	15,757.50	Drillings.....	11.04
Stone.....	23,822.40	Farming.....	10,114.25
		Flannels.....	1,381.66
		Ginghams.....	197.98
		Illuminating gas.....	25,959.00
		Jeans.....	1,429.00
		Machine-shop products.....	1,354.20
		Mats and matting.....	105,383.51
		Muslins.....	853.47
		Sheetings.....	25.80
		Shirts.....	22.00
		Shoes.....	13,668.45
		Shoes, men's and boys'.....	8,705.63
		Shoes, men's brogans.....	2,926.80
		Shoes, women's.....	3,745.02
		Soap.....	2,681.04
		Stone masonry.....	3,867.00
		Stone, quarried.....	9,138.00
		Tickings.....	305.03
		Tinware.....	1,357.86

PENNSYLVANIA—CONTRACT SYSTEM.

Brooms.....	\$56,000.00		
Cigars.....	64,000.00		
Iron, architectural.....	20,000.00		
Shoes, men's, women's, and girls'.....	356,452.81		

PENNSYLVANIA—PIECE-PRICE SYSTEM.

Hosiery, cotton.....	\$153,085.00	Hosiery, cotton.....	\$10,040.40
Hosiery, woolen and cotton.....	6,050.00	Brooms, etc.....	64,091.91
		Mops.....	1,086.37

RHODE ISLAND—CONTRACT SYSTEM.

Boots and shoes.....	\$75,000.00	Shoes, men's and boys'.....	\$151,488.40
Wire goods (screens and railings).....	6,000.00	Wire goods (screens and railings).....	8,000.00

SOUTH CAROLINA—PUBLIC-ACCOUNT SYSTEM.

Building State canal.....	\$80,000.00	Brick.....	\$15,000.00
Clothing (for convicts).....	4,457.03	Clothing (for convicts).....	2,000.00
Farming.....	10,000.00	Farming.....	68,010.00
Repairing prison.....	5,000.00	General labor.....	17,114.36

SOUTH CAROLINA—CONTRACT SYSTEM.

Hosiery.....	\$50,000.00	Hosiery.....	\$279,000.00
Boots and shoes.....	150,000.00		

TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Continued.

SOUTH CAROLINA—LEASE SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Mining, phosphate	\$23,560.00	Farming, etc.	\$166,189.33

SOUTH DAKOTA—PUBLIC-ACCOUNT SYSTEM.

.....	.....	Farming	\$2,500.00
.....	.....	Stone, dressed	2,133.60
.....	Stone, quarried	3,000.00

SOUTH DAKOTA—CONTRACT SYSTEM.

Stone, dressed	a \$11,577.36
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TENNESSEE—LEASE SYSTEM.

Farming	\$6,500.00	Farming	\$7,500.00
Mining, coal	451,500.00	Mining, coal	298,750.00
Mining, iron ore	134,000.00	Coke	93,750.00
Wagons	550,000.00	Grading railroad, etc.	89,000.00
.....	.....	Labor and camp duty at mines	13,500.00
.....	.....	Saddlery	125,000.00
.....	.....	Stoves and hollow ware	45,000.00
.....	.....	Work for State	7,800.00

TEXAS—PUBLIC-ACCOUNT SYSTEM.

Engines, boilers, pumps, etc.	\$16,187.00	Engines, boilers, pumps, etc.	\$143,287.82
Furniture and lumber	11,319.00	Furniture and lumber	274,631.49
Cloth (for prison)	16,480.00	Cotton and woolen cloth and hosiery (for convicts)	37,763.48
Pig iron and castings	129,000.00	Pig iron	50,837.50
Shoes (for convicts)	10,800.00	Boots and shoes (for convicts)	26,051.52
Wagons and cotton presses	48,965.00	Wagons, buggies, etc.	81,748.69
Mining, iron ore (and burning charcoal), etc.	85,000.00	Mining, iron ore	4,000.50
Stone, quarried	40,000.00	Burning charcoal	27,453.85
.....	.....	Blacksmith-shop products	4,286.92
.....	.....	Boilers	817.05
.....	.....	Building railroad	43,431.20
.....	.....	Building reservoir	2,712.75
.....	.....	Carpentering and planing-mill products	3,181.67
.....	.....	Cast-iron water pipes	53,360.00
.....	.....	Chewing tobacco (for convicts)	8,607.28
.....	.....	Clothing, mattresses, and shoes	60,019.70
.....	.....	Farming	96,800.80
.....	.....	Foundry and machine-shop products	20,456.04
.....	.....	Hollow ware, castings, etc.	23,701.37
.....	.....	Paint shop	2,606.38
.....	.....	Pattern shop	1,152.49
.....	.....	Tin shop	1,565.64
.....	.....	Miscellaneous, labor	25,000.00

TEXAS—CONTRACT SYSTEM.

Farming	b \$220,000.00	Farming	\$721,791.18
Building railroad	b 45,000.00	Railroad labor	148,750.00
Saddletrees and stirrups	30,000.00

VERMONT—PUBLIC-ACCOUNT SYSTEM.

.....	Marble, dressed	\$20,000.00
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a Dakota Territory.

b Value of labor only.

CONVICT LABOR.

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TABLE V.—GOODS PRODUCED OR WORK DONE, 1885 AND 1895—Concluded.

VERMONT—CONTRACT SYSTEM.

1885.		1895.	
Kind.	Value.	Kind.	Value.
Marble (dressed) and monuments.	\$30,000.00	Shoes, boys' and youths'.....	\$16,885.00
Shoes, women's	90,837.75	Shoes, children's.....	51,269.00
		Shoes, women's and misses'.....	245,446.50

VIRGINIA—PUBLIC-ACCOUNT SYSTEM.

		Farming.....	\$12,000.00
		Roadmaking.....	13,200.00

VIRGINIA—CONTRACT SYSTEM.

Shoes, women's.....	\$631,289.95	Shoes, women's and misses'.....	\$1,054,421.91
Tobacco, plug and twist.....	60,000.00	Tobacco, plug and twist.....	45,000.00
Barrels, etc.....	30,000.00		
Building railroad.....	65,000.00		

WASHINGTON—PUBLIC-ACCOUNT SYSTEM.

		Building and improving prison...	\$23,657.45
		Burlap.....	439.95
		Grain bags, jute.....	93,130.83
		Hop cloth.....	8,621.34
		Kiln cloth.....	27.11
		Matting.....	235.60
		Ore bags, jute.....	76.72
		Sewing twine.....	63.12
		Wool bags.....	1,578.21

WASHINGTON—LEASE SYSTEM.

Sashes, doors, and blinds.....	\$30,000.00		
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WEST VIRGINIA—CONTRACT SYSTEM.

Brooms and leather whips.....	\$125,000.00	Brooms.....	\$65,000.00
Wagons.....	150,000.00	Fly nets, etc.....	50,000.00
		Leather whips.....	83,300.00
		Pantaloons.....	43,750.00

WISCONSIN—PUBLIC-ACCOUNT SYSTEM.

		Hosiery.....	\$29,741.50
		Overalls.....	47,385.00

WISCONSIN—CONTRACT SYSTEM.

Boots and shoes.....	\$360,000.00	Boots and shoes.....	\$600,000.00
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TABLE VI.—VALUE OF GOODS PRODUCED OR WORK DONE, BY SYSTEMS OF WORK, 1885 AND 1895.

PUBLIC-ACCOUNT SYSTEM.					
State.	Value.		State.	Value.	
	1885.	1895.		1885.	1895.
Alabama		\$64, 912. 81	New Mexico		\$33, 281. 60
Arizona	\$25, 000. 00	6, 000. 00	New York	\$629, 857. 48	708, 744. 91
Arkansas		54, 019. 05	North Carolina	61, 072. 13	190, 000. 00
California	126, 413. 56	282, 766. 13	Ohio	99, 082. 51	
Colorado	30, 000. 00	12, 220. 52	Oregon	12, 000. 00	21, 533. 33
Illinois		773, 540. 62	Pennsylvania	203, 812. 52	370, 521. 52
Iowa	17, 000. 00	95, 243. 40	South Carolina	99, 457. 09	102, 124. 36
Kansas	268, 594. 77	166, 324. 25	South Dakota		7, 633. 60
Kentucky	37, 200. 00		Texas	357, 742. 00	993, 474. 10
Maine	72, 000. 00	43, 826. 13	Vermont		20, 000. 00
Massachusetts		175, 347. 09	Virginia		25, 200. 00
Michigan		121, 646. 55	Washington		127, 820. 33
Minnesota		150, 000. 00	Wisconsin		77, 126. 50
Mississippi		244, 066. 00			
Nevada	21, 372. 02	10, 607. 96	Total	2, 063, 892. 18	4, 888, 563. 36
New Jersey	3, 288. 10	10, 582. 60			

CONTRACT SYSTEM.

Arkansas		\$32, 273. 24	Ohio	\$322, 732. 00	\$444, 197. 20
Connecticut	\$109, 000. 00	242, 375. 00	Oregon	108, 000. 00	22, 500. 00
Illinois	3, 005, 000. 00	255, 000. 00	Pennsylvania	496, 452. 81	
Indiana	1, 551, 807. 82	799, 700. 00	Rhode Island	81, 000. 00	159, 488. 40
Iowa	381, 590. 00	251, 636. 00	South Carolina	200, 000. 00	279, 000. 00
Kansas	790, 125. 00	74, 761. 00	South Dakota	411, 577. 36	
Maryland	395, 000. 00	680, 000. 30	Texas	295, 000. 00	870, 541. 13
Massachusetts	79, 000. 00		Vermont	120, 837. 75	313, 600. 50
Michigan	818, 778. 00	286, 330. 00	Virginia	786, 289. 95	1, 099, 421. 91
Minnesota	245, 500. 00	175, 000. 00	West Virginia	275, 000. 00	242, 050. 00
Missouri	1, 135, 000. 00	1, 184, 062. 47	Wisconsin	360, 000. 00	600, 000. 00
Mississippi	100, 000. 00	128, 862. 50			
New Hampshire			Total	17, 071, 265. 69	8, 190, 799. 70
New York	4, 903, 575. 00				

PIECE-PRICE SYSTEM.

California	\$294, 777. 87		New York		\$1, 999, 769. 02
Indiana	16, 493. 25	\$7, 720. 88	Ohio	\$45, 648. 00	287, 974. 98
Kentucky		170, 528. 00	Pennsylvania	164, 135. 00	75, 218. 68
Massachusetts	341, 732. 00	859, 586. 17			
Michigan	35, 000. 00		Total	1, 484, 230. 52	3, 795, 483. 24
New Jersey	586, 444. 40	394, 685. 51			

LEASE SYSTEM.

Alabama	\$214, 400. 00	\$622, 463. 60	New Mexico	\$16, 000. 00	
Arkansas	230, 450. 00		North Carolina	260, 000. 00	
Florida	100, 000. 00	283, 173. 00	South Carolina	23, 560. 00	\$166, 189. 33
Georgia	460, 000. 00	177, 416. 00	Tennessee	1, 142, 000. 00	680, 300. 00
Kentucky	411, 280. 00		Washington	30, 000. 00	
Louisiana	352, 000. 00	165, 647. 85			
Mississippi	324, 000. 00		Total	3, 651, 690. 00	2, 167, 626. 03
Nebraska	148, 000. 00	72, 436. 25			

TABLE VII.—SUMMARY OF VALUE OF GOODS PRODUCED OR WORK DONE, BY SYSTEMS OF WORK, 1885 AND 1895.

Systems of work.	Value.	
	1885.	1895.
Public-account system	\$2, 063, 892. 18	\$4, 888, 563. 36
Contract system	17, 071, 265. 69	8, 190, 799. 70
Piece-price system	1, 484, 230. 52	3, 795, 483. 24
Lease system	3, 651, 690. 00	2, 167, 626. 03
Total	24, 271, 078. 39	19, 042, 472. 33

a Dakota Territory.

TABLE VIII.—SUMMARY OF VALUE OF GOODS PRODUCED OR WORK DONE, BY STATES.

State.	Value.		State.	Value.	
	1885.	1895.		1885.	1895.
Alabama	\$214,400.00	\$687,376.41	Nevada	\$21,372.02	\$10,607.96
Arizona	25,000.00	6,000.00	New Hampshire ..	100,000.00	128,862.50
Arkansas	230,450.00	136,292.29	New Jersey	589,732.50	405,268.11
California	421,191.43	282,766.13	New Mexico	16,000.00	33,281.60
Colorado	30,000.00	12,220.52	New York	5,533,432.48	2,708,513.93
Connecticut	109,000.00	242,375.00	North Carolina ..	261,072.13	190,000.00
Florida	100,600.00	283,173.00	Ohio	907,462.51	732,172.18
Georgia	460,000.00	177,416.00	Oregon	120,000.00	44,033.33
Illinois	3,005,000.00	1,028,540.62	Pennsylvania	864,400.33	145,740.20
Indiana	1,508,301.07	807,420.88	Rhode Island	81,000.00	159,488.40
Iowa	398,590.00	346,879.40	South Carolina ..	323,017.09	547,313.69
Kansas	1,058,719.77	241,085.25	South Dakota	211,577.36	7,633.60
Kentucky	448,480.00	170,528.00	Tennessee	1,142,000.00	680,300.00
Louisiana	352,000.00	165,647.85	Texas	652,742.00	1,864,015.28
Maine	72,000.00	43,826.13	Vermont	120,837.75	333,600.50
Maryland	395,000.00	680,000.30	Virginia	786,289.95	1,124,621.91
Massachusetts	420,732.00	1,034,933.26	Washington	30,000.00	127,820.33
Michigan	853,778.00	407,976.55	West Virginia	275,000.00	242,050.00
Minnesota	245,500.00	325,000.00	Wisconsin	360,000.00	677,126.50
Mississippi	324,000.00	244,066.00			
Missouri	1,135,000.00	1,184,062.47	Total	24,271,078.39	19,042,472.33
Nebraska	148,000.00	72,436.25			

α Dakota Territory.

ABSTRACT OF LAWS RELATING TO CONVICT LABOR PASSED SINCE 1885.

ALABAMA.—Act of February 18, 1895, provides in substance as follows: State convicts shall be hired or employed within the State as may be determined by the board of inspectors with the approval of the governor. All hiring made must be per capita. Not less than 50 State convicts shall be hired to one person or kept at one prison, except that where convicts are worked in the county where convicted, less than 50 may be worked at one place. The board of inspectors may make contracts for the hire of State convicts by the day, month, or year, or a term of years, the State in such cases controlling and supporting the convicts.

County convicts may be worked on public roads, bridges, and other public works in the county, and may be hired to labor anywhere within the State.

ARIZONA.—In section 2424 of the Revised Statutes of 1887, originally part of an act approved March 10, 1887, it is provided that the board of commissioners shall lease the labor of the convicts in the Territorial Prison to be employed within the prison walls in such manufacturing enterprises as the board may deem proper.

Section 9 of act No. 19 of the acts of 1895, approved March 8, 1895, provides that the board of control of the Territorial institutions shall have power to lease on shares or for cash the property, buildings, and lands belonging to the Territory for the purpose of furnishing employment for the inmates of the Territorial Prison and reform school, and to make contracts to furnish the labor of the inmates of said institutions either within or outside the walls of the prison or the confines of the reform school. The labor of said inmates shall not be leased when it is required upon the buildings or properties of said institutions.

ARKANSAS.—Sections 5499 to 5506, inclusive, of the Digest of 1894, originally forming part of an act approved March 21, 1893, direct that the board of commissioners of the penitentiary shall employ the convicts either within or outside the walls of the penitentiary, and shall purchase or lease and equip a farm or farms, upon which convicts who are not suitable for contract labor and who can not be made self-supporting within the walls shall be worked on State account; that the system of labor shall be the State account system or the contract system, or partly one and partly the other, but no contract shall be let if equally remunerative employment can be furnished by the State and worked on State account, and that said board shall establish within the walls of the penitentiary such industries as are for the

best interests of the State, and as will furnish the charitable institutions of the State with such articles as are necessary to be used therein.

The board is authorized to have State coal lands opened and operated by convict labor on the State account system. It is also authorized to employ convicts on State timber lands in clearing and fencing the same and cutting the timber, and to purchase a tract of land on which there is an abundant supply of good building stone, and to employ convicts thereon in cutting, quarrying, and otherwise preparing the stone for use.

CALIFORNIA.—In chapter 208 of the acts of 1895, approved March 28, 1895, provision is made for establishing at one or both of the State prisons a rock or stone crushing plant, to be operated by convict labor, with such free labor as is necessary for superintendence and direction.

COLORADO.—Section 3447 of the Annotated Statutes of 1891, originally part of an act approved April 2, 1887, forbids the employment of the penitentiary or prison convicts outside the prison walls or grounds in the vicinity of such penitentiary or prison, and provides that the board of penitentiary commissioners shall not hire out any convict for the purpose of carrying on an industry that comes in competition with free labor in the State.

Section 4163, originally part of an act approved April 19, 1889, provides that so far as practicable the industries upon which the convicts of the State reformatory shall be employed shall be the manufacture of articles not elsewhere manufactured in the State.

CONNECTICUT.—Chapter 153 of the acts of 1895, approved May 23, 1895, provides that no convict shall be employed in or about the manufacture or preparation of any drugs, medicines, food or food material, cigars or tobacco, or any preparation thereof, pipes, chewing gum, or any other article or thing used for eating, drinking, chewing, or smoking, or for any other use within or through the mouth of any human being.

IDAHO.—Section 3 of article 13 of the constitution of the State, adopted in 1889, provides that all labor of convicts shall be done within the prison walls, except where the work is done on public works under the direct control of the State.

Section 2 of an act approved February 3, 1891, as amended by an act approved March 6, 1893, empowers the board of State prison commissioners, either by direct expenditure or by contract, to provide for the employment of all convicts confined in the penitentiary, and provides that no contract shall be let to perform any labor which will conflict with any existing manufacturing industries in the State.

KANSAS.—In sections 35 to 43, inclusive, of chapter 152 of the acts of 1891, approved March 11, 1891, the following provisions are made: The party hiring the labor of the convicts in the penitentiary shall be required, so far as practicable, to teach the prisoner as much of the trade at which he is employed as will enable him to work at the same when discharged. No contract shall be made for the employment of the prisoners outside of the prison grounds. The warden of the penitentiary is authorized to employ the labor of such convicts as are not required in other departments in mining coal upon the lands belonging to the State upon which the penitentiary is located and adjacent thereto, and to use such portion of the convict labor as may be necessary to keep the wagon road from the penitentiary to the city of Leavenworth in repair.

Section 5 of chapter 46 of the acts of 1895, approved March 8, 1895, makes it unlawful to allow convicts in the penitentiary to perform labor for private citizens outside the prison grounds, for hire or otherwise, and makes it the duty of the warden to employ the surplus convict labor in extending and repairing the State road and upon other work exclusively for the benefit of the State.

KENTUCKY.—Sections 253 and 254 of the constitution, adopted in 1891, provide that the labor only of penitentiary convicts may be leased and must be performed within the prison walls. Also, that the employment of convicts outside the walls can not be authorized except upon public works, or when, during pestilence or in

case of the destruction of the prison building, they can not be confined in the penitentiary.

LOUISIANA.—Act No. 114 of the acts of 1890, approved July 10, 1890, provides for the extending of the lease for the labor of the penitentiary convicts for a period of ten years from March 3, 1891, but limits the employment of such labor to the levees, railroads, and other works of public improvement.

It absolutely prohibits the subletting, rental-out, or use by the lessee himself of the convict labor in the cultivation, planting, or gathering of any agricultural crop, such as rice, sugar, cotton, or corn.

Chapter 134 of the acts of 1894, approved July 11, 1894, permits the employment of the penitentiary convicts on plantation or farm work, or any other work not provided for in act No. 114 of the acts of 1890, when it shall have been demonstrated to the governor that employment for the convicts can not be obtained on the public levees of the State.

MASSACHUSETTS.—In chapter 447 of the acts of 1887, approved June 16, 1887, the following provisions were made:

No contract shall hereafter be made for the labor of prisoners confined in the State Prison, reformatories, or any of the houses of correction. Such prisoners shall be employed by the head officers of said institutions in such industries as shall from time to time be fixed upon. No new machinery to be propelled by other than hand or foot power shall be used in any such institution. The number of prisoners employed in a single industry at the same time in any institution shall not exceed one-twentieth of the number of persons employed in such industry in the State, except that county institutions doing business at the date of passage of this act on public account may continue such industries as they maintain, but can not employ more than 250 persons in any one industry at the same time. The goods to be manufactured in said institutions shall be, as far as may be, such articles as are in use in the several State and county institutions and as are necessary to their maintenance.

Chapter 22 of the acts of 1888, approved February 9, 1888, provides that the words "contract for the labor of prisoners," used in chapter 447 of the acts of 1887, shall not be construed as applying to a contract for the manufacture of articles by the piece, under what is known as the "piece-price system" with persons who furnish the materials used in such manufacture.

Section 2 of chapter 403 of the acts of 1888, as amended by chapter 371, acts of 1891, provides that the number of prisoners employed in any industry in the State Prison, Reformatory, Reformatory Prison for Women, or in any house of correction, shall not exceed one-twentieth of the number of persons employed in such industry in the State, unless a larger number is needed to produce articles to be supplied to State and county institutions. Fifty prisoners may be employed in the manufacture of brushes at the House of Correction at Cambridge, upon the public-account system.

Chapter 209 of the acts of 1891, approved April 17, 1891, provides that prisoners in any State institution shall not be employed outside the precincts of the same in any mechanical or skilled labor for private parties.

Chapter 460 of the acts of 1894, approved June 9, 1894, provides that no new contract for the employment of prisoners in the manufacture of reed or rattan goods shall be made until the number so employed is reduced to 75, and that thereafter no contract for the employment of more than 75 in the manufacture of such goods shall be approved.

MINNESOTA.—Section 3598 of the statutes of 1894, originally part of chapter 208 of the acts of 1887, as amended by chapter 112 of the acts of 1891, prohibits the contract system of convict labor in the State Reformatory, and provides that the board of managers shall retain control of the labor of the convicts. It also provides that during any year the board shall not employ or engage, on the average, to exceed 33 per cent of the prisoners in quarrying, manufacturing, and cutting of granite for sale.

In chapter 154 of the acts of 1895, approved April 12, 1895, the following provisions were made: The prisoners in the State Prison and State Reformatory shall be taught some trade or handicraft. No contracts shall be made for the leasing of the labor of the prisoners in said institutions at a certain rate per diem giving the contractor control of the labor, but they shall be employed by the warden, superintendent, or other chief officer having charge thereof, in such industries as from time to time may be fixed upon, or in the manufacture of articles by the piece under the "piece-price system" by contracts with persons who furnish the materials used in such manufacture. The number of prisoners employed in a single industry at the same time in any institution shall not exceed 10 per cent of the total number of persons engaged in such industry in the State unless a greater number is necessary to produce materials or articles to be supplied to State and other municipal institutions, penal or charitable. This does not apply to the number of prisoners employed in the manufacture of binding twine at the State Prison at Stillwater.

The board of managers of these institutions shall, as far as may be, have manufactured in said prison and reformatory such articles as are in common use in the several State institutions, whether penal or otherwise, and the officers of such institutions shall purchase such of said articles as are necessary for the maintenance of the institution they may represent.

MISSISSIPPI.—Sections 223 to 226, inclusive, of the State constitution, adopted in 1890, provide that after the year 1894 no penitentiary convict shall ever be leased or hired to any person or persons or corporation, private or public or quasi public, or board; that said convicts may be employed under State supervision on public roads or other public works, or by any levee board on any public levees; that the legislature may place the penitentiary convicts on State farms, and have them worked thereon, under State supervision exclusively, in tilling the soil or manufacturing, or both; and that convicts in the county jails shall not be hired or leased to any person or corporation outside the county of their conviction after 1892.

Section 3201 of the code of 1892 provides that after the year 1894 penitentiary convicts shall not be hired or leased out, but shall be employed in the penitentiary and on a farm or farms leased for that purpose, under the sole control, discipline, and management of the officers and employees of the penitentiary; and that the board of control may work said convicts on public roads, works, and levees.

Chapter 75 of the acts of 1894 provides for the establishment of penitentiary farms, and that the board of control of the penitentiary may carry on in connection with said farms such industrial enterprises as may be deemed advisable, including the manufacture of drainage tile, brick, wagons, agricultural implements, gearing, shoes, clothing, and other articles for the convicts.

Chapter 76 of the acts of 1894, approved February 10, 1894, provides that jail convicts shall be worked either by hiring them out to the best bidder or by working them, under the directions of the board of supervisors, on public roads or works, or on a farm or farms which the board may buy or lease or work on shares, or by delivering them to the county contractor; that the sheriff may hire out the convicts with their consent, or, if they do not consent, at public outcry, at the door of the courthouse, to persons who will pay in cash the amount of their several fines, costs, and jail fees, or give bond for the payment of the same; and that if the convicts are not hired out and the board of supervisors do not work them on the public roads, works, or farms, said board may agree with a person, as convict contractor, to work them at a price to be agreed upon by the board.

MONTANA.—Section 2 of article 18 of the constitution of the State, adopted in 1889, provides that the labor of the convicts in the reformatory institutions and penitentiaries of the State shall not be let by contract.

Section 2960 of the Penal Code (Codes and Statutes, 1895, Sanders' edition), originally part of an act passed in 1895, provides that the prisoners in the State Prison may be employed within the prison in any mechanical pursuits, or either within or without the walls or inclosures of the prison on the public grounds or buildings or

otherwise, but that such employment must be under the exclusive control of the board of prison commissioners; and that neither the board nor the warden must let by contract to any person the labor of any convict in the prison.

NEBRASKA.—Section 5202 of the Compiled Statutes of 1895, originally part of chapter 66 of the acts of 1895, authorizes and empowers the board of public lands and buildings to lease the labor of convicts in the penitentiary to responsible persons, when in its judgment the best interests of the State will be subserved thereby.

NEVADA.—Chapter 91 of the acts of 1887, approved February 23, 1887, provides that all the boots and shoes required to be used by the prisoners in the State Prison shall be made in the prison shop, and that the managers of other State institutions shall be supplied with all they need for the use of those under their charge; also that the surplus product of the shop may be sold by the warden in open market, but only by wholesale in full cases and unbroken packages of not less than one dozen pairs of boots or shoes each.

NEW JERSEY.—Chapter 357 of the acts of 1895, approved March 28, 1895, provides that the convicts in the reformatory may be employed in agricultural or mechanical labor, and that the system employed shall be either the "piece-price plan" or the "public-account system," or partly one and partly the other, in the discretion of the board of managers.

NEW MEXICO.—Sections 39 and 59 of chapter 76 of the acts of 1889, passed over veto February 22, 1889, provides that the labor of the penitentiary convicts may be hired out to the best advantage, and that those who are not hired out may be employed in and about any work, labor, or improvement on the capitol building or grounds, in grading, repairing, opening, cleaning, or leveling the streets, alleys, roads, and bridges in and near the city of Santa Fe; in quarrying and hauling stone, and in securing, bettering, and protecting the banks of the Santa Fe River from overflowing or destruction, so as to prevent damage to the city of Santa Fe.

NEW YORK.—Section 29 of article III of the constitution of the State, adopted in 1894, provides that after January 1, 1897, no person sentenced to the several State prisons, penitentiaries, jails, and reformatories shall be required or allowed to work at any trade, industry, or occupation wherein or whereby his work, or the product or profit of his work, shall be farmed out, contracted, given, or sold to any person, firm, association, or corporation, and that convicts may work for, and the products of their labor may be disposed of to, the State or any political division thereof, or for or to any public institution owned or managed and controlled by the State or any political division thereof.

Chapter 586 of the acts of 1888, approved August 1, 1888, provides that no motive-power machinery for manufacturing purposes shall be placed or used in any of the penal institutions of the State, and that no convict in such institutions shall be required or allowed to work at any trade or industry where his labor, or the production or profit of his labor, is farmed out, contracted, given, or sold to any person or persons whomsoever; also, that only such articles as are commonly needed and used in public institutions of the State for clothing and other necessary supplies shall be manufactured in the penal institutions.

Chapter 382 of the acts of 1889, amending article 3 of title 2 of chapter 3 of part 4 of the Revised Statutes of 1881, and approved June 6, 1889, provides that no contract shall be made by which the labor or time of any prisoner in the State prisons shall be contracted, let, or hired to contractors at a price per day or for other period of time; that the labor of the prisoners shall be either for the purpose of production and profit or for the purpose of industrial training and instruction, or partly for one and partly for the other; that the system of productive training in the State prisons shall be either the "public-account system" or the "piece-price system," or partly one and partly the other; that none of the product of the labor of the convicts shall be sold for less than 10 per centum in excess of the cost of the materials used in the manufacture of such products; that in determining the line of productive labor to be pursued the superintendent shall select diversified lines of industry

with reference to interfering as little as possible with the same lines of industry carried on by the citizens of the State; that the number of convicts employed at one time in manufacturing one kind of goods shall not exceed 5 per centum of the number of all persons within the State employed in manufacturing the same kind of goods, except in industries in which not to exceed 50 free laborers are employed, and provided that not more than 100 convicts shall be employed in all the prisons of the State in the manufacture of stoves, iron hollow ware, and boots and shoes, and that no convict shall be employed upon any of said specified industries in any of the penitentiaries, reformatories, or houses of correction in the State; that there shall be manufactured in the State prisons such articles as are commonly needed and used in the public institutions of the State, for clothing and other necessary supplies, and that such of said articles as are not needed in the State prisons shall be furnished to the several public institutions supported in whole or in part by the State; also that the labor of the prisoners in the State Reformatory at Elmira, and in the penitentiaries and other penal institutions of the State other than the State prisons, shall be conducted on the "public-account system" or the "piece-price system."

Chapter 237 of the acts of 1894, approved April 2, 1894, prohibits the manufacture of brushes, in whole or in part, by the convicts confined in the Albany Penitentiary.

Chapter 737 of the acts of 1894, approved May 21, 1894, restricts the total number of convicts employed in the State in manufacturing brooms and brushes from broom corn to 5 per centum of the total number of persons employed within the State in manufacturing such goods.

NORTH CAROLINA.—Section 4 of chapter 283 of the acts of 1893, ratified March 6, 1893, provides for the employment of the penitentiary convicts either within the walls of said institution or on farms leased or owned by the penitentiary, and makes it the duty of the superintendent to make contracts with persons or corporations, in order to employ and support as many of the able-bodied convicts on public works as the interests of the State and the constitution will permit

OHIO.—Section 7436-5 of the Revised Statutes, seventh edition, and originally part of an act passed in 1889, provides that the managers of the penitentiary shall employ all convicts directly for the State whenever the legislature shall provide means for machinery, materials, etc.; that said board shall have power to agree with manufacturers and others to furnish machinery, materials, etc., for the employment of the convicts, under the control of the managers and their officers; that such employment shall be on the "piece or process plan," and that bids for the product of such labor on said plan shall be advertised for; that the board may arrange with the employers of prisoners, so obtained, to pay for the labor of such number of prisoners necessary to the conduct of the general business (when they are employed in connection with larger numbers of other prisoners working by the piece or process plan), by the day or week, or otherwise, and that with this exception none of the labor of the prisoners in the penitentiary shall be let on contract by the day; that as far as practicable the board must employ all prisoners necessary in making all articles for the various State institutions not manufactured by such institutions, and said institutions shall purchase and pay to the penitentiary the market price for all such articles.

An act passed April 16, 1892, directs that the total number of prisoners and inmates employed at one time in the penitentiaries, workhouses, and reformatories of the State in the manufacture of any one kind of goods shall not exceed 5 per cent of the number of all persons in the State employed outside of said penitentiaries, etc., in manufacturing the same kind of goods, except in industries in which not more than 50 free laborers are employed.

An act passed April 21, 1893, prohibits any board or authority having the control or management of any penal, reformatory, or charitable institution, or asylum from contracting with any person, firm, or corporation for the manufacture of knit or woolen goods, or from establishing any mill or manufactory for the manufacture of such goods.

OKLAHOMA.—Section 5436 of the statutes of 1893 provides that the sheriff may employ jail convicts sentenced to hard labor within the jail, and the county shall be entitled to their earnings; also that he may employ said convicts outside of the jail or yard either for the county or for any municipality in the county in work on public streets, or highways, or otherwise.

OREGON.—Section 1 of an act approved February 23, 1895, authorizes the governor to contract and lease to any person, firm, or corporation the whole or any part of the labor of the convicts at any time confined in the penitentiary for any period or periods of time not exceeding ten years. It provides that the officers of the penitentiary shall have general charge and custody of the convicts while they are engaged in such labor, and that the labor must be performed within the penitentiary building or within the yard or inclosure thereof.

SOUTH CAROLINA.—Sections 662 and 663 of the Civil Statute Laws, originally part of chapter 21 of the acts of 1893, section 554 of the Criminal Statute Laws, originally part of chapter 481 of the acts of 1893, section 33 of article 5, and section 6 of article 12 of the constitution of 1895 provide for the labor of jail convicts upon the public works, roads, highways, and bridges, under control of the county and municipal authorities.

Section 578 of the Criminal Statute Laws, originally part of chapter 20 of the acts of 1889, provides that no hiring or leasing of convicts in phosphate mining shall be made by the board of directors of the penitentiary.

Section 9 of article 12 of the constitution of 1895 directs that in case penitentiary convicts are hired or farmed out, they shall be under the supervision and control of officers of the State.

SOUTH DAKOTA.—Chapter 11 of the acts of 1890, approved March 8, 1890, provides for the working of the undeveloped stone quarries belonging to the State, and situated upon the penitentiary grounds at Sioux Falls, by the labor of the penitentiary convicts.

Chapter 131 of the acts of 1893, approved March 6, 1893, provides for the establishment of a plant in the State Penitentiary for the manufacture of binding twine from hemp or flax fiber by the use of convict labor, and directs that in the manufacture of the twine preference shall be given to the fiber grown in the State.

TENNESSEE.—Chapter 204 of the acts of 1889, approved April 4, 1889, provides for the leasing of the penitentiary buildings, quarry, grounds, fixtures, etc., and the labor of the convicts for the term of six years from January 1, 1890.

Chapter 78 of the acts of 1893, approved April 4, 1893, provides that, for the purpose of removing, as far as possible, convict labor from competition with free labor and to utilize, under the exclusive control and management of the State and for and on the State's account, the labor of the convicts, a new penitentiary shall be erected, with such buildings and workshops within its outer walls as may be deemed necessary to utilize the labor of the convicts in diversified industries; that in connection with said penitentiary there shall be a farm, not exceeding 1,500 acres of land, and that coal lands shall be purchased of not more than 10,000 acres for the purpose of opening and operating a coal mine or mines to be worked by convict labor. Said chapter also provides that "from and after the expiration of the lease now in force between the State and the lessees of the hire and labor of the convicts of the State," the contract lease system shall be forever abolished.

TEXAS.—Chapter 82 of the acts of 1891, approved April 15, 1891, provides that the system of labor in the State penitentiaries shall be either the State account system or the contract system, or partly the one and partly the other, but no contract shall be let for any of such convict labor if equally remunerative employment can be furnished by the State and worked on State account, and that no contract shall be made by which the control of the convicts shall pass from the State or its officers. It also provides that all convicts shall be placed within the walls of the penitentiaries or on State farms and worked on State account as soon and speedily as possible.

UTAH.—Section 3 of article 13 of the State constitution, adopted in 1895, provides that the legislature shall prohibit the contracting of convict labor and the labor of convicts outside prison grounds, except on public works, under the direct control of the State.

WASHINGTON.—Section 29 of article 2 of the constitution of the State, adopted in 1889, directs that after January 1, 1890, the labor of convicts shall not be let out by contract to any person, copartnership, company, or corporation, and that the legislature shall provide for the working of convicts for the benefit of the State.

Section 1158 of the statutes and codes of 1891, originally part of an act approved March 9, 1891, provides that all convicts may be employed by the authority of the board of directors of the penitentiary in the performance of work for the State, or the manufacture of any article or articles for the State, or the manufacture of which is sanctioned by law.

It also provides that at the State Penitentiary no articles shall be manufactured for sale, except jute fabrics and brick.

WEST VIRGINIA.—Chapter 46 of the acts of 1893, approved February 24, 1893, provides that the directors of the penitentiary shall be required to let and hire the labor of the convicts, upon such branches of business and for the manufacture of such articles, as in their judgment will best accomplish the ends and subserve the interests of the State; that all convicts not employed on contracts shall be employed in the performance of work for the State or temporarily hired; that a portion of the convicts may be employed in the manufacture and repair of articles used by the State in carrying on the penitentiary or articles used by any of the other State institutions; that any convicts not employed under contract may be employed or let to contract on the piece-price system or employed in manufacturing for the State such articles as may be selected by the board of directors of the penitentiary, and that convicts may be furnished to counties to work on public roads.

WISCONSIN.—Section 567d of the Annotated Statutes of 1889, originally chapter 437 of the acts of 1887, provides that the State board of supervision of charitable, reformatory, and penal institutions shall, whenever in the opinion of such board it is best for the interest of the State, establish in the State prison the business of manufacturing.

WYOMING.—Chapter 37 of the acts of 1890-91, approved January 8, 1891, provides that it shall be the duty of the board of charities and reform, either by direct expenditure or contract, to provide for the care, maintenance, and employment of all inmates of the penitentiary, reform school, or any penal or reformatory institutions in the State, but that no convict shall be used or contracted to be used in any coal mine or occupation when the products of his labor may be in competition with that of any citizen of the State. It also provides that when the cost of maintaining said convicts can be reduced to the State by their employment in some occupation, not unreasonably laborious or unhealthy, or when they can be employed to complete or repair the place or surroundings of the place in which they are confined, they shall be so employed.

UNITED STATES.—Chapter 213 of the acts of 1886-87 (second session, Forty-ninth Congress), approved February 23, 1887, prohibits any officer, servant, or agent of the United States Government from hiring or contracting out the labor, or from permitting any warden, agent, or official of any State prison, penitentiary, jail, or house of correction from hiring or contracting out the labor of any United States criminals confined in said institutions.

Chapter 529 of the acts of 1890-91 (second session, Fifty-first Congress), approved March 3, 1891, provides for the erection of three United States prisons in different sections of the country, and also provides that the convicts therein be employed exclusively in the manufacture of such supplies for the Government as can be manufactured without the use of machinery, and that they be not worked outside the prison inclosure.

INDUSTRIAL COMMUNITIES. (*a*)

BY W. P. WILLOUGHBY.

CHAPTER IV.

IRON AND STEEL WORKS OF FRIEDRICH KRUPP, ESSEN, GERMANY.

There is no industrial center whose development, in relation to the condition of labor, can be studied with greater profit than that of Essen, Germany, the seat of the great iron and steel works of Friedrich Krupp.

The business of Krupp was founded in 1810, before the age of steel had fairly begun, and in its career is presented a type of the development of modern industry during the nineteenth century. From a beginning of a small shop, employing scarcely a dozen workmen, it has increased, at first slowly and then by leaps and bounds, to its present huge proportions—the largest single manufacturing establishment in the world.

The study of such an example of industrial evolution would of itself possess great interest, but accompanying this growth has been the creation of social institutions for the benefit of the employees of the works on a scale and in a variety existing to the same extent nowhere else—institutions that have had a profound influence in shaping public thought, both in Germany and elsewhere, concerning the best means of improving the condition of labor in strictly manufacturing districts. It is the existence of these institutions in connection with the industrial prosperity of Krupp's works that makes Essen a center that can be studied historically and analytically with especial profit. The village of Essen was in existence previous to the founding of the Krupp works. After a slow development during at least a thousand years, as far as records are in existence, Essen at the beginning of the present century was a small agricultural village comprising not over 3,000 inhabitants. The cultivation of the soil was almost the only industry. Though the mineral resources of the surrounding country were known, coal and iron were mined only in sufficient quantities to satisfy local household needs. This rural character changed suddenly with the rapid growth in the use of steam power. Mines were opened in rapid succession, and an influx of labor set in that has been likened to the California gold fever of 1849.

The history of the great iron and steel works of Krupp is but a repetition of that of the district in which they are situated. Founded in 1810, for nearly forty years the establishment progressed in the most

a See footnote to the beginning of this series of articles in Bulletin No. 3.

leisurely manner. In 1848, after an existence of thirty-eight years, it employed but 72 workmen all told. From that date, however, to the present time its development has been without a parallel in industrial annals. The following table, giving the population of Essen from year to year and the total number of employees of the establishment of Krupp in Essen, shows the relation between the city and Krupp's works:

POPULATION OF ESSEN AND EMPLOYEES OF THE KRUPP IRON AND STEEL WORKS LIVING IN ESSEN, 1803 TO 1894.

Year.	Popula- tion of Essen.	Employees of Krupp firm in Essen.	Year.	Popula- tion of Essen.	Employees of Krupp firm in Essen.	Year.	Popula- tion of Essen.	Employees of Krupp firm in Essen.
1803.....	3,480		1856.....		970	1876.....	52,280	8,998
1813.....	4,000		1857.....		992	1877.....	53,510	8,580
1820.....	4,636		1858.....	17,165	1,047	1878.....	54,721	9,414
1830.....	5,457		1859.....		1,391	1879.....	53,670	7,964
1832.....		10	1860.....		1,764	1880.....	56,957	8,806
1833.....		9	1861.....	20,766	2,082	1881.....	59,169	10,598
1840.....	6,325		1862.....		2,512	1882.....	60,707	11,011
1843.....	7,119	99	1863.....		4,185	1883.....	62,034	10,491
1844.....		107	1864.....	31,327	6,693	1884.....	63,343	10,213
1845.....		122	1865.....		8,187	1885.....	65,074	10,656
1846.....	7,841	120	1866.....		6,350	1886.....	65,143	11,723
1847.....		93	1867.....	40,695	6,869	1887.....	67,693	12,674
1848.....		72	1868.....		6,217	1888.....	70,395	13,193
1849.....	8,734	107	1869.....		6,318	1889.....	73,134	14,223
1850.....		237	1870.....		7,084	1890.....	78,723	15,519
1851.....		192	1871.....	51,840	8,810	1891.....		16,161
1852.....	10,475	340	1872.....		10,394	1892.....		16,865
1853.....		352	1873.....		11,671	1893.....		17,100
1854.....		360	1874.....		11,543	1894.....		16,706
1855.....	12,891	693	1875.....	55,045	9,743			

It should be understood that the figures just given for the number of employees of Krupp by no means include the total number. A constantly increasing number of employees have found homes just outside of the city limits. This is especially true of the period since 1873-74, when the largest group of workingmen's houses was erected. In the prosecution of its business the firm has found it advisable to acquire and manage extensive works outside of Essen. It now owns, in addition to its works at Essen, several iron works elsewhere, three coal mines—which, however, do not supply all the coal required—various iron mines in Germany and Spain, etc. The total number of employees in 1888 was 20,960, of whom 13,198 were in Essen. In 1891 the total number had increased to over 24,000, of whom 16,161 belonged to Essen, and in 1892 to over 25,000, of whom 16,865 were in Essen.

These figures stand for the actual number of employees only. The firm employs no women. The total number of employees and their families reached in 1888 the large number of 73,769, and in 1892, 85,591, all dependent upon this single manufacturing concern. It is unnecessary to more than mention these figures. The establishment of Krupp constitutes a state in itself.

Naturally such a rapid increase in population in a district unprepared to receive it introduced a number of evils. The greatest of these was that of insufficient housing. The price of land and the rent of houses went up enormously. The following figures, giving the total

number of houses and the average number of inmates per house in Essen at different periods, show how largely the increase in the number of houses failed to keep pace with the increase in the population:

NUMBER OF HOUSES AND PERSONS PER HOUSE AT ESSEN, 1820 TO 1890.

Year.	Houses.	Persons per house.	Year.	Houses.	Persons per house.	Year.	Houses.	Persons per house.
1820.....		6.39	1852.....	1,024	10.23	1871.....	3,322	15.61
1830.....		6.80	1855.....	1,105	11.07	1875.....		12.75
1840.....	840	7.53	1858.....	1,319	13.01	1880.....	4,214	13.52
1843.....	872	8.16	1861.....	1,636	12.69	1885.....	4,298	15.14
1846.....	923	8.50	1864.....	2,045	15.32	1890.....	4,853	16.22
1849.....	941	9.28	1867.....	2,970	13.70			

In the distinctively workingmen's quarter the density of population was even greater. In 1864 in two streets of this quarter there were 1,443 persons living in 77 houses, or an average of 18.74 persons per house, and in another street 2,962 persons living in 124 houses, or an average of 23.89 per house.

A natural result of these conditions was a great rise in rents. According to official investigations the annual rent of a two-room house in 1855 was from 24 to 30 thalers (\$17.14 to \$21.42), and gradually rose until it was from 36 to 50 thalers (\$25.70 to \$35.70). The crowding also gave rise to insanitary conditions, so that, in the first of the two streets mentioned as examples of overcrowding, the death rate was 4.24 per cent of the population and in the second street 4.59 per cent, while the average for all Essen was but 3.41. The cholera epidemic of 1866 was particularly fatal in these quarters, many squares being almost depopulated.

The second result of this increase in population was the great rise in the prices of all commodities consumed by workingmen. At the same time the workingmen became thoroughly demoralized through various trade practices on the part of the merchants. Trade was solicited through the granting of prizes and portions of whisky with purchases, and the workingmen were encouraged by the merchants to run in debt in order that they might be more securely held in their power. In a word, Essen during this period presented all the evils found in one of our new mining or other rapidly growing industrial communities.

These evils the firm of Krupp sought to remove through its extensive building operations and the creation of the vast system of Consum-Anstalten or cooperative distributive stores. To these two institutions, corresponding to the two main classes of material wants of the laboring population, was joined a whole system of institutions, the object of which was to provide assistance to the workingmen in times of special need. These institutions took the form of separate funds for the insurance of the men against sickness and accident, of pension funds for old employees, of the encouragement and provision of facilities for life insurance, of savings institutions, etc. Such a community, if it was to advance in prosperity and welfare, needed scholastic institutions. Primary and secondary schools for general education were provided,

but special effort was made to provide instruction in practical matters in the way of industrial schools for boys and housekeeping and cooking schools for girls.

Without attempting to state all the forms of activity adopted by the firm, the workingmen's institutions organized by it can be grouped into the following main classes:

1. The housing of employees.
2. Relief and pension funds.
3. Workingmen's life insurance association.
4. Cooperative distributive stores.
5. Funds for the benefit of workingmen other than the regular relief and pension funds.
6. Schools.
7. Health service.
8. Other institutions.

THE HOUSING OF EMPLOYEES.

The building operations of the Krupp firm for the housing of its employees have been conducted on a vast scale. As has been shown, the conditions at Essen were such as to render such action imperative. These building operations have taken several forms to meet the varying needs of the different classes of the firm's employees. They may be grouped under the following heads:

1. Labor colonies or distinct communities of workingmen's dwellings.
2. Maintenance of a building fund to aid employees to build their own houses.
3. Ménage or boarding house for unmarried employees.
4. Workingmen's Cooperative Boarding House for small groups of single workingmen.

GROUPS OF WORKINGMEN'S HOUSES.

The report of this Department on the Housing of the Working People gives a brief account of the technical details of several of the better types of houses erected by the Krupp firm at Essen. It is the building up of the whole community and the policy pursued regarding the provision of workingmen's houses that is the feature of interest for the present report.

The first efforts of the firm date from the year 1861, when the erection of ten houses for boss workmen and foremen was commenced. Since then the efforts of the firm have never ceased, and every few years a new group of houses has been erected, though even then it has been difficult to keep pace with the rapid increase in the number of employees of the firm.

The selection of a building system was limited from the beginning by existing conditions. The firm preferred the cottage system, where each house is isolated and surrounded by a garden. This system, however, was utterly impracticable at Essen. In fact, there was not enough

land to be had in the vicinity of the works to accommodate the 2,358 family tenements built during the years 1871 to 1873, if erected on that plan. But even if the land could have been acquired, the prices were such as to have made the dwellings too expensive for workingmen. The distance that many of the men would have been compelled to live from their work would have also been a great inconvenience, and would have prevented them from taking their midday meal at home.

Another objection would have been the lack of water facilities in the vicinity of Essen, as, owing to the mining operations, all well water had been drawn off. A water service by means of water mains to the widely extended cottage district would necessarily have increased the rents considerably. For these reasons it was necessary to adopt a plan whereby the dwellings could be somewhat more closely concentrated. In every case, however, the effort has been made to provide for the dwellings a healthy location, free access to light and air, and an abundant supply of good water.

Though the majority of houses contain a number of tenements, they are completely detached from one another; there are numerous streets and open spaces; the Krupp waterworks supply ample drinking water, and the streets are well lighted by the Krupp gas works. Though the tenements in a house have a common outside entrance, inside they are completely isolated from each other.

The houses erected at different periods differ greatly. The later built houses are much superior, and a remarkable opportunity is given for the study of the evolution of the workingman's home.

In 1892 Mr. Gussman, an official of the Krupp firm, was invited to deliver an address before the Centralstelle für Wohlfahrts-Einrichtungen, in Berlin, concerning the housing operations of the Krupp firm. In this address is given, in the most direct and chronological order, an account of the erection of workingmen's houses at Essen. The following account is largely a reproduction of this address, supplemented by other information furnished by the firm (*a*):

The first tenement houses for working people were constructed in 1861-62. Two rows of houses, one with 6 tenements and the other with 4, were built for the foremen of the factory. Each tenement contains 3 rooms on the first story, 3 in the attic, and cellar space. The outer walls are of heavy stone and plaster work, and the inner partition walls of a heavy wooden framework filled in with broken stone and plastered over.

The first workingmen's colony, known as Alt-Westend, was built during the three summer months of 1863. It consists of one row of houses two stories high, containing 16 four-room tenements, and eight rows containing tenements of three or four rooms each, and so arranged that the four-room tenements can be divided into two-room tenements.

a Free use has been made of the translation of a part of this address, as given by Dr. Lindsay in the *Annals of the American Academy of Political and Social Science*, November, 1892.

The outer walls of the buildings are of plastered stonework in the first story, surmounted by plastered wood framework. Each tenement has a cellar. The houses are very plain, and, as Mr. Krupp expresses it, "were intended for poor families who must save, but who desire a healthful dwelling, and not for those to whom a few more thalers a year make no difference, when it means that they could live more comfortably."

During the winter of 1871-72 a second colony, called Neu-Westend was completed. This colony consists of 10 double houses three stories high, each containing 2 two-room tenements on each floor—that is, 6 tenements to each house and 60 in all; also 8 double houses three stories high, with 2 three-room tenements per floor, or 6 tenements per house. This makes a total of 48 tenements of this kind and a grand total of 108 two and three room tenements for the colony. The houses in this colony are built of brick.

Another colony, known as Nordhof, was completed in the fall of 1871. This consists of 36 tenements of three and four rooms each, and 126 tenements of two rooms each, the latter built on the so-called "Baracken" system—that is, in solid rows. The latter houses are plain wood structures, two stories high. Each tenement has a separate entrance from the street. All sanitary arrangements, closets, etc., are outside of the house. The other 36 tenements have three and four rooms each and are built of brick. The houses are three stories high.

The next colony, called Baumhof (Dreilinden), was built in 1871 and enlarged in 1890. These houses are built in a more rural style, each having a garden, and some having stables. Eight houses have 4 four-room tenements each, 23 have 4 three-room tenements each, 6 have 3 four-room tenements each, and 4 have 3 five-room tenements each, making a total of 41 houses containing 154 tenements. The population in 1892 was 910 persons.

During the years 1872 and 1873 the Schederhof colony was built. This colony consists of 2 houses, each containing 6 four-room tenements; 44 houses, each containing 6 three-room tenements, and 36 houses, each containing 6 two-room tenements, or a total of 82 houses containing 492 tenements. Each house is three stories high and has a cellar and attic.

In addition to the above there are 70 houses containing 4 two-room tenements each, or a total of 280 tenements. These houses are built in solid rows. The population of this colony was 4,002 persons in 1892.

The largest of all the colonies is known as Cronenberg. It was built in the years 1872-1874, but has since then been enlarged from time to time. The colony is situated within 100 steps from the west boundary of the works. It covers over 50 acres of land, and, according to the census of 1892, had a population of 8,001 persons.

The colony consists of 226 three-story houses built with walls partly of rough brick and partly of rough stone. Some are in rows and some in pairs. They are built on eight streets running the length of the

colony and ten cross streets, ranging in width between curbs from 8½ to 12½ meters (27.9 to 41 feet) and with sidewalks 2½ meters (8 feet) wide. In 1892 there were in all 1,437 tenements. Of these 720 have two rooms each, 600 have three rooms each, 104 have four rooms each, and 13 have five and six living rooms. Each house has a garden, a cellar, and a drying space.

In this colony are located dwellings for several officials and school teachers connected with the works. A parsonage, two school buildings, a Protestant church, several branches of the cooperative store, an apothecary shop, a post-office, a market place over three-fourths of an acre in size, a restaurant with games, bowling alley, etc., and a library with a large hall for workmen's meetings have been established by the firm within the limits of Cronenberg.

In 1892 plans were prepared for another colony, larger than the preceding, to be known as Holsterhausen. According to the plans this colony consists of 280 tenement houses, 180 of which are built in pairs and 100 completely detached. Each tenement house has a large garden space at the side and rear. Near the center are a large market place and a public park. The 90 double houses accommodate four families each or two families per house, and the 100 detached houses contain one tenement each. The tenements in the former contain three rooms and an attic each. The detached houses, of which there are two types, contain five rooms and an attic each. The colony is planned to accommodate 460 families.

The annual rents of workmen's tenements range (1892) as follows:

Two-room tenements in rows (<i>Baracken</i>).....	\$14.28 to \$21.42
Other two-room tenements, with cellar.....	21.42 to 25.70
Three-room tenements, with cellar.....	28.56 to 38.56
Four-room tenements, with cellar.....	42.84 to 47.60
Five-room and larger tenements, with cellar.....	49.98 to 78.54

The following table shows the financial status of the firm's housing operations, July 1, 1891:

CAPITAL INVESTED AND ANNUAL RECEIPTS AND EXPENDITURES OF THE KRUPP IRON AND STEEL WORKS FOR HOUSING OF WORKING PEOPLE, JULY 1, 1891.

Items.	Essen.	Outside of Essen.	Total.
Tenements.....	a 3,659	b 523	c 4,182
Capital invested:			
Buildings.....	\$2,628,103.34	\$366,924.60	\$2,995,027.94
Ground.....	288,842.51	47,751.13	336,593.64
Total.....	2,916,945.85	414,675.73	3,331,621.58
Total receipts from rents.....	115,352.65	15,956.71	131,309.36
Expenses:			
Repairs.....	26,817.36	2,663.46	29,480.82
Lighting, water, roads, etc.....	16,100.70	719.95	16,820.65
Taxes and insurance.....	11,424.00	1,881.15	13,305.15
Total.....	54,342.06	5,264.56	59,606.62
Net receipts.....	61,010.59	10,692.15	71,702.74
Per cent of net receipts of capital.....	2.09	2.58	2.15

a Not including 43 rent free. b Not including 131 rent free. c Not including 174 rent free.

This shows a net income of 2.09 per cent on capital invested in housing operations at Essen, and 2.58 per cent on capital invested elsewhere, or a net income of 2.15 per cent on the total capital invested in such property.

In conclusion, it may be proper to present the following figures to show the relation between the total number of persons depending for support upon the Krupp Company and those housed by the company. In March, 1892, the number of employees was 25,200, and the members of families depending on the same 62,700, a total of 87,900.

Of the total number of persons depending for support upon the Krupp Company, as just shown, 15,300 lived in their own homes, 25,800 rented from the firm, and 46,800 rented from private parties.

BUILDING FUND.

None of the houses built by the firm in these labor colonies have been sold. The firm, however, is very desirous that its workingmen should become, as far as possible, owners of their own houses. To encourage this Mr. Krupp in 1889 set aside a sum of 500,000 marks (\$119,000) to be employed in making loans to workingmen with which to build. This money is loaned under the following conditions:

Applicants must be married and between 25 and 50 years of age, have been at least three years in the service of the firm, and earn less than 3,000 marks (\$714) per year. A payment of at least 300 marks (\$71.40) must be made from the applicant's own resources. If the loan is demanded for the purchase of a house already built, the latter is appraised by experts and the loan made according to their appraisal. If the loan is for the purpose of building a house, the plans must be furnished and the name of the builder, and then, if the firm approves, the loan will be paid in regular installments during the progress of the work. The services of the firm's experts and architect will be furnished gratis to the borrower. The loan is secured by a mortgage on the house and ground. Three per cent interest is charged. The capital is paid off in monthly or fortnightly installments, but additional payments can be made to hasten the liquidation of the debt. In cases of illness payments may be temporarily suspended. The installments and interest payments together rarely exceed ordinary rent payments.

In 1891 seventy-five houses, varying in value from 1,000 to 13,000 marks (\$238 to \$3,094), had been erected through the medium of these loans. In that year between one-fifth and one-sixth of all the employees of the firm lived in houses owned by themselves.

BOARDING HOUSE FOR UNMARRIED EMPLOYEES.

The firm found it very desirable to make some provision for the housing of its unmarried employees. In 1856 it erected its first ménage, or single men's boarding and lodging house, a building with accommodations for 200 men. Since then these accommodations have had to be

largely increased. In 1891 the ménage was occupied by about 800 men. Since 1884 all married workingmen who are not skilled laborers, and therefore have small wages, and who are separated from their families, are obliged to become inmates of the ménage.

In the beginning the cost per day for lodging, dinner (meat four times per week), supper, washing, etc., was 58 pfennigs (13.8 cents). On January 1, 1862, the rate was increased to 66 pfennigs (15.7 cents), and in 1869 further increased to 70 pfennigs (16 $\frac{2}{3}$ cents). Since the latter date, however, meat has been served at dinner daily. In 1874, owing to the increase in the prices of food products, another increase was made to 80 pfennigs (19 cents), which is the present rate charged. At present, however, meat or fish is also served in the evenings at supper three times a week.

The management of the ménage is exactly that of a military barrack. There are a number of beds in each room, meals are served at regular hours, and regulations prescribe the use to be made of the building. The club feature is introduced to a considerable extent. There is a special room for a small library, where periodicals and papers can be consulted, and there are rooms for a billiard table, a bowling alley, a restaurant, etc.

COOPERATIVE BOARDING HOUSE FOR UNMARRIED EMPLOYEES.

It is unnecessary to say that there are a good many of the higher paid and more intelligent workingmen to whom the life in a ménage such as has been described is extremely distasteful. Mr. Krupp has appreciated the desires of this class, and in 1893 he inaugurated an extremely interesting plan of erecting small compact houses specially constructed for the accommodation of 30 unmarried men. As yet only one such house has been erected as an experiment, but if successful the system will be further extended.

The idea, as exemplified in the existing house, is to provide a house that can be taken by a club of 30 men who will run it as a sort of living club house and share the payment of the expenses. The house that has been built contains three stories. On the ground floor are the dining room and kitchen. There are three reading and studying rooms, dressing rooms, a bath, lavatories, etc. On the upper floors are the living rooms for 30 men. Part of the rooms are single and part double-bedded rooms. The rooms are cheerful and contain a bed, a bureau, a wardrobe, a table, and chairs. In the writing rooms each member has a special drawer in the table provided with lock and key.

Thirty men club together and agree to take this house. The rent paid is 10 marks (\$2.38) per month by those occupying single, and 8 marks (\$1.90) by those occupying double-bedded rooms. A general manager is then elected by the members from among their number, who has entire charge of the building. He appoints a housekeeper, who takes care of the building, does the cooking, etc. The determination of the cost of the meals rests entirely with the members themselves.

They determine how much they will pay, and the general manager then makes the best use of this money that he can. The present club pays 1.25 marks ($29\frac{3}{4}$ cents) per member per day. With this 35 persons, including the housekeeper and her assistants, must be fed.

Meals of the following character are furnished: In the morning a first breakfast of coffee and bread, and a second breakfast of two meat and cheese sandwiches; at noon a warm meal consisting of meat, vegetables, bread, etc.; in the afternoon sandwiches again, and in the evening a warm supper of meat, somewhat less substantial than the dinner. Beer can be had at the house for 15 pfennigs (3.6 cents) a bottle.

From the foregoing it can be seen that the cost to each member for rent, including 1 mark (23.8 cents) per month for maintenance of the furnishings of the house, averages about 10 marks (\$2.38) per month, or $33\frac{1}{2}$ pfennigs (7.9 cents) per day; the cost of board is 1.25 marks ($29\frac{3}{4}$ cents) per day; the total cost for board and lodging being, therefore, about $1.58\frac{1}{2}$ marks (37.7 cents) per day. The members are mostly skilled iron workers and turners, earning from 4 to 5 marks (95 cents to \$1.19) per day.

From the standpoint of the firm, if the house is full, a yearly rent of 2,708 marks (\$644.50) will be obtained. The cost of the ground and building was about 65,000 marks (\$15,470). The maximum interest returns on the investment is therefore 4.17 per cent. It should be noted, however, that gas is supplied free by the firm, and the housekeeper and her daughter who assists her are able to live on a small salary, as her husband is pensioned by the firm. A visitor to this cooperative lodging house is struck with the admirable arrangement here devised, the full provision for the comfort and pleasure of the inhabitants, and at the same time the absolute freedom left to each, so that he can look upon his own room as his home. A vacancy is immediately competed for by a great many workingmen.

RELIEF AND PENSION FUNDS.

THE OLD GENERAL RELIEF AND PENSION FUND.

The system of relief and pension funds at Essen in its present form is of recent origin. This is due to the radical changes introduced in the organization of all such institutions by the series of laws enacted by the German Empire during the years 1883 to 1891 concerning the insurance of workingmen.

The existence of such funds in connection with the Krupp Works, however, dates from the year 1853, when a sick and death benefit fund (Kranken- und Sterbekasse) for the benefit of workingmen of the firm was created. Without entering into details concerning the fund, for it is now replaced by another system, it is sufficient to say that it combined in one institution the various services of a sick, accident, and old-age pension fund. The following table, showing the receipts and disbursements, renders extended comment unnecessary. Thus for thirty years previous to the introduction of the compulsory features in

workingmen's insurance by the State, a system had been organized offering almost if not quite as liberal benefits to workingmen as those provided for by the new series of laws.

RECEIPTS AND EXPENDITURES OF THE OLD GENERAL RELIEF AND PENSION FUND OF THE KRUPP IRON AND STEEL WORKS, BY FIVE-YEAR PERIODS, 1856 TO 1884.

Items.	1856-1860	1861-1865	1866-1870	1871-1875	1876-1880	1881-1884	Total.
RECEIPTS.							
Balance		\$11,314.85	\$35,818.39	\$66,564.91	\$177,662.80	\$253,207.53	
Entrance fees	\$1,182.22	4,367.14	3,324.37	8,222.82	2,316.76	2,485.75	\$21,899.06
Contributions of members	16,332.66	79,211.03	128,965.18	254,489.26	232,015.16	237,008.69	948,021.98
Contributions of firm	8,166.46	39,605.52	64,482.59	127,255.39	116,007.57	118,504.34	474,021.87
Fines	867.75	5,563.76	6,290.56	9,457.24	6,103.68	6,306.85	34,589.84
Interest	914.34	3,894.46	9,151.22	22,656.22	42,885.29	57,066.45	136,567.98
Miscellaneous receipts	645.85	152.12	844.33	4,838.76	2,060.90	731.05	9,273.01
Total	28,109.28	144,108.88	248,876.64	493,484.60	579,052.16	675,310.66	1,624,373.74
EXPENDITURES.							
Hospital service	a8,490.40	a45,824.75	17,189.52	38,184.23	22,051.50	24,467.74	156,208.14
Sick benefits, cash	(b)	(b)	52,542.24	120,303.18	136,359.64	119,299.49	428,564.55
Physicians, medicines, nurses, etc.	6,144.29	35,506.77	63,090.19	87,942.04	87,326.84	85,109.44	365,119.57
Voluntary and other irregular relief	813.49	21,776.09	35,465.24	47,640.43	44,392.88	24,568.77	174,656.90
Pensions, cash	687.49	1,895.02	4,719.85	9,057.62	23,355.34	44,508.74	84,224.06
Death benefits, cash	564.39	3,028.79	7,505.33	10,225.13	9,544.32	10,108.32	40,976.28
Miscellaneous expenditures	94.37	259.07	1,799.36	2,409.17	2,814.11	1,499.07	8,875.15
Balance	11,314.85	35,818.39	66,564.91	177,662.80	253,207.53	365,749.09	365,749.09
Total	28,109.28	144,108.88	248,876.64	493,484.60	579,052.16	675,310.66	1,624,373.74

a Including sick benefits.

b Included in hospital service.

The following table shows in detail the average number of members, the number of cases of sickness, and the expenditure per member during the entire existence of the old general relief and pension fund. It should be noted that the item of expenditure of administration is not included.

AVERAGE MEMBERS, CASES OF SICKNESS, AND EXPENDITURE PER MEMBER OF THE OLD GENERAL RELIEF AND PENSION FUND OF THE KRUPP IRON AND STEEL WORKS, 1856 TO 1884.

[It will be noticed that the average members from 1856 to 1882 as shown in this table agree with the total employees shown for the same years on page 480, while for 1883 and 1884 the figures are different. The explanation is not known. The figures are given as published by the company.]

Year.	Average members.	Cases of sickness.	Cases of sickness per member.	Expenditure per member.	Year.	Average members.	Cases of sickness.	Cases of sickness per member.	Expenditure per member.
1856.....	970	1,750	1.80	\$1.83	1871.....	8,810	20,651	2.34	\$5.82
1857.....	992	1,871	1.89	2.62	1872.....	10,394	13,280	1.28	5.68
1858.....	1,047	1,837	1.75	3.27	1873.....	11,671	22,874	1.96	5.19
1859.....	1,391	1,882	1.35	2.94	1874.....	11,543	22,474	1.95	5.98
1860.....	1,764	2,345	1.33	2.78	1875.....	9,743	19,828	2.04	7.80
1861.....	2,082	3,496	1.68	3.81	1876.....	8,998	16,064	1.86	7.17
1862.....	2,512	4,345	1.73	4.18	1877.....	8,586	15,150	1.76	7.25
1863.....	4,185	8,373	2.00	4.18	1878.....	9,414	17,880	1.90	7.02
1864.....	6,693	16,893	2.52	4.80	1879.....	9,964	14,334	1.80	8.24
1865.....	8,187	21,215	2.59	4.91	1880.....	7,806	16,851	1.91	7.65
1866.....	6,350	15,840	2.49	7.50	1881.....	10,598	20,774	1.96	7.28
1867.....	6,869	15,490	2.26	5.04	1882.....	11,011	21,139	1.92	7.03
1868.....	6,217	14,275	2.30	4.87	1883.....	10,402	19,629	1.89	7.32
1869.....	6,318	15,003	2.37	4.96	1884.....	10,214	18,715	1.83	7.73
1870.....	7,084	15,190	2.14	5.43					

NEW SICK FUND.

The old fund was forced to wind up its operations in accordance with the national law of June 15, 1883, which, while making the maintenance of sick and pension funds obligatory, prohibited their union in a single fund. To replace this old fund, therefore, there were organized by the Krupp firm two independent funds, a sick fund (*Krankenkasse*) and a pension fund (*Arbeiter-Pensions-, Wittwen- und Waisenkasse*).

On winding up the affairs of the old fund, a net surplus of 1,536,760.87 marks (\$365,749.09) remained, as will be seen by the table. Of this sum it was determined to apportion 10,000 marks (\$2,380) to the new sick fund, with the proviso that in case an extraordinary demand should be made on the sick fund, as in case of an epidemic, before the legal reserve fund could be accumulated, a further sum of 100,000 marks (\$23,800) could be claimed. This, however, it never became necessary to do. The remainder of the old fund's assets was transferred to the new pension fund, for it was for the payment of these pensions that the large reserve fund had been accumulated.

Membership in the new sick fund is obligatory for all persons employed by the firm with the exception of officials receiving more than 6 $\frac{3}{4}$ marks (\$1.59) per day, or 166 $\frac{3}{4}$ marks (\$39.67) per month, or 2,000 marks (\$476) per year. Provision is also made for voluntary membership.

The resources of the fund, in addition to the 10,000 marks (\$2,380) received from the old fund, consist practically of contributions by members of an amount equal to 2 per cent of their average wages as far as the latter do not exceed 4 marks (95 cents) per day, and contributions by the firm of a sum equal to one-half of that amount. Other receipts are unimportant, and consist of interest on funds invested, entrance fees, fines, and other miscellaneous items. If the state of the funds permit, the contribution of the members can be reduced, provided that their contributions to the pension fund are augmented to an equal amount. In consequence of this provision, the contributions of members were reduced in 1889 to 1.7 per cent of their average wages. Considerable latitude is also given regarding the power to raise and lower the rate of benefits granted in order to conform to the needs of the fund's budget. A reserve fund is provided for, the minimum amount of which can not be less than the average, of the last three years' expenditures.

From this fund provision is made for the granting of the following benefits:

1. Free medical attendance by a physician employed by the fund, free medicine, free medical supplies, etc. This includes hospital treatment and nursing for members who are married or members of families, if the disease is of such a nature as to require treatment outside their homes, and to all other persons unconditionally. In this case, however, the cash benefits paid to sick members are somewhat reduced.

2. Cash benefits to workmen when sick, after the third day of their illness, equal to one-half their average wages. If they are married or widowed and have children under 15 years of age who are not working, an additional allowance of 5 per cent for each child is accorded. Such total additional allowances can, however, in no case exceed $16\frac{2}{3}$ per cent of the wages, so that the regular and additional benefits can never exceed two-thirds of the recipient's wages. If the member has been in the employ of the firm less than five years, these benefits are paid during thirteen weeks only; but if they have been so employed five or more years, during a period of twenty-six weeks. Liberal power, however, is given to the management of the fund to continue the payments in worthy cases for a year if necessary.

3. In case of death a cash benefit equal to 20 times the amount of the decedent's average daily wages, but not to exceed 80 marks (\$19.04) nor be less than 20 times the average daily wages of ordinary laborers. A death benefit equal to two-thirds of this benefit is also paid in case of the death of the wife of a member.

The sick-benefit fund employs 16 physicians, 10 of whom live in Essen and the others in neighboring towns where the firm employs labor. Two oculists are among the physicians who reside in Essen. Arrangements also exist whereby the services of specialists for throat and other diseases may be secured whenever recommended by the attending physicians. The choice of physicians is optional with the patient. The compensation of the physicians depends upon the number of members of the fund and the number treated by each, respectively. For instance, the total for all physicians is determined in a lump sum, according to the membership. This amount is then apportioned to the physicians according to the number of persons treated by each. In order to facilitate the rendering of aid in case of injury, three special attendants (Heildiener) are stationed at two bandage dispensaries (Verbandstationen) within the works. Medicines, bandages, etc., are also placed in six portable medicine and bandage chests distributed at convenient points. Three special attendants are employed for performing minor surgical operations, such as cupping, leeching, tooth extracting, etc., whenever directed by the attending physicians. They receive compensation according to a fixed schedule of rates.

All apothecaries in Essen, Altendorf, Altenessen, Borbeck, Berge-Borbeck, Rellinghausen, Werden, and Muhlheim-on-the-Ruhr participate in furnishing medicines. The sick-benefit fund enjoys a rebate of from 10 to 25 per cent on all medicines. The charges allowed for medicines are determined by a paid pharmacist in accordance with the usual rates charged for medicines, and are verified by a factory physician. The bandage material is bought at wholesale directly from the manufacturer. All bandages, as well as orthopedic instruments, artificial limbs, etc., are furnished gratis to members of the fund.

The claims for assistance are usually made by a representative of the working people who is on the board of directors. He examines the

applications, usually certified to by the physicians, and reports the result to the board. Two inspectors are engaged to visit the homes of the patients receiving aid and to keep a general supervision over the condition of the recipients. They report also to the board of directors of the sick fund any facts that may be of interest in determining the assistance to be granted.

Another feature of the sick fund is one in the interest of married members. By its provisions every member may contribute 1.25 marks (29 $\frac{3}{4}$ cents) quarterly to the so-called "family fund," which entitles him to the services of a physician for members of his family, if the latter are not already connected with some sick fund or are not otherwise entitled to aid in case of sickness. Since April 1, 1890, this plan has also been extended to the families of pensioned invalids. An annual appropriation, which at present amounts to 1,200 marks (\$285.60), is made out of the workingmen's fund (Arbeiter-Stiftung) in aid of this service.

The administration of the fund is in the hands of a general assembly and board of directors elected by the firm and by the members of the fund. For the duties and powers of these bodies reference must be had to the constitution.

The operations of the sick-benefit fund extend far beyond those prescribed by law. They include, among other things, maintenance for as long a period as fifty-two weeks for persons over five years in the employ of the firm, and extra assistance in addition to regular sick benefits equal to 5 per cent of the wages for each child under 15 years of age and not working, the total not exceeding two-thirds of a maximum wage of 4 marks (95 cents) per day.

Notwithstanding the liberality of this fund the firm of Krupp has done a great deal in other ways for the relief of suffering resulting from sickness among its employees.

In 1879 Mr. Alfred Krupp donated a sum of 6,000 marks (\$1,428) for relief in cases of sickness and distress in families, in commemoration of the golden wedding of the late Emperor William I. Later the firm of Friedrich Krupp placed at the disposal of this fund an annual sum of 3,000 marks (\$714). A careful statement is kept of the disposition of these funds.

The directors of the fund have, furthermore, at their disposal the 5 per cent interest on a sum of 40,000 marks (\$9,520) donated by Mr. Friedrich Alfred Krupp. This interest, namely, 2,000 marks (\$476) per year, is intended for the payment of a part of the expenses borne by needy employees who have members of their families under treatment in the women's and children's division of the Krupp Hospital.

Lastly the trustees of the workingmen's fund (Arbeiter-Stiftung) have turned over to the directors of the sick fund a sum of 1,500 marks (\$357) for the last half of the year 1889 and 3,000 marks (\$714) for the year 1890, to be used for assisting members and their families.

The directors of the sick fund thus have the disposition of large amounts of money for assisting its members, not only in case of their

own illness but also in case of indigence in their families. The operations of the fund proper are shown in the table that follows. It is unnecessary to make any comment. The salient features may be seen at a glance. It is of interest, however, to know what is the average expenditure per member, and whether this average tends to increase or diminish during the year. The necessary calculations have been made in the following statement. The same information was given for the old fund, embracing the years 1856 to 1884. The two tables together, therefore, show the average annual cost per member of a general sick fund.

AVERAGE MEMBERS AND EXPENDITURE PER MEMBER OF THE NEW SICK FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894.

Year.	Average members.	Total expenditure.	Average expenditure per member.
1885	10,695	\$55,944.89	\$5.23
1886	11,784	74,173.21	6.29
1887	12,694	86,208.38	6.79
1888	13,266	81,660.59	6.16
1889	14,081	87,232.12	6.20
1890	15,572	92,350.09	5.93
1891	16,085	101,858.64	6.33
1892	16,779	109,067.62	6.50
1893	17,074	108,237.55	6.34
1894	16,705	97,370.17	5.83

RECEIPTS AND EXPENDITURES OF THE NEW SICK FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894.

Items.	1885.	1886.	1887.	1888.	1889.	1890.
RECEIPTS.						
Balance on hand at beginning	\$2,380.00	\$34.74	\$186.93	\$281.89	\$4,514.26	\$9,833.38
Contributions of members	52,696.02	57,284.29	61,759.61	66,469.86	64,368.31	65,568.15
Contributions of firm	26,348.01	28,642.14	30,879.81	33,234.93	31,480.03	32,768.53
Interest	511.31	1,347.08	1,904.79	3,436.72	3,351.04	3,351.04
Restitution by others for aid granted sick	629.45	1,325.41	2,436.32	1,785.82	2,804.90	3,183.06
Miscellaneous receipts	3,640.84	6.48	32.81	5.63	6.96	20.99
Total	86,205.63	88,640.14	97,200.27	105,214.85	106,585.50	114,725.15
EXPENDITURES.						
Expenses of administration	659.73	764.84	692.70	750.20	725.35	747.89
Medical attendance	8,257.10	9,074.72	10,096.27	10,259.86	10,789.07	12,084.97
Medicines	10,977.22	13,443.59	14,073.13	13,020.88	14,111.07	15,150.69
To hospitals for attendance and nursing	4,144.78	4,481.15	5,633.11	5,949.32	5,799.93	7,614.65
Sick benefits paid to members	26,343.95	38,353.83	46,547.50	37,145.65	40,956.05	41,055.79
Sick benefits paid to dependents of members	557.13	587.14	977.59	7,212.84	7,601.64	7,818.69
Death benefits	2,337.20	3,008.62	3,456.55	3,060.04	3,433.78	3,571.43
Miscellaneous relief	1,317.69	1,517.49	1,552.95	1,511.06	1,885.80	1,768.77
Miscellaneous expenditures	1,350.09	2,941.83	3,178.58	2,750.74	1,929.43	2,537.21
Contributed to reserve fund	30,226.00	14,280.00	10,710.00	19,040.00	9,520.00	14,280.00
Balance on hand at end	34.74	186.93	281.89	4,514.26	9,833.38	8,095.06
Total	86,205.63	88,640.14	97,200.27	105,214.85	106,585.50	114,725.15
Reserve fund at beginning		30,226.00	44,506.00	55,216.00	74,216.00	83,776.00
Contributed to reserve fund	30,226.00	14,280.00	10,710.00	19,040.00	9,520.00	14,280.00
Reserve fund at end	30,226.00	44,506.00	55,216.00	74,256.00	83,776.00	98,056.00

RECEIPTS AND EXPENDITURES OF THE NEW SICK FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894—Concluded.

Items.	1891.	1892.	1893.	1894.	Total.
RECEIPTS.					
Balance on hand at beginning.....	\$8,095.06	\$8,041.80	\$16,519.41	\$2,163.06	\$2,380.00
Contributions of members	69,447.67	73,233.19	66,363.95	55,943.49	633,134.54
Contributions of firm	31,704.80	36,665.80	33,148.27	27,957.19	315,829.51
Interest.....	2,760.80	5,583.48	2,927.40	6,297.48	31,471.14
Restitution by others for aid granted sick	3,215.11	1,892.04	2,722.38	3,400.82	23,455.31
Miscellaneous receipts	7.00	170.72	1,380.80	2,420.44	7,692.67
Total.....	118,230.44	125,587.03	123,062.21	98,182.48	1,013,963.17
EXPENDITURES.					
Expenses of administration.....	751.24	834.72	911.26	1,085.58	7,923.51
Medical attendance	12,666.40	14,280.85	18,406.29	14,905.71	120,821.24
Medicines	16,463.58	20,334.81	19,732.45	20,060.55	157,372.97
To hospitals for attendance and nursing	9,055.99	8,138.14	6,431.78	6,931.61	64,180.46
Sick benefits paid to members	45,246.62	48,759.57	51,316.20	46,412.29	422,137.45
Sick benefits paid to dependents of members	8,366.65	8,665.86	4,756.67	606.57	47,150.78
Death benefits	4,536.09	4,368.26	4,320.97	3,468.38	35,501.32
Miscellaneous relief	2,273.90	2,494.87	71.78	122.27	14,516.58
Miscellaneous expenditures	2,493.17	1,190.54	2,290.15	3,777.21	24,498.95
Contributed to reserve fund	8,330.00	.....	12,661.60	.....	119,047.60
Balance on hand at end	8,041.80	16,519.41	2,163.06	812.31	812.31
Total.....	118,230.44	125,587.03	123,062.21	98,182.48	1,013,963.17
Reserve fund at beginning	98,056.00	106,386.00	106,386.00	118,286.00	.....
Contributed to reserve fund	8,330.00	.....	12,661.60	.....	118,286.00
Reserve fund at end.....	106,386.00	106,386.00	118,286.00	118,286.00	118,286.00

a It will be noticed that \$12,661.60 is carried to the reserve fund, while the reserve fund is increased only \$11,900. The explanation of this is not known; the figures are as furnished by the company.

NEW PENSION FUND.

The imperial law of June 15, 1883, regarding workingmen's insurance necessitated, as has been shown, the abolition of the old sick and pension fund and the creation in its place of two independent funds. The constitution of the new pension fund (Pensionskasse für die Gussstahlfabrik der Firma Fried. Krupp) was adopted October 22, 1884. Membership in this fund is obligatory, and applies to the same classes that are included in the sick fund.

The resources of the fund were made to consist of (1) the entire assets of the old sick and pension fund, excepting the 10,000 marks (\$2,380), previously mentioned, that were turned over to the sick-benefit fund; (2) an entrance fee from each member of an amount equal to 1½ times his daily wages, where such wages do not exceed 4 marks (95 cents); (3) a contribution by each member of an amount equal originally to 1 per cent, but increased July 1, 1889, to 1.3 per cent of his annual wages at the same time that his contribution to the sick fund was reduced from 2 per cent to 1.7 per cent; (4) a contribution by the firm of an amount equal originally to one-half, but in 1891 increased to the same amount as that paid by the workingmen; (5) miscellaneous receipts, such as interest on funds invested, fines, voluntary gifts, etc. The rate

of the contributions can, within certain limits, be increased or diminished if the condition of the fund is such as to demand or warrant such a change.

From the fund thus constituted provision was made for the payment of pensions as follows:

1. To workmen who have been in the employ of the company for twenty years continuously, or who have done specially difficult work for the firm during at least fifteen years, an annual pension equal to 40 per cent of their average wages during the preceding three years. For every additional year of service the pension is increased by an amount equal to $1\frac{1}{2}$ per cent of the average wages. Wages over 4 marks (95 cents) per day are not considered in making this calculation.

2. To widows of pensioners, or those who would have been entitled to receive a pension in case of disability until their death or remarriage, $33\frac{1}{3}$ per cent of the pension of their husbands.

3. To children of these fathers until the age of 15 years or death, 10 per cent, or in case they have no mother, 15 per cent of the pensions of their fathers. In no case, however, can the total of pensions to survivors exceed 90 per cent of the pension to which the husband or father was entitled.

4. Partial pensions are also given to those entitled to pensions, but who are capable of doing light work. The partial pension can not exceed in amount one-half of that granted to totally disabled invalids, nor can the total amount paid for all partial pensions exceed 10 per cent of that for all pensioners.

The imperial law of June 22, 1889, regarding invalidity and old-age pensions necessitated several changes in the constitution of this fund. These modifications, which are very comprehensive in character, were incorporated in an amendment to the constitution adopted July 5 and approved August 18, 1890.

The imperial law, establishing a system of old-age and invalidity pensions under the auspices of the State, provided that an employer already maintaining a fund for the granting of such pensions to his employees could reduce the amount of such private pension by the amount granted under the national system, or, indeed, do away with the private fund altogether, provided, of course, no obligations already incurred were violated. The Krupp firm had been maintaining a private fund, which granted pensions in excess of those required by the imperial law. In order that its employees might receive some additional advantages from the law, the firm amended the constitution of its fund so that the pension received from this source would be reduced by an amount equal to only one-half the pension received from the general system. The effect of this was to increase the total pension received from the national and private funds by an amount equal to one-half the pension provided for in the law, the total amount received thus being far greater than that required by law.

The maximum wage for eligibility to pensions was raised from 1,200

to 2,000 marks (\$285.60 to \$476) per year. A special fund is provided for all those employed who earn over 2,000 marks (\$476). The amendment also provided that the widow's pension be raised from 33½ to 50 per cent of that received by the husband. To insure the payment of this additional expense the firm raised its contribution from one-half to an amount equal to that contributed by the members.

The significance of these changes can be seen in the following table showing the total amount of the pensions received by a workingman earning 1,200 marks (\$285.60) per annum, or by his widow and children:

SCHEDULE OF PENSIONS PAID FOR INVALIDITY TO MEMBERS OF THE NEW PENSION FUND OF THE KRUPP IRON AND STEEL WORKS EARNING \$285.60 PER ANNUM, AND TO THEIR WIDOWS AND CHILDREN.

[The figures in the table indicate that the child in each case receives only one-half of the pension provided by the constitution. The explanation is not known. The figures are given as furnished by the company.]

Length of service of members.	Pension paid to—				
	Members before passage of law.	Members since passage of law.	Widows.	One child.	
				Mother living.	Mother dead.
20 years	\$114.24	\$143.42	\$57.12	\$5.71	\$8.57
25 years	135.66	168.86	67.83	6.78	10.17
30 years	157.08	194.30	78.54	7.85	11.78
35 years	173.50	219.75	89.25	8.93	a 12.79
40 years	199.92	245.19	99.96	10.00	14.99

a Calculated on the same basis as the other figures in the column this should be \$13.39. The figures are given, however, as published by the company.

The following tables give all the desirable information concerning the operations of the fund since its creation:

RECEIPTS AND EXPENDITURES OF THE NEW PENSION FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894.

Items.	1885.	1886.	1887.	1888.	1889.	1890.
RECEIPTS.						
Balance on hand at beginning	\$363,536.57	\$20,844.38	\$21,820.01	\$8,499.73	\$13,498.49	\$14,006.58
Contributions of members	26,317.02	28,585.42	30,833.71	32,260.29	40,002.06	50,247.15
Contributions of firm	13,158.52	14,292.73	15,416.87	16,130.16	20,001.04	25,123.59
Entrance fees	2,175.99	2,830.58	3,273.39	2,661.70	5,159.69	5,050.19
Fines	1,465.97	1,762.53	1,763.77	2,039.48	2,231.33	2,222.06
Interest	14,619.88	16,137.37	17,566.73	18,851.70	20,023.36	21,704.69
Miscellaneous			298.89		59.76	427.90
Total	421,273.95	84,453.01	90,973.37	80,443.06	100,975.73	118,782.16
EXPENDITURES.						
Pensions	19,013.26	24,782.51	31,743.59	41,244.64	48,852.23	57,312.96
Premiums, expenses incident to purchase of securities, etc.	12,516.31	2,150.49	3,130.05	1,886.46	2,365.10	1,953.93
Miscellaneous				13.47	51.82	33.33
Invested in securities	368,900.00	35,700.00	47,600.00	23,800.00	35,700.00	35,700.00
Balance	20,844.38	21,820.01	8,499.73	13,498.49	14,006.58	23,781.94
Total	421,273.95	84,453.01	90,973.37	80,443.06	100,975.73	118,782.16
Reserve invested in 4 per cent securities—						
On hand at beginning		368,900.00	404,600.00	452,200.00	476,000.00	511,700.00
Invested	368,900.00	35,700.00	47,600.00	23,800.00	35,700.00	35,700.00
On hand at end	368,900.00	404,600.00	452,200.00	476,000.00	511,700.00	547,400.00

RECEIPTS AND EXPENDITURES OF THE NEW PENSION FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894—Concluded.

Items.	1891.	1892.	1893.	1894.	Total.
RECEIPTS.					
Balance on hand at beginning.....	\$23,781.94	\$45,574.52	\$29,205.29	\$55,299.05	\$303,536.57
Contributions of members.....	59,359.80	63,149.20	64,037.61	62,883.31	457,675.57
Contributions of firm.....	59,359.80	63,149.20	64,037.61	62,883.31	353,552.83
Entrance fees.....	4,645.29	3,949.09	3,534.97	2,051.31	35,332.20
Fines.....	2,399.35	2,363.56	2,425.08	2,694.37	21,277.50
Interest.....	23,869.73	27,388.02	30,481.41	33,066.30	223,709.19
Miscellaneous.....	397.15	235.95	457.99	245.66	2,123.30
Total.....	173,813.06	205,809.54	194,179.96	219,033.31	1,457,207.16
EXPENDITURES.					
Pensions.....	65,260.04	74,576.84	88,168.22	116,237.31	567,191.60
Premiums, expenses incident to purchase of securities, etc.....	3,440.54	6,784.12	3,067.66	1,858.16	39,152.82
Miscellaneous.....	37.96	43.29	45.03	69.59	294.49
Invested in securities.....	59,500.00	95,200.00	47,600.00	23,800.00	773,500.00
Balance.....	45,574.52	29,205.29	55,299.05	77,068.25	77,068.25
Total.....	173,813.06	205,809.54	194,179.96	219,033.31	1,457,207.16
Reserve invested in 4 per cent securities—					
On hand at beginning.....	547,400.00	606,900.00	702,100.00	749,700.00	.....
Invested.....	59,500.00	95,200.00	47,600.00	23,800.00	773,500.00
On hand at end.....	606,900.00	702,100.00	749,700.00	773,500.00	773,500.00

PENSIONERS AND AVERAGE PENSIONS UNDER THE NEW PENSION FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894.

Year.	Men.		Widows.		Orphans.		Partial pensions.		Total pensions.	
	Number.	Average.	Number.	Average.	Number.	Average.	Number.	Average.	Number.	Average.
1885.....	110	\$99.64	126	\$63.57	4	\$11.30	.....	.....	240	\$79.22
1886.....	155	95.87	156	63.06	11	7.81	.....	.....	322	76.96
1887.....	204	92.51	211	60.17	12	11.55	.....	.....	432	73.48
1888.....	247	105.54	247	62.14	18	11.37	5	\$7.24	518	79.63
1889.....	281	106.45	296	62.15	26	11.51	10	24.41	613	78.69
1890.....	312	109.89	357	62.09	35	11.47	15	30.72	719	79.71
1891.....	344	109.75	411	64.36	43	11.24	17	33.52	815	80.07
1892.....	395	104.04	488	65.70	65	13.18	17	32.94	965	77.28
1893.....	478	104.19	538	68.04	86	11.52	28	27.46	1,130	78.02
1894.....	658	110.97	587	69.31	98	13.17	52	23.98	1,395	83.32

AVERAGE MEMBERS AND EXPENDITURES PER MEMBER OF THE NEW PENSION FUND OF THE KRUPP IRON AND STEEL WORKS, 1885 TO 1894.

[It will be noticed that the figures in this table showing average members do not agree with the figures on page 480. The explanation is not known. The figures are given as furnished by the company.]

Year.	Average members.	Expenditures.					
		Pension.	Pension per member.	Other expenses.	Other expenses per member.	Total.	Total per member.
1885.....	10,673	\$19,013.26	\$1.78	\$12,516.31	\$1.17	\$31,529.57	\$2.95
1886.....	11,707	24,782.51	2.12	2,150.49	.18	26,933.00	2.30
1887.....	12,642	31,743.59	2.51	3,130.05	.25	34,873.64	2.76
1888.....	13,168	41,244.64	3.13	1,899.93	.15	43,144.57	3.28
1889.....	14,187	48,852.23	3.44	2,416.91	.17	51,269.14	3.61
1890.....	15,482	57,312.96	3.70	1,987.25	.13	59,300.21	3.83
1891.....	15,980	65,260.04	4.08	3,473.50	.22	68,733.54	4.30
1892.....	16,741	74,576.84	4.45	6,827.41	.41	81,404.25	4.86
1893.....	16,936	88,168.22	5.21	3,112.70	.18	91,280.92	5.39
1894.....	16,509	110,237.31	7.04	1,927.76	.12	118,165.07	7.16

From the experience thus far it is impossible to judge how long, on an average, an invalid of the steel works remains on the pension rolls. Cases have occurred in which quite considerable demands have been made upon the fund. Thus, for instance, three invalids died recently who lived $18\frac{3}{12}$, $19\frac{11}{12}$, and $13\frac{2}{12}$ years after having been placed on the pension list, and these invalids drew altogether 11,497.50, 14,937.50, and 6,912.50 marks (\$2,736.41, \$3,555.13, and \$1,645.18), respectively, in pension allowances.

FUNDS FOR THE INSURANCE OF OFFICIALS AND HIGHER PAID EMPLOYEES.

The pension funds that have been considered are for the laboring classes, strictly speaking. Their provisions apply only to those employees who are earning less than 2,000 marks (\$476) per annum. For those of its employees who are earning over that amount the firm has organized a parallel series of funds. The first of these, that for the granting of pensions to this class of employees, their widows, and orphans, was created July 1, 1890. As a nucleus for the fund Mr. Friedrich Alfred Krupp donated the sum of 500,000 marks (\$119,000). The regular sources of income consist of entrance fees equal to one-twelfth of the members' yearly earnings, dues equal to 3 per cent of the earnings, and a contribution by the firm equal to the amount paid by the members as dues. Membership is obligatory.

Members of the fund who have been at least five years in the employ of the firm receive in case of disability a pension of fifteen-sixtieths of their salary after five years' service, and one-sixtieth for each additional year of service. The pension can not in any case, however, exceed forty-five sixtieths of the salary received at the time of retirement. In case of death the widow of the member receives one-half of the husband's pension and each child under 18 years of age gets one-twentieth of the pension. The total paid to the heirs can not, however, exceed three-fourths of the entire pension. Any member who has been in the employ of the firm thirty-five years, or who has completed his sixty-fifth year of age, may apply for a pension. In all other cases, except when specially directed by the firm of Friedrich Krupp, a physician's certificate of disability must accompany the request for a pension.

The fund is administered by a board of directors. This consists of the president, treasurer, and secretary, who are appointed by the firm, and three directors elected by the members of the fund. The auditing committee consists of three members elected every three years by the members of the fund.

As the particular funds of the Krupp Works, as well as the provisions of the general law regarding the insurance of workmen against accident, do not apply to the insurance against accidents of employees earning over 2,000 marks (\$476) per annum, the firm has created a fund for the latter's insurance. The expense of the fund is borne entirely by

the firm. The schedule of pensions provides for the following indemnities:

In the case of death by accident the survivors receive the full wages which the member would have drawn at the time of the accident for the month when he died and the two months following. As soon as the payment of the full wages ceases, an annuity of 20 per cent of the wages is paid to the widow until her death or remarriage, and 15 per cent to each child until the attainment of 15 years of age. The total paid to survivors, however, can not exceed 60 per cent of the member's wages.

In case of accidents, not fatal, the injured person receives his full salary while under surgical treatment. If after surgical treatment he remains unable to perform his full duties, he receives an annuity of 66 $\frac{2}{3}$ per cent of his average wages in case of total disability; in case of partial disability he receives, during such disability, a fraction of the annuity mentioned above, to be measured by the extent of the partial disability.

The general workings of these two funds are the same as in the case of similar funds for workmen proper, and it is scarcely necessary to follow the details of their operations.

WORKINGMEN'S LIFE INSURANCE ASSOCIATION.

The desirability of life insurance is unquestionable. But among the working classes large numbers are deterred by their inability to understand the mechanism of insurance, the difference between different kinds of policies, and the real cost of carrying insurance; and in these matters the agents of the insurance companies are not always unbiased advisers.

To obviate the obstacles in the way of life insurance for its employees, and at the same time to cheapen the cost, the firm of Krupp organized in 1877 the present life insurance association. The objects of this association are not to itself offer insurance, but, as stated in its constitution—

1. To encourage insurance among the employees of the firm.
2. By making contracts with companies and undertaking the payment of premiums to secure to employees and their families, under advantageous conditions, the acquisition of life insurance of any kind, to be paid for in full or by annual premiums.
3. To act in general as an intermediary between the insurance companies and the insured.
4. To create a fund for the purpose of insuring the payment of premiums by members and to extend other extraordinary aid as far as its resources permit.

To accomplish these objects the association entered into special contracts with the principal life insurance companies, according to which the association agreed that thereafter it would act as the agent of the companies, that it would encourage insurance in every way, that it

would collect the premiums and pay them over to the companies, and pay to those entitled to it the insurance money due on the death of policy holders; in a word, that it would act as an intermediary in all necessary business transactions.

In return, the companies agreed to pay to the association all commissions that they usually paid to their local agents, and further agreed that they would charge no fee for the making out of policies, nor for medical examination.

The contract was made with a number of companies, in order that greater freedom of choice might be left to those wishing to become insured as to the kind of policies they desired to take out.

To those wishing to become insured, the advantages offered by the association were numerous. First of all, all the troublesome details necessary for securing a policy are managed by the association. All fees for examination or otherwise are abolished.

Financially, the members are benefited through their participation in the funds accumulated by the association through the payments by the insurance companies of sums in lieu of commissions and from gifts and donations received by it. When the association was first founded Mr. Alfred Krupp donated to it 50,000 marks (\$11,900), to which he subsequently added 4,000 marks (\$952). The firm also makes a regular quarterly contribution equal to one-half the amount received from the companies in lieu of commissions. The expenses of administration are borne entirely by the firm, so that the association has practically no running expenses. The funds of the association are used in the following ways:

One-half of the amount received by the association from the companies is credited to the policy holders as deductions on the amount of their premiums. Premium payments are also reduced by the direct application of the funds of the association. During recent years this reduction has amounted to nearly 8 per cent of the annual premiums. The remaining sum is used to aid members to pay their premiums in times of temporary distress and to grant loans to members. In cases of sickness or accident the necessary premium payments of a member may be made out of this fund. In these cases, however, the association should be reimbursed within a year. In particularly worthy and needy cases members can be permanently released from the necessity of making these repayments.

The system of granting loans enables the members to use their policies as collateral security for the raising of loans in times of emergency. No interest whatever is charged. The amount of the loan is limited to that which the private companies would grant in similar cases. Each loan must be repaid within one year in equal monthly or fortnightly installments. If repayment is not promptly made, interest at the rate of 6 per cent is charged. The policy is always transferred to the association as collateral security.

The affairs of the association are managed by a board of directors, consisting of nine members, of whom six are elected by the general assembly of all members, and three, including the presiding officer, are selected by the firm. The board of directors has at its service a number of confidential agents (Vertrauensmänner), of whom one or more are selected by the board from the membership of each of the forty-two districts into which the workingmen are divided. These officials hold office as an honorary post, and have the functions of insurance agents as far as they relate to efforts to encourage insurance and to preparing applications. The latter, when made, are acted upon by the board of directors. The agents are furnished with special instructions as to their duties and functions.

The workingmen, on taking out insurance, may select any of the policies offered in the rules and prospectuses of the different companies. The amount of the premium is therefore determined in each individual case according to the kind of policy and age, health, and occupation of the applicant. The following table, however, gives an average rate for 1,000 marks (\$238), payable at death:

AVERAGE FORTNIGHTLY PREMIUMS ON AN ORDINARY LIFE INSURANCE POLICY FOR \$238 IN THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS.

Age of applicant.	Premium payable fortnightly, fully paid up in—			
	20 years.	25 years.	30 years.	35 years.
20 years.....	\$0.29	\$0.26	\$0.24½	\$0.23
25 years.....	.31	.28	.26	.24½
30 years.....	.34	.30½	.28½	.27
35 years.....	.37½	.34	.31½	.30½
40 years.....	.42	.38	.36	.34½

The system of the joint insurance of man and wife is one often preferred by workingmen, by which the survivor receives the insurance money. The following table shows the average premium rate per fortnight, fully paid up in 25 years:

AVERAGE FORTNIGHTLY PREMIUMS ON A JOINT LIFE INSURANCE POLICY FOR \$238 IN THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS.

Age of elder person.	Age of younger person.			
	20 years.	25 years.	30 years.	35 years.
25 years.....	\$0.39	\$0.40½	.....	.....
30 years.....	.41	.42	\$0.44	.....
35 years.....	.44	.45	.46½	\$0.49
40 years.....	.48	.49	.50½	.52½

The operations of the association are fully set forth in the following tables (pages 502-504).

BUSINESS CONTRACTED WITH VARIOUS LIFE INSURANCE COMPANIES FOR MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, 1877 TO 1894.

Year.	New policies.		
	Number.	Amount.	Average.
1877.....	37	\$64,548.61	\$1,744.56
1878.....	1,340	392,398.96	292.84
1879-1884.....	1,191	410,628.75	344.78
1885-1889.....	611	315,198.63	515.87
1890.....	290	95,735.50	330.12
1891-1894.....	740	383,339.46	518.03

a Should be 2,189 in order to balance. The figures are given, however, as published by the company.

POLICIES HELD BY MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, BY FACE VALUE OF POLICY, 1878 TO 1894.

Face value of policy.	1878.				1879.			
	Policies.	Per cent.	Amount.	Per cent.	Policies.	Per cent.	Amount.	Per cent.
\$35.70.....								
\$47.60.....								
\$71.40.....	118	8.85	\$8,425.20	1.89	109	8.06	\$7,782.60	1.65
\$71.64 to \$142.80.....	492	36.91	68,472.60	15.36	496	36.69	69,008.10	14.59
\$143.04 to \$214.20.....	295	22.13	62,308.40	13.97	292	21.60	61,689.60	13.04
\$214.44 to \$285.60.....	129	9.68	33,331.90	7.48	135	9.98	34,855.10	7.37
\$285.84 to \$476.....	153	11.48	58,578.60	13.14	155	11.46	59,364.00	12.55
\$476.24 to \$714.....	72	5.40	49,837.20	11.18	81	5.99	56,120.40	11.86
\$714.24 to \$1,428.....	41	3.08	53,913.80	12.09	47	3.48	61,172.80	12.92
Over \$1,428.....	33	2.47	110,965.27	24.89	37	2.74	123,056.91	26.01
Total.....	1,333	100.00	445,832.97	100.00	1,352	100.00	473,049.51	100.00

POLICIES HELD BY MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, BY KIND OF POLICY, 1878 TO 1894.

Kind of policy.	1878.				1879.			
	Policies.	Per cent.	Amount.	Per cent.	Policies.	Per cent.	Amount.	Per cent.
Payable at death or specified age.....	751	56.34	\$328,165.77	73.61	757	55.99	\$352,669.11	74.55
For two lives conjointly.....	577	43.29	115,525.20	25.91	585	43.27	116,501.00	24.63
Endowment.....	5	.37	2,142.00	.48	10	.74	3,879.40	.82
Total.....	1,333	100.00	445,832.97	100.00	1,352	100.00	473,049.51	100.00
Insurance per member.....			349.40				366.99	

INDUSTRIAL COMMUNITIES.

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BUSINESS CONTRACTED WITH VARIOUS LIFE INSURANCE COMPANIES FOR MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, 1877 TO 1894.

Policies canceled.			Condition of business at end of year.					
Number.	Amount.	Average.	Persons insured.	Policies.			Annual premiums on policies.	
				Number.	Amount.	Average.	Amount.	Per cent of policies.
44	\$11,114.60	\$252.60	35	37	\$64,548.61	\$1,744.56	\$7.13	.....
620	189,638.42	305.87	1,276	1,333	445,832.97	334.46	8,999.55	.....
509	177,182.43	348.10	1,825	1,904	666,823.30	350.22	23,225.44	3.48
107	36,901.90	344.88	1,855	2,006	804,839.50	401.22	27,887.88	3.46
404	165,552.46	356.79	2,045	2,190	863,673.10	394.37	29,678.93	3.43
			2,308	2,466	1,081,460.10	438.55	38,630.65	3.57

POLICIES HELD BY MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, BY FACE VALUE OF POLICY, 1878 TO 1894.

1884.				1889.				1894.			
Policies.	Per cent.	Amount.	Per cent.	Policies.	Per cent.	Amount.	Per cent.	Policies.	Per cent.	Amount.	Per cent.
3	.16	\$107.10	.02	3	.15	\$107.10	.01	3	.12	\$83.30	.01
12	.63	583.10	.09	11	.55	523.60	.07	12	.49	571.20	.05
133	6.98	9,472.40	1.42	117	5.83	8,318.10	1.03	93	3.77	6,604.50	.61
614	32.25	82,871.60	12.43	539	26.87	72,173.50	8.97	491	19.91	65,200.10	6.03
270	14.18	56,417.90	8.46	238	11.37	47,362.00	5.89	182	7.38	37,746.80	3.49
396	20.80	97,127.80	14.56	508	25.32	123,272.10	15.32	894	36.25	214,783.10	19.86
242	12.71	94,802.20	14.22	283	14.11	111,819.20	13.89	378	15.33	151,803.20	14.04
117	6.14	81,229.40	12.18	143	7.13	100,186.10	12.45	179	7.26	127,294.30	11.77
67	3.52	84,020.80	12.60	104	5.18	129,359.80	16.07	130	5.27	160,792.80	14.87
50	2.63	160,191.00	24.02	70	3.49	211,718.00	26.30	104	4.22	316,580.80	29.27
1,904	100.00	666,823.30	100.00	2,006	100.00	804,839.50	100.00	2,466	100.00	1,081,460.10	100.00

POLICIES HELD BY MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, BY KIND OF POLICY, 1878 TO 1894.

1884.				1889.				1894.			
Policies.	Per cent.	Amount.	Per cent.	Policies.	Per cent.	Amount.	Per cent.	Policies.	Per cent.	Amount.	Per cent.
1,211	63.60	\$512,099.50	76.80	1,295	64.56	\$633,658.00	78.73	1,611	65.33	\$858,930.10	79.42
612	32.14	129,483.90	19.42	599	29.86	129,210.20	16.05	590	23.92	131,756.80	12.18
81	4.26	25,239.90	3.78	112	5.58	41,971.30	5.22	265	10.75	90,773.20	8.40
1,904	100.00	666,823.30	100.00	2,006	100.00	804,839.50	100.00	2,466	100.00	1,081,460.10	100.00
		365.38				385.09				468.57	

BENEFITS OBTAINED FOR MEMBERS OF THE WORKINGMEN'S LIFE INSURANCE
ASSOCIATION OF THE KRUPP IRON AND STEEL WORKS, 1877 TO 1894.

Year.	Reduction of premiums by use of—		Premiums paid in cases of—		Interest saved.	Other benefits.	Total benefits.	Capital of association at end of year.
	One-half of commissions paid by companies.	Funds of society (limited to 8 per cent of premiums).	Sickness.	Poverty.				
1877.....								\$12,238.31
1878.....	\$354.82					\$64.41	\$419.23	13,724.30
1879-1884....	3,571.50		\$1,565.68	\$941.51	\$1,074.32	889.89	8,042.90	24,875.24
1885-1889....	3,554.26	\$7,322.99	1,958.93	627.52	1,762.71	938.15	16,164.56	28,293.99
1890.....	886.99	2,177.28	480.50	84.51	392.50	184.97	4,206.75	28,593.54
1891-1894....	3,470.11	10,537.59	2,115.67	324.11	1,563.32	694.24	18,705.04	27,738.29
Total..	11,837.68	20,037.86	6,120.78	1,977.65	4,792.85	2,771.66	47,538.48	.....

COOPERATIVE DISTRIBUTIVE STORES.

During the first period of the rapid development of Essen the system under which the workingmen made their purchases was, as has been shown, demoralizing in the extreme. Not only were the articles purchased poor in quality and the prices exorbitant, but the workingmen were demoralized through the system of buying on credit that was encouraged by the storekeepers in order better to keep their customers in their power, through various lottery and prize schemes in connection with purchases, and through the prevalence of liquor selling in ordinary stores.

To remedy this the Krupp firm, in 1868, at the request of the members of a cooperative distributive society, took over its business, and with this as a beginning inaugurated a vast system of distributive stores (Consum-Anstalten) in which almost every article desired by the workingmen could be purchased.

As regards profits, the original policy of the firm was to so regulate prices that the stores should pay for themselves and neither profit nor loss be sustained. Though at this time there was no true division of profits the stores were never run on the truck-store principle. In all cases where a profit was realized it was applied in some way for the benefit of the workingmen. On January 1, 1890, however, in order to remove any suspicion that selfish interests were allowed to have any play, the firm introduced the true principle of cooperation whereby all profits were to be distributed among purchasers in proportion to the value of their purchases. Sales, as has been said, are made on an absolutely cash basis, but each purchaser is provided with a pass book, in which is entered the amount of his purchases in order that his share in the profits can be determined. Anyone can trade at the stores, but only employees of the firm are entitled to share in profits.

Under this régime prices are kept as near as possible to current prices elsewhere, though care is exercised that the latter be not exceeded. Printed posters are displayed showing the prices of the principal articles of consumption and indicating any changes in prices. The following table, compiled by the firm from their quotations, forms an interesting exhibit of the variation in prices of the principal commodities since 1872. The table can be used as a fair statement of the range of prices in Germany during these years, and has, therefore, more than a special interest.

PRICES OF COMMODITIES IN THE COOPERATIVE DISTRIBUTION STORES OF THE KRUPP IRON AND STEEL WORKS, 1872 TO 1893.

Articles.	Unit.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Potatoes	Bushel..	\$0.450	\$0.405	\$0.428	\$0.365	\$0.462	\$0.518	\$0.515	\$0.514	\$0.515	\$0.410	\$0.417
Rye bread	Pound..	.017	.017	.019	.017	.016	.017	.018	.018	.020	.022	.018
Beef:												
First quality	Pound..	.....	.....	.....	.140	.140	.140	.140	.139	.136	.134	.135
Second quality	Pound..	.....	.....	.....	.119	.119	.123	.130	.128	.126	.123	.124
Veal:												
First quality	Pound..	.....	.....	.....	.135	.135	.130	.131	.140	.140	.139	.140
Second quality	Pound..	.....	.....	.....	.124	.124	.119	.121	.130	.130	.128	.130
Mutton:												
First quality	Pound..	.....	.....	.....	.135	.135	.138	.144	.148	.140	.143	.140
Second quality	Pound..	.....	.....	.....	.124	.124	.127	.134	.138	.130	.130	.130
Pork	Pound..	.....	.....	.....	.147	.160	.162	.151	.144	.151	.161	.159
Pork sausage	Pound..	.155	.157	.159	.163	.171	.173	.173	.164	.162	.162	.162
Smoked bacon	Pound..	.151	.155	.154	.162	.180	.173	.155	.162	.166	.172	.190
American lard	Pound..	.124	.117	.139	.152	.143	.122	.100	.090	.113	.138	.147
Butter, first quality	Pound..	.246	.253	.264	.268	.270	.245	.225	.224	.255	.247	.243
Wheat flour	Pound..	.041	.044	.043	.033	.034	.039	.035	.034	.037	.036	.035
Groats	Pound..	.054	.054	.054	.054	.047	.043	.043	.041	.044	.043	.043
Buckwheat	Pound..	.031	.036	.038	.034	.032	.030	.028	.027	.032	.035	.031
Beans, white	Pound..	.029	.030	.038	.032	.026	.028	.028	.025	.030	.028	.029
Pease	Pound..	.027	.029	.035	.034	.033	.031	.028	.028	.031	.032	.031
Lentils	Pound..	.035	.032	.039	.045	.043	.039	.035	.034	.045	.060	.051
Barley	Pound..	.037	.038	.040	.039	.038	.037	.034	.033	.035	.032	.030
Rice	Pound..	.039	.037	.037	.035	.041	.039	.038	.037	.037	.037	.035
Vermicelli	Pound..	.073	.078	.086	.069	.065	.065	.065	.065	.065	.065	.065
Cheese, Holland	Pound..	.150	.149	.137	.137	.145	.142	.140	.145	.158	.162	.155
Turnip tops	Pound..	.041	.036	.034	.039	.030	.040	.033	.025	.030	.034	.031
Coffee, Java	Pound..	.212	.252	.278	.272	.266	.254	.241	.220	.217	.203	.184
Salt	Pound..	.019	.019	.019	.019	.019	.019	.019	.019	.019	.019	.019
Prunes, Turkish	Pound..	.060	.073	.086	.077	.060	.065	.076	.066	.072	.062	.072
Sugar:												
Refined	Pound..	.127	.121	.119	.114	.108	.116	.100	.097	.097	.098	.101
Loaf	Pound..	.162	.165	.166	.158	.144	.146	.133	.130	.130	.130	.130
Soap:												
Bar	Pound..	.065	.065	.065	.063	.060	.060	.060	.060	.057	.052	.052
Soft	Pound..	.048	.048	.047	.043	.043	.043	.042	.040	.039	.039	.039
Rape-seed oil	Quart..	.184	.171	.145	.145	.160	.166	.152	.130	.125	.123	.131
Petroleum	Quart..	.084	.080	.048	.048	.063	.060	.043	.040	.048	.045	.041

Articles.	Unit.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.
Potatoes	Bushel..	\$0.448	\$0.368	\$0.396	\$0.373	\$0.350	\$0.442	\$0.442	\$0.388	\$0.549	\$0.484	\$0.315
Rye bread	Pound..	.017	.016	.016	.015	.015	.014	.015	.016	.019	.019	.015
Beef:												
First quality	Pound..	.145	.140	.140	.135	.130	.127	.140	.148	.151	.151	.142
Second quality	Pound..	.134	.130	.130	.124	.109	.113	.129	.137	.140	.140	.131
Veal:												
First quality	Pound..	.140	.140	.140	.140	.140	.135	.140	.143	.147	.151	.144
Second quality	Pound..	.130	.130	.130	.130	.130	.124	.130	.132	.135	.130	.122
Mutton:												
First quality	Pound..	.140	.140	.140	.140	.140	.140	.140	.148	.151	.151	.141
Second quality	Pound..	.130	.130	.130	.123	.119	.119	.123	.130	.130	.127	.108
Pork	Pound..	.156	.135	.136	.130	.130	.125	.154	.161	.145	.149	.154
Pork sausage	Pound..	.169	.162	.162	.162	.162	.153	.169	.175	.173	.171	.168
Smoked bacon	Pound..	.176	.154	.156	.151	.151	.141	.174	.185	.162	.154	.164
American lard	Pound..	.137	.115	.103	.093	.095	.103	.108	.108	.165	.112	.141
Butter, first quality	Pound..	.254	.254	.235	.236	.232	.245	.257	.257	.261	.262	.258
Wheat flour	Pound..	.032	.028	.028	.027	.028	.029	.031	.022	.036	.033	.027
Groats	Pound..	.043	.038	.035	.035	.035	.035	.035	.039	.041	.042	.039
Buckwheat	Pound..	.030	.027	.026	.028	.025	.026	.028	.028	.030	.031	.028
Beans, white	Pound..	.030	.030	.029	.026	.025	.029	.028	.027	.030	.024	.024
Pease	Pound..	.032	.031	.028	.024	.024	.024	.027	.029	.033	.033	.030
Lentils	Pound..	.049	.045	.040	.051	.049	.057	.053	.051	.050	.063	.065
Barley	Pound..	.028	.028	.028	.028	.028	.028	.028	.030	.033	.032	.027
Rice	Pound..	.035	.035	.035	.034	.032	.032	.032	.033	.035	.035	.035
Vermicelli	Pound..	.065	.064	.060	.060	.060	.060	.060	.060	.063	.064	.060
Cheese, Holland	Pound..	.147	.150	.156	.160	.159	.164	.171	.173	.173	.173	.173
Turnip tops	Pound..	.027	.024	.024	.028	.026	.029	.030	.026	.027	.029	.030
Coffee, Java	Pound..	.182	.184	.172	.174	.232	.222	.245	.268	.286	.285	.285
Salt	Pound..	.019	.019	.019	.019	.019	.019	.019	.021	.022	.022	.022
Prunes, Turkish	Pound..	.070	.059	.049	.048	.049	.047	.046	.056	.074	.049	.063
Sugar:												
Refined	Pound..	.091	.081	.073	.071	.065	.069	.078	.070	.069	.070	.071
Loaf	Pound..	.126	.111	.106	.108	.108	.108	.110	.108	.108	.108	.108
Soap:												
Bar	Pound..	.055	.052	.049	.045	.043	.043	.043	.043	.048	.046	.048
Soft	Pound..	.039	.037	.035	.035	.035	.035	.032	.041	.036	.037	.030
Rape-seed oil	Quart..	.154	.133	.112	.101	.102	.116	.137	.150	.137	.121	.118
Petroleum	Quart..	.043	.043	.043	.041	.041	.043	.043	.042	.041	.039	.036

The system developed with extraordinary rapidity, until to-day its operations are conducted on a vast scale. In 1891 the system comprised 68 shops. Of these, 15 were general stores, 9 dry goods and clothing stores, 3 shoe stores, 1 hardware and house-furnishing store, 6 bake shops, 7 meat shops, 2 tailor shops, 7 restaurants, 8 liquor shops, 2 coffeehouses, etc. In connection with these are numerous establishments for the production or manufacture of various articles. Of these, the chief are 1 slaughterhouse and sausage factory, 2 bakeries, 1 shoe shop, 1 flour mill, 1 brush factory, 1 paper-bag factory, and an ice factory. As part of the system, there is also a hotel, a club room, 10 weekly markets, and a laundry.

The stores are all well housed. A central magazine was opened on July 1, 1874. It is a three-story structure, comprising a central building 22.4 meters (73½ feet) by 31 meters (101.7 feet), and 19 meters (62.3 feet) high, and two wings, each 18 meters (59 feet) by 15.2 meters (49.9 feet), and the same height as the central building. It contains a general store, a dry goods and clothing store, a hardware store, a shoe store, offices, a storage room, 2 tailor shops, 1 dining room for the personnel employed in the building, and dwellings for the janitress, saleswomen, servants, and porter. It also contains cellars for wine, beer, and leather. The building is provided with hot-air heating apparatus and a hydraulic elevator. There is also a three-story warehouse 62 by 15.7 meters (203.4 by 51½ feet), with a cellar and attic for the storage of supplies destined for the general stores. It contains also a coffee-roasting room and a spice mill. A gas motor supplies power to the elevator, spice mill, etc. A petroleum storage reservoir, with a capacity of 50,000 liters (13,208½ gallons), tank wagons, and iron receptacles at the stores are also provided.

The articles sold at the general stores are groceries, bakery and meat products, bottled beer, wines, liquors, mineral waters, tobacco, cigars, brushes, glass, porcelain and earthenware, stationery, school books, etc. The following list shows the quantity of the principal grocery products sold at these stores during the year 1890 :

Wheat flour..... pounds..	2, 059, 322	Rape-seed oil..... pounds..	326, 385
Groats..... do....	55, 675	Turnip tops..... do....	108, 514
Buckwheat flour..... do....	120, 813	Coffee..... do....	458, 034
Beans..... do....	201, 178	Substitutes for coffee... do....	145, 628
Pease..... do....	243, 461	Salt..... do....	577, 831
Lentils..... do....	39, 403	Prunes..... do....	153, 618
Barley..... do....	79, 221	Coarse sugar..... do....	56, 941
Rice..... do....	246, 611	Lump sugar..... do....	512, 980
Vermicelli..... do....	68, 685	Bar soap..... do....	190, 949
Cheese..... do....	19, 013	Soft soap..... do....	526, 631
American lard..... do....	249, 111	Petroleum..... do....	648, 130
Butter..... do....	246, 413	Potatoes..... bushels..	35, 392
Coal..... tons of 2,240 lbs..	9, 890		

The personnel of the general stores consists of 15 managers, 15 assistants, 2 apprentices, 71 saleswomen, and 35 laborers.

In the dry goods and clothing stores are sold dry goods, clothing, underwear, hats, umbrellas, sewing machines, etc. Forty-two persons are employed in these stores.

In the tailor shops clothing is made to order for men and boys, and such articles as bedding, underwear, overalls, etc. Repair work of all sorts is done. The personnel comprises a master tailor, a cutter, 21 journeymen tailors, and 2 seamstresses.

In the shoe stores foot wear of all kinds is kept in stock. Boots and shoes are made to order and repaired at the shoe shops. The personnel of the shops and stores consists of 1 master shoemaker, 11 journeymen shoemakers, 1 apprentice, 1 clerk, and 3 saleswomen.

The bakeries are furnished with 14 ovens, 4 kneading machines, and 1 cutting machine, operated by steam power. There is a mill for rough-grinding rye. The personnel of the mill and bakeries comprises 29 employees. The production during 1890 was 1,184,886 kilograms (2,612,223 pounds) of rye bread, 548,108 kilograms (1,208,370 pounds) of mixed (rye and wheat) bread, 233,523 kilograms (514,829 pounds) of wheat bread, besides quantities of rolls, toast, etc.

The abattoir comprises stables and pens for beeves, hogs, and sheep, a slaughterhouse, meat-storage room, sausage factory, sales room, smokehouse, 2 cold-storage rooms ventilated by water power, 3 cellars for pickling meat, drying rooms, warerooms, etc. Since July 1, 1885, the slaughtering and inspecting of meat is done at public abattoirs as required by law. In 1890 1,335 beeves, 1,343 calves, 4,907 hogs, and 817 sheep were slaughtered for the cooperative stores. The personnel of the abattoirs, including clerks, salesmen, cashiers, and butchers, comprised 52 persons.

The restaurants all have gardens and some have tenpin alleys. One, at Bredeney, has lodgings for transient guests. The restaurant in the central building is for persons employed there. One of the restaurants at Cronenberg has a hall with a seating capacity of 1,500 persons, a stage, galleries, and bookcases. It is intended for society meetings and festivities. In the wintertime the personnel of the Essen theater give fortnightly theatrical performances at this hall. The total amount of beer sold at the various bars and restaurants during 1890 was 1,424,539 liters (376,328 gallons). The personnel of the restaurants comprises 16 employees, such as managers, assistants, and laborers.

The hotel at Essen, the "Essener Hof," is intended for persons doing business with the Krupp establishment. Strangers are admitted at all times without any formalities. The hotel has a clubroom for the use of officials of the firm. The hotel contains twenty-five bedrooms, breakfast and dining halls, a billiard parlor, a tenpin alley, and a large garden. All beverages used at the hotel and restaurants must be obtained from the cooperative stores, as well as all food, which is sold at prices fixed by the management of the cooperative stores.

The wines and liquors for the restaurants and general stores are kept

in five cellars, where 1 master cooper and 8 journeymen coopers are employed. In 1890 there were sold 167,000 bottles of wine, each containing three-fourths of a liter ($1\frac{3}{8}$ pints).

All the ice which is not required for the steel works, the abattoir, stores, and restaurants, is sold to customers on subscription. In 1890 (May 1 to September 30), the total cost of ice for the season to the subscribers was 27 marks (\$6.43) for 15 kilograms (33 pounds) per day, 20 marks (\$4.76) for 10 kilograms (22 pounds), and 11 marks (\$2.62) for 5 kilograms (11 pounds) daily, delivered at the house. Ice is always on sale at the central magazine. It is delivered gratis to the members of the sick fund, when required on account of sickness.

Coffee stands are located at the main entrances to the steel works, at which coffee and rolls are sold in the morning before working hours. The average daily consumption in 1890 was 400 cups of coffee and 800 rolls.

The brush factory supplies all the brushes needed in the steel works and at the various stores. It employs 1 master brush maker, 2 skilled laborers, 12 partial invalids, and 2 assistants.

The paper-bag factory employs seven young women, daughters of widows.

Clothing is ironed at a fixed rate both for employees and others. Eighteen widows and daughters of former employees are employed in this work.

Weekly markets were established at the Cronenberg and Schederhof colonies for the sale of vegetables, bakery products, fish, and other food stuffs on squares belonging to the firm. Market masters employed by the firm keep the places in order, rent the chairs and stands, and attend to the weighing of products. Dealers pay a fee for the use of their stands.

Widows and dependents of deceased workmen often secure employment through these various institutions by sewing overalls, cartridge bags, etc., for the steel works; shirts, quilts, etc., for the drygoods department; and by cleaning up stores, offices, etc. Sewing machines are sold to them upon payment of small installments. During the year 1890, 449 widows and daughters of deceased workmen were employed in this way, earning altogether 43,031.74 marks (\$10,241.55).

The development of these stores has introduced entirely new habits regarding savings and the avoidance of debt. The small private stores have not been entirely crushed out by its competition, but since the system of apportioning profits, adopted in 1890, a great advance is yearly made. During the fiscal year 1890-91 there was a total of 11,154 pass books in use, showing about that number of families patronizing the stores. It is impossible to tell how many persons other than employees of the firm were also customers, but the number was said to be very large. The average profit distributed on sales is about 5 per cent.

**FUNDS FOR THE BENEFIT OF WORKINGMEN OTHER THAN THE
REGULAR RELIEF AND PENSION FUNDS.****WORKINGMEN'S AID FUND.**

Complete as are the provisions of the different benefit and pension funds, they can not provide for all cases of distress, even though the cases are such as are quite worthy of outside aid. Such, for instance, are those of workingmen who are sick, but can not fulfill the conditions entitling them to relief from the different relief funds, or when an unusual amount of sickness is experienced in a workingman's family. To meet these and other cases where general aid is desirable, Mr. Friedrich Alfred Krupp, in accordance with the wishes of his late father, set aside 1,000,000 marks (\$238,000) to constitute a workingmen's fund (Arbeiter-Stiftung). The administration of the fund is determined by a constitution adopted November 19, 1888.

Briefly recapitulated, the provisions of the constitution are the creation of a fund of 1,000,000 marks (\$238,000), to be known as the Krupp's workingmen's fund. Only the interest of the fund can be used, the capital must remain undiminished. The earnings must be applied exclusively to the benefit of the workingmen of the steel works at Essen and of the branches elsewhere, and for the dependents of the workingmen. By workingmen in this sense is meant not only those in actual service, but also those who have left the employ of the works or its branches on account of invalidity. Dependents include surviving members of the family after the death of a workingman.

The income of the fund can not be used for any expenditures resulting from present or future regulations. This applies as well to expenditures imposed by law upon the proprietor as to such expenditures as are obligatory upon such institutions as sick and pension funds, poor associations, etc., on account of statutory requirements.

The income is applied, first of all, to the rendering of aid in money or money value in cases of merited distress. It may also be used for the erection of institutions having for their object the physical and spiritual welfare of Krupp's employees or for assisting such institutions, already existing, in the form of subsidies. The assistance in the form of money or money value is especially granted:

1. To workingmen who were totally disabled but who have no claim to pensions—that is, such as have become incapacitated for work before having attained the time of service required by the pension regulations.

2. To widows and orphans of deceased workingmen who have no claim to pensions, namely, widows and orphans of workingmen who died or became permanently disabled before having attained the time of service required by the regulations.

3. To workingmen who remained ill and unable to work after the expiration of the time allowed, by the sick fund, for granting sick benefits, and who have therefore lost their claims upon that fund. Assistance may be given during the continuance of such sickness and disability.

4. To workmen afflicted with such serious and long-continued illness, that the sick fund seems insufficient under the circumstances.

5. To workmen who through no fault of their own have become destitute and fallen into debt on account of sickness or death in the family, or other misfortunes, particularly through the death of the housewife.

6. To pensioners whose pensions are insufficient to preserve them against destitution, or who, notwithstanding their pensions, have through no fault of their own (as on account of large families, sickness, etc.) become needy and fallen into debt.

7. To pensioners, for the purpose of facilitating the procuring of medical attendance and medicines in cases of need.

Whenever a person is legally entitled to communal poor relief, the assistance granted by this fund can not be given in lieu of such communal aid. It may be supplementary.

The following are specially mentioned as institutions for the erection and support of which the income of this fund may be applied: Institutions for the promotion of domestic sick-nursing (häusliche Krankenpflege); children's nurseries; cooking and housekeeping schools for female dependents of workmen; eating houses for the sick and indigent; workmen's schools (Fortbildungsschulen) for sons of employees; savings banks. All such institutions must be exclusively for the employees of the Krupp works, and all contributions out of the fund must be for their exclusive benefit.

The fund is managed by a board of five trustees, consisting of a chairman and two trustees appointed by the founder and two trustees elected by the directors of the sick fund. The two trustees elected by the sick fund must be taken from the ranks of the working people in the firm's employ. From these provisions it can be seen that the administration of the fund is conceived in the most general spirit. It is in every way a charitable fund, but at the same time it is not of such a character as would tend to lower the self-reliance of the beneficiaries.

ESSEN ENDOWMENT FUND.

The fund just described is for the exclusive benefit of the employees of the firm. But in 1887 Mr. Friedrich Alfred Krupp created a similar endowment of 500,000 marks (\$119,000), the income from which was to be used for the general betterment of conditions in the city of Essen, regardless of whether the benefited were employees of the firm or not. It is managed by a board of nine directors, one of whom is the mayor of the city, four are appointed by the city council, and four by the Krupp firm. Thus far the fund has been principally devoted to improving the condition of workmen's homes, that being deemed the direction in which the most useful work could be performed.

SCHOOLS.

The industrial character of Essen required that its schools should be of a kind suitable to the population. The public schools of the State afforded provision for ordinary primary instruction, though great over-

crowding would have resulted had not the firm supplemented the efforts of the State through the establishment of schools of its own. The main efforts of the firm, however, were directed toward the provision of industrial and technical education.

As the foundation of its efforts, there was adopted a liberal scheme of apprenticeship. Especial attention had always been given to this subject. Since 1864 indentures had been made in the form of contracts. The apprenticeship is for four years, except in cases of special proficiency, when it is sometimes reduced to three years. Each apprentice is trained in some particular trade, such as forge work, metal turning, pattern making, machine construction, and the building trades; but besides their own branches, apprentices are also required to gain some general knowledge of other work done at the steel works. Besides learning their trades, apprentices have the further advantage of accustoming themselves to accurate work. The workingmen's schools, attendance upon which is for them compulsory, give to them a thorough training in drawing and theoretical knowledge. Apprentices are thus better fitted for the higher positions of foreman, superintendent, etc., than other workingmen.

Apprentices are paid from the beginning of their services in accordance with the work done. The wages per day range from 65 to 70 pfennigs (15 to 17 cents) at the start, to 2.50 marks (60 cents). During the closing years of the apprenticeship piece wages are granted. Only one-half the wages is paid when due, the balance being given at the termination of the apprenticeship. Thus, for 103 apprentices who completed their time in 1890, 66,919.41 marks (\$15,926.82) had been retained, making an average of 649.70 marks (\$154.63) per apprentice paid out in lump sums. In cases where widows, or other dependents of deceased workingmen, have become dependent upon the apprentice, his wages to the extent of 1 mark (23.8 cents) per day may be paid in full; of the balance, however, one-half continues to be retained. Advances of money from the retained pay may also be made. In taking apprentices the sons of the older foremen and workingmen and of widows of former employees are given the preference.

In 1890 a sum of 12,000 marks (\$2,856) was set aside, the proceeds of which are used to entirely or partially pay for scholarships for sons of foremen and workingmen who desire to educate themselves in higher technical branches, and who have distinguished themselves by their good conduct, assiduity, and ability. The stipends are awarded by the directory upon the recommendation of a committee consisting of the chief of division, a superintendent, two foremen, and three workingmen. The stipends are sufficiently large to pay a considerable portion of the expense of scholarship, but only in rare cases do they cover the entire cost.

The purely scholastic institutions maintained by the firm, in addition to the primary schools already mentioned, consist of three distinct classes, viz, workingmen's schools, industrial schools, and housekeeping schools.

Workingmen's schools (Fortbildungsschulen) have existed in Essen since 1860. The course of instruction covers drawing, French, German, natural philosophy, mathematics, history, mensuration, mechanics, and the science of machinery and construction. Attendance is compulsory for all apprentices. An average tuition fee of 18 marks (\$4.28) per year is charged. The schools at Essen have 21 classes, 45 teachers, and about 900 pupils; a similar one at Altendorf has 7 evening and 7 drawing classes, 22 teachers, and about 300 pupils. The firm gives material aid to these schools, as well as to mining schools in the mining districts.

Industrial schools are of two kinds, those for women and those for girls of school age. Instruction in the former consists of sewing by hand and machine, embroidery, dressmaking, and ironing. The instruction is in charge of a principal and five teachers, all but two of whom have passed industrial teachers' examinations. The school is open to members of employees' families as well as to others. The tuition fees for the industrial schools for women are as follows: Sewing by hand, 3 hours daily, 2 marks (48 cents) per month, and 6 hours daily, 3 marks (71 cents) per month; sewing by machine, 3 hours daily, 9 marks (\$2.14) per 3 months, and 6 hours daily, 15 marks (\$3.57) per 3 months; embroidery, 3 hours daily, 3 marks (71 cents) per month, and 6 hours daily, 5 marks (\$1.19) per month; dressmaking, 3 hours daily, 10 marks (\$2.38) per 3 months; ironing, twice per week, 4 marks (95 cents) per month.

These fees are doubled for persons not members of employees' families. In 1890 the average attendance was 77 pupils in sewing by hand, 46 in sewing by machine, 29 in dressmaking, 28 in embroidery, and 6 in ironing, or a total of 186 pupils.

There are three industrial schools for girls of school age, situated in the three principal groups of workingmen's houses. The object of these schools is to give instruction in knitting, sewing, and crocheting. Only children of employees are admitted. The attendance in 1890 was 1,897 pupils, of whom 62 per cent were instructed in knitting, 30 per cent in crocheting, and 8 per cent in sewing. The pupils furnish their own materials, and when the articles are finished they can take them home for the use of the family. The tuition fee is 20 pfennigs (4.8 cents) per month in advance, but if the pupil attends regularly during the 15 months of the course and has a good record all the tuition money is refunded. The principal of the school for adults has supervision over these classes. The other teachers, 38 in number, are mostly widows and dependents of deceased employees.

The object of the housekeeping school is the education of girls over 14 years of age in the duties of an ordinary household. The instruction comprises the preparation of meals, preserving of fruits and vegetables, buying victuals, cultivating garden vegetables, washing, wringing, ironing, mending, darning, and all sorts of housework. A trained matron and two assistants have charge of the instruction. During attendance girls must board at the school. No tuition is charged, and the board and lodging cost 6 marks (\$1.43) per month.

In the case of poor persons this is frequently remitted in part. The course covers 4 months. Twelve new pupils are admitted every 2 months, making thus an attendance of 24 at any one time. Certificates are given to all who complete the course, and in meritorious cases money prizes are awarded.

A midday meal is served daily at the housekeeping school, for 35 pfennigs (8.3 cents), for widowers and their children, unmarried invalids, married men whose wives are ill, and widows who are prevented by work or sickness from doing their own cooking. In cases where, on account of the illness of the housewife, there is real destitution in the family, the physician may order that meals be furnished gratuitously.

The industrial and the housekeeping schools are under the management of the cooperative stores. The firm of Krupp furnishes the school accommodations and bears all expenses of maintenance, heating supplies and apparatus, salaries, etc. The housekeeping school cost in this manner a sum of 14,800 marks (\$3,522.40) during the first year of its operation, 1890-91.

It is unnecessary to comment upon the practical and useful character of the educational work of the firm. It seems to be perfectly adapted to the needs of the people.

HEALTH SERVICE.

To cope with the problem of public health consequent upon the aggregation of so many employees in one place, the firm has been under the compulsion of organizing a health service as elaborate and complete as that maintained by a government of a principality. Its service includes an elaborate board of health code, the maintenance of a corps of physicians, and the organization of a complete hospital service, and, finally, in order that exact information may always be at hand concerning the condition of the health of workmen, complete statistics concerning the health not only of employees but of their families as well.

The hospital service is naturally the most important and the central feature of the work. The service was first inaugurated in 1872, when buildings originally intended for the care of the wounded in the Franco-Prussian war were converted into hospital quarters. In 1888 the three original pavilions were supplemented by two new ones for women and children. In 1890 the three old ones were thoroughly renovated and partly reconstructed. The hospital is situated near the center of the town of Essen. The buildings are well isolated, thus affording plenty of light and air. The grounds cover an area of 1.7302 hectares (about 4 $\frac{1}{4}$ acres), of which 2,924 square meters (31,474 square feet) are built upon. The vacant ground is used for garden purposes for patients only.

Every attention is paid to the care of the buildings. All the walls are painted in light oil colors and the floors are of oiled hard wood. The bathrooms and water-closets have tiled wainscoting and tiled floors. The bedsteads are of iron and have wire mattresses. Every

precaution is thus taken to insure cleanliness. Lighting is done by gas and heating by hot-air furnaces. The operating room, dispensary, and the room for operating upon diphtheria patients are heated by gas stoves. The hospital is entirely owned by the firm, and its management is in the hands of the chief physician. The sick-fund management has no authority over it. The fund simply turns over its patients, for which it pays the firm 1.50 marks (35.7 cents) per day for men, 1.20 marks (28.6 cents) for women, 80 pfennigs (19 cents) for children, and 40 pfennigs (9½ cents) for infants. Any deficit is met by the firm.

The firm has also two hospitals for the treatment of epidemic cases. The larger of these is situated to the north and the other to the south of the steel works. They are both well isolated. The former consists of six barracks arranged in V shape and an administration building at the open end of the V. Each barrack contains four sick wards and a sitting room, lavatory, and bathroom. Each ward has four beds. The cubic air space is 40 cubic meters (1,413 cubic feet) per bed. Each ward is completely separated by wall partitions from every other. Each has its own stove. Oil is used for lighting. The administration building is one story high and contains nine rooms for the office and dwelling of the physician and his help.

The smaller hospital consists of two barracks, an administration building, and a deadhouse. Each barrack contains two large sick wards, a hall, sitting room, and water-closet. Each ward has fifteen beds. The air space per bed is 40 cubic meters (1,413 cubic feet). Special attention is given in both hospitals to light and ventilation.

The following tables give some idea of the scope of the work done by the hospital service in Essen:

STATISTICS OF DISEASES TREATED AT THE HOSPITALS OF THE KRUPP IRON AND STEEL WORKS, 1872-73 TO 1893-94.

Year.	Internal diseases.		Surgical cases.		Skin diseases.		Venereal diseases.		Total diseases.	
	Cases.	Percent of deaths.	Cases.	Percent of deaths.	Cases.	Percent of deaths.	Cases.	Percent of deaths.	Cases.	Percent of deaths.
1872-73..	533	6.1	466	3.2	162	.....	47	.....	α 1,228	3.6
1873-74..	355	7.0	344	3.1	117	.....	28	.....	844	4.3
1874-75..	223	8.1	225	1.3	59	.....	22	.....	529	4.9
1875-76..	217	6.5	194	2.0	50	.....	18	.....	479	3.8
1876-77..	129	9.3	134	3.7	23	.....	14	.....	300	5.6
1877-78..	129	13.1	183	0.5	59	.....	27	.....	α 401	4.4
1878-79..	115	13.0	175	.....	35	.....	32	.....	357	4.2
1879-80..	107	9.3	190	2.6	36	.....	35	.....	368	4.0
1880-81..	289	13.7	289	2.8	86	.....	62	.....	726	5.2
1881-82..	226	9.7	357	1.7	88	.....	90	.....	761	3.6
1882-83..	222	2.6	228	0.8	65	.....	24	.....	539	5.5
1883-84..	150	14.0	169	2.3	36	.....	16	.....	371	6.5
1884-85..	152	13.8	227	0.9	22	.....	17	.....	418	5.8
1885-86..	256	8.6	285	0.7	23	.....	23	.....	587	4.1
1886-87..	358	10.1	423	0.9	18	.....	29	.....	828	4.8
1887-88..	464	9.1	532	1.1	31	.....	18	.....	1,045	4.9
1888-89..	484	8.1	623	0.6	66	.....	21	.....	1,194	3.6
1889-90..	655	10.0	860	1.0	88	.....	20	.....	1,623	6.2
1890-91..	528	9.8	979	1.1	159	.....	28	.....	α 1,695	6.1
1891-92..	617	12.6	1,137	1.3	197	.....	34	.....	1,985	4.7
1892-93..	616	18.3	1,057	1.9	225	.....	63	.....	1,961	6.7
1893-94..	506	15.4	1,041	2.0	208	.....	53	.....	1,808	5.4

α This total does not agree with the sum of the items. The figures are given, however, as published by the company.

DAILY EXPENDITURES PER PATIENT AND TOTAL DAYS OF SICKNESS OF ALL PATIENTS IN THE HOSPITALS OF THE KRUPP IRON AND STEEL WORKS, 1878-79 TO 1893-94.

[Physicians' fees, depreciation, and amortization are not included.]

Year.	Daily expenditures per patient.										Total days of sickness.
	Repairs on buildings.	Wages and salaries.	Fuel.	Printing and stationery.	Miscellaneous supplies.	Food.	Drugs and bandages.	Washing and mending.	Miscellaneous expenditures.	Total.	
1878-79.	\$0.1071	\$0.0614	\$0.0118	\$0.0004	\$0.0030	\$0.2298	\$0.0429	\$0.0260	\$0.0025	\$0.4849	9,948
1879-80.	.0428	.0558	.0100	.0009	.0032	.2192	.0317	.0225	.0009	.3870	10,838
1880-81.	.0104	.0346	.0104	.0011	.0032	.1900	.0383	.0188	.0006	.3074	18,950
1881-82.	.0047	.0381	.0107	.0003	.0029	.1833	.0295	.0167	.0003	.2870	20,578
1882-83.	.0168	.0494	.0120	.0011	.0055	.1956	.0343	.0182	.0006	.3335	14,871
1883-84.	.0167	.0668	.0139	.0007	.0080	.2207	.0302	.0245	.0010	.3825	9,519
1884-85.	.0283	.0568	.0129	.0007	.0063	.1877	.0278	.0224	.0009	.3438	11,138
1885-86.	.0489	.0639	.0153	.0014	.0081	.2199	.0360	.0277	.0068	.4280	10,216
1886-87.	.0311	.0473	.0162	.0017	.0053	.1938	.0378	.0246	.0051	.3629	14,959
1887-88.	.0572	.0403	.0167	.0014	.0055	.2283	.0473	.0274	.0117	.4358	19,263
1888-89.	.0621	.0458	.0195	.0019	.0085	.2614	.0525	.0316	.0242	.5075	21,900
1889-90.	.0507	.0334	.0220	.0009	.0127	.2779	.0504	.0334	.0240	.5054	31,022
1890-91.	.2113	.0369	.0274	.0012	.0112	.3176	.0400	.0342	.0237	.7035	34,868
1891-92.	.0388	.0362	.0329	.0013	.0095	.3560	.0419	.0356	.0326	.5848	33,683
1892-93.	.1454	.0469	.0145	.0018	.0110	.3313	.0570	.0445	.0377	.6901	28,049
1893-94.	.0580	.0484	.0301	.0023	.0135	.3437	.0415	.0448	.0557	.6380	27,164

HOSPITAL PATIENTS AND COST OF HOSPITAL SERVICE OF THE KRUPP IRON AND STEEL WORKS, 1875-76 TO 1893-94.

Year.	Average employees of Krupp firm.	Hospital patients.			Days of patients in hospital.		Hospital expenditure (including depreciation).		Per cent of employees in hospitals.
		Men.	Women and children.	Daily average.	Total.	Per patient.	Total.	Per employee.	
1875-76.	9,720	479	.....	28.9	10,552	22.03	\$5,003.71	\$0.51	4.93
1876-77.	8,510	300	.....	22.8	8,306	27.69	3,946.28	.46	3.53
1877-78.	9,255	401	.....	26.4	9,644	24.05	4,276.38	.46	4.33
1878-79.	8,655	557	.....	27.3	9,948	27.87	5,643.93	.65	4.12
1879-80.	8,190	368	.....	29.7	10,838	29.45	4,970.15	.61	4.49
1880-81.	9,767	728	.....	51.9	18,950	26.10	6,629.01	.68	7.43
1881-82.	11,021	813	.....	56.2	20,508	25.23	6,842.98	.62	7.38
1882-83.	10,753	539	.....	40.7	14,871	27.59	5,573.96	.52	5.01
1883-84.	10,207	371	.....	26.1	9,519	25.66	4,072.89	.40	3.63
1884-85.	10,402	418	.....	30.5	11,138	26.65	4,465.83	.43	4.02
1885-86.	11,138	587	.....	28.0	10,216	17.40	4,930.17	.44	5.27
1886-87.	12,257	697	131	41.0	14,959	18.07	6,973.40	.57	5.69
1887-88.	13,053	734	464	52.8	19,263	18.43	10,216.15	.78	5.62
1888-89.	13,407	730	314	60.0	21,900	18.34	14,600.59	1.09	5.45
1889-90.	14,967	1,135	567	85.0	31,022	18.23	19,608.34	1.31	7.58
1890-91.	15,918	1,192	575	95.5	34,868	19.73	28,827.75	1.81	7.49
1891-92.	16,511	1,384	601	92.3	33,683	16.97	23,118.37	1.40	8.38
1892-93.	16,808	1,236	729	76.8	28,049	14.27	22,562.40	1.34	7.35
1893-94.	17,168	1,148	660	74.4	27,164	15.02	20,798.34	1.21	6.69

MORTALITY OF EMPLOYEES OF THE KRUPP IRON AND STEEL WORKS LIVING IN ESSEN, 1870 TO 1894.

Year.	Em- ployees.	Deaths.	Deaths per 1,000.	Year.	Em- ployees.	Deaths.	Deaths per 1,000.	Year.	Em- ployees.	Deaths.	Deaths per 1,000.
1870 ..	7,084	82	12	1879 ..	7,964	104	13	1887 ..	12,674	152	12
1871 ..	8,810	152	17	1880 ..	8,806	145	16	1888 ..	13,198	110	8
1872 ..	10,394	142	14	1881 ..	10,598	148	14	1889 ..	14,223	147	10
1873 ..	11,671	150	13	1882 ..	11,011	113	10	1890 ..	15,519	158	10
1874 ..	11,543	137	12	1883 ..	10,491	159	15	1891 ..	16,161	173	11
1875 ..	9,743	121	12	1884 ..	10,213	139	14	1892 ..	16,865	173	10
1876 ..	8,998	100	11	1885 ..	10,656	120	11	1893 ..	17,100	145	8
1877 ..	8,586	86	10	1886 ..	11,723	125	11	1894 ..	16,706	107	6
1878 ..	9,414	119	13								

OTHER INSTITUTIONS.

It would be almost impossible to describe the thousand and one ways in which the firm manifests its solicitude for the permanent welfare of its employees in addition to the ways already described. Contributions are made to almost every institution having for its object the elevation of the working classes. At the works provision is made for the furnishing of coffee and rolls at a minimum cost. A cup of coffee with sugar and a roll is provided for 7 pfennigs ($1\frac{2}{3}$ cents). Several eating houses with gardens are also provided for workmen who find it too far to return home for meals.

The unusual extent to which bathing facilities have been provided for employees should be especially commented upon. Bathrooms are provided at the exits of most of the shops. In addition there is a central bath house containing seven bathrooms with tubs, hot and cold water, and shower appliances, and a steam bath in which six persons can be accommodated simultaneously. The object of this central bath house is, first of all, the accommodation of patients who are not inmates of the hospital. Where baths are ordered by the physician the fees are paid by the sick fund. Other employees may also use the baths when not required by patients. The fees for employees are 15 pfennigs (3.6 cents) for tub baths and 1 mark (23.8 cents) for steam baths. The same fees are charged to the sick fund for patients. Free baths are allowed to workmen whose work is of such a nature as to make baths very desirable.

At the Hanover mines a bath house containing 28 cells with shower-bath appliances was erected at a cost of 20,000 marks (\$4,760). The daily attendance at these baths is about 1,100 persons.

Another bath house containing 16 cells for shower baths and one tub and shower bath was erected at the smelting works near Duisburg, at a cost of 10,000 marks (\$2,380). Out of 491 men employed there in 1890, the average daily attendance at the baths was 107 persons. No fees are charged for the use of these baths.

CONCLUSION.

The magnitude of the enterprise of Krupp at Essen, and the variety of social institutions that are found there, almost preclude any attempt at a general résumé of results. There are, however, certain general principles underlying the management of all these institutions that, though it is impossible to incorporate them in constitutions, yet determine the real spirit in which the institutions are carried on. They may be said to constitute the soul of the institutions. A study of these institutions in their practical workings shows, first of all, that they have been conceived in the most liberal spirit as regards the participation of the workmen themselves in their management. In spite of the great prominence of the firm, the independence of the individual has been sacrificed as little as possible.

There can be no doubt that the firm has succeeded in gaining the respect and good wishes of its employees. The feeling that the firm has the true welfare of the latter at heart seems to be universal. At the same time Essen is not the result of any sentimental effort for reform. To the visitor the first serious impression is that here there has been no carrying out of a caprice, or a personal desire to do this or that for the workingmen. Everything has the appearance of having been the result of stern necessity. Each institution has developed in response to a distinct demand. Economy is everywhere. The laborers are not given china where tin or iron will suffice. The schools are especially plain, but they have the appearance of being of a character suitable to a laboring population.

That the laborers constitute a contented class is shown by the almost absolute absence of labor difficulties, and the high degree of stability of employment. Twenty-one per cent of all employees have been continuously employed over fifteen years, and 23 per cent have been employed more than five but less than fifteen years, or a total of 44 per cent that have been in the employ of the firm more than five years. It should be remembered, moreover, that the rapid increase in the number of employees within recent years has necessitated the constant entrance of men to swell the number of those employed but a short time.

As regards the effect of the expense entailed upon the firm by its various social enterprises, the firm is emphatic in the statement that it has been more than repaid by the better class of workingmen that they have been able to obtain and retain, and the absence of friction between the management and its personnel. All improvements in the condition of its employees have been followed by improvements in the character of the work performed by them, and by increased faithfulness to the interests of the establishment.

RECENT REPORTS OF STATE BUREAUS OF LABOR STATISTICS.

MARYLAND.

Fourth Annual Report of the Bureau of Industrial Statistics of Maryland.
1896. A. B. Howard, jr., Chief of Bureau. 170 pp.

This report treats of the following subjects: Personal property values, 95 pages; building and loan associations, 56 pages; strikes and lockouts, 10 pages.

The presentation concerning building and loan associations consists principally of quotations from the Ninth Annual Report of the Department of Labor. Under the title of "Strikes and Lockouts" a short historical statement and the estimated loss in wages are given for each labor disturbance that occurred in the State during the year. The estimated loss in wages is fixed at \$25,000.

PERSONAL PROPERTY VALUES.—This presentation is a continuation and completion of an investigation commenced in 1894 and published in the report for that year. The inquiry of 1894 was confined to the city of Baltimore. The statistics for 1895 show, for each county in the State, the number of estates probated and the value of personal property belonging to them, for each year of two periods of five years each—1875 to 1879 and 1890 to 1894, inclusive. The estates for each county are arranged in nine classes according to value. Estates which were not of sufficient value to pay off all the debts charged against them are not included.

The following statement gives the State totals, not including Baltimore City, for the two periods:

ESTATES PROBATED AND VALUE OF PERSONAL PROPERTY.

Estates having personal property valued—	1875 to 1879, inclusive.		1890 to 1894, inclusive.	
	Number.	Value.	Number.	Value.
Under \$500	1,724	\$370,810	2,286	\$473,195
\$500 to \$1,000	895	593,898	1,062	706,341
\$1,000 to \$2,500	1,053	1,480,010	1,135	1,665,308
\$2,500 to \$5,000	535	1,703,783	508	1,687,610
\$5,000 to \$10,000	362	2,380,861	321	2,132,349
\$10,000 to \$25,000	255	3,592,562	203	2,927,474
\$25,000 to \$50,000	65	1,968,715	62	1,944,497
\$50,000 to \$100,000	27	1,852,223	29	1,827,179
Over \$100,000	10	2,265,003	16	9,455,844
Total	<i>a</i> 4,936	<i>b</i> 16,197,865	5,622	22,819,797

a Figures here apparently should be 4,926; those given are, however, according to the original.

b Figures here apparently should be \$16,207,865; those given are, however, according to the original.

MICHIGAN.

Thirteenth Annual Report of the Bureau of Labor and Industrial Statistics of Michigan. Year ending February 1, 1896. Charles H. Morse, Commissioner; H. R. Dewey, Deputy Commissioner. xxvi, 402 pp.

This report consists of an introduction of 26 pages, which includes statistics of street railway companies, and 6 parts which treat, respectively, of the following subjects: Laborers engaged in transportation, 227 pages; organized labor, 44 pages; miscellaneous statistics, 63 pages; penal and reformatory institutions, 9 pages; strikes, 30 pages; Michigan laws of 1895 affecting labor, etc., 26 pages.

The statistics presented under the first two titles are the results of original investigations by the bureau. The other presentations consist principally of compilations from official reports.

LABORERS ENGAGED IN TRANSPORTATION.—The individual reports from employees on street railways, hack and bus lines, etc., and from owners who drive their own hacks, buses, drays, or teams are published in detail. The following statement indicates the character of the questions asked and gives some of the principal facts brought out by the analysis of the statistics:

PERSONS ENGAGED IN TRANSPORTATION IN 1895.

Items.	Employees on—		Owners who drive their own hack, bus, dray, or team.
	Street railways.	Hack and bus lines, etc.	
Total number considered	1,865	3,127	1,943
Native born	1,070	1,930	.....
Foreign born	795	1,195	.....
Married	1,285	1,721	1,614
Single	557	1,376	306
Widowed	23	30	21
Average hours in day's work	10 $\frac{1}{2}$	10 $\frac{1}{2}$	10 $\frac{1}{2}$
Number reporting hours of work increased during past year	577	119	.....
Number reporting hours of work not increased during past year	958	2,846	.....
Number reporting hours of work decreased during past year	95	31	.....
Number who work overtime	520	1,157	.....
Number who do not work overtime	1,300	1,829	.....
Number who receive extra pay for overtime	398	345	.....
Number who do not receive extra pay for overtime	121	783	.....
Average daily wages	\$1.60	\$1.35	α \$2.16
Number reporting wages increased during past year	748	224	322
Number reporting no change during past year	824	2,588	710
Number reporting wages decreased during past year	45	235	850
Number who lost time during past year	1,614	1,552	1,292
Number who lost no time during past year	247	1,537	731
Average number of days lost for those who lost time	.....	56 $\frac{1}{2}$	73+
Number who saved money during past year	798	774	532
Number who did not save money during past year	994	2,222	1,301
Average savings of those who saved	\$123.28	\$100.84	\$209.73
Number who say times are better than one year ago	1,087	827	498
Number who say times are worse than one year ago	244	820	1,007
Number who own a home	460	619	1,112
Number who own a home clear of incumbrance	254	322	631
Number who rent homes	81	149	607
Average rent paid per month	\$7.27	\$6.46	\$7.53
Number who say cost of living increased during past year	833	676	769
Number who say cost of living decreased during past year	79	142	154
Number who buy beer or spirituous liquors	495	1,305	740
Average expenditure per month for beer or spirituous liquors by those who admit their use	\$1.10	\$1.05	\$1.96
Number who belong to labor organizations	1,074	277	168

α Average per vehicle per day.

In some of the returns answers were not given to all the questions. It therefore does not follow that the difference between the number given for any particular item in the above summary and the total number considered represents the number reporting the reverse of what is shown.

ORGANIZED LABOR.—Reports were received from 237 labor organizations in the State, which are published in detail. The organizations reported 19,192 male and 302 female members. There were 2,203 members initiated and 1,256 suspended during the year. Twenty-one organizations gave out-of-work—73 sick, 107 strike, and 93 burial—benefits. Fifty-eight furnished life insurance, and 194 reported the amount of daily wages received by members, the average wage being \$2.28 per day. The average hours in a day's work, as reported by 198 organizations, was 9 $\frac{3}{8}$. There were 23 organizations that reported 31 strikes, involving 5,956 men, as having occurred during the year. The employees were successful in 16 strikes, failed in 2, and compromised 7, no information as to settlement being furnished for 6.

NORTH CAROLINA.

Ninth Annual Report of the Bureau of Labor Statistics of the State of North Carolina for the year 1895. B. R. Lacy, Commissioner; L. D. Terrell, Chief Clerk. v, 408 pp.

This report treats of the following subjects: Cotton and woolen factories, 76 pages; agricultural statistics, 146 pages; reports of laboring men, 80 pages; tobacco and miscellaneous factories, 33 pages; railroads, 10 pages; organized labor, 25 pages; fishing industry, 15 pages; newspapers, 13 pages; bureaus of labor, 10 pages.

The presentation concerning the first four subjects treated consists of statistics as to capital, machinery, materials and products, employees and wages, hours of work, and the general social and financial condition of employees in the cotton and woolen, tobacco, and miscellaneous factories; also the financial, social, and moral condition of farmers, and the wages, hours of labor, educational, moral, and financial condition of mechanics and laboring men in various industries. These statistics are shown in detail, the individual reports being given for numerous factories and workingmen in different sections of the State. The reports are arranged by counties, and are followed by letters from employers and employees giving their personal views on the various subjects treated.

Totals and general averages for the State are shown for cotton and woolen factories and for farmers.

The following statement gives statistics of cotton and woolen factories for 1895:

Number of mills	157
Capital	\$14, 339, 342
Cotton and wool consumed, pounds.....	123, 658, 775

Products:	
Yarn, pounds	79, 473, 949
Domestics, yards	87, 742, 655
Plaids, yards	51, 737, 547
Woolen goods, yards	18, 424, 200
Number of employees:	
Men	4, 888
Women	6, 175
Children	3, 311
Children under 14 years of age—	
Boys	778
Girls	780
Total employees	15, 932
Average wages per day of—	
Machinists	\$1. 93½
Engineers	1. 61½
Firemen .....	. 89½
Skilled men	1. 10
Unskilled men .....	. 70
Skilled women .....	. 65
Unskilled women .....	. 50
Children .....	. 30
Average number of days in operation during year	286½
Average number of hours constituting day's work	11½
Number of spindles	913, 458
Number of looms	24, 853

The reports show that almost invariably wages were paid weekly and in cash, and that wages had neither increased nor decreased as compared with 1894; also that the sanitary condition of the factories and of the houses of employees was good, that the employees had religious and educational facilities of which they availed themselves and were improving mentally and morally, and that a large percentage of them could read and write.

Following are statistics relating to farm laborers:

AVERAGE WAGES AND VALUE OF RATIONS PER MONTH OF FARM LABORERS.

	1893.	1894.	1895.
Men	\$9. 50	\$9. 00	\$8. 75
Women	5. 50	5. 00	4. 65
Children	3. 20	3. 00	2. 90
Rations	4. 25	4. 00	3. 84
Rent and pasturage		3. 00	2. 57

In explanation of the comparatively low wages of farm laborers it is stated that they have no house rent to pay, "their fire wood is obtained by simply going out and gathering it up—it is free; and in most every instance the landlord gives them a team to haul it up with, and charges nothing for it. Gardens, truck patches, and places to raise pigs and poultry they have free of charge. We find, too, that the majority of tenant farmers are furnished with horse and plow to work their patches with free, and often work them in the landlord's time."

The average cost of producing a bale (400 pounds) of cotton during 1895 is given at \$22.50; a bushel of wheat, at 62 cents; a bushel of corn, at 38 cents; a bushel of oats, at 31 cents.

RAILROADS IN NORTH CAROLINA.—The number and average wages are shown for the different classes of employees on each railway in the State. There were 3,616 miles of road in the State in 1895, an increase of 34 miles over the total for 1894. In 1893 there were 9,000 employees; in 1894, 9,086; in 1895, 9,439.

ORGANIZED LABOR.—Letters from the different labor organizations throughout the State describing the objects and general condition of their organizations are published under this title.

REPORT OF THE MASSACHUSETTS BOARD TO INVESTIGATE THE SUBJECT OF THE UNEMPLOYED.

Report of the Massachusetts Board to Investigate the Subject of the Unemployed. January 1, 1895, and March 13, 1895. Davis R. Dewey, David F. Moreland, and Haven C. Perham, Commissioners. ccxx, 582 pp.

This report was prepared under authority of an act of the legislature approved April 12, 1894. The subject is treated under the following titles: Part I, Relief measures, 264 pages; Part II, Wayfarers and tramps, 123 pages; Part III, Public works, 135 pages; Part IV, The amount of nonemployment and causes thereof, 87 pages; Part V, Final report, 193 pages.

RELIEF MEASURES.—The various agencies, both public and private, that were at work in Massachusetts during the winter of 1893-94 to relieve or prevent distress among the unemployed are grouped in five classes.

1. Special citizens' relief committees, organized primarily to aid the unemployed.

2. Municipal departments having charge of public works upon which it was possible to give employment.

3. Labor organizations giving aid either by usual out-of-work benefits or by extraordinary methods.

4. Private charities, including all permanent relief-giving organizations not connected with the State or municipal government on the one hand, or with labor organizations on the other.

5. The permanently established public relief agencies administered for the State and for municipalities, such as poor departments.

The information for the entire State is summarized under these groups and then presented in detail for the different municipalities. Some of the features discussed are as follows: Methods of obtaining funds, character of the recipients of relief, distribution of relief, value of the relief work, characteristics of relief by public work, wages offered, and economic results.

The thirteen citizens' relief committees of the State raised about \$147,000, of which two-thirds was raised in Boston and one-half of the remainder in Lynn. The amount of extra appropriation to give work to the unemployed upon public works was \$352,000. The out-of-door aid granted by public poor departments in all cities and towns of the State was \$700,000 for the year 1893-94.

The amount of relief afforded was much greater than in previous normal years. The whole relief afforded by citizens' relief committees and employment upon public works may be considered an addition to the usual amounts. Most of that afforded by trade organizations is unusual. The increase of relief by private charities is estimated at about 50 per cent. The increase by public poor departments was absolutely about one-eighth.

It is impossible to ascertain definitely the number of persons assisted by means of all the methods referred to. Five of the leading relief societies aided 6,462 families in 1893-94, as compared with 3,642 in 1892-93. The number aided by the citizens' relief committees, employed upon the public works and by the public poor department, represented about 85,000 families, being an increased or unusual aid for more than 40,000 persons.

WAYFARERS AND TRAMPS.—Methods of reducing the number of wayfarers and tramps and of determining those worthy of assistance are discussed. The commissioners, in conclusion, recommend legislation designed to give effect to the following principles:

It should be easier to convict vagrants and tramps.

Overseers of the poor in every town shall provide decent accommodations of food and lodging for wayfarers, and in return therefor shall demand work. Refusal on the part of wayfarers to comply with this demand shall constitute *prima facie* evidence of tramping. No wayfarer shall be lodged in police stations or in tramp rooms connected with such station. These stations shall be reserved solely for those under criminal charge or sentence. Failure on part of the overseers of the poor to demand work shall be subject to penalties.

All persons found riding on freight trains without authorized permission should be punished with the penalties against tramps.

There should be uniform methods of treating wayfarers throughout the State.

It would be desirable for this Commonwealth to establish a separate institution for the care and training of tramps and vagrants under 30 years of age.

PUBLIC WORKS.—The following are extracts from the conclusions derived from a careful consideration of the large body of conflicting evidence presented under this title:

That, as a rule, the city does not do construction work directly as cheaply as can a contractor to whom the work is intrusted.

That, in exceptional instances, where civil-service rules are honestly and uniformly followed, and where the city is not too strictly limited by ordinances as to the minimum rates of wages and other conditions of labor, the city can do its work as cheaply as any private employer of labor.

That the quality of the work done by direct municipal employment is generally better than that done by contractors.

Nonemployment is frequently aggravated by the influx of a large number of nonresident and oftentimes alien laborers, brought in by contractors.

Greater care should be taken in the letting of contracts to prevent the introduction of large gangs of nonresident and particularly alien labor, unless there is clear proof that there is a scarcity in the vicinity of labor to be hired at a fair market price.

The plans for the establishment of factories or farms on State initiative appear impracticable.

THE AMOUNT OF NONEMPLOYMENT AND CAUSES THEREOF.—There is but little statistical material available which will show the amount of nonemployment in the different trades and occupations throughout the State for any series of years. The commission made special inquiries into conditions of employment in a few selected industries, with the purpose of determining whether the amount of nonemployment has been increasing or decreasing during the past ten years. The information is presented in detail for each of the trades investigated, it being impracticable to make a summarization.

FINAL REPORT.—The entire subject is discussed under the two general heads of temporary or emergency relief and permanent measures. The measures for temporary relief are treated under five subdivisions, as follows:

1. The permanently established relief agencies of town and State, such as the poor departments.
2. Municipal departments of public works, temporarily used for furnishing work relief.
3. Private charities.
4. Special relief committees.
5. Labor organizations.

The measures for permanent relief are treated as follows:

1. Removal of residents of the cities to the country and farms.
2. Removing the competition, and hence displacement of free labor occasioned by the labor of inmates of reformatory and penal institutions.
3. Reducing the hours of a day's labor.
4. Restriction of immigration.
5. An extension of industrial education.
6. Improving the intelligence and employment offices, or establishing free employment offices.

RECENT FOREIGN STATISTICAL PUBLICATIONS.

Systematisches Verzeichnis der Gewerbe für statistische Zwecke der Handels- und Gewerbekammern in den im Reichsrathe vertretenen Königreichen und Ländern. 1896. 87 pp.

This report comprises a list of all the skilled trades in the countries represented in the Austrian Parliament (Reichsrath) and which come within the scope of the trade regulations established by law (Gewerbeordnung). It is intended for the use of the chambers of commerce and industry in their statistical work. The list comprises 4,397 industrial and 2,101 mercantile trades. The trades are divided, according to their nature, into 25 classes, comprising 363 groups. The individual trades in a second list are arranged alphabetically.

Die gewerblichen Genossenschaften in Oesterreich. Verfasst und herausgegeben vom statistischen Departement im k. k. Handelsministerium. 1895. 1,480 pp.

This is the first complete statistical report of trades guilds in Austria published by the Government. The guilds herein reported include all the trades associations that are organized under the provisions of the act of March 15, 1883, and also those whose constitutions have not yet been approved as being in conformity with that act. Out of a total of 5,317 trades guilds reported, only 180 come under the latter class.

By the provisions of the act of 1883, all persons carrying on similar skilled trades on an independent basis in the same or neighboring towns, together with their helpers and apprentices, are required to organize themselves into trades guilds. Under certain conditions the guilds may also be composed of persons of different trades. Of the entire number of guilds, 992 are composed of persons of the same and allied trades, and 4,325 of persons of different trades. Owners and employees of factories are not included within the provisions of this act. Owners of shops are known as members proper (Mitglieder), while their employees are regarded as associate members (Angehörige) of the guilds.

The object of the Austrian trades guilds is, among other things, the regulation of the relations between employers and employees, the systematic training of apprentices, the care of workmen in cases of illness by means of sick insurance funds, and the establishment and maintenance of journeymen's homes (Gesellen-Herbergen), employment agencies, arbitration commissions, trade schools, etc.

The statistics contained in this report cover upper Austria, lower Austria, Salzburg, Styria, Carinthia, Carinola, Trieste and vicinity,

Goritz and Gradiska, Istria, Tyrol, Vorarlberg, Bohemia, Moravia, Silesia, Galicia, Bukowina, and Dalmatia. The date of the enumeration of the individual guilds was December 31, 1894, except in the case of 20, which were founded during the first half of the year 1895, and are also included.

The 5,317 trades guilds within the territory enumerated contained 554,335 members proper (owners of shops) and 692,753 associate members (employees), making a total of 1,247,088 members and associate members. This is equal to 5.3 per cent of the entire resident population.

The following titles of the various tables presented in the report will give a fair idea of the scope of the enumeration:

1. Number of trades guilds and number of members proper and of associate members in the various classes of guilds.

2. Trades guilds classified according to territorial extent and membership.

3. Trades guilds classified according to institutions (dues, membership qualifications, sick funds, etc.).

4. Trades guilds classified according to apprenticeship conditions and regulations.

5. Relief funds of the trades guilds.

6. Dates of approval of the constitutions of the guilds, of employees' assemblies, and of the arbitration commissions.

7. Relation between the number of apprentices and the number of journeymen.

8. Trades guilds classified according to the dates of their creation.

9. Trades guilds classified according to the population of the localities in which they are situated.

10. Trades guilds for single trades, by industries.

11. Provinces and minor divisions and the number of trades guilds in each.

12. Statistics showing population, number of proprietors of establishments, number of trades guilds, and number of members proper.

The tables present the statistics by provinces and minor divisions. Information is also given in detail for each individual guild.

The following statement shows the guilds, classified according to the number of members in each:

MEMBERSHIP OF TRADES GUILDS.

Trades guilds having a membership of—	Number.	Per cent.
1 to 30 members and associates	195	3.7
31 to 150 members and associates	2,879	54.2
151 to 300 members and associates	1,352	25.4
301 to 600 members and associates	586	11.0
601 to 1,500 members and associates	187	3.5
Over 1,500 members and associates	74	1.4
Not reported.....	44	.8
Total	5,317	100.0

It appears from the report that 9.8 per cent of all the trades guilds have no journeymen and 11.8 per cent have no apprentices in their membership. There are, on an average, in a single guild 104.3 members proper, 97.5 journeymen, and 32.8 apprentices, or a total membership of 234.6 per guild.

In connection with these guilds there are various auxiliary institutions created for the purpose of carrying out the objects of their organization, as contemplated by the act of 1883. Thus, of the whole number of guilds enumerated, 3,196, or 60.1 per cent, have journeymen's assemblies; 3,049, or 57.3 per cent, have arbitration commissions; 122, or 2.3 per cent, have trade and continuation schools, and 399, or 7.5 per cent, have journeymen's homes (Gesellen-Herbergen). In 1,495, or 28.1 per cent, of the guilds journeymen may be represented in the executive councils.

A very important feature of the guilds is the existence of relief funds. Prior to the act of 1859 there was no regular system of sick-relief organization in trades guilds. Although there existed special journeymen's funds, neither these nor the regular guild funds could be regarded as actual sick funds. The act of 1859 required the guilds to either establish funds for the relief of journeymen in case of sickness, or to participate in existing sick funds. This act was so amended by that of March 30, 1888, that all existing sick funds came under the provisions of the latter act, and as a result they now bear a close resemblance to the sick-insurance funds of Germany.

The report shows that there were 1,030 special sick funds participated in by 1,475 guilds. This leaves 3,842, or 72.3 per cent, of the guilds without special relief funds. Seven hundred and thirty-four, or 71.3 per cent, of the sick funds pay benefits equal to the legal minimum required in the case of district sick funds, while 32, or 3.1 per cent, pay larger amounts. In 264, or 25.6 per cent, of the journeymen's sick funds the benefits are of such a nature as not to permit of comparison.

By an act of April 4, 1889, apprentices who are members of trades guilds are permitted to participate in special sick-relief funds. At the time of the enumeration there were 313 such funds, participated in by 388 trades guilds. There were, in addition, 27 funds for both journeymen and apprentices, and 42 proprietors' sick funds. The report shows the existence of 23 special funds for other forms of relief.

The dues required of participants in the benefits of the journeymen's sick-relief funds vary in the different guilds. In 762, or 74 per cent of the funds, the dues are equal to 2 per cent of the wages, and in 15, or 1.5 per cent, they are over 2 per cent of the wages. In 150, or 14.5 per cent of the funds, the dues are fixed at 10 kreutzer (nearly 5 cents) or under per week, while in 103, or 10 per cent of the funds, they are over 10 kreutzer (nearly 5 cents) per week.

Each trades guild makes its own restrictions and regulations regarding the employment and education of apprentices. The report shows

that 4,797, or 90.2 per cent, of the guilds have regulations limiting the number of apprentices, and in 85.8 per cent of these cases the limitations relate to the employment of apprentices by masters who have no journeymen employees.

Following are the terms of apprenticeship required by the constitutions of the various guilds: 2 years or under, in 3.1 per cent of the guilds; 3 years in 23 per cent; 4 years in 6.5 per cent; 2 to 3 years in 4.7 per cent; 3 to 4 years in 17.3 per cent; from 2 to 4 years in 45.4 per cent.

Special regulations governing the examination of apprentices are provided for in 4,282, or 80.5 per cent, of the guilds.

The following statement shows the relation between the number of journeymen and the number of apprentices in the trades guilds:

JOURNEYMEN AND APPRENTICES IN TRADES GUILDS.

Trades guilds having—	Number.	Per cent.
Neither journeymen nor apprentices.....	280	5.3
Journeymen, but no apprentices.....	269	5.1
Apprentices, but no journeymen.....	161	3.0
As many apprentices as journeymen.....	115	2.2
More journeymen than apprentices.....	3,396	63.8
More apprentices than journeymen.....	1,012	19.0
Not reported.....	84	1.6
Total.....	5,317	100.0

The following statement shows the number of the present trades guilds founded during each of the specified periods:

DATE OF ESTABLISHMENT OF TRADES GUILDS.

Period.	Number.	Per cent.
Eighth century.....	1	0.02
Eleventh century.....	1	.02
Thirteenth century.....	2	.04
Fourteenth century.....	2	.04
Fifteenth century.....	14	.26
Sixteenth century.....	37	.70
Seventeenth century.....	97	1.82
First half of eighteenth century.....	53	1.00
Second half of eighteenth century.....	51	.96
1801 to 1859.....	60	1.13
1860 to 1882.....	372	7.00
1883 to 1895.....	4,593	86.38
Unknown.....	34	.63
Total.....	5,317	100.00

The periods during the present century were divided, as indicated, in order to show the development as affected by legislation. The first period, namely, 1801 to 1859, was prior to the act of 1859. During the second period, 1860 to 1882, the guilds operated under that act. The last period, 1883 to 1895, shows the development under the act of March 15, 1883.

Statistique des Grèves et des Recours à la Conciliation et à l'Arbitrage Surenvenus Pendant l'Année 1895. Office du Travail, Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. xii, 336 pp.

In Bulletin No. 1 was given a brief account of strikes in France during the year 1894, with a short recapitulation of the principal figures concerning strikes during the period 1890 to 1894, based on the annual volumes concerning strikes published by the French labor bureau. The present volume relates to strikes during 1895, and its principal results are summarized in the following notice. In the preparation of this statement the same structure of tables and form of presentation have, with a single exception, been followed. It is thus an easy matter to compare the information for 1895 with that for 1894 and prior years.

In 1895 there were reported a total of 405 strikes, involving 1,228 establishments, in which 45,801 workingmen participated as strikers, and resulting in a loss of 617,469 days labor, which latter figure, however, includes 61,597 days lost by 5,899 persons who were not strikers but were thrown out of employment as the result of strikes.

In 1894 there were but 391 strikes, but they involved 1,731 establishments, 54,576 strikers, and caused a loss of 1,062,469 (*a*) days of labor. The number of strikers in 1895, moreover, represented but 12.83 out of every 1,000 persons productively employed, as against 19.83 in 1894. Strikes, therefore, on the whole, were considerably less severe in 1895 than in the preceding year.

But little difference is discernible as regards the degree of success achieved by the strikers in the two years. In 1895 out of the total of 403 strikes (2 strikes not having been terminated when the record closed) 100, or 24.81 per cent, were successful, 117, or 29.03 per cent, were partly successful, and 186, or 46.16 per cent, resulted in failure. The percentages for 1894 were 21.48, 32.99, and 45.53, respectively. A really better criterion of results would be to take the number of strikers as a basis. Doing this, and eliminating the number of strikers involved in strikes not yet terminated, it will be found that 8,565, or 18.72 per cent, of strikers succeeded, 20,672, or 45.18 per cent, partly succeeded, and 16,521, or 36.10 per cent, failed to maintain their demands. In 1894 the percentages were 23.63, 45.41, and 30.96, respectively.

The great majority of strikes in 1895, 320 out of 405, involved but 1 establishment, 30 involved from 2 to 5 establishments, 20 from 6 to 10, 27 from 11 to 25, and 8 from 26 to 50 establishments.

The two tables that follow show the number of strikes, strikers, and establishments involved according to the results of the strikes, as well as the number of days work lost and the proportion that the number of strikers represent of the total number of working people according to 17 main groups of industries.

a The report for 1894 gives the loss as 1,062,480 days.

STRIKES IN 1895, BY INDUSTRIES.

Industry.	Succeeded.		Succeeded partly.		Failed.		Total.	
	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.
Agriculture, forestry, and fisheries.....			2	2	2	2	4	4
Mining.....	2	2	4	4	3	3	9	9
Quarrying.....	4	17	3	22	6	8	13	47
Food products.....	4	22			3	52	7	74
Chemical industries.....	1	1	2	5	5	10	8	16
Printing.....	1	1	1	1	13	13	15	15
Hides and leather.....	11	31	9	9	18	21	<i>a</i> 39	<i>a</i> 62
Textiles proper.....	32	66	45	52	63	93	<i>a</i> 141	<i>a</i> 212
Clothing and cleaning.....	1	1	2	2	4	5	7	8
Woodworking.....	3	7	4	6	7	32	14	45
Building trades (woodwork).....	2	9	8	110	6	68	16	187
Metal refining.....	1	1	1	1	3	3	5	5
Metallic goods.....	16	39	7	66	21	23	44	128
Precious-metal work.....								
Stone cutting and polishing, glass and pottery work.....	4	4	2	14	8	8	14	26
Building trades (stone, earthenware, glass, etc.).....	14	55	24	226	15	99	53	380
Transportation and handling.....	4	21	3	16	9	43	16	80
Total.....	100	277	117	536	186	483	<i>b</i> 405	<i>b</i> 1,298

a Including 1 strike not yet terminated.*b* Including 2 strikes not yet terminated.

STRIKERS AND DAYS OF WORK LOST IN 1895, BY INDUSTRIES.

Industry.	In suc-cess-ful strikes.	In partly suc-cess-ful strikes.	In strikes which failed.	Total strikers.	Strikers per 1,000 work peo-ple. (<i>a</i>)	Days of work lost.
Agriculture, forestry, and fisheries.....		53	8	61	0.02	
Mining.....	265	1,506	738	2,509	<i>b</i> 21.13	51,919
Quarrying.....	705	740	421	1,866	(<i>c</i>)	8,997
Food products.....	528		365	893	6.97	1,165
Chemical industries.....	305	1,564	2,042	3,911	65.18	61,956
Printing.....	150	12	210	372	3.87	1,730
Hides and leather.....	786	459	872	<i>d</i> 2,129	<i>d</i> 16.66	<i>d</i> 16,412
Textiles proper.....	3,101	5,899	5,610	<i>d</i> 14,641	<i>d</i> 20.27	<i>d</i> 190,655
Clothing and cleaning.....	16	32	97	145	.20	3,800
Woodworking.....	291	337	259	887	6.20	11,966
Building trades (woodwork).....	440	407	417	1,264	(<i>e</i>)	20,503
Metal refining.....	420	300	597	1,317	13.86	12,298
Metallic goods.....	650	689	967	2,306	7.61	28,820
Precious-metal work.....						
Stone cutting and polishing, glass and pottery work.....	148	645	1,762	2,555	24.50	135,483
Building trades (stone, earthenware, glass, etc.).....	585	5,613	826	7,024	<i>f</i> 19.27	48,550
Transportation and handling.....	175	2,416	1,330	3,921	16.61	23,162
Total.....	8,565	20,672	16,521	<i>g</i> 45,801	<i>g</i> 12.83	<i>g</i> 617,469

a Census of 1891.*b* Including quarrying.*c* Included in mining.*d* Including 1 strike not yet terminated.*e* Included in building trades (stone, earthenware, glass, etc.).*f* Including building trades (woodwork).*g* Including 2 strikes not yet terminated.

According to the number of strikes the industry most affected was that of textiles proper. A total of 141 strikes, involving 212 establishments and 14,641 strikers, and resulting in a loss of 190,655 days labor, occurred in this industry. Next in importance came that of the building trades, the two groupings together having had 69 strikes, involving 567 establishments and 8,288 workingmen, and causing a loss of 69,053 days labor. Metallic goods came third with 44 strikes, 128 establish-

ments, 2,306 strikers, and 28,820 days lost. The same three industries occupied the first three places in this respect, and in the same order, in 1894.

As regards the relative number of persons in each industry taking part in strikes, however, the chemical industry seems to have been especially affected by strikes, over 65 per cent of all workingmen in that industry participating in 1895; stone cutting and polishing, glass and pottery work coming second with 24.50 per cent of all workers engaged in strikes.

The information given in the two preceding tables is shown in the tables which follow, according to the causes or objects for which strikes were undertaken instead of according to industries.

STRIKES IN 1895, BY CAUSES.

[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 would not agree with those for the preceding tables.]

Cause or object.	Succeeded.		Succeeded partly.		Failed.		Total.	
	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.	Strikes.	Estab-lish-ments.
For increase of wages	48	180	78	434	70	282	196	896
Against reduction of wages	13	14	13	13	30	31	<i>a</i> 57	<i>a</i> 59
For reduction of hours of labor with present or increased wages.	23	170	7	83	19	223	49	476
Relating to time and method of payment of wages, etc.	13	60	1	13	7	7	21	80
For or against modification of conditions of work	10	17	4	4	14	16	28	37
Against piecework	2	2	2	2	6	50	10	54
For or against modification of shop rules	3	3	1	1	15	15	19	19
For abolition or reduction of fines.	3	3	2	2	7	7	12	12
Against discharge of workmen, foremen, or directors, or for their reinstatement	7	18	3	3	18	20	<i>a</i> 29	<i>a</i> 42
For discharge of workmen, foremen, or directors	16	18	5	5	35	38	56	61
Against employment of women .....	.....	.....	.....	.....	3	3	3	3
For discharge of apprentices or limitation in number	1	5	.....	.....	1	1	2	6
Relating to deduction from wages for the support of insurance and aid funds	3	29	.....	.....	.....	.....	3	29
Other	2	2	1	1	8	39	11	42

a Including 1 strike not yet terminated.

STRIKERS AND DAYS OF WORK LOST IN 1895, BY CAUSES.

[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 would not agree with those for the preceding tables.]

Cause or object.	In successful strikes.	In partly successful strikes.	In strikes which failed.	Total strikers.	Days of work lost.
For increase of wages.....	4,224	15,781	8,861	28,866	382,310
Against reduction of wages.....	682	842	1,649	<i>a</i> 3,204	<i>a</i> 39,621
For reduction of hours of labor with present or increased wages.....	3,602	777	1,727	6,106	67,451
Relating to time and method of payment of wages, etc.....	1,734	610	334	2,678	13,291
For or against modification of conditions of work. Against piecework.....	1,109	2,707	1,046	4,862	88,143
For or against modification of shop rules.....	32	500	519	1,051	12,386
For abolition or reduction of fines.....	208	35	1,257	1,500	14,150
Against discharge of workmen, foremen, or directors, or for their reinstatement.....	502	55	1,262	1,819	8,722
For discharge of workmen, foremen, or directors. Against employment of women.....	938	747	3,520	<i>a</i> 5,217	<i>a</i> 177,741
For discharge of apprentices or limitation in number.....	1,318	837	2,798	4,953	33,523
Relating to deduction from wages for the support of insurance and aid funds.....	52	52	52	52	1,276
Other.....	164	.....	21	185	6,524
.....	378	.....	.....	378	5,373
.....	85	142	244	471	3,503

a Including 1 strike not yet terminated.

The demand for higher wages or the refusal to accept a reduction of wages alone or in connection with other causes still continues, as in former years, the chief cause of strikes. This cause accounts for 62.47 per cent of all strikes, 70 per cent of all strikers, and 68.33 per cent of days of labor lost. The question of the employment or nonemployment of workingmen, foremen, or directors figures as the second important cause, having produced 85 strikes in 1895 as against 78 in 1894. Demand for shortening the hours of labor caused 30 strikes in 1894 and 49 in 1895. These strikes resulted in the substitution of 11 hours of labor in place of 12 in 14 cases, of 10 hours in place of 11 in 8 cases, and of 10 hours in place of 12 in 4 cases.

The results of strikes according to their importance and severity—that is, according to the number of persons involved and the duration of the strikes—is shown in the two tables that follow:

STRIKES AND STRIKERS, BY DURATION OF STRIKES, IN 1895.

Days of duration.	Strikes.				Strikers.			
	Succeeded.	Succeeded partly.	Failed.	Total.	Succeeded.	Succeeded partly.	Failed.	Total.
7 or under.....	72	73	131	276	6,441	11,405	7,182	25,028
8 to 15.....	16	20	25	61	1,253	5,298	2,173	8,724
16 to 30.....	4	13	16	33	350	1,502	3,190	5,042
31 to 100.....	8	11	11	<i>a</i> 31	521	2,467	2,719	<i>a</i> 5,738
101 or over.....	.....	.....	3	<i>a</i> 4	.....	.....	1,257	<i>a</i> 1,269
Total.....	100	117	186	<i>b</i> 405	8,565	20,672	16,521	<i>b</i> 45,801

a Including 1 strike not yet terminated.

b Including 2 strikes not yet terminated.

DURATION OF STRIKES IN 1895, BY NUMBER OF STRIKERS INVOLVED.

Strikers involved.	Strikes.				Days of duration.				
	Suc- ceeded.	Suc- ceeded partly.	Failed.	Total.	1 to 7.	8 to 15.	16 to 30.	31 to 100.	101 or over.
25 or under	25	27	84	a 137	101	23	6	6	a 1
26 to 50	29	20	31	a 81	63	6	5	a 6	1
51 to 100	18	24	38	80	54	15	8	3	.....
101 to 200	16	21	18	55	28	9	9	9	.....
201 to 500	12	18	10	40	26	5	3	5	1
501 to 1,000 .....	.....	3	3	6	2	1	1	1	1
1,001 or over .....	.....	4	2	6	2	2	1	1	.....
Total	100	117	186	b 405	276	61	33	a 31	a 4

a Including 1 strike not yet terminated.

b Including 2 strikes not yet terminated.

The great majority of strikes were comparatively unimportant affairs. Two hundred and seventy-six, or over two-thirds, lasted less than 8 days and but 35 lasted a month or over, while 137, or over one-third, involved less than 26 persons and but 12 involved over 500 persons. None of the 12 large strikes were completely successful, 7 having resulted in a compromise and 5 having been failures.

There are two classes of information contained in these reports of the French bureau that were not touched upon in the first notice, but concerning which it will perhaps be well to make some mention. A considerable portion of each report, in the present case 169 pages, is devoted to giving an account of the more important strikes of the year; and secondly, beginning with the volume for 1893, information is given concerning the extent to which use has been made of the law of December 27, 1892, relating to the arbitration of labor disputes.

Briefly stated, this law provides that on the arising of any difficulty between an employer and his employees the question in dispute can, if both parties agree, be submitted to a council of conciliation, or, if an actual strike has been begun, to a council of arbitration, which, under the presidency of the local justice of the peace, attempts to arrive at a solution of the difficulty, or the justice of the peace may himself take the initiative and request the parties to submit their difference to such a council. This council consists of delegates, not exceeding five in number, chosen by each party. If they fail to reach an agreement they can appoint one or more arbitrators. The submission of a dispute to arbitration, however, is entirely voluntary, and the decision, no matter how arrived at, can not be legally enforced, its acceptance being a matter to be determined by the parties as they deem best.

Demands for the application of this law were made in the case of 84 of the 405 strikes occurring during 1895, or in 20.74 per cent of all labor disputes. The initiative in making these demands was taken 46 (a) times by the workingmen, twice by the employers, 3 times by both the employers and employees, and 34 (a) times by the justice of the

a In the case of 1 strike extending to the departments of the Rhone and the Isere the initiative in 1 department was taken by the workingmen and in the other by the justice of the peace.

peace. In 4 cases work was resumed without waiting for the constitution of councils of arbitration, in 3 of which the strikers abandoned their claims and in the fourth a compromise was effected. In the remaining 80 cases submission to arbitration was refused in 34, of which 32 were by the employers and 2 by the workingmen. In 2 of these cases the intervention of the justice of the peace led to a settlement, and in a third the employer was compelled to accept arbitration by those of his employees who had not struck threatening to join the others. Arbitration was thus definitely refused in 31 cases. In these 31 cases the refusal to arbitrate was followed in 3 cases by the immediate resumption of work. The remaining 28 cases were fought out, resulting in success for the strikers in 4 cases, in partial success in 9, and in failure in 15.

Councils of arbitration were constituted for the adjustment of the remaining 49 strikes. Twenty-four of these were immediately adjusted by the council, and 5 others later on as the result of further negotiations. Of these 29 thus settled, 4 were in favor of the strikers, 24 were compromised, and 1 was in favor of the employer. It is a matter of interest to notice the large number of strikes that were thus settled by mutual concessions on the part of both parties. The 20 strikes remaining, in which the constitution of councils proved of no avail, resulted in success for the workingmen in 3 cases, in compromise in 8 cases, and failure in 9 cases.

In addition to these 84 strikes in which the constitution of councils of arbitration was asked, 5 demands were made by the employees for the submission of differences to councils of conciliation before the actual outbreak of the strikes. In one of these cases the employers refused to discuss the matter and the workingmen continued their work; in 4 cases a council was constituted and a settlement not being achieved, strikes resulted, the outcome being 2 compromises and 2 failures for the strikers.

The year 1895 was the third year that the law concerning arbitration had been in force. In the first year, 1893, arbitration was requested in 109 of the 634 strikes, or in 17.19 per cent of all strikes; in 1894, in 101 of the 391 strikes, or 25.83 per cent of all strikes. In 1893, 51 of these cases were finally adjusted by the councils, resulting 12 times in success to the strikers, 26 times in a compromise, and 13 times in failure. In 1894, 53 cases were thus adjusted, the results being 13 successes, 24 compromises, and 16 failures. In 1895, if to the 29 cases settled by the councils as the result of formal meetings there be added the 4 strikes adjusted before the councils could be formed and the 3 strikes terminated as soon as the decision of the employers concerning arbitration was known, there were adjusted a total of 36 strikes, 4 of which resulted in success, 25 in compromises, and 7 in failures.

Since the law went into effect, therefore, arbitration was requested in 295 out of 1,430 strikes, or in 20.63 per cent of all strikes. Owing to the refusal to arbitrate, or for other reasons, but 140 of these strikes were actually adjusted by councils of arbitration, their decisions resulting in 29 successes to the strikers, in 75 compromises, and in 36 failures.

Report of the Strikes and Lockouts of 1894 in Great Britain and Ireland.
1895. 345 pp. (Published by the Labor Department of the British Board of Trade.)

This report treats of the state of the labor market and the number, character, magnitude, and method of settlement of the strikes and lockouts that occurred in the United Kingdom during 1894. The statistics are presented in detail for each dispute, and the summarized statements include comparative data for previous years.

The state of the labor market in 1894 and in the seven preceding years is indicated by the percentage of the members of trade societies that were reported as unemployed at the close of each month during the period. These percentages are shown in the following statement:

PERCENTAGE OF MEMBERS OF TRADE UNIONS REPORTED AS UNEMPLOYED AT THE END OF EACH MONTH, 1887 TO 1894.

Month.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.
January	10.3	7.8	3.1	1.4	3.4	5.0	10.0	7.0
February	8.5	7.0	2.8	1.4	2.6	5.7	9.5	6.3
March	7.7	5.7	2.2	1.7	2.8	5.7	8.7	6.5
April	6.8	5.2	2.0	2.0	2.7	5.4	6.9	6.1
May	8.5	4.8	2.0	2.0	3.0	5.9	6.2	6.3
June	8.0	4.6	1.8	1.9	2.9	5.2	5.8	6.3
July	8.5	3.9	1.7	2.3	3.3	5.0	6.2	7.4
August	8.3	4.8	2.5	2.3	4.2	5.1	7.1	7.7
September	7.5	4.4	2.1	2.6	4.5	6.2	7.3	7.6
October	8.6	4.4	1.8	2.6	4.4	7.3	7.3	7.4
November	8.5	3.1	1.5	2.4	3.8	8.3	7.2	7.0
December	6.9	3.3	1.7	3.0	4.4	10.2	7.9	7.7

At the end of 1888 the number of unions reporting the number of their unemployed seldom exceeded 20, with an aggregate membership of 200,000, while at the end of 1894 there were 62 unions reporting with a membership of 362,000. While the increase in the number reported enhances the value of the figures for the later years, the percentages given in the above statement are not absolutely comparable for the entire period of eight years, the general effect being that the percentages for the earlier years are slightly too high.

The statistics concerning the number of strikes and lockouts, and the persons affected by them, in the United Kingdom during 1894 are summarized in the following statement:

STRIKES AND LOCKOUTS AND PERSONS AFFECTED IN 1894.

[Persons affected means persons thrown out of work.]

Division.	Total strikes and lockouts.	Strikes and lockouts for which persons affected were reported.	
		Number.	Persons affected.
England	747	704	168, 114
Wales	73	66	18, 380
Scotland	189	176	130, 467
Ireland	52	51	7, 284
Total	1, 061	997	324, 245

The causes or objects of the strikes and lockouts, and whether successful or otherwise, and the number of persons affected are shown in the following statements:

RESULTS OF STRIKES AND LOCKOUTS, BY CAUSES, IN 1894.

Cause or object.	Suc- ceeded.	Suc- ceeded partly.	Failed.	Not re- ported.	Total.
Wages	182	161	190	31	564
Hours of labor	6	3	12	2	23
Working arrangements	79	50	79	11	219
Class disputes	29	8	25	3	65
Unionism	37	6	28	3	74
Other causes or objects	39	16	55	4	114
Cause not known				2	2
Total	372	244	389	56	1,061

PERSONS AFFECTED BY STRIKES AND LOCKOUTS, BY CAUSES AND RESULTS, IN 1894.

[Persons affected means persons thrown out of work.]

Cause or object.	Succeeded.		Succeeded partly.		Failed.		Not reported.		Total.	
	Strikes and lock-outs.	Persons affected.								
Wages	175	31,150	156	93,531	178	107,112	17	3,110	526	234,903
Hours of labor	6	2,650	2	1,560	12	1,895			20	6,105
Working arrangements	78	15,042	47	9,137	77	12,128	5	1,456	207	37,763
Class disputes	27	1,612	8	813	24	1,248	2	26	61	3,699
Unionism	36	12,570	5	705	28	2,202	2	42	71	15,519
Other causes or objects	38	8,637	16	5,332	54	11,788	4	499	112	26,256
Total ..	360	71,661	234	111,078	373	136,373	30	5,133	997	324,245

The number of persons thrown out of employment during 1894 is shown for 997 strikes and lockouts; the remaining 64 are known to have been insignificant. Of the 324,245 persons thrown out of employment, 257,937 were directly engaged in the disputes and 66,308 were indirectly engaged. The number of persons affected was less by 312,141 than the number reported affected for 1893, and the average number per dispute was 306, as compared with 814 in 1893. The average duration in working days was 24.6, as compared with 28 days in 1893.

The information concerning the strikes and lockouts for which the number of persons affected and the working days lost were reported is summarized in the following statement. The total number of persons affected is also shown. The strikes and lockouts are grouped according to the number of persons affected.

WORKING DAYS LOST AND PERSONS AFFECTED BY STRIKES AND LOCKOUTS
IN 1894.

[Persons affected means persons thrown out of work.]

Groups.	Strikes and lockouts for which both persons affected and working days lost were reported.				Strikes and lockouts for which persons affected were reported.	
	Number.	Persons affected.	Working days lost.		Number.	Persons affected.
			Number.	Average per person affected.		
5,000 persons and upward.....	4	118,000	5,995,000	50.8	4	118,000
1,000 to 5,000 persons.....	48	80,133	910,329	11.4	49	81,133
500 to 1,000 persons.....	59	40,598	378,231	9.3	59	40,598
100 to 500 persons.....	276	61,152	1,632,486	26.7	297	65,811
Under 100 persons.....	490	16,160	406,050	25.1	588	18,703
Total.....	877	316,043	9,322,096	29.5	997	324,245

In the following statement the strikes and lockouts are grouped according to the method of settlement:

METHOD OF SETTLEMENT OF STRIKES AND LOCKOUTS IN 1894.

[Disputes settled by a combination of two or more of the methods enumerated have been classed under the most important one. Disputes settled partly by arbitration and partly by other methods are classed under arbitration. Persons affected means persons thrown out of work.]

Method of settlement.	Total strikes and lockouts.	Strikes and lockouts for which persons affected were reported.	
		Number.	Persons affected.
Negotiation or conciliation between the parties.....	607	583	144,125
Mediation or conciliation by third parties.....	18	18	8,399
Arbitration.....	32	32	10,785
Submission of work people.....	170	162	147,044
Replacement of hands.....	159	155	6,451
Closing of works or establishments.....	13	11	985
Withdrawal or disappearance of cause without mutual agreement.....	6	6	1,323
Indefinite, or no information.....	56	30	5,133
Total.....	1,061	997	324,245

Although the largest number of disputes during the year were settled by negotiation between the parties or by some other conciliatory method, the largest proportion of work people affected had their disputes terminated by submission.

The settlement of disputes by conciliation and arbitration is treated separately. The modes of settlement considered under this head are only those in which an independent individual or permanent body intervened or took part. Settlements due to the mediation of a trade union or trades council on the one side or association of employers or chamber of commerce on the other are not considered in this connection.

Including disputes which began in 1893 and were referred to arbitration or settlement by conciliation in 1894, but excluding those com-

menced in 1894 and referred to settlement in 1895, there were 42, affecting 18,325 persons, as compared with 25 in 1893, affecting 312,009 persons. The decrease in the number affected is explained by the fact that in 1893 the greatest dispute of the year, viz, that in the coal trade, involved no less than 300,000 persons. This dispute was settled by the mediation of Lord Rosebery.

In the following statement the strikes and lockouts settled by conciliation and arbitration are classified according to the agency employed in their settlement:

STRIKES AND LOCKOUTS SETTLED BY CONCILIATION AND ARBITRATION IN 1894.

[Persons affected means persons thrown out of work.]

Agency employed.	Conciliation.		Arbitration.		Total.	
	Strikes and lockouts.	Persons affected.	Strikes and lockouts.	Persons affected.	Strikes and lockouts.	Persons affected.
Trade boards	7	2,572	3	2,957	10	5,529
Individuals	11	2,799	16	9,187	27	11,986
Trades councils and federations of trade unions (disputes between groups of work people)	1	312	4	498	5	810
Total	19	5,683	23	12,642	42	18,325

It is not to be supposed that permanent boards of conciliation and arbitration are ineffective because so few disputes were settled by them. The greater part of their work consisted in dealing with questions, any or all of which might, if unsettled, have terminated in strikes. Their work, in fact, is rather preventive than remedial.

In all 64 trade boards are believed to have existed in 1894. Ten of these boards dealt with no questions during the year. The number of cases reported as dealt with by the remaining 54 (a) boards was 1,733, of which 368 were withdrawn by one or both of the parties, or referred back or ruled out of order by the boards. Thus, 1,365 cases were settled in 1894, as compared with 1,228 in 1893. Of these 1,365 the boards settled 1,142, the remaining 223 being referred to arbitrators by the boards or settled by independent chairmen of the boards.

Out of 22 district boards believed to have been in existence during the year, only 7 are known to have offered their services in any dispute, and only 3 actually dealt with any questions.

The loss to employers and work people caused by strikes and lockouts is shown by statistics taken from the returns received from employers and trade unions.

aIn the case of 6 of these boards no information was reported; in the case of 2 only the principal questions dealt with were reported.

The information contained in the following summary was taken from the returns received from employers:

COST OF STRIKES AND LOCKOUTS IN 1894, AS REPORTED BY EMPLOYERS.

Items.	Amount.	Strikes and lockouts.	Persons affected.
Estimated value of fixed capital laid idle.....	\$43, 286, 603	193	65, 306
Estimated value of capital where number of persons is not known.....	2, 136, 783	2	.....
Estimated annual ratable value of property laid idle.....	1, 243, 761	129	36, 894
Estimated actual outlay by employers in stopping and reopening works, and in payment of fixed charges, salaries, etc.....	632, 664	160	58, 597
Estimated actual outlay in cases where number of persons is not known.....	50, 952	3	.....
Amount paid in defense against strikes or in support of lockouts by organizations of employers.....	7, 835	12	3, 608

Compiled from partial returns, the trade unions reported \$233,529 as expended during 1894 from trade-union funds in support of strikes or defense against lockouts in 329 disputes involving 35,946 persons. For 5 of these disputes, however, the persons involved were not reported. The amount expended in this manner from funds other than those of trade unions is reported as \$33,944 for 142 disputes involving 21,665 persons.

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.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—*Culver v. Alabama R. R. Co.* 18 *Southern Reporter*, page 827.—Section 2590 of the Code of Alabama provides that "when a personal injury is received by a servant or employee in the service or business of the master or employer, the master or employer is liable to answer in damages to such servant or employee as if he were a stranger, and not engaged in such service or employment, in the cases following:

* * * * *

"5. When such injury is caused by reason of the negligence of any person in the service or employment of the master or employer, who has the charge or control of any signal, points, locomotive, engine, switch, car, or train upon a railway, or of any part of the track of a railway."

Under the above provision suit was brought against the Alabama Midland Railway Company by Leviu L. Culver as administrator of Virgil Mowdy, deceased, to recover damages for injuries sustained by Mowdy, which resulted in his death, caused by the alleged negligence of an engineer in charge of a locomotive. Judgment was given by the circuit court of Dale County, Ala., for the railroad company, whereupon Culver appealed to the supreme court, which reversed the judgment of the circuit court and remanded the case by decision rendered December 19, 1895.

In delivering the opinion of the supreme court Judge Coleman said:

The employer is liable for an injury inflicted upon an employee by the negligence of a coemployee when such negligence comes within the provisions of the employer's act [section 2590, Code of Alabama], and that without reference to the care and diligence used by the employer in the selection of his servants or employees. The employer's act in no wise relieves the employer from the duty of selecting with reasonable care his servant. The act imposes a further liability, and makes him responsible for injuries sustained by an employee in consequence of any neglect by the employer or his servants, specified in the act itself.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—*Leier v. Minnesota Belt Line and Transfer Co.* 65 *Northwestern Reporter*, page 269.—In this case the allegations of the complaint of the plaintiff were to the effect that he had been employed in the defendant's stock yards and that, when a stock train arrived, his duty was to step from a high platform up on top of the cars as they drew up opposite the platform and pull bundles of hay from the platform up on the top of the cars; that the conductor of the train negligently ordered him to step from the platform up on the top of a passing car while it was going at too great a rate of speed to enable him to do so with safety, a fact which was unknown to him, and that owing to the dangerous rate of speed of the car, he, while stepping upon it, was thrown to the ground and his arm run over by the wheels of a car.

From an order by the district court of Hennepin County, Minn., overruling the defendant's demurrer to Leier's complaint, appeal was taken to the supreme court of the State, which tribunal, on December 13, 1895, sustained the action of the district court, and decided that, according to the complaint, the plaintiff was injured by reason of exposure to hazards peculiar to the operation of railroads, and that the case was within the purview of section 2701 of the General Statutes of 1894 of Minnesota, making railroad companies liable to their servants for injuries caused by the negligence of their fellow-servants.

The opinion of the supreme court was delivered by Judge Mitchell, who, after summarizing the allegations of the complaint, said:

We think the fair construction of these allegations is: First, that it was usual and customary for defendant's servants to do this work under the directions of the conductor, and, hence, that in giving such instructions the conductor was acting within the scope of his duty; second, that the conductor knew, or, in the exercise of ordinary care, ought to have known, that the car was moving too fast for the plaintiff to step upon it without exposing himself to great danger of personal injury. If this was so, then the conductor was guilty of negligence in giving the order. It does not appear—certainly not conclusively—from the allegations of the complaint that defendant [plaintiff] was guilty of negligence in obeying the order. It must be remembered that contributory negligence is a matter of defense and that a plaintiff is not required to negative it in his complaint. In doing the work which he was doing, in getting upon a moving car, plaintiff was exposed to an element of hazard or condition of danger which is peculiar to railroad business, and, as this element of danger caused or contributed to his injury, the statute (Gen. St. 1894, Sec. 2701) applies, and the railway company would be liable if the injury was caused by the negligence of a fellow-servant.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—*Pennsylvania Co. v. McCann.* 42 *Northeastern Reporter*, page 768.—The following are the facts in this case: McCann, who was a brakeman in the service of the Pennsylvania Railroad Company, in attempting, in the State of Penn-

sylvania, to board one of its moving cars, put his foot in a stirrup that was suspended from the sill of the car and used as a step in mounting the car. The stirrup yielded to the pressure of his foot, causing him to be thrown under the car, whereby a wheel of the locomotive, which was backing, ran over one of his legs, inflicting the injury of which he complained. The railroad company was operating a line running from Youngstown, in Ohio, to a point in the State of Pennsylvania. Suit was brought against the railroad company in the court of common pleas in the State of Ohio. After the evidence had been presented for McCann the attorneys for the railroad company moved the court to take the case from the jury and to render a judgment in their favor, which was done. McCann then carried the cause to the circuit court in Mahoning County, Ohio. The circuit court reversed the judgment rendered in the court below on the sole ground that the act of April 2, 1890 (87 Ohio Laws, p. 149), was applicable, by force of which the fact that the stirrup was defective made a prima facie case of negligence against the railroad company.

The railroad company then brought the case on error to the supreme court of Ohio, which court on January 21, 1896, gave its decision affirming the judgment of the circuit court. From the opinion of the court, read by Judge Bradbury, the following is quoted:

The only question arising upon the record of sufficient importance to be worthy of extended consideration is whether the act of general assembly of this State, passed April 2, 1890 (87 Ohio Laws, p. 149), is applicable to the case or not, the injury complained of having been sustained beyond the limits of this State. The second section of the act in question prescribes the effect that shall be given to evidence which establishes a defect in the locomotives, cars, machinery, or attachments of certain railroads, in actions for injuries to its [their] employees, caused by such defects, and declares that, when such defects are made to appear, the same shall be prima facie evidence of negligence. There can be no doubt respecting the general power of a State to prescribe the rules of evidence which shall be observed by its judicial tribunals. It is a matter concerning its internal policy, over which its legislative department necessarily has authority, limited only by the constitutional guaranties respecting due process of law, vested rights, and the inviolability of contracts. The rules of evidence pertain to the remedy, and usually are the same, whether the cause of action in which they are applied arises within or without the State whose tribunal is investigating the facts in contention between the parties before it. Nor is it material, in this respect, whether the parties are residents or nonresidents of the State. The law of evidence, in its ordinary operation, is no more affected by one of these considerations than the other. No extraterritorial effect is given to a statute creating a rule of evidence by the fact that the rule is applied to the trial of a cause of action arising in another State, or to the trial of an action between parties who are nonresidents. If the tribunal of a State obtains jurisdiction of the parties and the cause, it will conduct the investigation of the facts in controversy between them according to its own rules of evidence, which is simply to follow its own laws within its own borders. The second section [of the act in question], in

forbidding the use of defective cars and locomotives by railroad companies, refers to them as "such corporations," manifestly including every corporation owning or operating a railroad any part of which extends into this State.

Here, again, the prohibitive language employed is broad enough to include acts or conduct occurring in other States. In the subsequent clause of the second section of the act, wherein the general assembly sought to prescribe the rule of evidence, before referred to, applicable to the trial of actions in the courts of this State brought by employees of railroad companies on account of injuries sustained by reason of defective cars, locomotives, machinery, or attachments, it approached the question of procedure in our judicial tribunals, over which, as we have seen, the authority of the general assembly is practically supreme. This clause of the statute is purely remedial, and should receive a liberal construction. The language employed by the act in this connection is consistent with a legislative purpose to extend the remedy to all actions of the character named in the act against all railroad companies, and no sufficient reason has been assigned for limiting its operation to causes of action that arose within the State. Indeed, it would be somewhat anomalous to prescribe to the courts of the State rules of evidence depending upon the question whether the cause of action arose within or without the State; and an intent to create this distinction should not be imputed to the legislative power unless it is fairly inferable from the language it has used. That language is as follows: "And when the fact of such defect shall be made to appear in the trial of any action in the courts of this State brought by such employee or his legal representatives against any railroad corporation for damages on account of such injuries so received the same shall be prima facie evidence of negligence on the part of such corporations." This language contains nothing indicating a purpose to confine the rule of evidence it creates to causes of action that should arise in this State. On the contrary, it expressly extends the rule to "any action in the courts of this State brought by such employee * * * against any railroad corporation." In fact the language is comprehensive enough to apply the rule to a railroad company, in this class of actions, whether any part of its line extended into Ohio or not; and if the courts of our State should acquire jurisdiction over the person of a railroad company whose line lay wholly without the State, no reason is perceived why the rule should not be applied. Judgment affirmed.

THE FELLOW-SERVANT ACT OF TEXAS--*San Antonio and Aransas Pass R. R. Co. v. Harding et al.* 33 *Southwestern Reporter*, page 373.—In the district court of Harris County, Tex., judgment was rendered awarding \$16,000 damages against the San Antonio and Aransas Pass Railway Company in favor of Laura Harding and others, the widow and minor children of Edward Harding, who was killed in a collision between the engine in which Harding was engineer and another engine used in switching in the company's yard at Waco, Tex. The case was carried, on appeal by the company, to the court of civil appeals, which tribunal affirmed the judgment of the district court by decision rendered November 28, 1895.

The circumstances under which Harding was killed were as follows: Deceased was an engineer, in the service of the company, in charge of a train going from Yoakum to Waco, and was under the control of the train master at Yoakum. In the company's yard at Waco was a regular yard crew, consisting of a night yard-master or foreman, a yard engineer or "hostler," a fireman, and other employees, and these were engaged in switching cars in the yard with engine No. 53. This yard crew was under the immediate supervision of one Hall, the foreman, who had no control over Harding. When engine No. 53 was taken to the yard to be used in switching cars its lamp was in a defective and leaking condition and was found empty. It was refilled and relighted by the yard engineer and fireman, who, it seems, had not been notified of its defective condition. The evidence was sufficient to show that when Harding arrived in sight the defective lamp had gone out, and nothing was done to give Harding notice of the switching engine's presence on the track upon which he was approaching, or to prevent a collision, except that when he had approached so close that he had not time to stop and avoid the danger, the yard engineer gave him a signal with his lantern to stop, and then endeavored to back the switch engine out of the way, but was prevented from doing so by the number of cars already occupying the side tracks. Deceased failed to discover the switching engine because of the absence of the headlight and received no other sufficient warning. A collision ensued, which resulted in his death.

In delivering the opinion of the court of civil appeals, Judge Williams said:

As negligence of the defendant in failing to exercise proper care to see that the headlight was in good condition was one of the causes contributing to the death of Harding, defendant is liable, even if it were true that the negligence of employees who were fellow-servants of the deceased also contributed. There can be little doubt that, if the headlight had been kept in proper condition, it would have continued to burn, and would have notified Harding of the presence of the switch engine in time to have enabled him to avoid danger. No other cause for the extinguishment of the light is suggested by the evidence but that the oil had leaked out and that none remained to feed the light. The company is responsible for the omissions of servants, to whom it left the performance of the duty of seeing after the condition of the lamp.

Under our fellow-servants' act the employees working with the switch engine were not the fellow-servants of Harding. (Laws of 1893, p. 120.) The employees in the yard, under the supervision and control of the yard master, were in a different department from engineers running trains on the road, under the supervision and control of the train master at another place. It is contended that the two engineers were in the common service of the company, were in the same department, were of the same grade, and were working together at the same time and place, and to a common purpose, and, therefore, come within the definition of "fellow-servants" as given in the statute. If this were conceded, we do not think it could relieve appellant, even if no negligence but

that of its servants were shown, because the collision can not be said to have resulted from the negligence of the yard engineer alone. If he was guilty of negligence, the foreman was also guilty, and the fact that the negligence of a fellow servant merely contributes to the injury does not relieve the company, if its own negligence, or that of its employees who are not fellow-servants with the injured employee, also contributes. But we are not prepared to concede that the "hostler" was a fellow-servant under the statute. In a sense, as stated by one of the witnesses, the two engineers were in the same department, the "motive power department," but this has reference to the divisions of its service into branches made by the company. Under its regulations servants may be in the same department as named by it, and yet in different departments as intended by the statute. Such questions must be determined by the relations which the employees actually bear to each other, and not by the mere names that are given by the company to the different branches of the service.

Nor do we think that the engineers were in the meaning of the statute, "in the common service," or that they were "working together to a common purpose." Their superiors, to whose authority they were subjected, were vice principals of the corporation, and stood to the servants under their control in the relation of master. This the statute expressly declares, and this provision, we think, enables us to determine what is meant by the words "departments," "common service," and "common purpose." As pointed out in the Ross case (112 U. S., 389; 5 Sup. Ct., 184), there is a line of decisions holding that employees are in the same department, and in a common employment, only when they are subject to the same immediate supervision and control. This view had not generally prevailed, and was not adopted by the courts in this State, and it seems to us, from the whole of the statute, that it was intended to substantially adopt it. The servant having control of others is first declared to stand in the relation of master to those under him, and then, in defining the relation of other employees to each other, it is provided that, in order to be fellow-servants, they must be in the common service, in the same department, of the same grade, working together at the same time and place, and to a common purpose. The servants subjected to the control of different supervisors are thus treated as being in separate departments and different service. When we consider that many authorities, including some of the later opinions of our supreme court, had expressed the view that sound reason for the existence of the rule as to fellow-servants could only be found in cases where the employees were so situated with reference to each other as to be enabled to exercise over the conduct of each other that watchfulness regarded as essential to the efficiency of the service and the safety of the public, we see that the legislature has adopted that view, and intended to enforce it, in the provisions referred to. Under our construction of the statute, none of the employees in the Waco yard were fellow-servants with Harding, unless indeed, in the performance of his duties, he became temporarily subject, while operating in the yard, to the supervision of the yard foreman. Then he might be considered for the time a fellow-servant with the others, subject to the same authority, but not with the foreman himself.

The court, in its charge, gave to the jury all of the provisions of the statute, leaving them only to apply the evidence. Contention is made that the rule applicable when one servant is intrusted with control of others should not have been given, because there was no evidence to support it. As before noted, there was evidence tending to show that

engineers, while in the yards, were subject to the control of the yard master, and, if for no other reason than to prevent confusion in the minds of the jury, it was not improper for the court to tell them that, even in that view, Harding could not be a fellow-servant with the yard master. We think it evident that Harding on the occasion in question, never became subject to the authority of the yard master, but it could have done no harm for the court to inform the jury that, if he did, they were not fellow-servants. If we are correct in our view that none of the employees in the yard were fellow-servants of the deceased, then, even if the court committed error in defining those who might be fellow-servants, it is immaterial.

While this verdict is large, and may be for a greater amount than this court would allow if trying the case, it is not so clearly excessive as to authorize us to disregard the opinion of the jury and of the court below. In refusing to reverse such verdicts, we are not to be understood as approving them, but simply as adhering to the rules governing appellate courts in such matters.

CHINESE EXCLUSION ACTS—*United States v. Wong Hong*. 71 *Federal Reporter*, page 283.—The facts in this case are as follows: Prior and up to November 9, 1893, the defendant had resided continuously in the State of California for a period of sixteen years. On said date he departed for China and did not return until May 27, 1895. For a period of seven years preceding and up to August 1, 1893, the defendant was a merchant as defined by act of Congress passed November 3, 1893, being chapter 14 of the first (extra) session of the Fifty-third Congress. On August 1, 1893, his store was destroyed by fire. About six weeks or two months after the fire another store was built on the same lot where the original store stood. The firm of Duey Lee & Co. opened business in this new store two weeks or more before the defendant left for China. Defendant was a member of this firm and put \$800 into the business. After the fire and up to his departure for China the defendant devoted himself to the business. After his return from China and up to the time of his arrest he stayed in the store and aided in the transaction of its business and retained his interest in the firm continuously up to the rendering of the decision in this case. The defendant was charged with being a Chinese laborer unlawfully within the United States. The case was heard in the district court for the southern district of California, and on December 2, 1895, the decision was given by Judge Wellborn. In the course of his opinion the following language was used:

The defendant's right to be in the United States must depend upon his having been a merchant at the time of his departure therefrom, November 9, 1893. If at that time he was a laborer, his return to the United States was in contravention of the act of October 1, 1888 (chapter 1015, acts of 1887-88), and unlawful. The defendant, having departed from the country in 1893, can not now be lawfully here, unless the facts sustain his contention that he was a merchant at the time of such departure. The act of November 3, 1893 (chapter 14, acts of 1893,

extra session), provides as follows: "The term 'merchant,' as employed herein and in the acts of which this is amendatory, shall have the following meaning and none other: A merchant is a person engaged in buying and selling merchandise, at a fixed place of business, which business is conducted in his name, and who during the time he claims to be engaged as a merchant, does not engage in the performance of any manual labor except such as is necessary in the conduct of his business as such merchant." An analysis of this provision shows that, in order to constitute a person a merchant, four things are necessary: First, such person must be engaged in buying and selling merchandise; second, he must be engaged at a fixed place of business; third, said business must be conducted in his name; fourth, he must not, during the time he claims to be engaged as a merchant engage in the performance of any manual labor, except such as is necessary in the conduct of his business as such merchant. With reference to these constituents, it is only necessary to say, that the defendant has not only failed to establish the third constituent, but the evidence shows its nonexistence. The evidence is uncontradicted and positive to the effect that the firm name was Duey Lee & Co., and there is not a particle of evidence that the defendant's name appeared in any way in the conduct of said business. It is impossible, therefore, to hold in this case that the defendant is a merchant, without an utter disregard of the act of Congress above mentioned. The circuit court of appeals of this circuit has decided that, in order to constitute a person a merchant within the meaning of said act, it is not necessary that his name appear in the firm designation, but it is sufficient if his interest be real and appear in the business and partnership articles in his own name. In the present case there is no proof that the defendant's name appeared in the partnership articles or elsewhere in the business, while the proof is positive that the business subsequent to August 1, 1893, was not conducted in the defendant's name. My conclusion is that the defendant, Wong Hong, is a Chinese laborer, and unlawfully within the jurisdiction of the United States, and the judgment of the court will be that the said defendant, Wong Hong, be removed from the United States to China.

CONSTITUTIONALITY OF LAW REQUIRING BLOWERS FOR EMERY WHEELS—*People v. Smith*. 66 *Northwestern Reporter*, page 382.—Act No. 136 of the session laws of Michigan of 1887, now sections 1690z1, 1690z2, and 1690z3 of the third volume of Howell's Annotated Statutes, as amended by act No. 111 of the session laws of 1893, reads as follows:

SECTION 1. All persons, companies, or corporations, operating any factory or workshop where emery wheels or emery belts of any description are used, either solid emery, leather, leather covered, felt, canvas, linen, paper, cotton, or wheels or belts rolled or coated with emery or corundum, or cotton wheels used as buffs, shall provide the same with blowers, or similar apparatus, which shall be placed over, beside or under such wheels or belts in such a manner as to protect the person or persons using the same from the particles of dust produced and caused thereby, and to carry away the dust arising from, or thrown off by such wheels or belts while in operation, directly to the outside of the building or to some receptacle placed so as to receive and confine such dust: *Provided*, That grinding machines upon which water is

used at the point of the grinding contact shall be exempt from the conditions of this act.

SEC. 2. Any such person or persons and the managers or directors of any such corporation who shall have [the] charge or management of such factory or workshop, who shall fail to comply with the provisions of this act, shall be deemed guilty of a misdemeanor, and upon a conviction thereof before any court of competent jurisdiction shall be punished by a fine not less than twenty-five dollars and not exceeding one hundred dollars, or imprisonment in the county jail not less than thirty days or exceeding ninety days, or both such fine and imprisonment in the discretion of the court.

SEC. 3. Nothing in this act shall apply to factories, sawmills, shingle mills, and workshops in which such wheels or belts are occasionally used and only by men not especially employed for that purpose.

Joseph N. Smith was convicted of a violation of this act and appealed to the supreme court of Michigan from judgment on a writ of certiorari from the justice's court in Detroit rendered in the circuit court of Wayne County. The supreme court rendered its decision March 3, 1896, sustaining the constitutionality of the act and affirming the judgment of the court below. The following is quoted from the opinion of the supreme court, delivered by Judge Hooker:

Counsel for the defendant assert that they care to raise but one question, viz, the constitutionality of this law. It is not disputed that the State may regulate the use of private property, when the health, morals, or welfare of the public demands it. Such laws have their origin in necessity.

Counsel say that this law is invalid because it does not apply to all, not even to all who have emery wheels, because some may use with water, and others may not work continuously. For the purposes of this case, it may be said that all persons who are given continuous employment over dry emery wheels are within the provisions of this act. This singles out no class, as it applies to all persons who use emery wheels in that manner. Necessarily the practical application is limited to those who engage in such business, but such is the case with many laws. All criminal laws apply only to those who choose to break them. This law applies to all who choose to use the emery wheel.

The legislature has seen fit to permit certain uses of the dry wheel without a blower, while in other cases it is required. This is competent, and is not class legislation as between operatives. It fixes the limits of use without a blower, and requires it after such limits are passed; but the rules apply to all.

The vital question in this case is the right of the State to require the employer to provide, and the employee to use, appliances intended for the protection of the latter. Laws of this class embrace provisions for the safety and welfare of those whom necessity may compel to submit to existing conditions involving hazards which they would otherwise be unwilling to assume. Among them are provisions for fire escapes, the covering or otherwise rendering machinery safe, the condition of buildings, ventilation, etc. In the main, where the necessity is obvious, they commend themselves to those who have at heart the welfare of their fellows, and should be upheld if they do not contravene private rights. The constitution secures to the citizen the rights of life, liberty, and private property, and, as the only value in the latter consists in its use, it follows that the right to use private property

is within the provision. There can, however, be no doubt that the use of private property may be regulated by law. No one would think of questioning the validity of laws regulating the manufacture, use, and sale of dangerous drugs or explosives, or laws designed to insure safety in railway travel. The inspection of boilers, fire escapes upon hotels, means of exit from churches and other buildings which the public are wont to frequent, are familiar instances of the exercise of the police power. These rules are defended upon the ground that they are necessary to the safety of the public; not the entire populace, but such persons as shall lawfully place themselves in a position requiring such protection.

Where the law is aimed at acts or conditions which threaten contagion,—as where sewers, disinfection, or quarantine is required,—the necessity of and the power to make such laws are obvious. But at first blush they may not be so apparent where there is no direct danger to others than the party whose business is sought to be regulated, and those with whom he contracts.

It is contended in this case that neither the public welfare nor health is involved, inasmuch as the protection sought to be afforded is limited to the individual employee, who, by his contract of employment, signifies a willingness to use the machine in its dangerous condition, and therefore can not be heard to complain.

It is the law that a manufacturer may provide inferior and even dangerous machinery, tools, and utensils; and enterprises more or less hazardous are common and lawful. Men may contract to use such machinery, or to perform dangerous service, and have no remedy if injured. But we are not aware that the police power is limited by such contracts.

As between the parties themselves, the contract may cut off legal redress for injuries sustained, but we are not satisfied that the authority of the State is limited to the protection of those who do not sustain contract relations with each other. In the absence of a law requiring fire escapes, one who works in a high building, and is injured may be held to have assumed the risk incident to his employment, but we know of no rule which precludes the State from making a regulation requiring fire escapes to be placed upon high buildings, though the only object be to facilitate the escape of employees who are under contract to work there without such appliances for escape. Fire escapes in hotels and means of exit in theaters and public halls are required by law for the benefit of patrons, who are there by virtue of contract relations with the proprietor. So long as the rule is general, and the danger to the public—i. e., that portion of the public who are subjected to the danger—is clear, it is a proper subject for legislative intervention.

Certain cases bearing upon the subject under discussion are here cited in the opinion, which then goes on to say:

The trouble with these cases arises over the inability of the courts to fix a rigid rule by which the validity of such laws may be tested. Each law of the kind involves the questions: (1) Is there a threatened danger? (2) Does the regulation invade a constitutional right? (3) Is the regulation reasonable? In the present case no controversy is raised over the first of these. Hence we are not called upon to discuss it. As is implied by what has been said, the constitutional right to use property without regulation is plain, unless the public welfare requires its regulation. If the public welfare does require it, the right must yield to

the public exigency. And it is upon this question of necessity that the third question depends.

All, then, seems to be embraced in the question of necessity. Unless the emery wheel is dangerous to health, there is no necessity, and consequently no power, to regulate it. Unless the blower is a reasonable and proper regulation, it is not a necessary one. Who shall decide the question and by what rule? Shall it be the legislature or the courts? And, if the latter, is it to be determined by the evidence in the case that happens to be the first brought, or by some other rule? Does it become a question of fact to be submitted to the jury or decided by the court?

There is a manifest absurdity in allowing any tribunal, either court or jury, to determine from the testimony in the case the question of the constitutionality of the law. Whether this law invades the rights of all the persons using emery wheels in the State is a serious question. If it is a necessary regulation, the law should be sustained, but, if an unjust law, it should be annulled. The first case presented might show, by the opinions of many witnesses, that the use of the dry emery wheel is almost necessarily fatal to the operative, while the next might show exactly the opposite state of facts. Manifestly, then, the decision could not settle the question for other parties, or the fate of the law would depend upon the character of the case first presented to the court of last resort, which would have no means of ascertaining whether it was a collusive case or not, or whether the weight of evidence was in accord with the truth.

It would seem, then, that the questions of danger and reasonableness must be determined in another way. The legislature, in determining upon the passage of the law, may make investigations which the courts can not. As a rule, the members (collectively) may be expected to acquire more technical and experimental knowledge of such matters than any court can be supposed to possess, both as to the dangers to be guarded against and the means of prevention of injury to be applied; and hence, while under our institutions the validity of laws must be finally passed upon by the courts, all presumptions should be in favor of the validity of legislative action. If the courts find the plain provisions of the constitution violated, or if it can be said that the act is not within the rule of necessity in view of facts of which judicial notice may be taken, then the act must fall; otherwise it should stand. Applying this test, we think the law constitutional, and the judgment is therefore affirmed.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—*Pennsylvania Co. v. Finney.* 42 *Northeastern Reporter*, page 816.—This action was brought by Michael Finney, administrator, against the Pennsylvania Company to recover damages for the killing of the plaintiff's intestate, Patrick J. Finney, a brakeman in its employ. A judgment was rendered in favor of the plaintiff, and the defendant appealed from the superior court of Allen County, Ind., where the trial was had, to the supreme court of the State. From the evidence it appeared that the decedent was 22 years old and had been in the employ of the defendant for six months as a brakeman on a freight train; that near Columbia City the defendant maintained a water plug so near its track that a person descending a passing car on that side could not avoid it; that decedent was familiar with its location and had passed it almost daily

during his employment; that it was a part of his duty to go to the top of a train while passing through a station; that, after having passed through Columbia City, he walked to the rear of a car, with his back to the plug, while within 200 feet of it, and, without looking around to ascertain the attendant danger, began to descend the car ladder, and was carried against the plug; that he had no orders to descend at that particular time, but attempted to do so of his own volition. In the opinion of the supreme court, delivered by Judge Jordan, January 29, 1896, the following statements are made:

Considered in the light of the law which must control the case at bar, we are of the opinion, under the facts, that the jury was not authorized in finding a verdict in favor of the appellee. Assuming, without deciding, that the appellant was chargeable with actionable negligence in maintaining the water crane in the manner and in the condition shown, still there is an absence of evidence showing freedom from contributory negligence upon the part of the deceased, in the matter of which appellee complains. The rule is settled that the plaintiff, in such a case as this, must affirmatively show, by the evidence, not only negligence upon the part of the master, but freedom therefrom upon the part of the servant. The freedom from fault or negligence upon the part of the latter being under the law an essential element in the cause, which must be found to exist in order to warrant a recovery, a failure to establish the same results in defeating the action; and when the evidence in the record fails to prove this material fact, the judgment, upon appeal to this court, must necessarily be reversed.

After reviewing the facts in the case the court uses the following language:

We may affirm that appellee's decedent did not, under the facts, observe his surroundings, or exert the care required of him under the law; and hence, in the eye of the latter, he was chargeable with contributory negligence, and the allegations in the complaint, to this extent, at least, are not sustained by the evidence. As we have heretofore stated, the accident occurred as the deceased was attempting to descend to the caboose upon his own volition, and not under or by any direction of the appellant. We are unable to discover in this cause any evidence in the record from which a reasonable inference can fairly arise that appellee's decedent was in the exercise of due and ordinary care at the time of the fatal accident. The jury was not authorized, arbitrarily, without evidence, to infer the absence of contributory negligence upon the part of the deceased servant. The judgment is reversed and the cause is remanded, with instructions to the lower court to sustain the motion for a new trial.

DECISIONS UNDER COMMON LAW.

EMPLOYERS' LIABILITY—RAILROAD COMPANIES—*Central R. R. Co. of New Jersey v. Keegan.* 16 *Supreme Court Reporter*, page 262.—In an action brought by one Keegan against the Central Railroad Company of New Jersey judgment was rendered in favor of Keegan upon the verdict of a jury awarding him damages for injuries sustained by him while acting as brakeman in the employ of the railroad company, the injuries having been caused by the negligence of one O'Brien, who was

foreman of a drill crew, of which Keegan was a member, which was employed in the company's yard at Jersey City, N. J., in taking cars from the tracks on which they had been left by incoming trains and placing them upon floats by which they were transported across the North river to the city of New York. The negligence of the foreman, resulting in the injury to Keegan, consisted in his failure to place himself or some one else at the brake of certain backwardly-moving cars, so that there was no one to check their motion by applying the brakes, in consequence of which the rear wheel passed over Keegan's leg, who, while in the performance of his duty, had caught his right foot in the guard rail of a switch, and was thereby prevented from moving out of the way of the cars.

The case was carried by the railroad company to the United States circuit court of appeals for the second circuit, where two judges, sitting as the court, differed in opinion upon questions of law, and certified the two following questions to the Supreme Court of the United States for instructions, to enable them to render a proper decision: "(1) Whether the defendant in error [Keegan] and O'Brien were or were not fellow-servants; and (2) whether, from negligence of O'Brien in failing to place himself or some one else at the brake of the backwardly-moving cars, the plaintiff in error, the railroad company, is responsible."

The United States Supreme Court, through Mr. Justice White, decided, December 23, 1895, that Keegan and O'Brien were fellow-servants and that the railroad company was not responsible for the injuries sustained by the former through the negligence of the latter; but Mr. Chief Justice Fuller, Mr. Justice Field, and Mr. Justice Harlan dissented.

The following extract is made from the opinion in the case:

We held in *Railroad Co. v. Baugh* (149 U. S., 368; 13 Sup. Ct., 914) that an engineer and fireman of a locomotive engine running alone on a railroad, without any train attached, when engaged on such duty, were fellow-servants of the railroad company; hence, that the fireman was precluded from securing damages from the company for injuries caused, during the running, by the negligence of the engineer. In that case it was declared that: "Prima facie, all who enter the employment of a single master are engaged in a common service, and are fellow-servants. * * * All enter in the service of the same master to further his interests in the one enterprise." And while we in that case recognized that the heads of separate and distinct departments of a diversified business may, under certain circumstances, be considered, with respect to employees under them, vice principals or representatives of the master, as fully and completely as if the entire business of the master was by him placed under the charge of one superintendent, we declined to affirm that each separate piece of work was a distinct department, and made the one having control of that piece of work a vice principal or representative of the master. It was further declared that "the danger from the negligence of one specially in charge of the particular work was as obvious and as great as from that of those who were simply coworkers with him upon it. Each is equally with the other an ordinary risk of the employment," which the employee assumes

when entering upon the employment, whether the risk be obvious or not. It was laid down that the rightful test to determine whether the negligence complained of was an ordinary risk of the employment was whether the negligent act constituted a breach of positive duty owing by the master, such as that of taking fair and reasonable precautions to surround his employees with fit and careful coworkers, and the furnishing to such employees of a reasonably safe place to work, and reasonably safe tools or machinery with which to do the work; thus making the question of liability of an employer for an injury to his employee turn rather on the character of the alleged negligent act, than on the relations of the employees to each other, so that if the act is done in the discharge of some positive duty of the master to the servant, then negligence in the act is negligence of the master, but, if it be not one in the discharge of such positive duty, then there should be some personal wrong on the part of the employer before he is liable therefor.

The principles thus applied in the case referred to are in perfect harmony with the rules enforced by the supreme court of the State of New Jersey, within whose territory the accident happened which gave rise to the present controversy.

In *O'Brien v. Dredging Co.* (33 N. J. Law, 291; 21 Atl., 324), the court [of New Jersey] said: "Whether the master retain the superintendence and management of his business, or withdraws himself from it and devolve it upon a vice principal or representative, it is quite apparent that although the master or his representative may devise the plans, engage the workmen, provide the machinery and tools, and direct the performance of the work, neither can, as a general rule, be continually present at the execution of all such work. It is the necessary consequence that the mere execution of the planned work must be intrusted to workmen, and, where necessary to groups or gangs of workmen, and in such case that one should be selected as the leader, boss, or foreman, to see to the execution of such work. This sort of superiority of service is so essential and so universal that every workman, in entering upon a contract of service, must contemplate its being made use of in a proper case. He therefore makes his contract of service in contemplation of the risk of injury from the negligence of a boss or foreman, as well as from the negligence of another fellow-workman. The foreman or superior servant stands to him, in that respect, in the precise position of his other fellow-servants."

Applying the principles announced by this court and the supreme court of New Jersey to the facts in the case at bar, it is clear that *O'Brien* and *Keegan* were fellow-servants. *O'Brien's* duties were not even those of simple direction and superintendence over the operations of the drill crew. He was a component part of the crew, an active coworker in the manual work of switching, with the specific duty assigned to him by the yard master of turning the switches. He was subordinate to the yard master, who had jurisdiction over this and other drill crews; and it was the yard master who employed and discharged all the workers in the yard, giving them their general instructions and assigning them to their duties. *O'Brien's* control over the other members of the drill crew was similar to the control which a section foreman exercises over the men in his section; and, following its constructions of the decisions of this court in the *Baugh* and *Hambly* cases, the circuit court of appeals for the eighth circuit has held that a section foreman is a fellow-servant of a member of his crew, and that one of the crew injured by the negligence of the foreman could not recover. (*Railway Co. v. Waters*, 70 Fed., 28.)

In *Potter v. Railroad Co.* (136 N. Y., 77; 32 N. E., 603), employees of a railroad company, while switching cars in the company's yard, under the direction of a yard master, shunted a number of cars onto a track so that they collided with a car being inspected, and caused the death of the inspector. It was claimed that proper and reasonable care required that there should have been a brakeman on the front of the cars, to control in an emergency their motion, when detached from the engine. In the absence of proof to the contrary, the court presumed that competent and sufficient servants were employed, and proper regulations for the management of the business had been established, and observed: "It is quite obvious that the work of shifting cars in a railroad yard must be left in a great measure to the judgment and discretion of the servants of the railroad who are intrusted with the management of the yard. The details must be left to them, and all that the company can do for the protection of its employees is to provide competent coservants, and prescribe such regulations as experience shows may be best calculated to secure their safety."

We adopt this statement as proper to be applied to the case at bar. A personal, positive duty would clearly not have been imposed upon a natural person, owner of a railroad, to supervise and control the details of the operation of switching cars in a railroad yard; neither is such duty imposed as a positive duty upon a corporation; and if O'Brien was negligent, in failing to place himself or some one else at the brake of the backwardly moving cars, such omission not being the performance of a positive duty owing by the master, the plaintiff in error is not responsible therefor.

These conclusions determine both questions certified for our decision, and accordingly the first question is answered in the affirmative and the second in the negative.

EMPLOYERS' LIABILITY.—*Maher v. McGrath.* 33 *Atlantic Reporter*, page 945.—The defendant in this case was a contractor for the erection of a brick building, and employed the plaintiff, who was a laborer in attendance upon masons, who were also in the employ of the defendant. The evidence showed that when the plaintiff delivered to the masons upon a scaffold a hod full of brick, the scaffold fell with him and he sustained serious injuries. The cause of the fall was plainly fixed by the evidence to have been the breaking of a "bearer," one end of which was fastened to a scaffold pole and the other end was supported by the wall on which the masons were working. This case was tried in the circuit court of Union County, N. J., and the plaintiff was given a verdict. It was taken on error to the supreme court of the State and a rule to show cause issued. February 20, 1896, said court reversed the judgment of the court below and made the rule absolute. In the course of the opinion delivered by Judge Magie the following language was used:

Plaintiff claimed to have established defendant's liability to him for his injuries on the ground that the evidence showed a dereliction of the duty which, as employer, he owed his servants, in two respects, viz: (1) As to the material with which the scaffold was constructed, and (2) as to the manner of its construction. It is unnecessary to consider

whether defendant is charged with any liability for defects in materials, for the evidence makes it clear that the fall of the scaffold was due, not to defects in the material, but to defective construction. It affirmatively appears that defendant personally took no part in its construction, but that it was constructed by the masons, in accordance with the custom of the trade. As the error of construction which occasioned the plaintiff's injury was committed by workmen with whom he was working in a common employment, subject to a common danger which all equally knew must result from a negligent construction of the scaffold, the rule which denies the liability of the master for injury received from the negligence of a fellow-servant was plainly applicable. As there was no evidence that defendant was negligent in the selection and employment of the masons engaged in the work, there was no evidence of defendant's liability sufficient to be submitted to a jury. For these reasons I think the rule should be made absolute.

EMPLOYERS' LIABILITY—VICE PRINCIPAL.—*Carlson v. Northwestern Telegraph Exchange Co.* 65 *Northwestern Reporter*, page 914.—This case was brought before the supreme court of Minnesota on an appeal from the district court of Hennepin County. Suit had been brought in the district court to recover damages for personal injuries sustained by the plaintiff by reason of the defendant's negligence. Verdict was rendered for the plaintiff, and the defendant appealed from an order denying its motion for a new trial. January 20, 1896, the supreme court gave its decision, affirming the order of the court below. The evidence showed that the plaintiff, with some eighty other laborers employed by the defendant, a corporation, was engaged on August 3, 1893, in the work of excavating a ditch in which telephone wires were to be laid. The work of making this ditch was in charge of a foreman of the name of Purvey, who had control of the work and of all the men engaged thereon, with power to employ and discharge them, and to direct them what to do and where to work. He was the supreme authority there present, and all of the men were subject to his orders in every particular and no one present had any authority over him. A curbing had been put in to hold the side of the ditch in place, but it was insufficient for the purpose, and the complaint alleged that the defendant knew that the walls of the ditch were unsafe and were liable to cave in and injure persons there working. The plaintiff had no knowledge of the condition of the ditch at the point where the curbing was placed. When it was completed, he was ordered by the foreman to go into the ditch and clean out the loose sand at the bottom. He obeyed the order and commenced the work as directed, when a piece of earth, constituting the side of the ditch, settled down under the curbing into the bottom of the ditch, catching the plaintiff and breaking his foot and ankle. The foreman did not caution or advise the plaintiff as to the unsafe condition of the ditch at the place he was ordered

into. The following is the essential part of the opinion of the court, which was delivered by Chief Justice Start:

This brings us to the important, and practically the only real, question presented by the record for our decision, viz: Was the foreman discharging a duty which rested upon the defendant as master, when, under the particular circumstances and conditions of this case, he ordered the plaintiff into the ditch at the point where the accident occurred?

We answer the question in the affirmative. In the case of *Leindvall v. Wood* (41 Minn., 212) this court had the question under consideration, and as a result of a review of its previous decisions, and upon principle, reached the conclusion: "That it is not the rank of the employee, or his authority over other employees, but the nature of the duty or service which he performs, that is decisive; that whenever a master delegates to another the performance of a duty to his servant which rests upon himself as an absolute duty, he is liable for the manner in which that duty is performed by the middleman whom he has selected as his agent; and to the extent of a discharge of those duties by the middleman, however high or low his rank, or however great or small his authority over other employees, he stands in the place of the master, but as to all other matters he is a mere coservant. It follows that the same person may occupy a dual capacity of vice principal as to some matters and of fellow-servant as to others." We adhere to this conclusion. It is correct in principle, and furnishes a just and rational test for determining whether the act or default of an employee in a given case is that of a fellow-servant or of a vice principal. The decisive test is not the conventional title, grade, or rank given to the employee, but the character of what he is authorized to and does do. Applying the rule to the facts of this case, it is clear upon principle that the foreman, Purvey, in ordering the plaintiff into the ditch at the point of the accident, must be regarded as a vice principal. While the employee assumes for himself the ordinary and obvious dangers of the work or business in which he engages, yet the master is bound to use ordinary care to warn and protect the employee from unusual and unnecessary dangers and risks. If the nature and magnitude of the master's work, whether it be that of construction or otherwise, and the number of men engaged in its execution, are such that the exercise of ordinary care for the safety and protection of the workmen from unusual and unnecessary dangers requires that they be given reasonable orders, and that they be not ordered from one part of the work to another, without warning, into places of unusual danger and risks, which are not obvious to the senses and known to them, but which might be ascertained by the master by a proper inspection, the absolute duty rests upon the master to give such reasonable orders. Considerations of justice and a sound public policy impose this duty upon the master as such, which he can not delegate so as to relieve himself from the consequences of a negligent discharge of it. A workman, when ordered from one part of the work to another, can not be allowed to stop, examine, and experiment for himself, in order to ascertain if the place assigned to him is a safe one; and therefore, in obeying the order, while he assumes obvious and ordinary risks, he has a right to rely upon a faithful discharge of the master's duty to use ordinary care to warn and protect him against unusual dangers. In the present case the foreman, Purvey, was the supreme authority in charge of the work, with power to give all orders directing the places where the employees

should work, and all reasonable and necessary orders to secure their safety, which orders the plaintiff was bound to obey and did obey, and was injured by reason of the negligence of the foreman in knowingly ordering him into a place of unusual danger without warning him of the risks incurred in obeying the order. In giving such order, under the special facts of this case, the foreman represented the master, the defendant.

RAILROAD AID ASSOCIATION—ACCEPTANCE OF BENEFITS—RELEASE OF CLAIM—*Otis v. Pennsylvania Co.* 71 *Federal Reporter*, page 136.—In this case the United States circuit court, district of Indiana, decided, on January 3, 1896, that where a railroad relief association, composed of associated companies and their employees, is in charge of the companies, who guaranty the obligations, supply the facilities for the business, pay the operating expenses, take charge of and are responsible for the funds, make up deficits in the benefit fund, and supply surgical attendance for injuries received in their service, an employee's agreement, in his voluntary application for membership, that acceptance of benefits from the association for an injury shall release the railroad company from any claim for damages therefor, is not invalid as being against public policy or for want of consideration or mutuality.

The opinion of the court, delivered by District Judge Baker, is as follows:

This is an action by the plaintiff, Eugene V. Otis, for the recovery of damages from the defendant, the Pennsylvania Company, for injuries received by him through the negligence of the defendant in employing and retaining in its service a careless and drunken engineer, with full knowledge of his habits, by whose carelessness the plaintiff sustained serious and permanent injuries, without fault on his part. The defendant has answered in two paragraphs. The first is a general denial. The second sets up matter in confession and avoidance. To this paragraph of answer the plaintiff has interposed a demurrer, and the question for decision is, Does this paragraph of answer set up facts sufficient to constitute a defense? The gist of this paragraph of answer is the payment to and acceptance by the plaintiff of benefits to the amount of \$660 from the relief fund of the defendant's "voluntary relief department" on account of the injuries for which the action is brought, in full payment and satisfaction thereof.

It is alleged in the paragraph under consideration that the plaintiff was a member of the relief department mentioned, which is composed of the different corporations forming the lines of the Pennsylvania Company west of Pittsburg, to which such of their employees as voluntarily become members contribute monthly certain agreed amounts. This department has for its object the relief of such employees as become members thereof in cases of sickness or disability from accident, and the relief of their families in case of death, by the payment to them of definite amounts out of a fund "formed by voluntary contributions from employees, contributions, when necessary to make up any deficit, by the several companies respectively, and income or profit derived from investments of the moneys of the fund, and such gifts as may be made for the use of the fund." The associated companies have general

charge of the department, guaranty the full amount of the obligations assumed by them, and for this purpose annually pay into the funds of the department the sum of \$30,000 in conformity with established regulations, furnish the necessary facilities for conducting the business of the department, and pay all the operating expenses thereof, amounting annually to the sum of \$25,000. The associated companies have charge of the funds, and are responsible for their management and safe-keeping. Employees of the Pennsylvania Company are not required to become members of the relief department, but are at liberty to do so if admitted on their voluntary written application; and may continue their membership by the payment of certain monthly dues, the amount of which depends upon the respective classes to which they may be admitted; and the benefits to which they may become entitled are determined by the class to which they belong. A disabled member is also entitled to surgical attendance at the company's expense, if injured while in its employ. The plaintiff agreed in his application for membership:

"That the acceptance of benefits from the said relief fund for injury or death shall operate as a release of all claim for damages against said company arising from such injury or death which may be made by or through me, and that I or my legal representatives will execute such further instrument as may be necessary formally to evidence such acquittance."

Each company to the contract also agreed in behalf of itself and employees to appropriate its ratable proportion of the joint expense of administration and management, and the entire outlay necessary to make up deficits for benefits to its employees. It is further alleged that the member was a member of the relief department when injured, and that there was paid to him by the defendant through such department, on account of the injuries so received, and in accordance with his application therefor, and in accordance with the certificate of membership so issued to him, and the rules and regulations of the relief department, the sum of \$660, being at the rate of \$60 per month for eleven months, which he accepted and received as the benefits due to him from the said relief department under his said application and certificate and the rules and regulations of said relief department.

It is strenuously insisted by the learned counsel for the plaintiff that the contract is void, because it is repugnant to sound public policy, and is an attempt by the defendant to exempt itself, by contract, from the consequences of its own negligence; and because the agreement that the payment and acceptance of the benefits should operate to release the company from responsibility for its wrongful act is without consideration, for the reason that the plaintiff, by the payment of his monthly dues, became entitled as a matter of legal right to receive the stipulated benefits as fully as he was entitled to the payment of his monthly wages.

As a general proposition, it is unquestionably true that a railroad company can not relieve itself from responsibility to an employee for an injury resulting from its own negligence by any contract entered into for that purpose before the happening of the injury, and, if the contract under consideration is of that character, it must be held to be invalid. But upon a careful examination it will be seen that it contains no stipulation that the plaintiff should not be at liberty to bring an action for damages in case he sustained an injury through the negligence of the defendant. He still had as perfect a right to sue for his injury as though the contract had never been entered into. Before the contract was entered into, his right of action for an injury resulting

from the defendant's negligence was limited to a suit against it for the recovery of damages therefor. By the contract he was given an election either to receive the benefits stipulated for, or to waive his right to the benefits, and to pursue his remedy at law. He voluntarily agreed that, when an injury happened to him, he would then determine whether he would accept the benefits secured by the contract, or waive them and retain his right of action for damages. He knew, if he accepted the benefits secured to him by the contract, that it would operate to release his right to the other remedy. After the injury happened, two alternative modes were presented to him for obtaining compensation for such injury. With full opportunity to determine which alternative was preferable, he deliberately chose to accept the stipulated benefits. There was nothing illegal or immoral in requiring him so to do. And it is not perceived why the court should relieve him from his election in order to enable him now to pursue his remedy by an action at law, and thus practically to obtain double compensation for his injury. Nor does the fact that the fund was in part formed by his contributions to it alter the case. The defendant also contributed largely to the fund under its agreement to make up deficits, to furnish surgical aid and attendance, to pay expenses of administration and management, and to be responsible for the safe-keeping of the funds of the relief department. It had a large pecuniary interest in the very money which the plaintiff received. We are not concerned with the question whether the plaintiff might not have secured a larger sum of money if he had prosecuted his legal remedy for the recovery of damages for his injury. After the injury, the plaintiff was at liberty to compromise his right of action with the defendant for any valuable consideration, however small; and, if he chose to accept a less amount than that which he might have recovered by action, such settlement, if fairly entered into, constitutes a full accord and satisfaction, from which the court can not, and ought not to, relieve him.

The question of the validity of such a contract as that relied upon in the paragraph of answer under consideration is a new one in this court, but it has been considered by a number of reputable courts in other jurisdictions, and, with a single exception, so far as I am advised, it has been uniformly held that such a contract is not invalid for repugnancy to sound public policy, or for want of consideration, or for want of mutuality. In the views expressed in these cases I entirely concur.

INJUNCTIONS AGAINST LABOR ORGANIZATIONS—*Silver State Council, No. 1, of American Order of Steam Engineers v. Rhodes et al.* 43 *Pacific Reporter*, page 451.—This case was heard in the district court of Arapahoe County, Colo., the injunction asked for being refused and judgment rendered for the defendants. The plaintiff brought the case on error to the court of appeals of Colorado, and on November 11, 1895, the decision of said court was given, in which the judgment rendered in the court below was affirmed. The facts in the case are sufficiently set out in the opinion of the court delivered by Judge Thomson, which is as follows:

The purpose for which this proceeding was instituted is set forth in the prayer of the complaint, which we quote: "That an injunction issue

out of this honorable court, enjoining, restraining, and prohibiting the above-named defendants, each and all of them, and their said organizations, their servants, agents, and employees, both as individuals and organizations, in any manner interfering with or trying by threats, boycotts, strikes, or intimidations to break up and destroy, or cause the resignation of any member by threats, boycotts, strikes, or intimidations, of Silver State Council, No. 1, American Order of Steam Engineers, plaintiff herein, or by strikes, boycotts, or any other threats to compel it or its members to throw up its certificate, articles, or charter of incorporation or organization, or to in any manner interfere with the rights and privileges of Silver State Council, No. 1, of the American Order of Steam Engineers, plaintiff herein, or its right to exist and enjoy its rights, privileges, and freedom under the laws under which it was created; for costs herein expended, and will ever pray."

The complaint avers the capacity in which the plaintiff sues, and the objects of its corporate existence as follows: "That plaintiff is a corporation organized and existing by and under the laws of the State of Colorado, for the purpose of promoting a thorough knowledge in its members of theoretical and practical steam engineering, to help each other to obtain employment, bury the dead, extend the license law throughout the United States as well as the State of Colorado, and for the further purpose of helping its members according to the terms set forth in its certificate of incorporation, reference to which is hereto made." The complaint further states that the plaintiff is a "nonstriking labor organization;" that certain of the defendants are trustees of an organization called the "Trades and Labor Assembly," which is composed of various labor unions of Denver and vicinity, and was organized for the purpose (among other things) "of enforcing the rights of their several component parts by ordering a strike against all other organizations, employers, or individuals against whom it or they may have a grievance, and can not enforce their rights upon which they base their demands;" that certain other defendants are officers and members of an organization known as "Steam Engineers' Protective Union, No. 5703, of the American Federation of Labor," whose objects are to compel all stationary steam engineers to join their order, "and to resort to force by boycotting anyone who employs stationary steam engineers not members of said organization," or not subject to its orders or those of the Federation of Labor; and that the members of this organization are also members of the Trades and Labor Assembly.

It is also alleged that in March, 1892, the plaintiff was admitted into, and became a member of, the Trades and Labor Assembly, and in April, 1893, was expelled from that body, because its charter, constitution, and by-laws declared that it was a "nonstriking" organization; and that its expulsion was in pursuance of a conspiracy among certain of the defendants, members of the assembly, who, together with the other defendants, have since its expulsion been constantly endeavoring "in all manner and ways, both openly and in secret, to destroy and exterminate" it. This purpose was proposed to be accomplished "by declaring boycotts and strikes and using other means of warfare known to striking organizations against any and all who would employ any stationary steam engineer who was a member or belonged to Silver State Council, No. 1, of the American Order of Steam Engineers." Some instances are given in which it was attempted to compel engineers belonging to the plaintiff's organization to join the union, or procure their discharge from employment, by threatening to "boycott" and "levy strikes against" their employers. The plaintiff is a corporation,

and to entitle it to relief, it must appear that its corporate rights are threatened with some injury of a kind which may be made the subject of an action, and for which courts have the power to afford redress. The complaint is that the defendants have banded together and conspired to "exterminate" the plaintiff; and that they propose to accomplish their purpose by compelling its members to leave it. Of course, when its members have all withdrawn, it will be extinct. We need not discuss the character of the means to be employed for its disintegration. Whether they are legal or illegal, they can not be made the subject of an action in favor of the plaintiff. It has no property in its members, and, in losing them, it sustains no damage which the law recognizes as damage. It can not compel its members to remain with it; and, if they are violently driven out of it,—if they are forced to relinquish their membership against their will,—the grievance is theirs, and not the plaintiff's. Or if, for the purpose of forcing their withdrawal, others, by means of "boycotts" or "strikes," are made to suffer, the latter must fight their own battles. The law does not make the plaintiff their champion. The disorganization and resulting extinction of the plaintiff would, doubtless, be a calamity; but it is one which the law is powerless to avert. We have cited no authorities because we can find none which are of any use. If a case bearing the remotest analogy to this was ever the subject of adjudication, our most diligent effort has failed to unearth any record of it. The judgment will be affirmed.

EMPLOYERS' LIABILITY—*Durst v. Carnegie Steel Co., Limited.* 33 *Atlantic Reporter*, page 1102.—This was an action to recover damages for the death of Andrew Durst, who was an employee of the defendant, and lost his life by the fall of an embankment of earth into a ditch, which he was engaged with others in digging on October 18, 1893. The plaintiff was nonsuited in the court of common pleas of Allegheny County, Pa., and carried the case on appeal to the supreme court. In the opinion of the court of common pleas the following points were decided: (1) When a master intrusts to the superintendent in charge of an excavation the matter of notifying the employees of any latent danger, the foremen in charge of the gangs engaged in the work of excavation are not vice principals in the absence of the superintendent, so as to render the employer liable for their failure to notify the employee of such danger. (2) When the only possible danger to an employee engaged in making an excavation is such as may arise during the progress of the work, the employer is not bound to stand by during the work to see if a danger arises, it being sufficient if he provides against such dangers as may possibly arise and gives the workmen the means of protecting themselves. In arriving at these conclusions the following language was used by said court:

The principles of the law governing such cases are well established. The difficulty arises in their application to particular cases. An employee assumes all the ordinary risks of the business in which he may be employed. This includes accidents caused by the negligence of coemployees. But the master owes certain duties to the employee, and

among these is to furnish a reasonably safe place to work, and to notify the employee of any latent danger of which the employer has knowledge, or with reasonable care would know. These duties can not be avoided. If the master intrusts them to another, the latter becomes a vice principal, and the master is liable for any neglect by him in performance of the duties imposed by law upon the principal. It does not matter how many intermediates there may be, the person to whom the duty is committed is vice principal. In this case the duty was intrusted to John Molamphy, superintendent of labor, who had charge of all excavations. The company was therefore responsible for any neglect by him to perform the duty imposed by law upon them. It is contended that Patterson and McMillan, who were foremen of the gangs engaged at this work, were charged with the duty of protecting it in absence of Molamphy, and were therefore vice principals for the time being. We do not so understand it. They were mere foremen in charge of the men, supervising and directing their labor. Under all the cases they were coemployees with the men under their charge. We do not understand that Molamphy turned over any of his duties to them, but merely instructed them, in cases of necessity, to call him or the carpenter to provide against danger. There was no evidence to show contributory negligence on part of deceased. The only question, therefore, is whether there was evidence of neglect on the part of Molamphy to perform any of the duties imposed by law upon the defendants. The duty which it is alleged was neglected is that of furnishing a reasonably safe place to work. It will be observed that the place as it stood when the work commenced was perfectly safe. The danger could only arise as the work progressed, and be caused by the work done. In such a case we do not think it is the duty of the employer to stand by during the progress of the work to see when a danger arises. It is sufficient if he provides against such dangers as may possibly or probably arise, and gives the workmen the means of protecting themselves. They should look out for such dangers and use the means provided.

The supreme court, on January 6, 1896, approved the decision of the court of common pleas and affirmed its judgment in the following terms:

The opinion of the learned court below on the motion to take off the nonsuit is so full, clear, and convincing that for the reasons there stated, and upon the authorities cited, we affirm the judgment in this case.

PROTECTION OF GARMENT WORKERS IN SWEAT SHOPS IN MARYLAND.

[January session, 1896, chapter 363, public local laws.]

SECTION 1. *Be it enacted by the General Assembly of Maryland,* That two new sections be and the same are hereby added to article 4 of the Code of Public Local Laws, title "City of Baltimore," under the subtitle "Buildings," to follow section 131, to be designated as sections 131A and 131B, and to read as follows:

131A. It shall not be lawful for any person, agent, owner or proprietor of any sweat shop or factory where four or more persons are employed, to use any coal oil, gasoline, or any other explosive or inflammable compound for the purpose of lighting or heating in any form; any person, agent, owner or proprietor violating the provisions of this section shall be guilty of a misdemeanor, and, on conviction thereof, be fined by the court before whom such conviction is had for every violation, the sum of one hundred dollars and costs, and stand committed until such fine and costs be paid.

131B. The owner or owners of any such house or building used as a sweat shop or factory where four or more persons are employed as garment workers, on other than the first floor of such house or building, shall provide fire escapes for the same, and if any owner or owners of any such house or building so used, fail to make or provide a fire escape within six months after the passage of this act, upon conviction thereof, shall pay a fine of two hundred dollars to be recovered as other fines in this State, or imprisonment in the city jail for sixty days, or both fine and imprisonment, in the discretion of the court.

SEC. 2. *And be it enacted,* That this act shall take effect from the date of its passage.

Approved April 4, 1896.

RECENT GOVERNMENT CONTRACTS.

[It is proposed to publish in the Bulletin from time to time statements of the contracts for constructions entered into by the Treasury, War, and Navy Departments.]

The following contracts have been made by the office of the Super-
vising Architect of the Treasury:

FISHERMANS ISLAND, VA.—June 11, 1896. Contract with William H. Virden, of Lewes, Del., for work on new toilet rooms, plumbing, piping, sewer, miscellaneous work, etc., in connection with extensions to barracks at quarantine station, for \$2,032.60. Work to be completed within fifty-five days.

NEWBERN, N. C.—June 24, 1896. Contract with Gude & Walker, Atlanta, Ga., for interior finish, plumbing, approaches, etc., for post office, courthouse, and customhouse, \$20,080. Work to be completed within seven months.

WASHINGTON, D. C.—June 25, 1896.—Contract with Crook, Horner & Co., Baltimore, Md., for low-pressure steam-heating apparatus for extension to United States Bureau of Engraving and Printing, \$1,638.20. Work to be completed within thirty days.

NEWARK, N. J.—June 26, 1896. Contract with the Standard Paving Company, Newark, N. J., for approaches to customhouse and post office, \$5,000. Work to be completed within thirty days.

PHILADELPHIA, PA.—June 30, 1896. Contract with Morse, Williams & Co., Philadelphia, Pa., for two hydraulic passenger elevators in the courthouse and post office, \$22,097. Work to be completed within four months.

CHICAGO, ILL.—July 1, 1896. Contract with D. H. Hayes, Chicago, Ill., for the erection and completion of an operating wing to the United States Marine Hospital, \$6,948. Work to be completed within three months.

PAWTUCKET, R. I.—July 6, 1896. Contract with L. L. Leach & Son, Chicago, Ill., for erection and completion (except heating apparatus) of post office, \$40,774. Work to be completed within ten months.

MILWAUKEE, WIS.—Contract with Empire Fire Proofing Company, Chicago, Ill., for terra-cotta fireproofing, miscellaneous ironwork, etc., on post office, courthouse, and customhouse, \$39,800. Work within building proper to be completed within ninety days, in tower within fifteen days from the time roofs are on.

The following contracts have been made by the Navy Department:

PITTSBURG AND SOUTH BETHLEHEM, PA.—June 1, 1896. Contract with the Carnegie Steel Company, of Pittsburg, and the Bethlehem Iron Company, of South Bethlehem, for nickel-steel armor plates and appurtenances for battleships Nos. 5 and 6, the "Kearsarge" and the "Kentucky," the former amounting to \$1,660,518.20 and the latter to \$1,462,191.80.