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Contents

This Issue in Brief

Existing provisions for the care of the aged in the United States have been recently surveyed by the Bureau of Labor Statistics. The results of the survey are presented in this issue of the Review for three types of provisions—homes supported by fraternal organizations, homes supported by religious organizations, and public pensions. The findings are briefly as follows:

There are at least 111 fraternal homes for the aged. Data obtained show the capacity of such homes to be more than 10,000 and the average number of residents in excess of 7,000. Membership in the order is essential to admission, but the charging of an admission fee is very uncommon. The cost of operation for the homes reporting on this point averages $457.03 per inmate per year. Page 3.

Homes for the aged supported by religious and religious philanthropic organizations number at least 475. The bureau obtained reports from 408, the total capacity of these being about 31,000 and the total number of inmates in residence in excess of 27,000. More than one-half of the homes require no admission fee. The cost of operation of the homes reporting on this point averages $392.99 per inmate per year. Page 12.

Public pensions for aged dependent citizens are now authorized by legislation in 6 States (Colorado, Kentucky, Maryland, Montana, Nevada, and Wisconsin) and in Alaska. In each of the 6 States the legislation is merely permissive to the counties. So far as the bureau could ascertain, only 52 of the 351 counties in these States have adopted the pension system. About 1,000 persons are receiving pensions, the average pension being $17.37 per month. Page 31.

Accident rates for various industries showed no definite trend during the three years 1925 to 1927 inclusive, for which the Bureau of Labor Statistics has compiled data. In a few industries the severity rate has improved—such as in the manufacture of agricultural implements and in slaughtering and meat packing. On the other hand, the severity rates in the manufacture of electrical machinery, furniture, glass, and machine tools, and in lumber-planing mills have steadily risen during the period studied. Page 87.

There would be no problem of the displacement of railroad labor if the railroads adopted the policy of not taking on new men unless absolutely necessary, according to the Commissioner of Labor Statistics (p. 49). The worst that can be anticipated regarding railroad employment is that it will decrease very slowly, and this decrease will probably be much less rapid than the normal dropping off of old employees.

The Federal convict labor law of 1929 divests convict-made goods of their interstate character and thus permits the laws of any State to become operative with respect to the sale and distribution of convict-made goods within that State (p. 126). An article beginning on the same page gives a digest of all existing State legislation on the subject of systems of convict employment.

The average yearly earnings per worker in the manufacturing industries of Massachusetts are reported to have been $1,220.83 in 1927, as compared with $1,280.74 in 1920 and with $569.43 in 1913. Page 164.

Death claims due to automobile accidents, paid by fraternal benefit societies, showed an increase of 16 per cent in the 5-year period 1923–1928. Page 97.

The employment of city children at farm labor exists on a considerable scale in Philadelphia and results in serious loss of time from school. An investigation of this subject by the Pennsylvania Bureau of Women and Children in 1928 showed that nearly 2,000 children had entered school late in the fall of 1927 because they or their families were migratory agricultural laborers. Page 82.

The death rate from tuberculosis among members of the International Typographical Union increased in 1928, as compared with 1927. On the other hand, the death rate from cancer decreased considerably over the same period. Page 84.

Minimum-wage legislation in all countries having such legislation is reviewed in an article on page 73. In the United States such legislation has been attempted only in the case of women and minors, and recent court decisions have invalidated most of it. In many other countries, however, the legal fixation of wages exists for men as well as for women in at least certain industries where labor is not well organized.

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Care of the Aged in the United States

BECAUSE of the growing interest in the subject of the care of the dependent aged in the United States, the Bureau of Labor Statistics has recently been making a survey of the various means by which wage earners and others are provided for in their old age. Earlier studies of the bureau have dealt with the subject of American almshouses, retirement systems for public employees of various classes (Federal, State, and municipal employees, teachers, policemen and firemen, etc.), and pension plans for employees in private industry. The present study rounds out and supplements these earlier studies, bringing together in summary form the material already collected, and adding new data on homes for the aged, on the present status of public old-age pensions in the United States, and on the ministers' pension plans of religious denominations.

As is well known, the Federal Government operates a number of homes for disabled soldiers in various parts of the country, some of whose inmates are aged. Also, the majority of the States have established homes for soldiers of the Civil War (admitting also, in many cases, their wives or widows), of which a number have also begun to admit soldiers of the later wars—Indian, Spanish, and Mexican—and even of the World War. There are still, however, many residents of these homes who come properly within this study of the aged. In addition to these homes there are many homes for the aged maintained by organizations of various types. Thus a number of the fraternal organizations have such homes, as have also a very large number of churches and other religious organizations, and a third large group of homes is run by private philanthropy. In addition there are a number of homes for the aged supported by groups of various nationalities—German, Scandinavian, English, Scottish, etc.—for the benefit of their fellow countrymen. All of these types of homes have been included in the bureau's study.

From all possible sources of information the bureau was able to ascertain the existence of some 1,200 homes for the aged in this country. Thus far, data have been obtained for 988. These include 9 Federal soldiers' or sailors' homes, 46 State homes, 101 fraternal homes, 408 homes maintained by religious organizations of various sorts, 35 homes of miscellaneous organizations, 34 homes of nationality groups, 5 trade-union homes, and 350 private homes. Following this article are presented statistics dealing with two classes of

homes—those of fraternal organizations and those of religious organizations—and one relating to the present status of public pensions for aged wage earners and others who are without income sufficient for their full support. Similar summary articles on the other types of homes will appear later in the Labor Review. It is hoped to follow these purely statistical articles by others showing the actual conditions in the homes as disclosed by personal visits of agents of the bureau. All the data in detail will be printed later in bulletin form.

Homes for the Aged, Operated by Fraternal Organizations

INQUIRY was made of 71 national fraternal organizations (which could not be classified as organizations of either religious or national groups) as to what, if any, provision was made by the organization for the aged members, through pensions, homes, or relief. Replies were received from 61 of these. Seventeen issue beneficial certificates which can be surrendered for cash benefit, 4 have a pension plan, and 17 operate one or more homes for the aged.

Of the 111 homes for aged known to be operated by fraternal organizations which are neither of a religious character nor composed of national groups, the bureau has already secured data for 101. Three organizations stand out in respect to their provision for aged members. These are the Knights of Pythias (including Pythian Sisters), the Masons (including the Eastern Star), and the Odd Fellows (including the Rebekahs).[1] These three organizations together account for 97 of the 111 homes and for 87 of the 101 for which data were secured. The Odd Fellows lead with 47 homes (42 reporting), the Masons follow with 38 (34 reporting), and the Knights of Pythias are third with 12 (11 reporting). The other 14 organizations operate one home each.

Some of the fraternal organizations also operate orphanages, sanatoriums, etc., but these, of course, do not fall within the scope of the present study. Where aged and orphans are cared for in the same institution the home was included here.

Table 1 shows the distribution, by States, of the homes of the three leading organizations.

TABLE 1.—DISTRIBUTION OF PYTHIAN, MASONIC, AND ODD FELLOWS' HOMES FOR AGED, BY STATES

State	Knights of Pythias		Masons		Odd Fellows	
	Total number	Number reporting	Total number	Number reporting	Total number	Number reporting
Alabama					1	1
Arizona					1	1
California	1	1	[a] 2	[a] 2	1	1
Colorado					1	1
Connecticut			1	1	1	1
District of Columbia			[b] 1	[b] 1	1	1
Florida			1		1	1
Idaho					1	1
Illinois	1	1	[b] 3	[b] 3	1	1
Indiana	1	1	1	1	1	1
Iowa			[b] 1	[b] 1	1	1
Kansas			1	1	[c] 1	[c] 1
Kentucky			2	2	[c] 2	[c] 1
Louisiana					1	1
Maryland					1	1
Massachusetts	[d] 1		[a] 1	[a] 1	1	1
Michigan			1	1	1	1
Minnesota			1	1	1	1

[a] Including 1 Eastern Star home.
[b] Including 1 Masonic and Eastern Star combined.
[c] 1 Odd Fellows and Rebekahs combined.
[d] Pythian Sisters' home.

[1] The homes of the women's auxiliaries had to be included with those of the men because many of the homes are operated jointly.

TABLE 1.—DISTRIBUTION OF PYTHIAN, MASONIC, AND ODD FELLOWS' HOMES FOR AGED, BY STATES—Continued

State	Knights of Pythias		Masons		Odd Fellows	
	Total number	Number reporting	Total number	Number reporting	Total number	Number reporting
Missouri	1	1	1		1	
Montana			1	1	1	
Nebraska			1	1	1	1
New Hampshire	1	1	1	1	1	1
New Jersey			1	1	1	1
New York	1	1	[1] 3	[1] 3	5	5
North Carolina			[2] 1	1	1	1
North Dakota					1	1
Ohio	2	2	2	1	1	1
Oklahoma			1	1	1	1
Oregon					1	1
Pennsylvania	2	2	[1] 2	[1] 2	[3] 5	[3] 4
Rhode Island					1	1
South Dakota					1	
Tennessee			2	1	1	1
Texas			[1] 2	[1] 2	1	1
Vermont			[1] 1	[1] 1	1	1
Virginia			[1] 1	[1] 1		
Washington	1	1	1	1	1	1
West Virginia					1	1
Wisconsin			1	1	1	1
Total	12	11	[6] 38	[7] 34	[8] 47	[8] 42

[1] Including 1 Eastern Star home.
[2] Including 1 Masonic and Eastern Star combined.
[3] Including 1 Odd Fellows' and Rebekahs' home, and 1 Rebekahs' home.
[6] Including 7 Eastern Star homes and 4 Eastern Star and Masonic homes.
[7] Including 7 Eastern Star homes, and 3 Eastern Star and Masonic homes.
[8] Including 1 Rebekahs' home, and 3 Odd Fellows' and Rebekahs' homes.

The location of the single homes of the other fraternal organizations is shown below.

	State
Supreme Tribe of Ben-Hur	Indiana.
Benevolent and Protective Order of Elks	Virginia.
Foresters of America	New York.
Knights of Damon	Virginia.
Knights of the Golden Eagle	Pennsylvania.
Knights of Malta	Do.
Maccabees	Do.
Loyal Order of Moose	Florida.
Neighbors of Woodcraft	California.
Orangemen	Pennsylvania.
Patriotic Order of Sons of America	Do.
Improved Order of Red Men	Do.
Security Benefit Association	Kansas.
Sons of Hermann	Texas.

The 99 homes from which data as to number of residents were secured together provide for more than 7,000 old people. More than $3,000,000 was spent by the fraternal organizations reporting for this purpose last year.

The table following shows for the various orders the number of old people provided for and the cost of such provision during the last fiscal year.

TABLE 2.—NUMBER OF AGED IN HOMES OF FRATERNAL ORGANIZATIONS AND COST OF OPERATION FOR ONE YEAR

Organization	Total number of homes	Number reporting	Inmates		Cost of operation last fiscal year
			Capacity of home	Average number in residence	
Ben-Hur	1	1	21	9	[1]
Elks	1	1	300	244	$112,000
Knights of Damon	1	1	35	25	5,054
Knights of Malta	1	1	35	35	37,317
Knights of Pythias	12	11	623	[2] 362	[3] 184,442
Maccabees	1	1	100	20	5,000
Masons	38	34	[4] 4,726	[5] 3,267	[6] 1,252,413
Moose	1	1	200	167	84,966
Neighbors of Woodcraft	1	1	125	67	[1]
Odd Fellows	47	42	[7] 4,116	2,927	[8] 1,330,440
Orangemen	1	1	60	30	55,194
Patriotic Order of Sons of America	1	1	85	73	16,256
Red Men	1	1	20	10	7,162
Security Benefit Association	1	1	80	65	[9] 150,000
Foresters of America	1	1	16	16	[1]
Knights of the Golden Eagle	1	1	[1]	9	7,332
Sons of Hermann	1	1	[1]	[1]	[1]
Total	111	101	[10] 10,542	[11] 7,326	[12] 3,247,576

[1] No data.
[2] 10 homes.
[3] 9 homes.
[4] 32 homes; data include children also in 3 cases.
[5] 33 homes.
[6] 27 homes; data include children also in 2 cases.
[7] Data include children also in 1 case.
[8] 40 homes; data include children also in 2 cases.
[9] Includes also cost of hospital.
[10] 97 homes; data include children also in 4 cases.
[11] 98 homes; aged only.
[12] 86 homes; data include children also in 4 cases and hospital in 1 case.

Only 12 of these homes are filled to capacity.

Nearly half of these homes care for an average of fewer than 50 old people each, about one-fifth care for from 100 to 200 persons, and 8 care for 200 or more. The distribution of homes, according to number of aged who are sheltered there, is as follows:

Homes caring for—	Number of homes
Fewer than 25 persons	28
25 and under 50 persons	19
50 and under 100 persons	24
100 and under 200 persons	18
200 persons and over	8
Not reported	4
Total	101

The German Masonic Home of New York was the first fraternal home to be opened, it having started in 1867, but 33 of the 96 homes for which data on this point were obtained were opened before 1900. The distribution of the 97 homes reporting, according to number of years of operation, is shown below:

Homes in operation—	Number of homes
1 year or less	4
2 and under 5 years	7
5 and under 10 years	11
10 and under 25 years	31
25 and under 50 years	41
50 years and over	3
Total	97

Terms of Admission

MEMBERSHIP in the order is the first requisite in all fraternal homes. In those cases in which there is a required period of membership this varies from 1 to 25 years, the most common period being 5 years.

In the majority of cases wives and widows of members [2] are also admitted, subject to the same requirements, and in a number of cases the mother of a resident or of a deceased member who would have been eligible for admission may also be admitted. The Masonic Home of California also admits adult daughters of deceased members eligible for admission at the time of death, and a number of the other Masonic homes also admit the adult daughter or sister.

In order that the benefits of the home may be as equitably distributed as possible many of the fraternal organizations establish a quota of admission to the institution. In such cases the lodges have the privilege of sending to the home one resident for every specified number of members in the lodge.

In the majority of cases admission to the homes of the fraternal organizations is limited to those who are indigent and "unable to support themselves by reason of age and indigence, sickness, or infirmity." In a few cases, however, it is provided that persons with private means may be admitted upon terms mutually agreeable to home and applicant.

The Illinois Pythian Home specifies that it will not admit any member "whose affliction, disability, or indigency has been caused by his own misconduct, dissipation, or improper mode of living"; and, further, that should any resident, after being admitted, become able to support himself or cease to be indigent, he shall be discharged from the home.

Almost without exception it is required that the applicant be of good moral character, of temperate habits, and free from mental, infectious, or contagious diseases. Persons unable to dress and care for themselves are usually specifically excluded, but the Masonic Home of California, the Odd Fellows' Home of Kentucky, and the Pythian Home of California provide that provision may be made for the maintenance of such persons in sanatoriums or other appropriate institutions.

The following is a common provision in this connection:

> The home is a home for aged and indigent, who can care for their daily necessary wants, and not a hospital or sanitarium for the care of the sick or disabled, or those who are suffering with incurable, infectious, or contagious diseases, or from any other causes which have already rendered them unable to care for their daily wants.
>
> Hospital facilities are provided for those who are taken sick or become disabled after they have become residents of the home, but no provision is made in the law to accept applicants who are already too sick or too disabled to take care of their physical wants.

Age.—Of the 101 homes reporting 63 have no age limit on admittance. Of the remaining 38 which do have an age requirement, 5 place the age at 50, 2 at 55, 18 at 60, 9 at 65, 1 at 67, and 1 at 70, while 2 require merely that the applicant be "old."

[2] Orphans or half orphans, as well, in many cases.

FIGURE 1.—IOWA ODD FELLOWS' HOME, AT MASON CITY, WHICH COST $177,000

FIGURE 2.—BEN-HUR HOME, AT CRAWFORDSVILLE, IND.

Admission fee.—The charging of an admission fee to the home is very uncommon among fraternal organizations. The Maccabees' Home admits without fee beneficial members in the order; social members who carry no insurance in the order must, however, pay $200 per year if admitted to residence. Lodges of other States than Pennsylvania must also pay $200 per year for each of their members who is at the home. An admission fee of $500 is required at the Orangemen's Home.

Property.—Fifty-six homes have no property requirement, 40 require that any property or income possessed must be turned over to the home, 1 requisitions two-thirds of such property, 1 requires the forfeiture of all income over $20 per month and 1 of all over $60 per year, and 2 admit indigents only.

Other requirements.—Only 27 homes have any nationality or racial requirements. Of these, 13 require that the applicant be white, 10 that he be "American," 1 that he be an Anglo-Saxon, 1 that he be colored, 1 that he be German, and 1 that he be a native of the State in which the home is located.

Six homes require that the applicant be a Protestant.

Clothing.—Almost without exception the local lodges are required to provide all aged members seeking admittance to the home from their lodge with suitable clothing—usually for one or two years. (In some cases a detailed list of the articles required is given.) Generally the home furnishes any clothing needed thereafter, but in some cases the local lodge must continue to bear the clothing expense and see to it that its residents are "decently and properly clothed" as long as they continue in residence at the home.

Benefits Provided

MEDICAL care is provided in all of the 97 fraternal homes reporting on this point. Of these, 26 have a resident physician, 69 have one or more resident nurses, and 10 have either a hospital or infirmary in the institution. Of those who have resident nurses, 6 have 2 nurses, 5 have 3, 1 has 4, 1 has 6, 1 has 11, and 1 has 24 nurses. In a number of cases physician members of the order donate their services to the home.

The Iowa Odd Fellows' and Orphans' Home has a hospital building which cost $47,000 (see fig. 1), and the Masonic Home of California a hospital building with accommodations for 20 patients, which was presented to the organization by one of the officers. The Masonic Home of Ohio (fig. 5) has on its extensive grounds a hospital building containing 140 bedrooms, an isolation ward with 14 beds, diet kitchen on each of the three floors, a dental laboratory, consulting rooms, 11 solariums, an auditorium, and a large dining room and kitchen.

Recreation and amusements are provided for the old people in 75 homes. The recreations so provided range from those characterized as "limited," "ordinary," "usual" to those which represent the result of a good deal of time and thought. Among the recreations specified are radio, motion pictures, entertainments of various sorts, concerts, rides, games, etc.

In addition to providing for all the wants of the residents, six homes (three Masonic, three Odd Fellows') pay interest on property made over to the home at the time of admission. Twenty-one homes make

allowances to the residents to cover their small needs and for spending money. Of these one allows each resident $1 per month, one $2 per month, one $3 to $10 per month, according to the circumstances, and in one each resident receives $1 per month from his local lodge.

Burial.—A number of organizations provide that when a resident of the home dies he shall be buried in the home cemetery at the expense of the home (in some cases this is subject to a fixed maximum); in case relatives or the local lodge desire that other disposition be made of the body it is often specified that the expense of removal and burial must be met by the relatives or lodge. Other organizations require the resident's local lodge to defray all funeral expenses.

Duties of Inmates

RESIDENTS are expected to cooperate with the management in every way possible, to be friendly and courteous, prompt, and neat, and to do everything possible to make the home atmosphere pleasant.

In many homes the residents are also required to do such light chores and perform such services as their age and physical condition will permit; 61 of 90 homes reporting on this point make this requirement. These duties include making beds, washing and wiping dishes, setting the tables, etc. In 30 homes there is no requirement in this respect, but 12 of these permit the old people to assist around the place if they care to.

Among the services performed by the inmates of one home, as reported by the matron, are: "The care of the poultry, tending the cows in pasture, firing the boilers and keeping the basements clean, a quantity of carpenter work and painting work, preparing fruits for canning and vegetables for the tables, helping in the garden and picking fruits, mending and darning and making of all new material into sheets, pillow cases, table linen, etc., assisting in office errands for hospital, washing of dishes and dining-room work, cleaning of parlors every day, washing windows, etc. All hives have some drones, but we find that these are not our happy and contented residents. I am telling you these facts, as I am often asked whether the residents, who are able, do any work in the home."

Support and Administration of Home

FRATERNAL homes for the aged receive support in a number of ways. The most common is through a per capita tax levied upon the general membership. Many homes have established an endowment fund or are endeavoring to do so,[3] this being built up from voluntary assessments, gifts, bequests, etc. Also, in many cases the home is run by a separate association which the local lodges are expected to join and which individual members may join for varying fees, as annual, honorary, life, etc., members. The Masonic Home of California requires each new member to pay a fee of $25, which goes to the support of the home, and although a small per capita tax is levied upon the membership, so great has been the number of accessions to the order that the fees have been sufficient not only to pay the cost of operation but also to pay for the construction of new buildings.

[3] The endowment fund of the Masonic Charity Foundation of Connecticut amounts to $316,489.

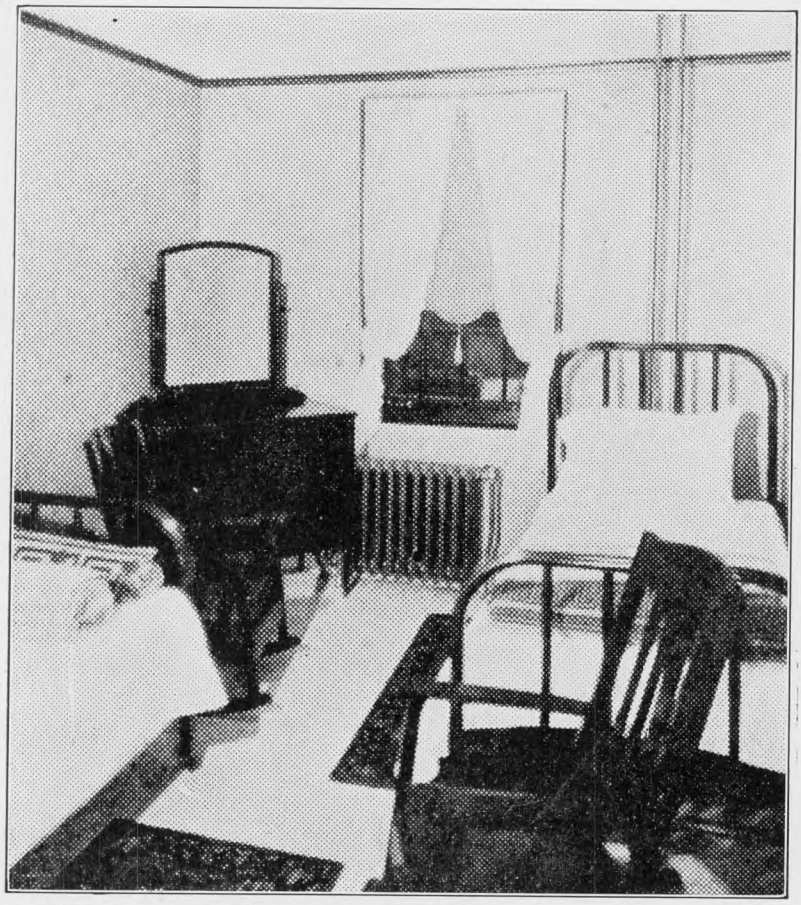

FIGURE 3.—BEDROOM AT INDIANA PYTHIAN HOME, INDIANAPOLIS, IND.

FIGURE 4.—ONE OF THE BUNGALOWS FOR OLD PEOPLE AT MOOSEHAVEN, ORANGE PARK, FLA.

Donations of furnishings, household supplies, as well as canned and other foods form a considerable item in the operation of many of these homes.

Usually a separate board of trustees manages the home, these trustees being so appointed or elected as to be representative of various districts of the fraternal jurisdiction.

Cost of Operation of Homes

THE per capita cost of operation varies according to the size of the home, the service given, etc. Naturally those homes which furnish such items as burial, clothing, medical and nursing service, etc., cost more per resident than those which furnish only board and lodging. The per capita cost in the various homes studied ranged from $33.33 to $911.24, the average for this group of homes being $457.03. In some instances where the home is run in connection with a hospital or orphanage, it was impossible to segregate the cost chargeable to the old people's home. The range and average per capita cost for those homes for which such information was available in usable form are shown in the following table:

TABLE 3.—PER CAPITA COST OF OPERATION OF HOMES OF FRATERNAL ORGANIZATIONS

Sponsoring organization	Cost of operation per inmate per year		
	Low	High	Average
Elks [1]	$459.02	$459.02	$459.02
Knights of Damon [1]	202.16	202.16	202.16
Knights of Malta [1]	[2] 731.71	[2] 731.71	[2] 731.71
Knights of Pythias	288.88	911.24	517.22
Maccabees [1]	250.00	250.00	250.00
Masons	200.00	796.57	474.68
Moose [1]	508.78	508.78	508.78
Odd Fellows	33.33	908.25	438.03
Red Men [1]	716.20	716.20	716.20
Patriotic Order of Sons of America [1]	222.68	222.68	222.68
All homes	33.33	911.24	457.03

[1] 1 home only. [2] Includes orphans also.

The bureau has data showing detailed figures of operating expenses of four fraternal homes, two of which are Masonic homes and two those of the Odd Fellows. The itemized expenditures of each of these four homes are given in the table below. In the last line of the table is shown the annual cost of operation per inmate. It is seen in this connection that this average cost is much higher for the Masonic Home of Illinois than for the others, but this is due to the unusually large expenditure for repairs in that home. In each case expenditures (where made) for permanent additions to the home plant were omitted, as it was felt that such costs are not properly chargeable to the current operating expenses of any one year.

TABLE 4.—OPERATING EXPENSES OF FRATERNAL HOMES FOR ONE YEAR

Item	Masonic Home of California, Decoto, Calif.	Masonic Home of Illinois, Sullivan, Ill.	Odd Fellows' Home, Stuyvesant, N. Y.	Odd Fellows' Home, Grove City, Pa.
Salaries and wages	$11,926.30	$22,794.50	$1,805.00	$12,310.34
Groceries and meats	27,912.66	30,075.87	3,204.69	5,403.97
Clothing	1,978.13	1,688.67	----	607.38
Laundry and supplies	4,101.86	3,183.83	----	940.92
Telephone and telegraph	394.93	----	40.16	33.15
Heat, light, and power	[1] 7,360.68	8,971.21	1,116.65	2,298.49
Water and ice	----	----	----	646.55
Drugs and medical supplies	425.02	----	----	344.55
Medical and hospital care	[2] 8,719.38	12,236.85	79.20	449.50
Printing and office supplies	234.04	----	121.47	880.32
Repairs to equipment and structures	1,499.88	16,935.89	165.89	1,653.40
Replacements	1,385.11	9,742.22	291.70	186.88
Transportation	----	1,100.69	6.10	2.25
Recreation	----	5,042.14	----	25.00
Insurance	----	762.05	345.45	----
Taxes	----	----	55.92	----
Miscellaneous	[3] 23,194.66	[4] 7,060.22	957.56	[4] 3,086.76
Total	89,132.65	119,594.14	[5] 8,189.79	28,869.46
Cost per inmate	353.27	778.12	282.44	246.75

[1] Includes water.
[2] Includes dental expense.
[3] Includes $6,133.11 for farm expenditures, freight, and certain expenses of kitchen and dining room.
[4] Includes burial expense.
[5] Includes farm expenses.

A number of fraternal homes have extensive land holdings in connection with the home, some of which in a number of cases is used for farming purposes. The farm does not always prove an asset in dollars and cents—in some cases the cost of operation is greater than the value of the crops produced—but the residents are in this way supplied with fresh fruits and vegetables that they might not otherwise have.

The 42 Odd Fellows' Homes for which the bureau has data relating to the land holdings have a combined acreage of 5,007 acres. In 2 cases the grounds are less than 5 acres, 9 homes have from 5 to 25 acres, 11 have from 25 to 100 acres, 11 from 100 to 200 acres, and 9 have 200 acres or more. Of the last group, one home has 316 acres, one 350 acres, and one 476 acres of land.

Six Masonic homes report farms, but there are undoubtedly many more which also have farms but did not think to mention this feature. Of these six, one has holdings of 150 acres, one of slightly over 267 acres, one of 271 acres, and one of 400 acres.

The Pythian Home of Indiana has land amounting to 135 acres, and the Kinkora Pythian Home of Pennsylvania (fig. 6), 2,700 acres.

The Security Benefit Association Home in Topeka, Kans., has 404 acres of ground.

Homes Proposed or in Process of Building

THE Woodmen's Circle reports that that society has acquired a tract of 214 acres in Sherman, Tex., upon which a home for aged members will be built "at an early date." Two needy members are now being assisted by the payment of a small monthly allowance until such time as the home is ready.

FIGURE 5.—LOBBY AND LIBRARY IN MAIN BUILDING OF OHIO MASONIC HOME, SPRINGFIELD, OHIO

FIGURE 6.—GARDEN AT KINKORA PYTHIAN HOME, DUNCANNON, PA.

FIGURE 7.—ENTRANCE TO MONTEFIORE (JEWISH) HOME, CLEVELAND, OHIO

The Daughters of America is building a home for aged at Tiffin, Ohio. It is expected that the cost will reach $250,000, and that it will be two years before the building is ready for occupancy. Only members in good standing who have belonged to the order for 20 years and have reached the age of 65 years will be eligible for admission.

The Workmen's Circle reports that it has for the past seven years been accumulating funds which will ultimately be used for the erection of a home for aged members. The secretary states that as few of the members have as yet reached their sixtieth year, the problem has not become urgent. The few who need aid now receive it from a relief fund. By the time there is a sufficient number of old people to make a home necessary it is thought that sufficient funds will be available to start one.

Other organizations which are accumulating funds for this purpose are the Ancient Order of Gleaners, and the Eastern Star grand lodges of Delaware, Mississippi, Nevada, North Dakota, and South Carolina.

The Virginia grand lodge of the Knights of Pythias expects to have a home for the aged "at some future time."

Homes for the Aged, Maintained by Religious Organizations

THERE are known to be some 475 homes for the aged and infirm run by religious organizations. These include 406 homes established and supported by churches of individual denominations, 13 homes which churches of several denominations cooperate in maintaining, and 55 homes which are run by philanthropic organizations of a religious aspect or connection, and 1 which is the home of a religious fraternal society. The church home may be a national home, such as the National Lutheran Home for the Aged, which is supported by the whole Lutheran body, it may be maintained by a State or district conference of a specified denomination, or it may be a purely local affair supported by one or more local churches. Homes which are operated through the joint support of several denominations—say, the various Protestant churches, or the Methodist and Presbyterian churches of a city, have been classified as "joint church" homes. In the classification, "religious philanthropic organizations," have been included organizations which, while undenominational, have a distinctly religious aspect, such as the King's Daughters' and the Jewish homes. The latter were not included with the "church" organizations because it is understood that seldom, if at all, are these homes supported by any specified Jewish congregation. The Salvation Army and the Volunteers of America are also included in this group because, while distinctly religious bodies, they nevertheless are essentially social service and philanthropic rather than denominational organizations.

Of the 475 homes, the Bureau of Labor Statistics has thus far obtained data for 408, distributed by States as follows:

TABLE 1.—DISTRIBUTION OF HOMES FOR AGED RUN BY RELIGIOUS BODIES

State	Total number of homes	Number reporting	State	Total number of homes	Number reporting
Alabama	1	1	Missouri	13	10
California	23	19	Nebraska	5	4
Colorado	2	2	New Hampshire	6	3
Connecticut	12	11	New Jersey	13	10
Delaware	2	2	New York	[1] 83	[1] 73
District of Columbia	11	11	North Carolina	2	1
Florida	1	1	Ohio	26	22
Georgia	4	4	Oregon	2	2
Idaho	1	1	Pennsylvania	50	47
Illinois	42	39	Rhode Island	5	5
Indiana	14	13	South Carolina	7	3
Iowa	10	10	South Dakota	1	1
Kansas	7	7	Tennessee	3	2
Kentucky	7	3	Texas	8	8
Louisiana	6	5	Vermont	2	-------
Maine	2	1	Virginia	6	4
Maryland	17	11	Washington	5	5
Massachusetts	22	15	Wisconsin	16	16
Michigan	15	15			
Minnesota	22	21	Total	[1] 475	[1] 408
Mississippi	1	-------			

[1] Includes 1 religious fraternal home.

Table 2 which follows shows the total number of homes and the number reporting, the capacity and average number in residence, and the total and per capita cost of operation, classified by type of organization supporting the home.

TABLE 2.—NUMBER OF AGED IN HOMES OF RELIGIOUS GROUPS, AND ANNUAL COST OF OPERATION

Sponsoring organization	Total number of homes	Number of homes reporting	Inmates		Annual cost of operation
			Capacity of homes	Average number in residence	
Religious denominations:					
Adventist, Seventh Day	1	1	50	45	$11,335
Apostolic Christian	1	1	20	18	3,307
Baptist	[1] 20	[1] 16	[2] 845	788	[3] 223,473
Christian	[1] 6	[1] 6	221	198	61,131
Christian Science	1	1	85	85	108,074
Congregational	5	5	178	163	80,969
Disciples of Christ	1	1	22	[4]	7,500
Evangelical	5	5	275	195	67,459
Evangelical Synod	5	5	410	400	141,014
Friends	4	4	154	139	102,431
German Baptist	3	13	[5] 472	[6] 442	[7] 113,552
Latter Day Saints	2	2	115	90	[8] 8,190
Lutheran	47	46	2,254	2,062	[9] 717,543
Mennonite	3	2	48	46	[8] 8,000
Methodist	45	42	2,844	[10] 2,406	[10] 1,158,793
Moravian	4	4	[11] 72	[11] 51	[8] 7,875
Presbyterian	[12] 20	[1] 16	843	[2] 619	[6] 296,533
Protestant Episcopal	39	37	1,168	[13] 999	[14] 526,985
Reformed Church in the United States	2	2	60	49	19,844
River Brethren	2	2	125	115	31,763
Roman Catholic	156	127	15,687	[15] 13,749	[16] 2,195,766
Scandinavian Evangelical	2	2	132	131	44,159
United Brethren	[1] 4	[1] 4	187	158	[11] 33,500
Univeralist	4	4	154	146	71,855
Unclassified	14	3	93	88	27,310
Joint church	13	13	576	536	198,162
Total	[17] 419	[12] 364	[18] 27,090	[19] 23,718	[20] 6,266,523
Religious philanthropic organizations:					
Jewish	42	31	3,714	3,267	[21] 1,734,563
King's Daughters	11	10	296	263	[7] 46,420
Salvation Army	1	1	24	20	8,270
Volunteers of America	1	1	30	30	14,221
Total	55	43	4,064	3,580	[22] 1,803,474
Religious fraternal	1	1	125	[4]	[4]
Grand total	[17] 475	[12] 408	[23] 31,279	[24] 27,298	[25] 8,069,997

[1] Includes 1 home for ministers.
[2] 15 homes.
[3] 13 homes.
[4] No data.
[5] 11 homes.
[6] 12 homes.
[7] 9 homes.
[8] 1 home.
[9] 43 homes; includes cost of orphanage in 2 cases.
[10] 41 homes.
[11] 3 homes.
[12] Includes 4 homes for ministers.
[13] 36 homes.
[14] 24 homes.
[15] 124 homes.
[16] 74 homes.
[17] Includes 7 homes for ministers.
[18] 360 homes.
[19] 355 homes.
[20] 277 homes.
[21] 28 homes.
[22] 39 homes.
[23] 404 homes.
[24] 398 homes.
[25] 316 homes.

As is seen, the various Catholic organizations operate the largest number of homes. There are in that church certain orders, such as the Little Sisters of the Poor, Sisters of St. Francis, etc., whose members devote their lives to the care of the poor, sick, and aged, and many of these homes are carried on by those orders. It will be noted that only 74 of the 127 Catholic homes reporting gave data as

to cost. Failure to report on this point was, in most cases, due to the fact that these homes are almost entirely supported by contributions and donations in kind upon which it is impossible to place a value. Other denominations or organizations which are especially active in the care of the aged are the Lutherans, Methodists, Episcopalians, and Jews.

As Table 2 shows, these 408 homes have accommodations for more than 30,000 persons. The total average number actually living there, however, falls below capacity by some 4,000. This is due in part to failure to reply on the second point; but it is also true that in many cases the home is not full. One home which has a much smaller number of residents than can be accommodated reports that this is due to the fact that one part of it is closed because of lack of funds to keep it in operation. Of the 394 homes which reported both capacity and number in residence, only 126 are full. In a few instances this is because the home has just been enlarged and the new section is not open for residence.

On the other hand, some homes are not only full but have waiting lists of applicants for admission as soon as a place can be made for them. One Methodist home which accommodates 195 persons reports that the home is always full and at present has a waiting list of 81. Another home which has 62 residents always has "a long waiting list." One Jewish home now has a waiting list for the first time. A Lutheran home which has 70 residents reports that although there have been several deaths at the home, "as soon as there is a vacancy, caused by death, there is always someone on the waiting list, anxious to get into the home. And in such cases the board always gives room for the most needy. We have at the present time a long waiting list, but the home is filled, and no one can come in until there is a vacancy. We are always happy when we can open our doors to new ones, some of whom have been waiting for years to come in, but it is also very hard when some of these poor old folks come to our door asking for admittance, and we must tell them there is no room." No fee is charged for admission to this home.

Some 28 per cent of these homes shelter fewer than 25 persons each, and 54 per cent have fewer than 50 persons. The largest homes are run by Catholic and Jewish groups; 22 homes of the Catholic and 5 of the Jewish groups have more than 200 people each. The average-sized home shelters 68 persons. Table 3 shows the distribution, by size of home.

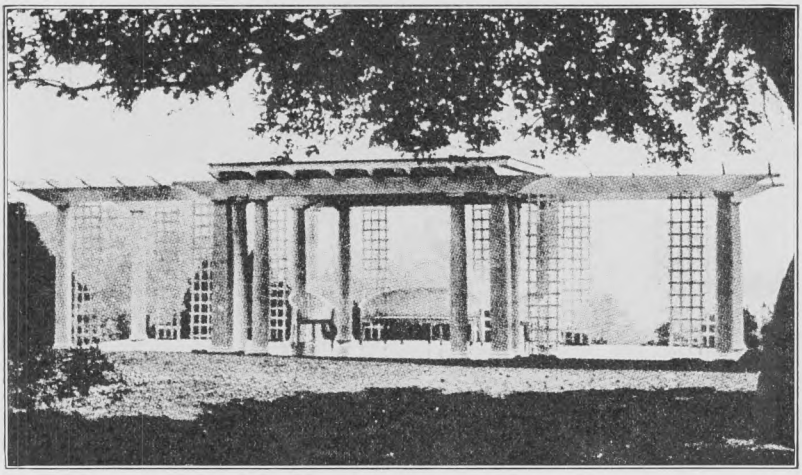

FIGURE 8.—MEMORIAL PERGOLA AT MONTEFIORE (JEWISH) HOME, CLEVELAND, OHIO

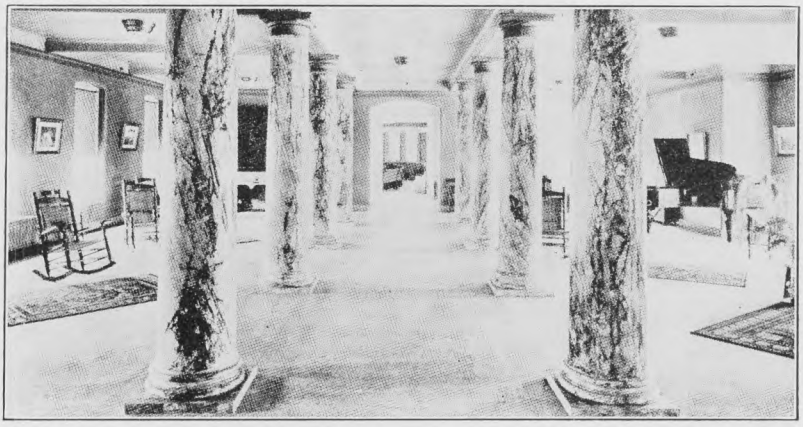

FIGURE 9.—CORRIDOR OF METHODIST HOME FOR AGED, CINCINNATI, OHIO. IN THIS ROOM ARE HELD CONCERTS AND "SINGS"

FIGURE 10.—DINING ROOM AT KIRKLEIGH VILLA, ROMAN CATHOLIC BOARDING HOME FOR AGED WOMEN, AT BALTIMORE, MD.

TABLE 3.—SIZE OF HOMES FOR AGED OF SPECIFIED RELIGIOUS GROUPS

Sponsoring organization	Number of homes with inmates numbering—						Total
	Less than 25	25 and under 50	50 and under 75	75 and under 100	100 and under 200	200 and under 500	
Religious denominations:							
Adventist, Seventh Day		1					1
Apostolic Christian	1						1
Baptist	4	5	4	2	1		16
Christian	2	2	2				6
Christian Science				1			1
Congregational	2	2	1				5
Evangelical	1	2	2				5
Evangelical Synod	1	3				1	5
Friends	1	2	1				4
German Baptist	7	2	1	2			[1] 12
Latter Day Saints		1	1				2
Lutheran	11	19	9	4	3		46
Mennonite	1	1					2
Methodist	12	9	6	6	8		[1] 41
Moravian	3						[1] 3
Presbyterian	7	5	1	1	1		[1] 15
Protestant Episcopal	18	14	2	2			[1] 36
Reformed Church in the United States	1	1					2
River Brethren			2				2
Roman Catholic	19	20	13	9	41	22	[2] 124
Scandinavian Evangelical		1			1		2
United Brethren	1	1	2				4
Universalist	3				1		4
Unclassified	1	1	1				3
Joint church	5	4	2	1	1		13
Total	101	96	50	28	57	23	[3] 355
Religious philanthropic organizations:							
Jewish	3	8	6	4	5	5	31
King's Daughters	7	2			1		10
Salvation Army	1						1
Volunteers of America		1					1
Total	11	11	6	4	6	5	43
Grand total	112	107	56	32	63	28	[4] 398

[1] Not including 1 home which did not report on this point.
[2] Not including 3 homes which did not report on this point.
[3] Not including 1 home of Disciples of Christ and 8 homes above noted, which did not report on this point.
[4] Not including 1 religious fraternal home and 9 homes above noted, which did not report on this point.

Fifty-nine homes have been established during the past decade, but 212 have been in existence twenty-five years or more, and 75 fifty years or more. The oldest is the Lafon's Asylum of the Holy Family, at New Orleans, La., which was established in 1848.

The Baptist, Congregational, Episcopalian, and Catholic homes are the oldest. Of the Episcopal homes, 23 of the 36 covered are more than 50 years old, as are 25 of the 123 Catholic homes, 4 of the 16 Baptist homes, and 2 of the 5 Congregational homes.

Terms of Admission

KIND and character of persons admitted.—Sound mind and good health are a general requisite for admission to the church homes, as to other homes for the aged. One Baptist home requires "fairly sound mind and reasonably good health," and a Catholic home that the applicant be "respectable, of sound mind, and free of contagious disease." Some homes require that the applicant submit to a physical examination.

"Good character" or "Christian character" is often specified as a requisite. "Good reputation" is required by one home.

One home accepts only deaf mutes, while another admits only "childless women" of good health and sound mind, and a third "aged women of the better sort, i. e., women of education and refinement, who have very small means or no relatives."

The Salvation Army home, "Eventide Home," has as its residents principally men whom the army has aided through its social service institutions and who are incapacitated and unable to provide for themselves.

There is one home in New York City which, as far as the knowledge of this bureau goes, is unique of its kind. It is a "waiting-home," maintained by the Protestant Unity League. This home has been in operation since April, 1925. No permanent guests are admitted; the home is operated simply for the benefit of persons who are on the waiting lists of the benevolent homes of the city. The period of "waiting" in the home averages about two years. If the aged resident is able to pay, a nominal board is charged; otherwise the service is free. This home is mainly for poor people who have painfully managed to hoard the entrance fee required by the home on whose waiting list their names are entered, but who are unable to maintain themselves until a vacancy occurs. Up to the present the waiting home has had accommodations for only 11 old ladies, but the league is now negotiating for the purchase of a larger house which will enable it to care for five men, for married couples if occasion arises, and also for a larger number of women.

There are 5 so-called "widows' homes" conducted by religious denominations. One is a Catholic home, 1 a Congregational home, 1 an Episcopal home, and 2 are Moravian homes. One home gives preference to widows of ministers, but ministers' unmarried daughters, teachers in church boarding schools, and others, are also admitted. These homes furnish living quarters either free or at a nominal rental, the light, heat, water, and janitor service being supplied free. The residents are otherwise self-sustaining. Together, these homes have a capacity of 80 persons; the average number in residence is only 67.

A number of homes are maintained solely or principally for ministers and their wives or widows, or for other workers in the church (missionaries, deaconesses, etc.). Thus, the Baptists of Ohio, Indiana, Michigan, Illinois, and Wisconsin have a home at Fenton, Mich., for "aged, infirm, and destitute" ministers and missionaries of that faith who have served 5 years in that capacity. The home also admits their wives, widows, and orphans. A fee of $100 is required at entrance. There are 14 residents at the home.

A home for ministers of the Christian Church is provided at Lakemont, N. Y. This home admits ministers who have served 20 years in the Christian church or some other Evangelical denomination, and their wives and widows. Men are admitted at 70 years (unless unable to preach, in which case at 50) and women at 60. The nominal entrance fee is $100, but this may be waived in the discretion of the home board of trustees. The home can accommodate 13 persons, but the average number of residents is 6.

Although there are some 45 homes for the aged conducted by Methodists, none of these are exclusively ministers' homes. One

such home which takes only "Christian people," is open to ministers and their widows, missionaries, deaconesses, and other workers in the church. Another, an African Methodist home, was started to care "for worn-out ministers and their wives or widows," but in practice the home has taken in "any worthy person of good repute."

The Presbyterian Board of Ministerial Relief conducts four homes for retired Presbyterian ministers, one of which is in Indiana, one in New Jersey, one in New York, and one in Pennsylvania. The bureau has data only for the Thornton Home, at Newburgh, Ind. Each of these homes has an average family of 15 persons. Twenty years' service in the church is required, but there is no admission fee. The Thornton Home accepts retired ministers and their widows, and missionaries of the church. No fee is required. The home at present has 24 residents, but the board announces that enlargement to a colony is contemplated, so as to "care for the large number of aged or disabled ministers and missionaries whose afflictions have made it impossible for them to be cared for at one of our homes." The original tract of 50 acres owned by the board has been added to by a gift of 25 acres with six houses "and attractive building sites for many more." Cottages will be erected for the use of the residents, and a sanitarium or hospital is also contemplated.[1]

The church of the United Brethren in Christ has a home for retired ministers of that church and their wives, in Puente, Calif. The home is run on the cottage plan. The superannuated ministers, of whom there are now 25 in residence, are assigned to a cottage where they keep house as if in their own homes. No fee is required. The home association provides the cottage, electric lights, water, and garden, free, and in needy cases, makes an allowance of from $20 to $30 per month. This home also takes residents with means, on an annuity basis, paying 7 per cent interest on all property transferred to the home. In this way, considerable property has been acquired by the home.

Sex.—The great majority of these homes (305) admit not only individuals of either sex but also take in married couples. In 78 homes, however, only old ladies are taken, and in 5 homes only old men. Eighteen homes take individuals of either sex but do not admit married couples.

Age.—Sixty-five of the homes have no fixed minimum age of admission, and 6 did not report on this point. All of the remaining 337 homes have an age below which admission is refused, this age varying from 50 to 75 years.

The most common ages of admission are 60 and 65 years, these being set by 163 and 145 homes, respectively, while 65 homes admit only persons of 70 years or over. The superintendent of one Methodist home, in which the age of admission is 60 years, reports in this connection that in his opinion 60 years is too low by at least 5 years; "great care should be taken that homes like this be not made a refuge for lazy folks. I have found them here and elsewhere."

Admission fee and other monetary requirements.—Over half of these homes require no entrance fee. The other 203 reporting have an admission fee, but in 38 of these admittance is not refused, as long as

[1] There is also a Presbyterian rest home in Milwaukee, established to provide a temporary home for Protestant clergymen and their wives (but Presbyterians are given preference). The length of residence varies from 2 to 6 months.

the resources of the home permit, to those who are unable to pay the fee. Many of the homes which require a fee in most cases, nevertheless accept persons who are unable to pay it. Thus, one Methodist home in Illinois, which has 140 residents, reports that 50 of these have paid nothing whatever to the home. Another, a Catholic home with accommodations for 50 persons, reports that about half of the residents are charity cases or have paid only part of the regular fees; in fact the great majority of Catholic homes, especially those of the Little Sisters of the Poor, require no fees of any sort from the aged for whom they are caring. A larger proportion of the homes of this denomination than of any other have no entrance fee.

The size of the minimum fee demanded varies considerably, ranging from $5 for one home for colored women to $5,000. In most cases where there is a range, the fee varies according to the financial means of the applicant.

Of the homes which require no entrance fee, 75 are boarding homes which do not take life members, but charge a specified rate per week as long as the resident is at the home. Thirteen homes take both life members and those who come in on a temporary (i. e., boarding) basis. One Catholic home reports that from 1880 (when the home was established) until 1913 life members were accepted for a fee of $1,000. Under this arrangement, however, it was impossible to meet expenses, and so the system was changed. The home now takes boarders only, the rates being $10, $12, and $15 per week, according to the location of the room chosen.

The rates of admission and of board are shown in the table below.

TABLE 4.—MONETARY REQUIREMENTS OF HOMES TAKING LIFE MEMBERS AND OF BOARDING HOMES OF RELIGIOUS GROUPS

Life members

Rate	Number of homes	Rate	Number of homes
$5	1	$800	[6] 10
$15	2	Up to $1,000	1
$100	9	$1,000	[7] 18
$200	10	$1,000 or $2,000	1
$250	2	$1,000–$3,000	[3] 2
Up to $300	[1] 1	$1,200	1
$300	12	$1,200–$3,750	[3] 1
$300–$500	[2] 2	$1,500	3
$300–$600	1	$1,800	2
$365	1	$2,000	2
Up to $400	1	$2,000–$3,500	1
$400	11	$2,000–$4,000	[3] 1
$400–$500	[3] 1	$2,500	[8] 1
Up to $500	1	$3,000	2
$500	[4] 37	Up to $4,000	1
$500–$1,000	[3] 1	$4,000	1
$600	[5] 8	Up to $5,000	1
$700	2	According to means, etc	49
$700–$900	[3] 1		
Up to $800	1	Total	203

[1] Per year.
[2] According to age in 1 case.
[3] According to age.
[4] $800 for nonresidents in 1 case; plus funeral expenses (amount not specified) in 1 case; plus funeral expenses of $100 in 1 case.
[5] $1,000 in 1 case if nursing is required.
[6] Plus funeral expenses in 1 case.
[7] Or $100 and $75 per year in 1 case; plus $200 for funeral expenses in 1 case.
[8] Or $300 and $8 per week.

TABLE 4.—MONETARY REQUIREMENTS OF HOMES TAKING LIFE MEMBERS AND OF BOARDING HOMES OF RELIGIOUS GROUPS—Continued

Boarders

Rate	Number of homes	Rate	Number of homes
Per day:		Per month—Continued.	
$1	8	$20–$40	1
$1.15	1	$20.50	1
Per week:		$21	1
$2–$10	2	$25	6
$3	1	$25–$35	2
$5	2	$25–$40	2
$5–$6	1	$30	12
$5–$8	1	$30–$100	1
$5.50	1	$35	4
$7	2	$35–$40	1
$8–$10	1	$35–$50	1
$10–$18 [1]	1	$35–$60	1
Not reported	6	$40	3
Per month:		$45	2
$2 [2]	2	$50	1
$10	3	$65	1
$12.50 [2]	1	$65 and $75	1
$16–30	1	Not reported	7
$18–$22	1	Not reported	2
$20	2		
$20–$35	1	Total	88

[1] Not including medical care.

[2] Widows; covers rent only.

The incoming life resident is required by 133 of these homes to transfer to the home, either at entrance or at death, all or part of such property, insurance, pensions, and other income as he is or may thereafter be in possession; in one of these he is required to make over one-half of his property up to $10,000, in one all up to $1,500, and in a third all up to $5,000. In 66 of these cases the home pays to the resident who has made such transfer of property either all or part of the income from it or a fixed rate of interest upon it. Many homes accept only persons in destitute circumstances and therefore require no admission fee; in such cases, of course, the applicant has no property and the property-transfer clause would mean nothing.

Nationality.—One hundred and fifteen homes make requirements as to race, nationality, or color. Of these 1 takes only citizens of the United States, 29 Americans only, 4 only persons speaking English, 5 Germans only, 4 German-Americans only, 1 Germans or Americans, 2 French only, 6 Swedes only, 2 Norwegians only, 6 Scandinavians only, 24 Jews only, 20 whites only, 8 negroes only, and 3 homes any but negroes. One home takes all nationalities but gives preference to Swedes, 2 give preference to Germans, and 4 to Scandinavians.

Religion.—Of the 364 homes maintained by specified religious denominations, 173 take only (or give preference to) applicants who are members of the denomination sponsoring the home.

Of the religious philanthropic organizations, 13 require that applicants belong to a Jewish congregation (in 4 cases an orthodox congregation) and 3 that they be Protestants.

Personal property.—The regulations as regards furniture and personal effects vary. Some homes require that the applicant have a supply of clothing sufficient to last one or two years. Others furnish this from the time the person enters the home. In some

instances the home requires that the resident furnish his own room or that he supply his own bed linen. Others go to the opposite extreme, and prohibit the resident from bringing any furniture with him, except possibly a favorite chair.

One home, each of whose residents has a private room comfortably furnished, allows the members to keep their personal belongings, "those little trinkets and mementoes, those precious links to the unforgettable past. And with what loving care these residents look after their own little possessions!"

A Methodist home in New Jersey requires that an incoming resident bring with him the following: "One single iron bed, one bureau, one washstand, one mattress, six sheets, six pillowcases, three counterpanes, six napkins, two pairs blankets, one washbowl, pitcher, and soap dish, one rocking-chair, one straight chair, three rugs 36 by 72, one commode, one small table, some family pictures, books, small clock, six bath towels, six face towels."

Another, in its prospectus and report, writes as follows:

> It is the purpose of the institution to afford comfort and care to the aged fathers and mothers who make this their home. They are provided with carefully prepared food, and their rooms are kept clean and comfortable. The rooms are nicely furnished, but if those coming into the home desire to bring, say, a rug, or rocker, or clock, or nice, clean bedding, as good as new, or some other small things that would help to make their room more homelike, they should write the superintendent about it, who would be glad to advise in the matter.

Residence.—Residence requirements are very infrequent among these church and religious homes. Only 14 homes make regulations on this point. Five require residence in the city where the home is located (one for three years and one for one year), one six months' residence in the county, and five residence in the State (one for two years, one for three years, and one for five years); while one home gives preference to residents of the State. One home accepts only persons who have been resident in the United States for five years. Another, while accepting nonresidents, charges them a higher fee at admission.

Rules and Regulations Governing Home

THE strict regulations governing some of the homes undoubtedly detract from the attractiveness of the prospect of spending the rest of one's life there. One home, for instance, reports that "Inmates are not permitted to leave the grounds without the permission of the superior"; in this home the residents are permitted to receive visitors only on two days a week from 2 to 5 p. m.

The following extracts from the rules of another home illustrate another case in point:

> 4. Rooms must be kept in a neat, orderly condition, and ready for the inspection of managers at any time after 10 o'clock in the morning.
> 5. Inmates will not be allowed to bring furniture to the home for storage, and only such articles as approved by the house committee will be allowed in the rooms. Position of the furniture in the rooms shall not be changed without asking members of the house committee. One trunk can be kept in closet of each room. The matron will store any extra trunks belonging to inmates, not exceeding two to each person.
> 7. Driving tacks or nails in the walls of the rooms, closets, or halls forbidden.
> 8. Inmates are not allowed to go to the kitchen, the pantries, storerooms, linen closets, laundry, or cellars without permission of the matron. This rule must be enforced.

11. Each inmate will be allowed eight plain pieces in the wash weekly. All articles must be plainly marked with the owner's name. The assistant matron will advise as to the care of all soiled linen.

12. Food and crumbs for birds or animals must not be thrown from windows or left on window sills. Clothing shall not be left out to air from either windows or verandas. Only six potted or growing plants allowed in a room with permission.

13. Keys of bedrooms must not be taken out of the home. Any inmate locking her door when about to leave the house shall leave the key in her letter box on first floor. Bedroom doors must not be locked at night except by permission of the matron.

Quite otherwise is a home which "relies more upon the good sense and character of its members for the orderly and happy ongoings of the family life than it does on formal rules."

A Cleveland home reports its attitude as regards "institutionalism" thus:

The ——— Home is in no sense a place of isolation. Friends and relatives of residents are welcome at any time. There is a complete absence of the "visiting hours" which characterize the routine of so many institutions.

Residents may leave the grounds when they desire and are accorded all reasonable privileges consistent with their safety and welfare.

When the home was built every detail of its design and arrangement was decided upon with a view to eliminating every trace of the institutional. The paramount object was to make this a real home for our aged and infirm people. The present building and grounds are striking evidence of the attainment of that objective.

Everything is done to promote a "family" spirit, to provide recreation and entertainment for the residents as a group, yet to preserve for each resident the privacy so essential to peace and comfort.

One unusual requirement found was that of a home which forbids marriage of residents. If a resident does marry while in the home this action "shall forfeit such person's place and rights in the home."

Duties of Residents

AS TO what is expected of the residents, as regards conduct, the following is typical:

In order to maintain a cheerful home atmosphere, all members are expected to keep their rooms in order, and to be neat in their personal appearance, to be kind and obliging to other members of the home, and to those in charge; to be prompt at meals and give reverent attention upon Divine worship conducted in the home; to make all criticisms to the matron or members of the board of managers and to no one else.

The 408 homes reporting are divided in the matter of requiring service of the residents; 182 require the performance of such light tasks as the old people are able to do, while 226 require no assistance (though 54 of these latter accept volunteer assistance from the residents).

Generally the service required is the care of the resident's own room, if physically able. In other instances the inmates are expected to help with the housework (setting the tables, helping with the ironing, sewing, etc., washing dishes), or (in the case of men) to assist around the grounds, help in the garden, with the poultry, etc. One Lutheran home reports that about half of the members help, the men in the garden and on the lawns and flower beds and the women washing the dishes, doing mending etc.; "just a little to keep them more spry, bodily and mentally." In another home the old ladies "knit, patch, darn, or do any little handwork at which they are proficient. They have for themselves whatever they earn in such work."

One or two homes have the cottage system, and in such cases the residents are expected to do the housework connected therewith. In the "widows' homes," where light, heat, janitor service, and quarters are provided, the inmates are in all other respects independent and self-supporting, each doing her own housework, cooking her own meals, etc., as if in her own home.

Occupational therapy is practiced in several homes in the belief that those who are busy are happiest. One Methodist home of this class reports that some of the articles so made are sold and the residents who made them receive all the money realized by the sale over the cost of the materials used. The report of this home states:

> In this connection we can lay special emphasis on the fine value of our carried on occupational therapy. More and more is it evidencing a great mental stimulus, inestimable in its effect on health, as well as according days of delightful busyness. Our pride in the artists we are discovering and developing in this household is very great. While the changes in coming and going have to be many, there is no abating in evidence. Homes of this kind now in existence are far insufficient.

One Catholic home has a special committee whose duty it is "to provide work of an agreeable nature for the entertainment and employment of the members of the home." Another committee, called the "pricing committee," places a value upon articles so made for sale by the home.

A Congregational home which holds a yearly "fair" exhibits articles made by the members.

One of the most beautiful of the homes studied, an endowed Jewish home, reports its position as regards the activities of the residents as follows:

> The dominant thought in the management of the ——— Home is that each resident shall take an active part in its conduct, since it is natural that old people are infinitely happier when they know that their efforts are helping to make life easier for themselves and for those about them.
>
> Morning finds them at their simple tasks—putting their rooms in order, doing their bit around the grounds and gardens, helping with the meals—doing all those things that make for normal life and remove from their minds all thought of institutional routine.
>
> Evening finds them in cheerful groups in the reading or recreation rooms, where the men and women residents may find amusement to their tastes, or enjoying the peace and quiet of their own individual rooms, where they are as undisturbed as they would be in a private home.

Benefits Provided

PERSONS taken into these homes receive board, lodging, and laundry for the remainder of their lives. The individual accommodations vary. In some of the larger homes the sleeping quarters are on the dormitory plan, with many beds in a room. In others, however, each individual (or couple) has a private room. One home describes the benefits as follows:

> Each person is given a cheerful, well-furnished private room, with furnace heat and electric lights. Also, the use of the pleasant living rooms, freedom of the grounds, and every privilege that goes with real family life. Each member is guaranteed comfortable support, wholesome food, competent medical care and nursing, and at death, Christian burial * * * unless interment is otherwise provided.

The president of the home association of another large institution reports: "It would take an entire day to tell you the benefits our

FIGURE 11.—BUNGALOW AT PACIFIC OLD PEOPLE'S HOME (METHODIST), LOS ANGELES, CALIF.

FIGURE 12.—KITCHENETTE APARTMENT FOR MARRIED COUPLE AT BETHANY (SWEDISH METHODIST) HOME FOR THE AGED, CHICAGO, ILL.

old people enjoy. Food of the best, fine rooms, plenty of heat and light, a beautiful chapel, Sunday services of a high order, etc."

A Methodist home on the Pacific coast, operated on the cottage plan, has five "units," each with from 4 to 12 rooms. (See fig. 11.) It describes the rooms and their furnishings as follows:

> The bungalow building plan decided on has proven very satisfactory. Five units, containing 4 to 12 rooms each, have been constructed, a stucco finish of the soft, yellow color so frequently found in California homes being used, and another 10-room structure is in process of erection. Each unit is well equipped with modern features for the convenience and comfort of old people—hot and cold water, electrical lighting, and gas radiators for heating rooms and halls. Rooms are large, with recess lavatories, clothes closets, and at least two windows in each room for light and ventilation.
>
> Furnishings are suitable and attractive. Beds, dressers and chiffoniers, tables and book shelves are chiefly of ivory finish, and chairs are selected with ease of the occupant in mind. Good rugs on floors help to establish a feeling of adequate comfort and gratification, particularly after the personal touch of the occupant is given. A central corridor or lobby with excellent lighting and furnished with a large table gives a cheerful and inviting entrance and an attractive assembling place for tenants, when so desired.

Another home of the same denomination in the Middle West has for its married couples "kitchenette apartments," consisting of living room (with kitchenette), bedroom, and bathroom. (See fig. 12.)

Medical care.—Of the 389 homes reporting on this subject, 370 furnish medical care. Generally a physician is retained who comes on call or makes periodic visits, but 57 homes have a resident physician and 256 have one or more resident nurses (30 have two nurses, 16 have three, 3 have four, 4 have five, and 2 have six nurses each). Some of the Catholic homes are conducted by nursing orders, and in such cases the nursing care is given by the sisters.

Some of the larger church homes have a hospital or infirmary in connection with the home. No specific request was made for information on this point, but 18 homes report having a hospital or infirmary, and it is likely that others which did not think to report this feature also have one. One home has a 12-bed infirmary, another accommodations for 35 patients, with male and female nurses in attendance, another a 5-bed hospital with dispensary.

In a number of cases medical service is given free by one or more of the local doctors, and in some instances there is a regular panel of physicians and specialists upon whom the home may call. Other homes retain their physician on a yearly basis.

Where medical and nursing care is given and the home pays for this, such care constitutes an important item of expense for the home, especially where a considerable proportion of the members are ill or infirm. Thus a Methodist home for negroes in Louisiana reports that of its 50 residents 12 are blind, 8 are paralyzed, 4 are feeble-minded, and 18 are over 95 years of age.

Another home reports: "Twelve of our inmates are totally blind and 27 partially blind. We have many inmates of very advanced years, who are exceedingly infirm and either partially or almost totally helpless. We have now 18 chair cases, a greater number than we ever had before."

Recreation.—The provision made for recreation for the old people who are living at these homes varies greatly. In 294 homes some attempt is made to furnish recreation. In some instances the old

people amuse themselves with the radios, pianos, victrolas, etc., at the home, or by walks through the grounds; in other cases the church or supporting organization has a committee whose business it is to arrange for the entertainment of the residents. As would be expected, most of these recreations are of the passive sort, requiring little or no exertion on the part of the aged inmates. Entertainments given at the home are very frequently reported, followed by the radio as a close second. Motion pictures are reported by a number of homes. Other recreations reported include automobile and bus rides, "outings," picnics, birthday and other parties, musical programs or concerts, games of various sorts (such as cards, billiards, quoits, etc.), teas, etc. One home gives theater parties for its old people, and another, located in a city which has a municipal opera company, takes its residents to the opera. A great number of homes, especially the larger ones, have libraries, smoking and game rooms, sun parlors, etc., where the residents may enjoy themselves.

Several homes report that birthdays of members are fittingly observed, with parties, programs, etc. In one home "once a week moving pictures are thrown on the screen by our own projector which is the gift of a kind donor. Films are supplied each week through the generosity of other friends of the home."

One home which has a large hospital in connection with it has a traveling library which visits all the wards and rooms every day, supplying reading matter to the residents. Last year 4,837 books were issued in this way.

In many places there appears to be a good deal of local interest in the home and its old people and considerable effort is expended for their pleasure.

Money benefits.—As already noted, 66 homes pay to the resident who has property to turn over to the home either the income from it or a fixed rate of interest upon it. One home pays interest at the rate of 2 per cent, 7 homes at the rate of 3 per cent, 12 homes at the rate of 4 per cent (1 only on property in excess of $1,000), 3 homes at the rate of 5 per cent, 1 home at the rate of 5.9 per cent, and 1 at the rate of 7 per cent.

One home makes each inmate an allowance of 75 cents a month, one home of $1 a month and $5 at Christmas, one of $1.50 a month, one of $2 a month, one of $10 per year, and one of $20 to $30 per month.[2] One gives each resident $1 on his birthday and $5 at Christmas. Twenty-two others, which do not state amounts, allow car fare and occasional small amounts, "pin money," spending money, etc. Four homes pay the residents for any work done around the institution.

One Methodist home which pays a small allowance to its residents explains its attitude thus:

> The home is not a poorhouse, but is the home where the church entertains, as its guests, its worthy men and women of ripe age whose own family circle is broken up. To contribute to the feeling of independence and self-respect, the home pays quarterly a certain amount of pocket money to such members as have no other income; it is sufficient to get the few articles of personal need and of gratification.

[2] This is a home for retired ministers, the allowance being for maintenance. (See p. 17.)

FIGURE 13.—ONE OF THE SIX SUN ROOMS AT KIRKLEIGH VILLA (ROMAN CATHOLIC), BALTIMORE, MD.

FIGURE 14.—CHAPEL AT THE CHURCH HOME AND INFIRMARY (EPISCOPAL), BALTIMORE, MD.

Religious services.—Religious services, as would be expected, are an almost universal feature of the homes in this group, and many of the homes have their own chapel where the residents assemble. (See fig. 14.)

One home reports on this point:

> The management does not stop with looking after the mere physical welfare of the members of the home. In all possible ways their religious life is cultivated and their spirits sustained by a living faith.
>
> Perhaps there is no service that so unites the family as the Sunday service. In the beautiful chapel they gather every Sunday afternoon for the preaching service. Attendance is not compulsory, but most of those who are able attend regularly and greatly enjoy the meetings.

Support and Cost of Home

THE main support of these church homes is, naturally, the churches of the denomination which sponsors the home. One home reports that it receives its support from the following sources, which are probably typical of a majority of the church homes: Monthly dues of members of the home association; voluntary contributions, gifts, legacies, compensation from local churches for care of their members; annual collections in all the participating churches; interest on endowments; admission fees; and gifts in kind.

Some of the homes have good-sized permanent or endowment funds, the income from which helps considerably to defray the operating expenses of the home. One endowed home, which does not report the amount of its endowment fund, states that the income from the fund pays for about one-half the cost of operation of the home, the institution being dependent for the remainder "upon gifts from friends, contributions from our churches, associate memberships, and funds raised in various ways by the board of managers, one of their greatest efforts being to see that each year we close our books without a deficit."

One home reports that it receives financial support from the churches of the denomination in the States of Iowa, Minnesota, and South Dakota. Another states that its funds are raised by direct levies laid on the membership of the supporting synods and by personal gifts of many friends throughout the church; "quite a few annuity bonds have been issued and legacies not a few have come to the home."

One home reports that in addition to the support received through "pledges" from the various parishes in the diocese it has an endowment fund of about $165,000. Another has an endowment of more than $218,000, another one of more than $400,000, and a fourth one of more than $181,000. One Chicago home reports permanent funds of $537,000.

Cost of Operation

Of the homes which furnished data from which per capita cost of operation could be computed, the Friends' homes are the group having the largest average per capita expenditure (considering only those denominations more than one of which reported). The next highest average is that of the Episcopal homes, with the Jewish and Congregational homes following. The average for the whole group is $392.99

per person per year. Details for the various denominations and organizations are shown in the table following.

TABLE 5.—PER CAPITA COST OF OPERATION OF HOMES OF RELIGIOUS GROUPS

Sponsoring organization	Annual per capita cost		
	Low	High	Average
Religious denominations:			
Adventists, Seventh Day [1]	$251.89	$251.89	$251.89
Apostolic Christian [1]	183.72	183.72	183.72
Baptist	151.35	697.64	401.93
Christian	245.00	500.00	308.74
Christian Science [1]	1,271.46	1,271.46	1,271.46
Congregational	264.71	634.96	529.60
Evangelical	198.63	928.57	345.94
Evangelical Synod	300.05	325.00	303.35
Friends	474.85	1,000.00	736.91
German Baptist	152.51	600.00	295.71
Latter Day Saints [1]	204.75	204.75	204.75
Lutheran	187.91	846.90	365.07
Mennonite [1]	285.71	285.71	285.71
Methodist	214.28	1,279.85	486.21
Moravian [1]	393.75	393.75	393.75
Presbyterian	111.60	775.55	455.71
Protestant Episcopal	83.33	1,154.96	649.30
Reformed Church in the United States	342.10	444.83	404.98
River Brethren	250.00	304.78	276.20
Roman Catholic	100.00	953.75	277.21
Scandinavian Evangelical	234.52	368.89	337.09
United Brethren	200.00	700.00	360.22
Universalist	271.25	775.08	492.16
Unclassified	230.76	571.43	310.34
Joint church	161.74	714.30	381.08
All denominational homes	83.33	1,279.85	362.36
Religious philanthropic organizations:			
Jewish	181.82	3,402.30	560.26
King's Daughters	136.14	583.29	313.65
Salvation Army [1]	413.50	413.50	413.50
Volunteers of America [1]	474.03	474.03	474.03
All philanthropic homes	136.14	3,402.30	547.50
Grand total	83.33	3,402.30	392.99

[1] 1 home only.

Some 25 homes of various denominations have furnished the bureau detailed figures as to cost of operation of the home for their latest fiscal year. This information is shown in the table below. In compiling these data certain combinations of items have been necessary in order to make the information comparable. Also, expenditures for permanent additions to the building and interest on mortgages have been omitted, since these are not properly chargeable to the current upkeep of the home.

TABLE 6.—DETAILED OPERATING COSTS, FOR ONE YEAR, OF SPECIFIED HOMES

Item	Baptist		Episcopal		
	Home A,[a] New York	Home B,[a] Pennsylvania	Church Home for Aged Persons, Chicago, Ill.	St. John's Home for Old Ladies, Milwaukee, Wis.	Gallaudet Church Mission to Deaf Mutes, Wappingers Falls, N. Y.
Salaries and wages	$14,096.36	$14,841.52	$12,522.75	$7,807.04	$6,957.31
Groceries and meats	11,704.86	3,519.87	8,923.33	6,132.18	2,748.58
Clothing					
Laundry	206.24		287.53		
Telephone and telegraph	178.79		85.20		153.71
Heat, light, and power	4,248.48	928.37	3,512.26	2,716.78	2,476.81
Water and ice	89.72	78.20	235.14		589.78
Drugs and medical supplies	404.99	410.89	612.03		191.27
Medical and hospital care		88.62		211.44	434.00
Printing and office supplies	16.79	868.71		201.24	9.00
Repairs to equipment and structures	333.30	180.92	1,590.28	1,794.80	1,456.44
Replacements	1,881.38	1,591.38			574.45
Transportation					316.61
Recreation					
Insurance	446.80	383.82			
Taxes					
Miscellaneous	903.67	1,551.58	1,184.87	1,048.43	[1] 175.00
Total	34,511.38	24,443.88	28,953.39	19,911.91	16,082.96
Allowances or interest to inmates	884.21				
Cost per inmate (excluding allowances)	431.39	181.07	413.62	538.16	502.59

Item	Evangelical: Home A,[a] New York	German Baptist			Jewish: Home for Aged and Infirm Hebrews, New York City
		Western German Baptist Old People's Home, Chicago, Ill.	Old Folks' Home of Brethren, Marshalltown, Iowa	German Baptist Home for Aged, Philadelphia, Pa.	
Salaries and wages	$18,152.12	$6,376.00	$1,772.12	$3,419.75	$52,509.95
Groceries and meats	19,876.23	6,784.97	708.14	4,062.34	44,549.99
Clothing			25.52		2,668.12
Laundry					1,562.15
Telephone and telegraph	329.23	222.01			323.56
Heat, light, and power	7,361.40	2,442.96	236.97	2,337.93	11,951.87
Water and ice			28.50	163.96	110.36
Drugs and medical supplies	623.26	[1] 628.98		90.73	4,371.18
Medical and hospital care	[1] 1,521.70		71.68	812.75	
Printing and office supplies	1,931.51	140.10		241.41	1,776.49
Repairs to equipment and structures	509.25	1,766.26	73.34	312.81	11,971.35
Replacements	4,079.72	88.79	65.00	234.56	8,130.74
Transportation	586.27	88.00		184.84	345.16
Recreation	[2] 392.78	180.00		9.00	82.97
Insurance	2,526.70	180.35	22.70	22.72	1,263.79
Taxes	76.82		211.30		
Miscellaneous	727.53	249.23	349.92	[1] 1,331.37	[1] 3,102.28
Total	58,694.52	19,147.65	3,565.19	13,224.17	144,719.96
Allowances or interest to inmates		2,196.99		198.25	1,200.00
Cost per inmate (excluding allowances)	217.39	227.95	297.10	330.60	425.65

[a] Designation adopted, at request of home, to avoid identification.
[1] Includes cost of burials.
[2] Christmas gifts.

TABLE 6.—DETAILED OPERATING COSTS, FOR ONE YEAR, OF SPECIFIED HOMES—Continued

Item	Lutheran		Methodist		
	Norwegian Lutheran Bethesda Home, Chicago, Ill.	Wartburg Lutheran Home, Brooklyn, N. Y.	Home A,[a] New York	Methodist Episcopal Home for Aged of Philadelphia, Pa.	Methodist Home for Aged, Central Pennsylvania Annual Conference, Tyrone, Pa.
Salaries and wages	$6,294.45	$6,622.32	$12,777.80	$19,273.99	$9,249.45
Groceries and meats	7,125.05	8,791.45	15,157.65	22,585.45	8,103.03
Clothing	451.40	----------	----------	338.96	----------
Laundry	538.24	----------	----------	644.42	1,229.90
Telephone and telegraph	96.13	103.53	----------	104.58	159.34
Heat, light, and power	2,550.83	2,460.69	6,796.92	6,643.49	2,985.42
Water and ice	----------	----------	273.10	357.50	----------
Drugs and medical supplies	47.99	149.11	[3]	358.01	----------
Medical and hospital care	----------	----------	[4] 313.44	583.49	4,247.29
Printing and office supplies	170.00	301.15	591.20	100.16	671.40
Repairs to equipment and structures	1,829.62	1,313.10	457.66	1,592.22	1,080.22
Replacements	394.16	694.51	1,220.53	1,330.50	810.44
Transportation	120.36	----------	----------	190.63	603.18
Recreation	----------	----------	----------	----------	----------
Insurance	----------	47.50	594.89	----------	426.44
Taxes	----------	----------	----------	----------	6.05
Miscellaneous	[1] 1,421.87	2,237.70	[1] 1,596.46	[1] 2,919.25	[1] 2,852.89
Total	21,040.10	22,721.06	39,779.65	57,022.65	32,425.05
Allowances or interest to inmates	5,083.18	336.90	1,049.39	2,291.30	----------
Cost per inmate (excluding allowances)	300.57	302.95	442.00	292.42	341.32

Item	Methodist—Continued				
	Methodist Church Home, West Haven, Conn.	Home B,[a] Illinois	Crowell Memorial Home, Blair, Nebr.	Gerry Homes, Gerry, N. Y.	Home C,[a] New York
Salaries and wages	$2,788.85	$13,131.95	$5,752.51	$2,833.00	$5,398.96
Groceries and meats	1,684.89	16,343.16	3,780.26	1,881.58	1,719.40
Clothing	17.50	----------	----------	16.19	----------
Laundry	332.79	550.40	20.05	----------	----------
Telephone and telegraph	49.15	164.43	91.60	----------	78.31
Heat, light, and power	1,078.96	5,005.03	2,921.50	1,142.96	839.74
Water and ice	122.77	----------	322.09	----------	----------
Drugs and medical supplies	225.14	----------	146.81	46.50	----------
Medical and hospital care	----------	2,303.86	75.00	----------	----------
Printing and office supplies	322.25	550.75	181.07	211.89	151.50
Repairs to equipment and structures	295.85	813.54	681.44	4,262.49	593.59
Replacements	480.01	2,601.74	891.84	84.24	----------
Transportation	----------	34.21	952.54	149.27	465.12
Recreation	35.00	----------	----------	----------	----------
Insurance	----------	1,134.94	50.00	----------	----------
Taxes	----------	226.50	68.51	----------	----------
Miscellaneous	182.50	[1] 2,908.14	[1] 2,923.99	1,416.40	[1] 1,474.34
Total	7,615.66	45,768.65	18,859.21	12,044.52	10,720.96
Allowances or interest to inmates	179.50	3,880.00	187.00	----------	----------
Cost per inmate (excluding allowances)	380.78	339.03	304.18	334.57	428.84

[a] Designation adopted, at request of home, to avoid identification.
[1] Includes cost of burials.
[3] Included in medical and hospital care.
[4] Includes medicines.

TABLE 6.—DETAILED OPERATING COSTS, FOR ONE YEAR, OF SPECIFIED HOMES—Continued

Item	Reformed: Phoebe Home, Allentown, Pa.	Universalist: Chapin Home, Jamaica, L. I., N. Y.	Universalist: Messiah Universalist Home, Philadelphia, Pa.	Joint church: Norwegian Christian Home, Brooklyn, N. Y.
Salaries and wages	$5,669.64	$16,799.31	$1,842.29	$4,075.72
Groceries and meats	2,348.76	18,310.43	4,393.99	5,727.30
Clothing				
Laundry				
Telephone and telegraph	79.25	201.42	70.96	70.13
Heat, light, and power	1,402.97	6,547.33	548.39	[5] 1,465.22
Water and ice				([6])
Drugs and medical supplies	421.20	168.34		102.03
Medical and hospital care		212.50	546.00	
Printing and office supplies	1,323.14	622.58	116.16	1,142.28
Repairs to equipment and structures	1,122.15	2,415.08	245.35	3,458.65
Replacements	169.00	1,206.38	51.96	313.80
Transportation	145.94			
Recreation				
Insurance	432.38	355.00	52.55	118.78
Taxes				
Miscellaneous	230.36	[1] 1,460.00		[1] 610.00
Total	13,344.79	48,298.37	7,867.65	17,083.91
Allowances or interest to inmates		1,662.12		
Cost per inmate (excluding allowances)	444.83	473.51	393.38	262.83

[1] Includes cost of burials. [5] Includes ice. [6] Included in heat, light, and power.

Land Holdings

IN MANY cases the homes have extensive grounds, some of which are used for gardening purposes, and a few homes have good-sized farms whose crops help considerably in supplying the home with fresh foodstuffs and in keeping down the food expense. One such home has a farm of 704 acres and several tracts of timber, one tract of which covers 84 acres. Another home, whose holdings in farm land are the most extensive of all the homes studied, last year had 1,100 acres planted to corn alone, in addition to 25,500 strawberry plants, about 2 acres planted to raspberries, gooseberries, and currants, and a large orchard. Altogether 1,725 acres are in cultivation. A large part of the expenses of this home is met by the proceeds from the farming operations. The farm superintendent's report contained the following statement:

> We gathered something over 5,000 quarts of strawberries, about 1,000 quarts of raspberries, and several gallons of blackberries and gooseberries. Mr. S. harvested a fine crop of 2,125 pounds of excellent honey, which affords us a very wholesome and tasty food for old and young. We have served fruits and honey generously throughout the year, but still the sales from these sources amounted to nearly $500. We have butchered all our own meat, buying the cattle and hogs from the farm. We feed a small bunch of hogs on the garbage, thus producing pork at a very low cost. Our milk is purchased from the farm. We use 60 gallons a day, almost twice the amount used a year ago. This increase was made so that the whole milk might be served twice daily as per instructions of the executive committee and the home's physician.

Other instances in which ownership of considerable land (usually used for farming) was reported included two Methodist homes owning 125 and 358 acres, respectively; two Episcopal homes owning 500 and

100 acres; a Jewish home with a truck farm whose acreage was not reported; a Presbyterian home with 294 acres of land; a United Brethren home with holdings of about 490 acres; and three Lutheran homes with 10½, 50, and 40 acres, respectively.

Value of Home Property

CONSIDERABLE sums are represented in the property of some of these church homes for the aged for which the bureau has data. One Lutheran home in Chicago has buildings, grounds, and furnishings valued at over $500,000; another in Los Angeles has building and grounds valued at $32,500, and two United Brethren homes have land and buildings worth $929,680 and $91,586, respectively, while those of an Evangelical home are valued at $140,000 and those of a home of the Reformed Church at $115,000. A large Jewish home which has 400 residents values its holdings at $1,104,962, and another Jewish home has a million-dollar building facing Central Park in New York City.

Six Methodist homes for which the bureau has data on this point own property valued, respectively, at $47,780, $102,500, $219,000, $220,000, $347,599, and more than $2,000,000. The quadrennial report of the board of hospitals and homes of the Methodist Church (north), rendered at the 1928 general conference of that church, stated that the value of property owned by 44 Methodist homes at that time aggregated $6,639,132 and their endowment funds amounted to $3,863,761.

New buildings are being planned or built in several instances. One such home has just completed a new wing costing $50,000, and another a new 18-room wing, and a third during the fall of 1928 increased its capacity from 27 to 42. Another has accumulated $5,000 toward an extension to the building.

Public Pensions for Aged Dependent Citizens

ONE phase of the bureau's study of old-age care has dealt with the subject of State pensions for the aged.

There appears to be a growing tendency by commissions appointed to study the subject of old-age dependency to recommend some form of public pension, to be regarded not as charity but rather as a recognition of service, to be paid under careful supervision, but to be sufficient to enable the recipient to remain with his family or friends instead of obliging him to become a resident in an institution.

There are at present six States (and Alaska) which have adopted some form of pension legislation designed to provide for aged dependents, and measures on the subject are pending or being studied in many other States and in the Congress of the United States. It may be of interest, therefore, to review briefly the progress in such legislation.

Progress of the Movement in the United States

LITTLE attention was paid to this question in the United States until the present century. The first active step in connection therewith seems to have been the appointment of a commission by Massachusetts in 1907 to investigate and report on the subject. No action resulted from that report. In the report of an investigation of the subject eight years later by another Massachusetts commission occurs this statement:

> No general system of old-age insurance or pensions has been established by the United States Government or by any of the individual States, although there are in operation special pension systems covering certain classes of public employees such as veterans, retired Army and Navy officers, State employees (in Massachusetts), and certain other municipal employees. * * * No very considerable portion of the population of this country, or of any of the States, is yet covered by any system of old-age insurance or pensions.[1]

A year earlier, however, Arizona had made an attempt to provide such a system. In 1914 an initiative act was passed (Acts of 1915, initiative measures, p. 10) abolishing almshouses and establishing old-age and mothers' pensions. The act was so loosely worded that before it could come into effect it was pronounced unconstitutional on the ground of its vagueness, the constitutionality of its pension provisions, if properly expressed, being left undiscussed. Alaska followed suit with a law, passed in 1915, providing a pension of $12.50 a month to those aged 65 and upward who met certain requirements as to residence, need, and character. This law has been amended several times, but is still in operation.

The effects of the war renewed interest in the idea of provision for the aged, and within the last decade a number of State commissions have been appointed and in some cases action has followed their reports. In 1923 Nevada, Montana, and Pennsylvania enacted old-age pension laws. In Ohio in the same year the question of establish-

[1] Report of special inquiry relative to aged and dependent persons in Massachusetts, 1915, p. 94.

ing an old-age pension system was submitted to a referendum vote, and was decided adversely by a vote of almost 2 to 1. In 1924 the Pennsylvania law was declared unconstitutional, the decision being based largely on a clause in the constitution which prohibits the legislature from making appropriations for charitable, benevolent, and educational purposes.

The year 1925 saw much activity in regard to old-age pensions, with varying results in different States. In both Nevada and Montana bills were introduced repealing the old-age pension laws, and in Nevada the repeal was accomplished. A number of State commissions brought in favorable reports, and by the middle of the year bills were pending in Michigan, Illinois, Minnesota, Ohio, Maine, New Jersey, and Indiana. In Texas and Kansas bills were reported favorably, but failed to pass either house of the legislature. In New Jersey and Indiana they passed the lower house, but were not acted upon by the upper chamber. In Colorado, Minnesota, and Utah commissions to study the subject were appointed. In Pennsylvania the legislature created a new commission to study the question further, and passed a resolution providing for a constitutional amendment to permit appropriations for old-age pensions. In Nevada a new law was enacted, differing in some respects from the former one. Wisconsin passed an old-age pension law, which was signed by the governor, and California passed one, which was vetoed.

In January, 1926, the Legislature of Washington passed an old-age pension act, but this was vetoed by the governor. Early in 1926 the Virginia State Commission brought in a favorable report recommending the adoption of an old-age pension system, and a bill to that effect was introduced into the Virginia Legislature. In Massachusetts a commission on the subject handed in a divided report. The majority recommended a bill establishing a pension not to exceed $1 a day to needy citizens aged 70 or over, but the legislature adjourned without taking any action. In the spring of 1926 the Legislature of Kentucky passed an old-age pension law which became effective June 24 of that year, Maryland and Colorado each passed one in 1927, and a year later a law was passed in Massachusetts. Mention has been made above of the report of the Massachusetts commission and its recommendation. In the law which was finally passed, the report of the majority of the commission was ignored and a suggestion made in one section of the minority report was adopted instead. This law, which can hardly be termed an old-age pension law but might more accurately be called a "public bequest law," was approved June 12, 1928.

A joint legislative committee was appointed in New York in 1926 to make a survey and report upon the condition of the aged poor in the State, with a view to legislative action. The California State Department of Social Welfare was delegated to make a study of the aged in the State and it has been carrying on an extensive survey. Many of the State federations of labor and a number of the international craft unions have expressed themselves in favor of public old-age pensions.

Thus, the close of 1928 found old-age pension laws in effect in six States (Colorado, Kentucky, Maryland, Montana, Nevada, and Wisconsin) and Alaska, with bills pending in the legislatures of a number of other States.

Provisions of Pension Laws

ALL of the pension laws except that of Massachusetts provide for an optional county system. Any county may adopt the plan and after one year's trial may discontinue it. In general, applicants for the pension must be at least 70 years of age (65 years in Nevada and Maryland), be citizens of the United States for 15 years, and residents of the State or county at least 15 years (10 years in Nevada).

Montana limits the benefits payable to $25 per month and Kentucky to $250 per year, while in the other States, the total income of a person aided with a pension may not exceed $1 per day from all sources (including pension).

Only persons are eligible to benefit who have not been imprisoned for a specified period, who have not within the past 10 years deserted their family, who are not professional beggars or tramps, and who have no relatives responsible for their support.

The whole cost of the plan in all the States except Wisconsin is borne by the individual county. In Wisconsin one-third of the cost of the plan up to a total of $200,000 per year, is borne by the State. If this amount is not sufficient it is pro rated among them according to the amounts paid out.

The Massachusetts act (Acts of 1928, ch. 383), which as before stated can hardly be termed an old-age pension act, provides merely for the creation of a public bequest commission consisting of the secretary of state, the State treasurer, and the commissioner of State aid and pensions. No additional compensation is allowed the officials for their service on the commission. A "public bequest fund" is provided for, to be under the control of the commissioners. It is to be made up of gifts to the fund or to the commission for the use of the fund. (No State contribution was provided for.) The State treasurer is to be the custodian of the fund. When, and so long as, the principal of said fund amounts to $500,000 the commission, with the approval of the governor and council, may distribute, in accordance with its rules and regulations relative thereto, the income from said fund to such worthy citizens of the Commonwealth, as, in its opinion, by reason of old age and need, are entitled thereto. No man under 65 and no woman under 60 is entitled to assistance from such fund. The commission, subject to the approval of the governor and council, may make, and from time to time may alter and amend, rules and regulations governing payments.

Old-Age Pension Laws in Operation

IN THE attempt to ascertain to what extent the counties were availing themselves of these old-age pension laws and how many aged were actually being assisted under their provisions, the Bureau of Labor Statistics addressed an inquiry to each of the 280 counties of Colorado, Kentucky, Maryland, Montana, and Nevada, and to the State Board of Control in Wisconsin (reporting for 71 counties).[2] The replies, covering 262 counties in these States, show that only 52 of the

[2] No inquiry was addressed to Massachusetts, for it will be some time before any pensions will be payable in that State. In fact, press reports from that State, dated Feb. 8, 1929, state that up to the present only $1,000 has been given to the fund.

counties reporting have adopted the pension system provided by the law. The greatest proportion of adopting counties was found in Montana, as would be expected, since this was the first State to pass old-age pension legislation which is still in effect. The replies from some of the counties which have not yet adopted the plan indicate that they would have done so, but were financially unable. Others replied that they already had a considerable amount of money invested in a county infirmary or almshouse and therefore felt that operation of the almshouse should be continued.

Only two of the counties reporting in Nevada have adopted the county pension plan. Since its adoption in one of these, the county commissioner reports, the tax income has been insufficient to pay any pensions, though some poor relief has been given.

The table below shows, for each State, the status of pensions for aged dependents and the actual cost to the counties.

NUMBER OF PENSIONERS AND COST OF PENSION PLANS IN SIX STATES

State	Year of law	Number of counties	Number reporting	Number with pension system	Pensions			
					Number receiving	Average pension per month	Average cost per month	Total cost per year
Colorado	1927	63	52	1	1	$10.00	$10	$120
Kentucky	1926	120	63	3	[1] 30	[1] 20.00	[2] 672	[2] 8,064
Maryland	1927	[3] 24	[3] 12	0				
Montana	1923	56	51	42	666	16.59	11,048	132,575
Nevada	1925	17	13	2	[4] 11	[4] 15.00	[4] 175	[4] 1,680
Wisconsin	1925	71	71	[5] 4	295	19.20	5,515	[6] 66,185
Total		351	262	52	1,003	17.37	17,420	208,624

[1] 1 county only; 1 has system but has paid no pensions; 1 did not report on this point.
[2] 2 counties only.
[3] Including Baltimore City.
[4] 1 county only; the other has made no payments as yet.
[5] 1 additional county has adopted system since report was made.
[6] One-third paid by State.

As the above table shows, 1,003 aged persons are being cared for through the old-age pension plans of 52 counties, an average of about 20 per county. (Many of these counties also have aged people at the county poor farm or infirmary.) The largest average pension is being paid in Kentucky. A greater number of persons per county are receiving pensions in Wisconsin than in any of the other States, and in its four counties nearly half as much is being spent for pensions as in the 42 pension counties of Montana, which has the largest total annual expenditure. In Wisconsin, however, as already stated, one-third of the expense is borne by the State.

A recent report by the Wisconsin Board of Control [3] contains some interesting data as to the pensioners in that State. Of the 295 persons on the county pension rolls in 1927, 178 were men and 117 were women; 164 were widowed, 84 were married, 31 were single, 9 were separated from husband or wife, and 7 were divorced. The ages of the pensioners ranged from 70 to 94 years, 75 per cent being between 70 and 80 years old. Approximately 60 per cent were native-born

[3] Wisconsin. State Board of Control. Old-age pensions in Wisconsin, 1927. (Madison), 1928.

Americans. The following statement shows the causes of dependency of the pensioners:

	Number of pensioners
Old age	159
Disease	21
Crippled	18
Deformity or loss of limb	17
Partial disability	10
Total disability	8
Blindness	2
Deaf and dumb	1
Other	21
Not reported	38

It is seen that the chief cause of dependency was old age itself, followed by disease, crippling conditions, and deformities.

Eighty per cent were unable to work, but 50 pensioners were still able to follow occasional occupations of one sort or another, of whom 20 were in domestic service.

About three-eighths were living with relatives, principally children, and 24 per cent owned their own homes which the pension enabled them to keep. There was no other source of income than the pension for 64 per cent; the others had some income but in no case was this sufficient for their support. "The occupations of the pensioners' children indicate that they are not any more than making a living for themselves and their family."

Criticisms of Old-Age Pension Systems Now in Force

THE opponents of old-age pension legislation base their objections upon several grounds. They claim that a noncontributory system, the only kind which has been adopted in this country, decreases self-reliance, discourages thrift and energy, and promotes pauperism by relieving it of some of its more unpleasant features. They object because of the expense, and because pensions may weaken the sense of responsibility for their own aged relatives which decent people should feel. They fear a tendency toward increasing reliance upon Government aid rather than on private resources, and they claim that wherever the system has been tried there has been a disposition to make pensions increasingly large, and the conditions of granting them increasingly easy.

The friends of such legislation look with apprehension upon the present situation from entirely different motives. The real purpose of old-age pensions, they say, is to make it possible for those reduced to poverty by age to spend their declining years in self-respecting privacy, free from the anxieties of want and the stigma of pauperism, living independently in their own surroundings instead of being massed together in an institution. The mere substitution of outdoor for indoor relief, although perhaps a step in the right direction, is far from accomplishing this end. At present, they say, the pension is not sufficiently differentiated from poor relief, and the laws are usually administered by the same authorities who have charge of the poor relief. Consequently their tendency is to look upon the pension merely as an extension of the principle of poor relief.

Appraisal of Pension System by Counties

IN EACH case in the present study inquiry was made as to the opinion of the administering officer as to the relative value of the pension system as compared with the old almshouse system (though in many instances the two systems are being practiced jointly).

The replies indicate that, in general, those counties which have adopted the pension plan like it and feel that it is superior to the almshouse as a means of caring for aged poor. As would be expected, the majority of counties which have not accepted the pension plan cling to the almshouse as preferable.

The main objections raised against the county old-age pensions by those who are administering them are:

(1) That they are inadequate for full support and are feasible only where the pensioner has some means of his own or where friends or relatives are willing to receive him into their homes or contribute to his support.

(2) That pensions are too expensive to be considered by counties which cover poor districts or which are only sparsely settled.

(3) That dependent aged people find themselves in a position in which assistance is necessary mainly because of mismanagement in money matters, lack of thrift, etc.

(4) That persons apply for pensions who would not apply for relief if this meant being sent to the poorhouse, and the cost to the county is therefore greater under the pension system.

It is seen that these objections are based upon purely utilitarian reasons—mainly financial. In only two replies was the matter given consideration from the point of view of the pensioner, i. e., whether considering the self-respect and human feelings of the aged applicant for public assistance, the pension is preferable to the almshouse.

As regards the comparative annual per capita cost of pensions and almshouses, the following statement is of interest. It shows the average annual per capita cost of operation of almshouses, as disclosed in a previous study of the Bureau of Labor Statistics,[4] and the annual amount of the average old-age pensions now being paid in these States.

	Almshouse	Pension
Colorado	$228. 40	$10. 00
Kentucky	216. 40	240. 00
Maryland	269. 49	------
Montana	518. 91	199. 08
Nevada	865. 10	------
Wisconsin	290. 46	230. 40

The above figures show that as regards actual per capita expenditure for these two purposes, in only one State does the annual pension per person exceed the amount spent per year to maintain a person in the county almshouse.

It is true, indeed, as some critics point out, that the present pensions are inadequate for full support. Of interest in this connection, however, is the report from a county of Maryland—one of the two cases in which the question was considered from a humanitarian standpoint.

[4] See Bureau of Labor Statistics Bul. No. 386.

(A) We do not have a sufficient number of homeless pensioners to justify maintenance of such an institution.

(B) It seldom happens that our applicants for county aid are entirely dependent. This is evidenced by the fact that most of them receive not more than $60 annually. Some get $30, others $40 and $50.

(C) In rural communities there is usually some kind neighbor who is willing to shelter an old or infirm friend with a little help from neighbors and the county. This, I find, applies to negroes as well as the whites.

(D) Occasionally we have a case of an old man or woman without a home. These I have succeeded in placing in almshouses belonging to either Frederick, Baltimore, or Montgomery counties. At this time we have one such patient who is in Montevue Hospital, Frederick. We pay them $300 a year for his maintenance which includes medical attention and nursing.

(E) My experience has taught me that old folks prefer to spend their final years in familiar surroundings, rather than enter an institution of any kind.

(F) In cases of emergency I have used our county jail with very satisfactory results. All of the wives of our jailors have been exceedingly kind. Mrs. C. is always ready to take in an unfortunate on my recommendation and in a short time, with good food and a warm bed, she puts them on their feet. Such cases are not confined to cells, but sleep in the hospital room and go out in the sunshine when they feel like doing so. Sometimes I have the magistrate commit them as vagrants for a short time, but I seldom do this with white people as preservation of self-respect helps many a poor person to start to climb again.

(G) For larger communities I consider almshouses necessary.

The trend of opinion disclosed in the various pension States is shown below:

Colorado.—The Colorado law is very recent, having been passed only in 1927, and the reports thus far received from counties of that State indicate that only one county has availed itself of the pension law; and that county reports that it does not believe the system to be any improvement on the almshouse system. Thirteen other counties reporting are flatly opposed to the pension system, while five believe the pension to be preferable to the poorhouse. Several replies indicate that while they have no general criticism to make of the idea of old-age pensions, they can see no advantage in the adoption of the present law. Thus, the report from one county runs as follows:

> We can see no advantage in the Colorado old-age pension law and therefore have never accepted or put it into use. It is more binding than our law governing expenditures for care of paupers and anyone requiring assistance can be taken care of from the poor fund. The old-age pension law limits any person receiving benefits from it to a total maximum income of $1 per day from all sources and requires the making of a separate levy, distribution of another fund from taxes collected, and in all is of no benefit, except that possibly the person receiving it may not feel that he is receiving charity if called an old-age pension rather than poor or pauper support. It comes as a direct county tax if adopted by a county and therefore only adds to the red tape of administration.

Four counties have a system of providing outdoor poor relief. Of those who have poor relief, one is aiding 8 aged persons at an average cost of $18.12 each per month, while another is assisting "a very large number in this way." One of the poor-relief counties expresses the opinion that "the pension system is not preferable [to the almshouse] unless the State makes some provision for funds. As long as the county must supply the funds, we prefer to handle the cases under the poor fund."

Three counties prefer the almshouse system because, in their opinion, it is cheaper. One of these states: "Pension system induces people to apply who under the old system would not do so." Another expresses practically the same idea thus: "People will apply for a pension, but will avoid going to the county poorhouse as long as

possible." The third reports: "I think we have gotten along cheaper this way as many would have been helped by a pension [whom] we are not now helping."

Kentucky.—In Kentucky, where only 3 of the 120 counties have adopted the pension system, the county judge (who administers the system) in one prefers the almshouse system but without giving reasons, one prefers the pension system, and one failed to reply on this point.

Of the remaining counties the majority who expressed an opinion were unfavorable to it, quite generally on the ground of expense. One of these states:

> We have spent quite a lot of money on our county infirmary and it is costing $20,000 to $25,000 every year to operate the infirmary in addition to the investment which we have in the farm. We have approximately 100 inmates in the home.

Others frown upon the pension system because of the inadequacy of the pension to cover the full support of the pensioner who has no funds or relatives, because the majority of the pensioners are incapable of handling money wisely, etc. One county judge, in a county which had a pension system but discontinued it, gives his reasons for preferring the almshouse to the pension as follows:

> There are too many people who can not take care of money given to support them and many swear falsely to secure same. If they are in need they would prefer a comfortable infirmary to a poor living allowance given them.

Another expresses his opinion as follows: "If the person lived with relatives who would assist him, the pension would be preferable. If destitute or wholly dependent the almshouse system is preferred."

Another states:

> In some cases I would prefer the pension system but in many cases it would cost much more to care for them with a pension. We care for old or helpless persons who are without means of support and have no one to support them, either at our almshouse or by an amount allowed by the court per month for their aid and support when it costs less than the cost of the almshouse.

Another county which has no regular pension system and disapproves of it, but which practices something very like that system in an informal way, reports as follows:

> We have several old people who are too old to help themselves and too poor to live without some assistance whom we help by making small monthly allowances and let them stay at home or remain with some member of the family. We have been doing this for years and find it gives satisfaction. Our county is not able to have a general old-age pension system and merely help these who are needy. Of course we have the usual Kentucky "poorhouse" but usually have but three or four there. Have five now.

One county gives aid to aged poor in certain cases, one is paying $10 per month to 12 old people, and a third pays $5 per month in certain cases where the old person can live with relatives. "We find it cheaper to keep charity claims other than blind with relatives if possible. But we can not do without the almshouse for we find cases that no one will keep in their families."

The reporting officer in a fourth county, which has no pension system but has four persons who are each receiving $20, is inclined to favor a pension system.

Maryland.—None of the counties in Maryland have adopted the State pension plan, although opinion is quite favorable to old-age

pensions among those counties which reported. Many of the counties which have not adopted the plan offered by the State law nevertheless grant allowances (really poor relief) under an informal plan and have done so for years. One county has abandoned its almshouse entirely in favor of such relief; in a few instances, former inmates of the almshouse are boarded in private families. One county reports that this allowance system has been practiced for at least 40 years; in 1927 there were 76 old people who each received the sum of $15, the county paying out $1,140 during the year. Another such county makes allowances of from $10 to $25 a year to some 140 persons, the total costing from $1,600 to $1,800 per year. A third, which has an almshouse, nevertheless has for many years been granting small yearly sums—from $7.50 to $30 to persons able with this help to get along at home. The number of persons aided and the total amount paid, it is reported, remains nearly constant from year to year; during the year ending May 31, 1928, 140 persons received assistance, at a total cost of $2,265. Another county which has its own (not the State) system is aiding some 70 aged persons at a cost of about $7,500 a year; in this county the relief system is regarded as "much better than the almshouse but not nearly so good as a home for the aged [who are chronic invalids or incurable], which the Eastern Shore counties are working to get at the coming session of the legislature." Another county aids about 150 persons with an allowance of $5 per month, another 6 persons at the rate of $1 per month each, and a third 25 at the same rate.

Montana.—In Montana, among the auditors of the counties which have the pension system, 21 are unqualifiedly favorable to it, and 7 unqualifiedly opposed. Of those opposed, one county auditor states that he favors the almshouse plan because the pension is not adequate for the pensioner's entire support and the latter could live better at the county poor farm. Another expresses the opinion that the county should have a "home" large enough to care for the aged dependents in the county. Another states that the prevailing opinion in his county is that the almshouse would be more economical, and another prefers the almshouse system because fewer persons would make application for admission to a poor farm than apply for the pension. A fifth replies that the pension system "is not as economical as an almshouse, and the fact that mismanagement has been the cause of a pensioner's plight, so the habit of mismanagement does not help him in his status as a pensioner. Many of the inhabitants of our county farm seem to be much more satisfied with their present conditions than they were when receiving their pensions." Other opinions are that the pension plan is "very satisfactory in our county as we have been able to care for many of our people at a less expense than at the farm and our farm is full at the present time"; that the pension is preferable to the almshouse "from the viewpoint of saving to the county"; preferable "both for the people and the county"; preferable "because the majority [of the pensioners] are partially self-supporting or are aided by their children"; or that the "pension is by far the best."

One auditor thinks the results are about the same under either pension or almshouse plan, and two others think the pension plan is better in small counties and the almshouse in larger ones (in one case

because of the expense in large counties). One report states that the county in question "is going to try out the home system when they get it fixed up for that purpose; put them in the home and have a caretaker."

In the eight counties reporting which have not adopted the pension plan, four think the almshouse preferable to the pension plan; and one auditor states that "neither is the proper way to care for paupers," but does not state what, in his opinion, would be the proper way to handle the problem.

Nevada.—Only two counties reporting in Nevada have formally adopted the pension plan and in one of these it is as yet inoperative because of lack of funds.

The commissioner of one county which has no pension plan but does give "aid" at the rate of $17.50 per month each to 24 persons states that in his opinion, the pension plan is impracticable for the reason that "many indigents in this county are not capable of handling their money and our county gives orders for groceries, etc., instead of cash." Another county has a monthly allowance system through which 100 persons are now receiving aid at the rate of $15 per month.

Wisconsin.—In the three years' operation of the law, five counties have put the pension plan into effect. Taking advantage of the provision of the law which permits a county to discontinue the pension plan after it has been in effect one year, Wood County, which had adopted the plan in 1925, discontinued it a year and a half afterward, but six months later adopted it again. Another of the original five counties revoked its acceptance, but its place was taken by another county which has recently accepted the plan but is not covered by the table on page 34.

Stability of Employment in the Leather and Boot and Shoe Industries

STUDIES were made of the leather industry and of the boot and shoe industry for the purpose of measuring the degree of regularity of employment and to ascertain whether regularity of employment has improved during recent years. The plan of analysis is the same as that employed in similar studies of various industries previously published in the Labor Review, as follows: Railroad industry, in August, 1928; iron and steel industry, in November, 1928; men's clothing industry, in January, 1929; automobile industry, in February, 1929.

For the sake of clearness, the explanations as to method or plan of analysis given before are repeated.

The basic data for the study are derived from the monthly reports made to the Bureau of Labor Statistics by most of the important leather and boot and shoe factories, as part of the general employment survey made monthly by the bureau and covering almost 12,000 manufacturing plants in various lines of industry. As these reports give only the number of employees of all kinds without separation by occupational groups, the present analysis must disregard occupational differences and treat the employees of a plant as a unit.

The method here employed for the measurement of stability is that of the relationship of average monthly employment during the year to the number of employees in the month of maximum employment. Thus, if during 1927 a particular plant had a monthly average of 90 employees and the maximum number in any month was 100, then the stability of employment may be fairly said to be 90 per cent. In other words, if the 100 men needed to fill the positions at the busiest season had no other opportunity for work, then each man would have an opportunity of 90 per cent of full-time employment. Of course, this is rarely quite true, but it is often substantially true; and, in any case, the method offers a fairly accurate measure of the degree in which a particular establishment has attained a condition of stable employment. On the other hand, failure of an establishment to obtain a good level of stability in one or all occupations must not necessarily be attributed to faulty management. Many factors over which the management has little or no control may affect the stability of employment. Nevertheless, an employment stability of or very near to 100 per cent is the desirable goal.

The method of measuring employment stability just described has been used in this study because it is simple and clear. Somewhat more accurate measures of a mathematical character could be employed, but what they gain in accuracy is more than overbalanced by complexity in computation and explanation.

In this connection it is important to bear in mind that regularity of employment is an entirely different matter from volume of employment. Thus, the total number of employees in a plant may steadily decline from year to year with improving productive efficiency, while within each year the fluctuations in the number of employees, whether due to seasonal or other causes, may progressively diminish, with the result that the employees, though fewer in number, may have more steady work.

Leather Industry

THE percentages of full-time employment, computed as described above, have been worked out for 70 leather plants for each of the years from 1923 to 1927 and for the 12-month period ending November, 1928. The plants included ten various kinds of leathers.

The average full-time employment in the leather industry, as shown at the end of Table 1, is not good, but it appears that conditions regarding stability are showing slight improvement. Stability rates of over 90 were found in 44.3 per cent of the plants in 1928 and in 55.8 per cent in 1927; before 1927 considerably fewer plants were included in this group.

It will be also noted that the individual plants as a rule follow the general averages in the same manner and in about the same proportions. Some plants with consistently bad stability rates are included and they are not as a rule showing the improvement that the plants with the higher stability rates are, while a few plants fluctuate widely from year to year.

Table 1 shows the per cent of full-time employment in the leather industry, arranged in descending order according to the favorableness of the showing in 1928.

TABLE 1.—PER CENT OF FULL-TIME EMPLOYMENT IN THE LEATHER INDUSTRY

Plant No.	Location [1]	1923	1924	1925	1926	1927	12 months ending November, 1928
1	Philadelphia, Pa	89.0	84.3	97.7	92.2	96.9	99.3
2	Pennsylvania	93.3	57.0	88.8	93.4	91.4	97.8
3	Philadelphia, Pa	98.2	80.5	97.8	100.0	92.6	97.6
4	Chicago, Ill	95.3	83.6	91.2	95.1	91.6	96.4
5	Philadelphia, Pa	80.7	88.3	95.2	85.9	91.2	96.4
6	do	91.0	72.9	92.5	78.6	80.7	95.2
7	do	97.7	86.1	86.1	91.0	95.2	95.1
8	do	83.4	80.2	86.8	75.8	76.4	94.8
9	Connecticut	82.9	75.4	94.1	91.4	87.9	94.6
10	Pennsylvania	93.2	96.3	91.7	93.4	92.2	93.7
11	do	83.6	89.1	89.3	82.8	72.2	93.7
12	Philadelphia, Pa	96.9	87.1	96.1	80.4	90.6	93.6
13	Wisconsin	92.5	89.0	86.9	84.1	95.0	93.4
14	Peabody, Mass	90.7	80.2	91.1	81.0	81.8	93.2
15	Chicago, Ill	95.9	84.0	89.1	96.5	90.9	93.1
16	Peabody, Mass	90.4	88.3	87.5	82.7	90.8	93.1
17	Illinois	84.5	64.7	87.5	84.1	84.7	93.1
18	Pennsylvania	85.1	87.5	87.7	81.2	92.6	93.0
19	Salem, Mass	82.3	47.7	60.7	59.3	67.9	93.0
20	Kentucky	93.6	92.8	92.0	90.4	99.1	92.8
21	Boston, Mass	64.6	85.7	82.9	86.3	91.5	92.5
22	California	81.8	87.5	90.3	74.8	97.7	92.4
23	Massachusetts	87.0	92.6	93.5	91.0	93.8	92.4
24	Chicago, Ill	91.2	88.0	89.3	89.5	92.0	92.4
25	Pennsylvania	75.0	76.2	90.4	87.6	93.8	92.0
26	Massachusetts	91.7	93.0	88.5	92.9	95.3	91.8
27	Pennsylvania	94.6	94.0	93.1	97.0	96.6	91.3
28	Chicago, Ill	82.5	82.7	89.4	83.2	95.7	90.7
29	Cincinnati, Ohio	94.1	85.0	88.9	95.9	92.2	90.5
30	do	88.0	86.6	90.0	94.8	84.8	90.5
31	San Francisco, Calif	89.7	87.9	71.2	72.1	84.9	90.2
32	Michigan	92.2	73.7	86.6	86.1	90.9	89.8
33	Pennsylvania	83.4	62.8	84.0	83.0	90.2	89.7
34	do	83.4	27.6	44.4	20.0	76.7	89.3
35	Virginia	80.0	92.0	92.3	95.0	97.1	88.9
36	Chicago, Ill	96.4	90.0	93.3	85.7	92.9	88.9
37	Wilmington, Del	83.4	77.2	86.3	92.1	88.9	88.4
38	Minnesota	80.3	74.0	82.4	90.7	83.7	88.0
39	Wisconsin	91.7	86.8	96.0	86.7	95.6	87.2

[1] In cases where the name of the city might identify the plant, only the State is given.

TABLE 1.—PER CENT OF FULL-TIME EMPLOYMENT IN THE LEATHER INDUSTRY—Continued

Plant No.	Location	1923	1924	1925	1926	1927	12 months ending November, 1928
40	Michigan	89.0	72.4	84.9	86.7	86.2	87.2
41	Peabody, Mass	81.2	89.2	67.8	88.9	80.5	86.5
42	California	96.0	70.4	84.7	60.4	77.5	86.2
43	Salem, Mass	91.7	96.4	82.2	71.6	95.8	85.9
44	Maine	82.1	76.3	87.4	88.9	97.1	85.7
45	St. Louis, Mo	78.9	80.0	80.0	81.0	90.5	85.7
46	Milwaukee, Wis	82.5	91.1	90.1	89.4	91.8	85.4
47	Massachusetts	84.5	85.2	93.3	89.2	93.4	84.6
48	Illinois	91.7	79.4	87.8	74.6	90.6	84.2
49	Wilmington, Del	85.6	84.4	84.1	85.4	78.0	83.8
50	Whitman, Mass	100.0	100.0	90.0	76.9	95.0	83.3
51	Pennsylvania	86.2	86.3	82.0	84.4	85.1	82.5
52	Milwaukee, Wis	87.6	95.3	90.7	79.2	89.0	81.6
53	Peabody, Mass	70.6	73.9	73.3	78.5	66.2	80.4
54	Maryland	100.0	92.8	83.3	100.0	100.0	80.0
55	Peabody, Mass	81.2	83.9	67.3	71.1	82.8	80.0
56	Salem, Mass	74.2	58.8	62.9	85.7	89.9	79.4
57	Peabody, Mass	76.8	91.6	78.2	71.8	79.5	78.9
58	California	82.9	84.2	92.7	69.2	86.3	78.7
59	Ohio	96.4	96.4	86.0	85.4	89.7	78.4
60	Virginia	68.8	84.5	87.7	78.1	79.7	78.1
61	Salem, Mass	80.8	87.7	91.5	89.5	71.6	77.8
62	Michigan	92.7	89.1	96.5	84.8	92.4	77.5
63	Massachusetts	67.6	55.8	74.7	66.1	86.5	75.0
64	Wilmington, Del	93.8	86.9	93.3	74.0	95.0	74.5
65	Lynn, Mass	57.8	78.0	72.9	62.0	71.4	73.3
66	Philadelphia, Pa	89.7	70.4	77.6	84.6	90.0	68.9
67	do	51.9	63.4	63.4	37.6	83.1	67.3
68	Lynn, Mass	90.1	73.0	69.1	65.1	75.8	67.3
69	San Francisco, Calif	87.9	97.0	90.2	95.1	95.8	63.5
70	Chicago, Ill	89.0	66.3	92.5	77.7	89.9	59.3
	Average	86.0	81.4	85.4	82.2	88.2	86.4
	Highest	100.0	100.0	97.8	100.0	100.0	99.3
	Lowest	51.9	27.6	44.4	20.0	66.2	59.3
	Per cent of plants with employment stability of—						
	95 per cent and over	14.3	8.6	8.6	11.4	22.9	10.0
	90 to 94.9 per cent	25.7	12.9	31.4	15.7	32.9	34.3
	85 to 89.9 per cent	17.1	28.6	27.1	22.9	14.3	21.4
	80 to 84.9 per cent	28.6	17.1	14.3	18.6	12.9	12.9
	Under 80 per cent	14.3	32.9	18.6	31.4	17.1	21.4

Boot and Shoe Industry

FOR the boot and shoe industry 99 plants were studied. These plants make various kinds of leather shoes. An inspection of the averages at the end of Table 2 discloses that this industry shows a consistently poor average, with little improvement apparent. With the exception of 1927, every year showed a lower average than 1923—the initial year for which data are presented. It will be noted however, that taking the industry as a whole the average from year to year is fairly steady.

It will also be noted that plants with stability rates of 90 to 100 were more numerous in 1928 than in any of the other five years shown; on the other hand, the number of plants with stability rates under 80 were almost twice as great in 1928 as in 1927.

A few plants (notably Nos. 2, 4, and 17) maintained a fairly good average stability rate throughout the period studied. The individual plants as a rule maintain a fairly even rate. However, employment stability in those plants with the lower rates seems to be decreasing.

Table 2 shows the per cent of full-time employment in the boot and shoe industry for the years 1923 to 1927 and for the 12-month

period ending November, 1928, arranged in descending order according to the favorableness of the showing in 1928.

TABLE 2.—PER CENT OF FULL-TIME EMPLOYMENT IN THE BOOT AND SHOE INDUSTRY

Plant No.	Location[1]	1923	1924	1925	1926	1927	12 months ending November, 1928
1	Brooklyn, N. Y	76.8	79.5	79.4	48.4	94.9	100.0
2	Philadelphia, Pa	96.3	95.7	95.4	94.1	91.2	98.2
3	Milwaukee, Wis	89.3	88.1	94.6	96.2	97.7	98.1
4	New York (State)	96.9	94.0	97.3	91.3	97.2	97.9
5	St. Louis, Mo	96.0	88.6	96.1	94.9	96.0	97.6
6	Marlboro, Mass	73.2	80.9	64.4	95.7	88.7	97.3
7	Pennsylvania	87.2	91.6	64.9	81.9	91.4	97.1
8	Chicago, Ill	92.1	93.9	96.0	91.7	91.2	96.5
9	Gardiner, Me	89.2	94.1	86.1	90.1	95.4	96.5
10	St. Louis, Mo	83.0	88.9	96.8	91.5	93.5	96.0
11	Pontiac, Ill	94.3	87.5	91.7	87.6	90.9	95.7
12	Milwaukee, Wis	93.1	80.0	83.2	81.3	93.5	95.6
13	Manchester, N. H	97.2	90.6	92.8	89.1	89.5	95.2
14	Rochester, N. Y	87.4	95.0	88.3	91.9	92.6	94.9
15	Carlisle, Pa	72.7	91.9	88.4	97.4	86.2	94.6
16	St. Louis, Mo	85.4	95.0	95.7	94.6	94.0	94.4
17	New York (State)	94.1	96.7	98.0	95.6	96.8	94.0
18	Cincinnati, Ohio	89.2	91.9	91.5	90.7	93.9	93.9
19	Michigan	90.4	81.4	81.3	95.4	87.9	93.8
20	Lynchburg, Va	85.4	90.5	86.1	91.5	94.1	93.8
21	St. Louis, Mo	87.2	89.6	88.7	85.8	81.2	93.7
22	Illinois	91.0	87.8	92.3	92.8	95.3	93.4
23	Portsmouth, Ohio	86.7	92.2	93.3	87.6	91.7	93.4
24	Whitman, Mass	93.1	88.3	92.1	94.8	88.6	93.1
25	Massachusetts	87.1	90.1	96.4	94.6	94.5	93.0
26	Lynchburg, Va	83.3	77.5	83.9	85.6	85.3	93.0
27	do	77.2	95.4	93.3	91.9	84.4	92.7
28	Missouri	93.6	79.6	79.5	74.5	93.7	92.4
29	St. Louis, Mo	89.9	79.2	91.4	85.6	93.2	92.4
30	Philadelphia, Pa	92.3	92.7	93.1	89.1	91.7	92.4
31	do	96.4	96.5	88.4	92.7	94.0	92.3
32	Boston, Mass	88.9	82.0	91.0	89.1	78.1	92.3
33	Middleboro, Mass	94.4	91.0	95.5	94.7	85.8	92.1
34	Rochester, N. Y	89.0	86.6	92.2	90.7	89.9	91.8
35	Brooklyn, N. Y	93.9	86.6	90.8	94.3	86.8	91.2
36	Lynchburg, Va	82.2	94.2	77.5	93.3	88.5	90.9
37	Dover, N. H	76.7	79.5	85.1	74.5	84.0	90.9
38	Brockton, Mass	83.7	78.7	90.8	82.5	90.4	90.8
39	Pontiac, Ill	93.0	90.5	90.4	87.7	95.3	90.6
40	Brockton, Mass	80.0	76.9	76.5	83.7	84.5	90.6
41	St. Louis, Mo	84.8	85.4	87.3	88.9	89.3	90.5
42	Lowell, Mass	88.1	90.7	89.2	90.6	91.6	90.5
43	St. Louis, Mo	91.8	90.6	92.5	90.7	80.9	90.4
44	do	79.5	79.4	80.5	90.0	87.4	90.3
45	Columbus, Ohio	90.3	83.4	92.9	94.4	88.0	90.1
46	Gardiner, Me	90.6	82.9	87.5	90.5	95.7	89.8
47	Milwaukee, Wis	85.4	75.3	76.6	79.4	75.0	89.5
48	Columbus, Ohio	84.6	92.3	89.3	93.9	87.6	89.4
49	St. Louis, Mo	89.5	96.2	92.2	93.4	89.8	89.0
50	Philadelphia, Pa	87.1	90.6	87.4	87.2	89.7	88.9
51	St. Louis, Mo	90.9	94.0	78.8	79.4	88.5	88.9
52	Brooklyn, N. Y	90.3	91.6	85.2	83.4	89.3	88.8
53	Manchester, N. H	88.2	70.3	87.4	89.6	95.0	88.4
54	Michigan	76.8	68.6	53.2	73.8	82.1	88.3
55	New Jersey	92.4	74.0	84.2	82.6	93.7	88.3
56	Belleville, Ill	95.8	94.3	95.8	89.2	88.7	88.2
57	Auburn, N. Y	93.1	98.0	89.5	83.1	85.1	88.2
58	Columbus, Ohio	92.4	91.8	89.3	83.3	93.1	87.0
59	Rochester, N. Y	84.5	84.5	90.8	90.2	91.8	86.9
60	Lynchburg, Va	84.1	96.0	88.1	87.2	89.3	86.9
61	Pennsylvania	91.9	89.4	90.1	90.5	87.4	86.4
62	Belleville, Ill	58.7	81.9	95.0	90.3	94.0	85.7
63	Maine	88.5	90.5	88.0	85.8	89.9	85.0
64	Cincinnati, Ohio	91.0	93.4	92.0	93.2	84.6	84.9
65	Manchester, N. H	91.6	83.2	91.6	83.8	88.3	84.6
66	Harrisburg, Pa	87.4	91.7	84.9	75.7	88.5	84.4
67	Missouri	80.6	90.0	95.4	84.7	89.1	84.0
68	Whitman, Mass	90.2	87.2	84.4	56.6	84.7	83.2
69	Manchester, N. H	89.6	84.5	95.1	87.3	88.1	83.1
70	St. Paul, Minn	94.1	87.0	93.8	89.1	92.8	82.4
71	Cincinnati, Ohio	92.7	87.0	89.4	88.3	87.7	82.3
72	Manchester, N. H	96.6	73.4	90.3	83.2	88.3	82.3

[1] In cases where the name of the city might identify the plant, only the State is given.

TABLE 2.—PER CENT OF FULL-TIME EMPLOYMENT IN THE BOOT AND SHOE INDUSTRY—Continued

Plant No.	Location	1923	1924	1925	1926	1927	12 months ending November, 1928
73	Maine	91.2	42.4	90.6	87.0	79.5	81.8
74	Brooklyn, N. Y	92.7	89.0	87.5	89.5	93.7	81.3
75	Lynn, Mass	87.5	76.2	68.0	75.3	85.8	81.0
76	Texas	84.1	80.4	73.8	90.2	86.2	81.0
77	Michigan	88.4	86.2	76.8	90.6	91.1	80.5
78	Lynn, Mass	84.0	90.7	91.8	73.0	94.3	80.2
79	Brockton, Mass	63.7	85.8	68.5	85.7	89.8	80.2
80	Pennsylvania	93.8	66.1	79.3	89.1	83.1	80.0
81	New Hampshire	73.2	64.0	77.8	82.0	84.0	79.6
82	Brockton, Mass	83.5	80.9	76.7	86.6	78.3	78.4
83	Manchester, N. H	85.4	84.4	80.0	88.0	81.2	78.3
84	Derry, N. H	76.8	76.7	72.4	72.9	73.1	78.1
85	Manchester, N. H	84.5	81.4	91.4	90.5	89.0	77.4
86	Derry, N. H	82.8	74.3	87.0	88.3	69.8	77.4
87	Missouri	93.4	79.7	65.9	69.1	74.2	75.6
88	Michigan	90.1	91.4	89.0	86.0	82.1	75.4
89	Boston, Mass	76.7	78.6	73.9	78.7	87.4	74.4
90	Maine	84.6	83.1	79.0	92.8	90.6	71.7
91	Minnesota	94.4	73.8	81.3	85.6	87.6	71.5
92	St. Paul, Minn	84.6	73.9	81.1	74.4	92.3	71.4
93	St. Louis, Mo	86.3	78.0	88.9	72.9	81.5	69.1
94	Weymouth, Mass	94.3	84.8	93.5	90.0	85.3	64.9
95	Chicago, Ill	86.6	76.9	76.4	83.7	79.4	62.5
96	Manchester, N. H	70.3	79.0	73.7	78.7	74.9	59.6
97	West Virginia	81.5	70.2	84.8	75.4	80.6	56.9
98	Lynn, Mass	69.3	77.0	64.8	68.1	78.8	44.4
99	Philadelphia, Pa	89.0	49.8	81.3	70.8	87.2	41.4
	Average	87.0	84.6	86.0	86.1	88.2	85.9
	Highest	97.2	98.0	98.0	97.4	97.7	100.0
	Lowest	58.7	42.4	53.2	48.4	69.8	41.4
	Per cent of plants with employment stability of—						
	95 per cent and over	7.1	9.1	13.1	5.1	9.1	13.1
	90 to 94.9 per cent	33.3	28.3	28.3	35.4	29.3	32.3
	85 to 89.9 per cent	27.3	17.2	23.2	27.3	37.4	18.2
	80 to 84.9 per cent	18.2	16.2	12.1	13.1	14.1	17.2
	Under 80 per cent	14.1	29.3	23.2	19.2	10.1	19.2

PRODUCTIVITY OF LABOR AND INDUSTRY

Ultimate Effects of Automatic Machine Production [1]

By Ethelbert Stewart, U. S. Commissioner of Labor Statistics

A NEW device has been perfected in Rochester, N. Y., by which the Mergenthaler machines can be run by electricity from a central station, any number of them operated by one person and any distance apart. It appears to be practically on the idea of a piano player. One person can sit in Rochester, punch holes in a tape 500 miles away, and set up exactly the same article on any number of papers. It has already been developed on 12 papers at one time, and there is no reason to suppose that it can not be done on 25 papers.

The annual manufacture of combination harvester-threshing machines, which will harvest from 20 to 48 acres of wheat in a day, according to the length of cut, increased from 5,131 in 1925 to 18,307 in 1927. These machines are operated by from one to two men. On the authority of ex-Governor Allen, of Kansas, there were 8,000 of these combined machines in use in Kansas in 1926, with an estimation that the number had been increased to 13,000 in the year 1927. There can be no doubt that this machine will solve the problem of wheat harvesting. On the other hand, there can be no doubt, except among those who insist on doubting, that it has shifted the problem to the hundreds of thousands of men who depended upon the wheat-harvesting season for a considerable percentage of their total employment.

Looking a little bit into the future, you are each of you doubtless aware of the experiments that are being made by the Department of Agriculture in the use of mulch paper in the raising of all types of agricultural products which are planted in rows. This has become an established success with the pineapple growers of Hawaii, who last year bought half a million dollars worth of paper, where 90 per cent of the total crop is grown by this method. It is a black paper not so heavy as that used for roofing, strongly impregnated with asphalt, and while it has not been used to any great extent as yet except in the pineapple fields of Hawaii, it has there raised the percentage of output by 30 per cent and has accomplished another result, that it makes for practical certainty of a crop each year. It holds the moisture in the ground, it holds the warmth in the ground, keeps down weeds, and entirely dispenses with the necessity for human labor aside from planting and harvesting. The percentage of increase in yield as shown in the experiments of the Department of Agri-

[1] Extracts from an address delivered at Cornell University, Jan. 21, 1929.

culture conducted at its experimental farms at Arlington, Va., were as follows:

	Per cent of increase		Per cent of increase
White potatoes	73	Green beans	153
Cotton	91	Beets	409
Sweet potatoes	122	Carrots	507
Celery	123	Cucumbers	512
Peppers	146	Sweet corn	691
Eggplant	150		

This list leaves out some of the most startling experiments in the field of truck gardening, where tomatoes not only increased their yield 44 per cent but shortened the time between planting and bearing by several weeks. It has proved a success with carrots, radishes, spinach, onions, and in each instance the increase in production and saving of labor has been sufficient to pay for the paper in one year, whereas the paper will last practically four years, during which time there is no necessity for cultivation nor any of that class of labor which relates to the elimination of weeds or the stirring up of the ground, the retention of moisture and various chemical properties making cultivation unnecessary. How many men this will throw out of work I leave you to guess.

There may be some silver lining to this cloud. I refer particularly to truck farming in the neighborhood of cities, where armies of children are employed at the most back-breaking work any human being ever attempted to do. The extent to which the use of this paper will eliminate child labor can be forecast from a study made of 501 boys and girls working on truck farming in Cook County, Ill. Of the total number of children employed, 404 were boys and 97 were girls. Of these, 292 boys and 65 girls were engaged in the occupation of weeding, a total of 357 out of the 501 children included in the study. The elimination of weeding is one of the principal results of the use of mulch paper.

The subdivision of labor has gone to an extent in the United States which is not only amazing but beyond the comprehension of most industrialists of Europe and, indeed, of all foreign countries. That 239 separate operations and 239 different people are employed in making a pair of shoes seems utterly incomprehensible. To tell a foreign workman or industrial manager that in the manufacture of a needle used in one type of sewing machine 44 different people are required—and this does not include the packing and shipping departments—is to be met with a vacant and almost incredulous stare.

But it is this specialization that has made the application of machinery possible. A machine that does more than one thing is as a general proposition too expensive in its construction and is too liable to get out of working order frequently. For instance, there are two grooves, one on each side of the sewing machine needle. Now it pays better to put these needles through two machines that are absolutely automatic and cut these grooves separately than it does to construct a machine which will cut both grooves at once. While the invention of such a machine is entirely practicable, it does not pay from a mass production point of view. The eye is punched in the needle after these grooves are made. At first an eye-punching machine was constructed which punched one needle at a time, and was operated by a girl.

Now they have an automatic machine, in which you pour the needles into a hopper, which does twenty-five times as much as this girl could do on the original eye-punching machine; and the original machine is now used only in the manufacture of special needles or when the demand is outrunning the productive capacity of the automatic machine.

In passing the needle through so many machines and processes, naturally a number of them become bent. Originally girls inspected for crooked needles, and a few experts are still retained to do this hand inspection. Now a girl inspecting for crooked needles by hand will handle 3,000 needles an hour, while an automatic machine has been invented to inspect for crooked needles which does 27,000 per hour. It is admitted by the manager that the hand inspection, however, is a trifle more efficient; that is to say, there are girls whose eyes have been trained to a point where they can detect a crooked needle more accurately than it has been possible to do by automatic machinery.

The question is very frequently asked whether we have not carried specialized machinery to a point where it does not pay. Another question is frequently presented as to where this is going to end and what will be the effect upon human employment if we keep on inventing machines that take the place of from 10 to 25 persons and even in some instances as many as 100 persons. It used to be said that just as many people were needed to build the labor-saving machines, and that this was a higher grade of labor, hence from the worker's point of view it was all to the good. The answer to that is that if it requires as many people to make the machines as the difference between hand production and machine production then there has been no labor saved and the higher wage rates of the machine constructors would make machine production more expensive than hand production, which shows the absurdity of the whole proposition. The answer to those questions, if there is one, is the absorption of labor by new industries and the shortening of the hours of labor for machine attendants.

It is, however, doubtless true that a study should be made by competent persons, if there are any such, as to whether or not we are carrying specialized machinery too far. Perhaps it had better be put this way: Is there an ascertainable point in production along any line beyond which specialized machinery is not profitable?

It seems to me that it is time for us to begin to try to answer the question of "What are you going to do about it?" The objection of William Morris, of Tolstoi, of Mahatma Gandhi—in fact, of the whole eastern and European culture as opposed to the American culture—is that you are going to make men slaves of machinery, you are going to factoryize mankind, and that sooner or later our very souls will rebel against the whole process.

Unless American culture finds some way to answer this, then Gandhi, Tolstoi, and William Morris are right. But is there no answer to it? Already the 5-day week can be mentioned without serious danger of arrest. Already the 10-hour day is becoming an exception rather than the rule. If American culture will be willing to compromise with the views of the Orient, less radically held in Europe, that the purpose of mankind is to develop mankind, then this very machinery which the Orient so dreads, which Tolstoi and William

Morris rail at with such venom, will be the instrument of accomplishing the very thing that the oriental point of view values most. In fact, in my opinion, it is the only way in which to accomplish it. I venture to say that there is not an industry in the United States to-day that could not produce all that it can sell with the present equipment working 30 hours a week. I am willing to leave room for one or two exceptions to this, though I do not know what they are. If we progress as we have in most industries, four days of six hours each would accomplish all that is necessary even at the present time; and as things go on, instead of working men to pile up overproduction let machinery be our slaves, let machinery operate to give us the leisure for the contemplation that Gandhi considers the sole purpose of life.

Let us change our point of view as to the object of existence. At present it is work, work, work; produce, produce, produce; and sell, sell, sell. We have no education along any other lines. We do not know what to do with our leisure. We do not know what Mahatma Gandhi means by contemplation. The whole machinery of education should be turned at once toward a study of leisure, and toward teaching the coming generation the use and purpose of leisure, for, take it from me, they will have plenty of it.

Displacement of Railroad Labor [1]

By Ethelbert Stewart, U. S. Commissioner of Labor Statistics

DURING the past several years the average number of railroad employees of all classes has remained fairly constant, the total being somewhat larger in 1928 than in 1922 and somewhat smaller in 1928 than in 1924. This was also the general situation as regards most of the occupations, although a few, such as carmen and telegraphers, have shown such a steady decline of recent years as to indicate that this may be a permanent movement, and others, such as electrical workers and maintenance-of-way employees, have shown a definite trend upward.

Of course, no one can forecast the future, but from the tendencies indicated above, it seems that the worst that can be apprehended regarding railway employment is that it will either not decrease at all or will decrease very slowly, as regards both total employees and as regards practically all the individual occupations.

This being so, it seems to me that the real problem is not so much the making of provisions for displaced workers as it is of not taking on new employees unless they are absolutely needed.

In every group of workers there is a certain proportion which drops out each year. If the average industrial life of railroad workers is 40 years (and this is probably much too high an estimate), there would be an automatic decrease, through death, retirement, etc., of 2½ per cent a year. In other words, if no new employees were taken on, the working force would automatically decrease 25 per cent in 10 years.

Such a decrease would be much greater than any indicated decrease in the demand for railroad labor, and thus there would arise no neces-

[1] Extracts from address before Railroad Labor Conference, Baltimore, Md., Jan. 19, 1929.

sity for ever considering the problem of displaced labor. The matter would take care of itself.

Thus, to repeat, it seems evident that a railroad, by a careful policy of not taking on any new employees except to fill actual gaps in the ranks in its labor force, could give substantially continuous employment to all its old employees and prevent the occurrence of the problem of what to do with displaced workers, except in the case of a comparatively few occupations.

To carry out such a policy in an effective manner would require two things:

First, there must be no arbitrary age limits on employment.

Second, railroad employment must be stabilized throughout the year much more effectively than it has been in the past.

As regards the placing of arbitrary age limits on employment, it is probable that no road discharges a regular worker just because he has reached a certain age limit such as 40 or 45. It is possible, however, that some of them do refuse to employ new men who have passed a certain age, and this would prevent the rehiring of the old railroad men who had once been dropped.

As regards the second point—stabilizing employment throughout the year—such stability is in itself, of course, an immensely important thing to the worker. Men must live upon their earnings, not upon their wage rates, and a fair wage rate loses its value if work is not regular.

In addition, however, stability of employment is an essential protection to the older employees. If a man is dropped because of lack of work, he may on occasion be carried on the pay roll and be taken back when work is available. But, very often, this is not the case. He is simply dropped and endures all the vicissitudes of a new man seeking work, such as being rejected because of "old age" without even a chance to demonstrate his efficiency.

At present on many railroads there are enormous variations in employment from month to month. The Bureau of Labor Statistics last year made a study of employment on certain railroads to discover to what extent employment actually did fluctuate throughout the year on different roads, and whether there had been any improvement as regards employment stability in recent years. The full details of the study were published in the Labor Review for August, 1928. I can here touch only upon the high spots:

The study covered 10 representative railroads and 6 representative occupations. The roads were located in various sections of the country. The method of measuring employment stability used was that of the relationship of average monthly employment during the year to the number of employees in the month of maximum employment. Thus, if during 1927 a particular occupation of a particular road had a monthly average of 80 employees and the maximum number in any month was 100, then the stability of employment for that year may be fairly said to be 80 per cent. In other words, if the 100 men needed to fill the position at the busiest season had no other opportunity for work, then each man would have an opportunity of 80 per cent of full-time employment. Of course, this is rarely quite true, but it is often substantially true; and, in any case, the method offers a fairly accurate measure of the degree in which a particular

railroad or establishment has attained a condition of stable employment.

The results show:

Telegraphers had an excellent percentage of full-time employment, the average for all 10 roads in 1927 being 95.7. But the best road in this respect had a percentage of 98.3, while the percentage for the road with the lowest rate was 89.1.

Section laborers, as was to be expected, made the worst showing, the average of full-time employment for all 10 roads in 1927 being only 81.8. But the best showing for this occupation made by any road—the Louisville & Nashville—was 92.6 per cent, and the worst showing was 66.8 per cent. Climatic conditions, of course, had something to do with these differences in the case of section work, but this is not the sole explanation, as roads operating in substantially the same conditions of climate showed considerable variation in the extent in which employment was regularized over the year.

Similar contrasts exist for other occupations. Of two northwestern roads, covering about the same territory, one had a stability percentage of 90.5 for road-freight firemen and the other a rate of only 72.9 for the same occupation.

Comparing conditions over a period of years—from 1922 to 1927—this study further shows that, on the whole, employment stability had considerably improved in the case of most occupations covered. Thus, in 1922 only 1 of the 10 roads had an employment stability rate for road-freight firemen of 90 or over, whereas, in 1927, 4 roads had attained this level. The Chicago, Milwaukee & St. Paul had the best record for this occupation among the 10 roads studied, it having a percentage of 90 or over in five of the six years studied.

These figures are cited to show that certain progressive railroads are steadily improving the stability of employment among their workers. In a few occupations on certain roads such stability is not far from 100 per cent perfect. In even the most difficult occupations to stabilize—such as section laborers—much can be accomplished, and, while a 100 per cent record seems rather far off, an average of 90 per cent or more of full-time employment has been attained by certain roads in recent years.

Railroads as Part of the Entire Transportation System

THERE is another aspect of the problem of the railroad labor displacement to be considered—namely, that the railroads are, after all merely a part, although still the largest part, of the country's transportation system. During the past decade or so motor trucks and motor buses (running on the public highways) have come to constitute an important part of the transportation system regarded as a whole. These trucks and buses, very often run in rather close connection with railroad systems, have created new forms of employment, some of them not very different, if at all different, from certain railroad occupations.

To cite but one phase of this subject: According to the National Automobile Chamber of Commerce,[2] there were, on January 1, 1927, some 80,000 motor buses in use in the United States. Assuming that each one of these gives employment to only one driver (and many

[2]Facts and Figures of the Automobile Industry, 1927, p. 78.

bus services have both drivers and conductors, and some work on more than one shift), here is the creation of at least 80,000 new jobs of a highly responsible character. In addition, each of these buses has to be kept in repair and serviced. A recent study of this subject [3] estimates that for every three motor coaches in operation two men are needed for repair and service. Many of these men are unskilled, but many are skilled mechanics. It probably requires as much skill to build, repair, and service a motor coach as it does to build, repair, and service a railroad car.

These examples might be increased to show how the development of motor transportation has created work (not dissimilar from railroad work) for large groups of workers, both skilled and unskilled. There are as yet no very accurate statistics on the subject, but such scattered data as are available, as well as common observation, indicate that the newly created jobs growing out of this new phase of the transportation industry must run into the hundreds of thousands.

A Basis for Evaluating Manufacturing Efficiency

THE use of labor time as a measure of various factors in industrial operating efficiency is proposed in a recent paper by L. P. Alford and J. E. Hannum.[4] The essential idea is that as all industrial processes involve labor, the proportion that labor-time cost bears to output and to other industrial factors constitutes a useful guide to the comparative efficiency of operation. Thus, as applied to production, if plant A uses twice as much labor time as plant B to produce the identical product, then the presumption is that plant B is more efficiently operated than plant A.

The unit of measurement proposed is 1,000 man-hours, the name "kilo man-hour" being suggested as a convenient designating term. This, it may be noted, is the same basis as that which has long been used in industrial accident statistics, accident frequency being now universally expressed by the number of lost-time accidents per 1,000 man-hours.

From this base, the kilo man-hour, the authors point out that numerous factors can be developed (including accident frequency and severity as is now done), and the following list is suggested as probably the most important:

Factor	How expressed
Productivity	Physical volume of product per kilo man-hour.
Labor permanence	Number of workers employed per kilo man-hour.
Fixed capital investment:	
Buildings	Investment in dollars per kilo man-hour, or square feet of floor area per kilo man-hour.
Machinery	Investment in dollars per kilo man-hour.
Primary power	Horsepower utilized per kilo man-hour.

[3] Railway Age, Nov. 24, 1928, sec. 2, p. 1066.
[4] Paper presented at the annual meeting of the American Society of Mechanical Engineers, Dec. 3–7, 1928.

Factor	How expressed
Industrial accidents:	
Frequency	Number of lost-time accidents per kilo man-hour.
Severity	Number of working hours lost per 1,000 kilo man-hours.
Costs:	
Wages	Dollars per kilo man-hour.
Material cost	
Prime cost	
Overhead charges	
Manufacturing cost	
Profit:	
Manufacturing	Dollars per kilo man-hour.
Net	
Selling price	Dollars per kilo man-hour.

Application of the method proposed is made by the authors to the output of various industries, use being made of the reports of the United States Census Bureau, the United States Bureau of Mines, the American Engineering Council, etc. The results show wide differences in the output per 1,000 man-hours as between different industries and between different establishments in the same industry. Two conclusions are of particular interest:

First, that low manufacturing costs seem to accompany high wages.

Second, that on the whole the small plants are more efficient than the larger ones when measured solely by the amount of labor time per unit of output.

Effect of Rest Periods on Production

THE results of a series of tests carried out under carefully controlled conditions which show the effect of rest periods on production were reported by George H. Shepard in the Personnel Journal, October, 1928.

For the experiments "light-heavy" muscular work was chosen, the subjects of the experiments being university students who worked in the tests, lifting weights on a gymnasium chest-weight machine. Light-heavy muscular work is defined as "work in which the muscular system is continually under load during the operation, the load not being heavy enough to produce a sensation of muscular strain, but repeated so many times that the worker becomes sensibly fatigued by the end of the day's work."

At the outset the writer points out that operations differ greatly and that it is hardly possible, therefore, to predict an optimum working day without an analysis of the work itself. A working day approximating eight hours, with a half day on Saturday, has been quite generally accepted, however, as giving greater production than the old working day with its long hours, and the question to be determined then is whether with the present length of the working day production can be increased by the judicious use of rest periods. While it is obviously impossible, owing to the variation between individuals and in industrial conditions, to obtain a general result as to the proportion of rest periods to total working hours which will give a maximum output, it was considered possible to decide upon a minimum standard of rest, any diminution of which would

result in a decrease of output. It was believed that such a minimum, applied to a given industrial situation, would give a manager a starting point in the institution of rest periods from which he could gradually increase them until he had reached the point which would give him the maximum output.

The students submitting to the tests were all young men of superior physique and in vigorous health, so that they could be expected to have more endurance than the average worker, and the point at which they reached the maximum output could be accepted, therefore, as the very least amount of rest upon which an industrial worker using approximately the same energy could be expected to give his best production. The operators were required to raise and lower the weights in such a manner as to cause general fatigue of the whole body and not of any particular muscle or group of muscles, and they were also stimulated to give their best production by the fact that as they were all dependent, in part at least, on their own work for support while attending the university, they were paid an additional bonus in addition to their time rates. During the rest periods, with a few exceptions, the men were required to lie down and relax completely and they were covered with blankets enough to keep them warm—a complete use of rest periods which is rarely approximated in industry.

A series of tests carried out on four individuals at different periods showed that the average proportion of rest time to rest time plus work time was 18.2 per cent, the lowest being 16⅔ and the highest 20 per cent. The average work period at maximum production varied from 29.1 to 40 minutes and the rest period from 7.07 to 10 minutes, respectively. These results indicate, therefore, that a worker on light-heavy muscular work and an 8-hour day can not give his maximum output unless he rests at least one-sixth of the time. This is in practical agreement with the practice in the United States Army, which has adopted, as a result of experience, the practice of marching infantry 45 minutes during the first hour with 15 minutes for rest, to adjust packs, etc., and thereafter to march 50 minutes and rest 10 minutes. It is expected that seasoned infantry can keep this up for six days a week for as long as necessary. As in the tests under consideration, this represents a minimum percentage of rest to work for an industrial worker for the reason that men in the Army are selected by strict physical examination and also they are kept in condition by what amounts to mild athletic training, they are encouraged to lie down during the rest periods, and the total daily marching time is only six hours.

Other studies similar to this one confirm these findings. Thus a study showing the rest pauses necessary to give maximum production on the light-heavy muscular work of filing metal by hand showed that the best production was obtained where the operation lasted five minutes and was followed by one minute of complete rest, giving a ratio of rest time to rest time plus work time of 16⅔ per cent. This study showed that there was a rather sharp break in output when the rest periods extended beyond this point, indicating that caution must be observed in increasing rest periods beyond the minimum. The possible need of more rest where workers are not of superior physique was shown, however, in a study of girls folding

handkerchiefs, where the best output was secured when the girls rested 21 per cent of the total working time.

In several of the tests in the present study the workers were allowed to select their work and rest periods to find out whether by following their natural feelings they could arrive at an efficient selection of work and rest periods. Although the data on this point were too limited to be conclusive, it was found that they were able to make the selection almost as well as it could have been made for them.

Another investigation has shown the advantage of short frequent rests by use of the ergograph—an instrument registering on a moving drum the movement of a finger in lifting a weight. It was found that a rest of 10 seconds allowed between successive contractions of a finger permitted the work to be continued indefinitely without fatigue or discomfort, but that working the finger to exhaustion required a long pause of two hours between working periods in order to maintain a constant output throughout the day. "When nature," the writer says, "desires long-sustained and undiminished performance on work of this kind she arranges work and rest periods in this fashion, as in the case of the beating of the heart."

Effect of Mass Production Upon Skill in an English Factory

IS MASS production eliminating the skilled worker and substituting for him the man who is only an adjunct of the machine and who makes a better hand if he has not mind enough to rebel against the monotony of repetitive work? Is skill to be discarded and industry mechanized until it offers neither stimulus nor satisfaction to an intelligent worker? And if so, what will be the social consequences of such a change?

C. G. Renold, of the manufacturing firm of Hans Renold (Ltd.), Manchester, England, discusses these questions at some length in the issue of the Economic Journal for December, 1928. The answers depend in part, he thinks, on the definition of skill. According to a physchological definition of the word, skill is "an integration of well-adjusted responses to external situations." This, the writer holds, is really dexterity, and its loss, if it should disappear, is not of great importance, since it is by no means the only source of satisfaction in work. He prefers the following definition: "Any combination, useful to industry, of mental and physical qualities which requires considerable training to acquire." This, of course, includes dexterity, but adds to it conscious knowledge, and thereby increases greatly the field of possible satisfaction in work. Such satisfaction involves two elements—the doing well something which is difficult and a certain freedom of choice. If skill means merely dexterity, the difficult thing must necessarily be physical, but if the second definition be accepted, the difficulty may be mental as well as physical; much satisfaction may be derived from work in which the main requirement is the correct use of knowledge, so that the field of possible stimulus and enjoyment in work is largely increased. Bearing these considerations in mind, is it true that the demand for skilled workers is diminishing? There is a general impression that this is so.

It is common knowledge that many kinds of skill, which formerly were necessary, are being eliminated from industry. This is true, whichever definition is

adopted. Jobs are being split up so that a composite operation which required long training for its performance is broken down into elementary jobs, each so simple that it can be done with very little training. The proud boast of Mr. Ford may be quoted, that 85 per cent of the jobs in his works do not need more than two weeks' training. From this, the conclusion has been drawn that the industry of the future will only find employment for the feeble-minded, and the question is naturally asked, "What are we going to do about it?"

The author believes that the picture thus presented is misleading, because it neglects to take into account two tendencies. In the first place, Ford confines himself to a highly specialized product. To keep his works going there must be numerous other plants producing machines and tools for him, and much of this work, since it requires a considerable amount both of designing skill and of the machine craftsman's skill, can not be reduced to a basis of mass production. Furthermore, the reduction of manufacture to mass production, as in the Ford works, involves an organization of control, a systematization of supply, and the development of modern selling methods which open up large new fields for skill. The need for manual dexterity may be diminished, but the need for skill in the wider sense of the word is increased.

What is happening is that skill which used to be applied to the production of articles of direct consumption is being eliminated and replaced by skill applied to the design and construction of the machinery and tools for making those articles, to a more refined control of the raw material out of which they are made, to the finding of markets for them, and to the control of complex organizations.

A second consideration is the changing demand for skill as an industry goes through the process of mechanization. At first the work is dependent on a skilled craftsman, then machinery is introduced, and the job is split up into single operations, each performed by a machine which requires only an unskilled operator. This stage involves an uneconomic amount of intermediate handling of the material, and to avoid this more elaborate machines are devised which combine several elementary operations and are mainly or fully automatic. At this stage it is possible that the machine might still be operated by an unskilled workman, but usually it is not.

It is much more likely that it will have become so complicated and the cost of a mishap be so great that highly skilled operators will be employed who have not only to work the machines but to keep them in adjustment. Such work may well call for a very high degree of skill in the form of judgment, alertness to recognize the first signs of the hundred and one things that may go wrong, and a real understanding of the principles on which the machine works.

On the other hand, if an unskilled operator is still employed, the work which is intrusted to him is so simple that he will look after a whole battery of machines, and the number of such men will be greatly reduced compared with the increased numbers engaged on the more skilled ancillary services.

How far these two tendencies will correct the balance of skill in industry can not be determined without exhaustive research, but the author's view is that this balance is not being seriously upset. He believes that as fast as one type of skill is eliminated other types are called into action and that the problem thus becomes personal rather than general. To the particular individuals whose skill is no longer required the situation is serious enough, but from the social standpoint it presents a less gloomy outlook than the view that industry will ultimately dispense with all kinds of skill.

The author is confirmed in his view by the experience of his own plant, an engineering factory making repetition articles which during the last 15 years has been going through a process of development along the lines of scientific management. He presents tables showing the number and proportion of skilled and unskilled workers before and after the introduction of specialized methods. The basis of classification is the degree of skill which requires for its acquisition about two or three years under ordinary industrial conditions, and by this test the following groups are ranked as skilled: Craftsmen, craftsmen apprentices, all male staff workers, and of the woman staff workers, the upper staff, the forewomen, and the clerical over 21 years of age. The apprentices are included because, although not yet fully skilled, they serve as a measure of the plant's need for skilled workers.

NUMBER AND PER CENT OF EMPLOYEES OF RENOLD PLANT, BY SEX AND DEGREE OF SKILL, AT THREE SPECIFIED PERIODS

Class of worker	1913		January, 1927		August, 1928	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Men						
Factory workers:						
Craftsmen	130	10.3	193	14.3	287	15.9
Craftsmen apprentices	36	2.9	30	2.2	35	1.9
Semiskilled machine operators	215	17.0	180	13.3	210	11.6
Unskilled laborers	273	21.8	85	6.3	196	10.8
Total	654	52.0	488	36.1	728	40.2
Staff workers:						
Upper staff	71	5.7	62	4.6	59	3.3
Foremen	23	1.8	39	2.9	39	2.2
Draftsmen	17	1.4	17	1.3	18	1.0
Clerical	150	11.9	76	5.6	78	4.3
Total	261	20.8	194	14.4	194	10.8
Women						
Skilled	34	2.7	112	8.3	115	6.4
Unskilled	307	24.5	556	41.2	770	42.6
Total	341	27.2	668	49.5	885	49.0
Both sexes						
Skilled	461	36.7	529	39.1	631	34.9
Unskilled	795	63.3	821	60.9	1,176	65.1
Total	1,256	100.0	1,350	100.0	1,807	100.0

January, 1927, it is explained, was a time of slack trade which affected chiefly the unskilled, so that the percentage of skilled workers is unduly high; August, 1928, on the other hand, was a period of extreme activity, affecting first the unskilled workers. "Consequential increases in managerial and other skilled grades are due but not yet effected. Hence momentary drop in percentage of skilled categories." Allowing for these transitional conditions, it will be seen that the percentage of skilled workers has been remarkably steady, that there has been a decided increase in both the number and percentage of skilled craftsmen, and that among the men there has been a marked decrease in the number and proportion of unskilled and semiskilled workers. This last the writer attributes to the introduc-

tion of elaborate machines and the growing use of skilled men upon them. The author anticipates one possible criticism of his results.

It may be asked, on examining these figures, whether the development of scien tific management based on the elimination of skill has not been a failure, since by my own showing it has left the proportion of skill nearly constant. This can only be answered by an examination of the production at the three dates in question.

Such an examination shows that the selling value of the output per employee at the prices current at each date was £161 in 1913, that in January, 1927, it had risen to £303, and in August, 1928, to £383.

The 1,807 people in 1928 containing 34.9 per cent of skill produced in value nearly two and a half times as much per individual as the group of 1,256 people in 1913, which contained much the same proportion of skill, viz, 36.7 per cent. As the price of the product has now, in 1928, just got back to the 1913 level, no correction on this score is needed.

These results, the writer feels, show that the modern developments of industrial methods require just as high a proportion of skill of one kind or another, and at some point in the complex, as was needed previously. The point at which the skill must be applied changes, but the need for it remains constant, or nearly so.

New Alloy for Cutting Tools

A NEW alloy, much harder than the finest steels and as a result possibly destined to be used for the edges of cutting tools, is described in recent press articles. A description of the new alloy and its uses is given in a recent article in the New York Herald Tribune quoted in the Literary Digest of February 2, 1929:

Tests at Bridgeport, Conn., of a new metal produced by Krupps indicate that a revolution in manufacturing processes is at hand which will make it possible to speed up greatly the machines used in making hundreds of different automobile parts and in practically all processes involving the cutting, grinding, or drilling of metals in quantity production.

The Krupp metal, used in a high-speed machine, cuts through steel at the rate of 230 feet a second, or nearly twice the speed which the finest cutting steels now in use achieve. The new metal cuts through cast iron at 600 feet a second, or more than four times the speed which could be achieved with the finest high-speed steels.

The metal is the hardest thing known next to diamond. Krupp has christened it "widia," a contraction of "wie diamant" or "like diamond." It cuts glass or porcelain as a steel knife whittles wood. It takes a keener edge than any steel and holds it longer.

The great drawback of widia is the price. Krupp is selling it at $500 a pound, or more than double the value of gold, although the materials of which widia is composed are comparatively cheap. It is an alloy of tungsten, carbon, and cobalt. The process of manufacture is expensive, but the chief reason for the staggering price is the fact that the Krupp Steel Works now holds a monopoly. Krupp has licensed the General Electric Co., the Ludlum Steel Co., and the Firth Sterling Steel Co. to manufacture the tungsten-carbon-cobalt metal for heavy royalties. The General Electric Co. has begun to place its product on the market under the name of carboloy, but the other companies have not yet achieved a commercial output.

Beginning nearly 30 years ago, the introduction of Taylor-White steel, a steel mixed with tungsten, which could be used in manufacturing processes at vastly higher speeds than ordinary steels, caused nearly every machine shop in the country to adopt new machinery capable of taking advantage of the higher speeds.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

Mexican Labor in the Imperial Valley, Calif.

ABOUT 20,000, or more than a third of the people in Imperial County, Calif., are Mexicans and they constitute an inextricable part of the social and economic life of this agricultural community. An investigation of Mexican labor in this section of the country was made in the spring and early summer of 1927. The results of this inquiry and the conclusions based thereon are brought together by Paul S. Taylor in volume 6 of the University of California publications in economics,[1] which is the first of a series of studies being conducted "as a project of the committee on scientific aspects of human migration of the Social Science Research Council." Some of the findings of this initial study are presented here.

A table showing race distribution of the elementary school children in Imperial County lists 54.7 per cent of the Mexican children enrolled in such schools as born in the United States, which fact is indicative of the "increasing stabilization" of the Mexican population in that section of the country. Mr. Taylor declares that this permanent group is immensely "more important numerically than the group which crosses the line for seasonal work in the valley and returns to Mexico when the season ends, and of infinitely greater social significance to the United States, for these are becoming a permanent part of the culture of the valley."

About 50 per cent of the Mexicans of the Imperial Valley are town residents; however, most of those who reside in the towns are agricultural laborers whose homes are located near the ranches on which they work. During fruit and grape-picking seasons, from July through September or even longer, probably a majority of the Mexicans close their town homes and migrate to the San Joaquin Valley and other parts of California. Also, the rural Mexican populations shift their location according to crop conditions, the harvest labor group leading in mobility. Such labor may not be in the same section for more than two months at a time. Individuals in this group migrate even more rapidly. Another group is constituted of semipermanent rural residents whose stability depends upon the somewhat constant labor requirements of certain crops. Alfalfa, on account of its eight or nine cuttings per annum and the fact that dairying is dependent upon it, contributes more to the labor stability of the valley than any other crop.

The distribution of Mexicans in the valley, then, is a shifting phenomenon. Its explanation is principally in terms of crops, both at present and historically in the formative years of town building. Towns located in the center of the valley have generally had the advantage of location and of a larger tributary area, and so have drawn heavy Mexican labor populations. But location within an area of intensive agriculture is the most important condition for building up a Mexican colony.

[1] Taylor, Paul S.: Mexican Labor in the United States Imperial Valley. Berkeley, University of California Press, 1928.

Economic Side of the Valley's Agriculture

ALTHOUGH the valley soil is rich and the money returns on the crops are high in good years, absentee ownership, tenant farming, and generally unstable conditions characterize agriculture in this part of California. According to the United States census, tenant farming in the State of California decreased between 1910 and 1925 from 20.6 to 14.7 per cent, while in Imperial County in the same period it increased from 31.8 to 46.7 per cent. The majority of melon and lettuce growers are companies which came into the valley as commission merchants. Recently these companies have leased the land themselves to grow truck crops, subleasing it in small tracts or turning over small acreages to foremen or managers or operating their own holdings.

The housing, machinery, labor, and other farm requirements under intensive cultivation are entirely different from those under extensive agriculture. Considerable dislocation is caused at the beginning and close of vegetable leases. The crop-lease rotation system followed in the valley, which in many cases is practically crop-lease farm rotation, "adds one more shifting element to the general instability." Mexicans are employed mainly to meet the highly seasonal calls for hand-labor gangs. Present conditions are not favorable for establishing a class of either white or Mexican resident working farm owners, and there is considerable difference of opinion as to the desirability of building up such a class of residents. Urban interests, especially financial and mercantile, are strongly in favor of doing so, while the large growers stress the economy of production on a large scale.

The Labor Market and Wages

IN 1927 Mexican laborers were being used to some extent in nearly all the agricultural operations in the valley.

It is in the truck crops, however, that Mexicans predominate heavily—melon and lettuce harvesting and picking tomatoes and peas. They pick cotton, they harvest nearly all the milo maize by hand labor, and they pick grapefruit. The grapefruit crop is not at present a cause of heavy demand for Mexicans, but its importance is increasing as new trees come into bearing. Cleaning the heavy silt deposits from irrigating ditches is done by Mexican hand labor throughout most of the year. August, otherwise a slack month, marks considerable activity in ditch cleaning. The larger ditches are of course dredged by machinery. The importance of ditch cleaning is indicated by the fact that the annual cost of this work is estimated at $3 per acre.

It is not at all easy to determine the labor requirements for a given crop or for all crops at a particular period. The heaviest demands for Mexican workers in the valley are in January and February, at the time of the lettuce harvest, and from May to mid-July, when melons are harvested.

The current daily wage rate in the valley for Mexican general ranch workers is from $2.50 to $3, usually for nine hours of labor. These rates are exclusive of board and vary with the employer, the worker, and the proximity of a labor market.

Rates per hour are ordinarily from 30 to 35 cents, but in certain years at harvest time they have been as high as 45 cents. One large ranch, which employs Mexican workers the year round, pays $50 a month with board and $80 a month without board. White ranch

laborers are usually paid 50 cents or $1 a day more than Mexicans. Housing is sometimes provided for Mexican workers.

The following are the rates of pay for different kinds of agricultural work in the valley: For irrigating the usual rate is $3 per day; for asparagus harvesting, principally by Filipinos, $2.75 per day; cotton picking, 1¼ to 2 cents per pound; grapefruit picking, 40 cents per hour; lettuce harvesting, 30 cents per hour; cantaloupe harvesting, 13 to 15 cents per crate.

In the valley and also in other localities the statement is frequently made that "Mexican labor is not good on hour work, only on piecework." It is usual for certain crops to use Mexican labor under contract at so much per acre, per ton, or per crate, in order to get the results by this method of payment that are secured under hour work by "driving" or "supervision." Nearly all the large vegetable and melon growers, however, prefer to pay their labor by the hour. Each worker is assigned to a row and when a whole gang is operating together in this way under a supervisor the individual laborer's pace becomes conspicuous if he does not conform to that of the gang. When the men are hired for piecework close inspection is more necessary.

In the cantaloupe season earnings per day are often high; amounts as high as $5 to $7 are ordinarily reported by both the Mexicans and the growers. In exceptional cases, with long hours, daily earnings have been reported as high as $12 to $14. It is evident, however, according to the author, that "high daily earnings are not a very reliable index of seasonal earnings."

It is extremely difficult to determine with any approach to exactitude the annual earnings of Mexican laborers. The varying bases of payment, the irregularity of employment, the lack of uniformity in rates paid in different portions of the valley and by different employers, the migrations of the Mexicans over the State and into Arizona, make any exact computation exceptionally difficult. Barring that small minority of Mexicans regularly employed by the same employers the year round, a fair estimate of the annual earnings of a Mexican laborer of Imperial Valley is from $600 to a possible $800. In some cases his housing is furnished, or he can construct his own, rent free, on a ditch bank, or he may own or rent a small "shack" in a town, or during the course of a single year he may live in all of these ways.

A detailed study of Mexican migration is to be embodied in another report. In the monograph under review, however, some little space is given to this subject. Among the statements made in this connection the following is of special interest:

The major portion of the migratory Mexicans, and these constitute probably half or more of the Mexicans of the valley, join in the great migration to the San Joaquin Valley to work in grapes, cotton, apricots, peaches, and prunes. This tide of Mexican labor moves north principally by automobile on the State highways. It flows not only over the San Joaquin Valley, which absorbs the major number, but over all the valleys of the State as far north as San Francisco and even beyond. At the close of the season most of it flows again southward.

Viewpoints on Mexican Labor

OPINIONS vary on the matter of the desirability of Mexican labor. Among those quoted as representative of the range of opinion is that of a man who has been familiar for years with agriculture in the valley, who states that "Mexican labor is good labor, and we couldn't get any other class of labor for anything like the same

money. * * * About 30 per cent of Mexican labor is first class and makes good gang pushers. Mexican gang pushers are better than whites, and are paid 25 cents per day extra."

A large grower declares: "Mexicans are much to be preferred to whites. Once fixed, they are permanent and reliable. I do not think they are good for other types of labor."

A field man for a large-scale grower of lettuce and cantaloupes says: "Mexicans are very satisfactory. They offer no disciplinary problem, but require constant supervision and driving." On the other hand, a young rancher from Wisconsin who employs white labor "can't understand why some ranchers are able to say 'My Mexicans are good.'" A foreman with steady year-round Mexican workers on a large alfalfa and cattle ranch reported that his men when teaming, "fresnoing" (leveling land), or irrigating, worked "best if left alone," and that they kept up "a steady gait."

Not all Mexican labor in Imperial Valley agriculture is gang labor, although the heaviest demands are for this type. This is the chief explanation of the frequency with which one is told of the necessity for driving. Some Mexicans are used for general ranch labor, for irrigating, teaming, "fresnoing" (leveling land). In Imperial Valley Mexicans are less often spoken well of as teamsters than in San Joaquin Valley. In very few cases do Mexicans drive tractors. The consensus of opinion of ranchers large and small, however, is that only the small minority of Mexicans are fitted for these types of labor at the present time.

Wage Claims

IN 1926 in the San Diego Imperial district almost all the complaints made by the Mexicans to the California labor commissioner were wage complaints. The inability of employers to pay is the principal reason for the nonpayment of wages. These employers for the most part are contractors or lessees. A lessee's position is a precarious one, as often he has no property and if his crop fails he has no assets to attach. The owner is not responsible for a lessee's debts and the worker gets nothing. "Probably nothing short of a bond for the payment of wages would fully protect the wage earners."

A Valley Labor Union

IN APRIL, 1928, less than 12 months after the field survey of the present study was closed, a Mexican union was formed under the name of Union of United Workers of the Imperial Valley (Inc.). This title was shortly afterwards changed to Mexican Mutual Aid Society of Imperial Valley. The organization, however, is primarily a union. Its formation was suggested by the former Mexican Consul at Calexico, who had been called upon by the Mexicans to settle so many labor claims that he had come to the conclusion that the organization of a union might remedy the situation. A very interesting account of an incipient strike following the refusal of certain demands of the union is included in Mr. Taylor's monograph.

The upshot of the situation was that the "strike," which was never really a strike, was broken up; the pickers generally found their demands for better wages, for ice and sacks, acceded to, cases against practically all of the sixty-odd Mexicans arrested were dismissed, only four or five who pleaded guilty to technical violations on minor charges being given suspended sentences. One of these, a Mexican born in Arizona, agreed to leave the county for the period of his suspended sentence as a result of an agreement with the district attorney. The

Mexicans in the union came out of the affair with a sense of unjust treatment, but with optimism for the future. The resentment against the sheriff seems in no way to have become attached to the growers, many of whom, particularly the large companies, the Mexicans hold in high esteem.

Careful inquiry has failed to disclose the slightest evidence of violence or "uprising," or to yield the least support to the charge that the union is "red" or communistic.

With a few exceptions, Mexican labor is not found in trades which ordinarily come within the scope of unionized labor.

Housing of Agricultural Laborers

THE State Housing Commission's inspectors try to enforce certain minimum standards in the housing of agricultural labor in the valley; for example, the flooring of tents for workers in the lettuce season, the provision of beds, screened cook houses and toilets, baking facilities, and garbage disposal. Up to the time the study was made (1927) the inspectors had had a good deal of difficulty in attempting to maintain such standards, which were far from being "universally observed." Among the factors militating against good housing conditions are "the atmosphere of impermanence which characterizes the valley," the desert climate which does not call for the same kind of construction as in other sections of the State, the highly seasonal nature of the valley's agricultural work on which Mexican labor is used, and the fact that Mexican families are unusually large, which makes for overcrowding unless additional space is provided.

A man familiar with the condition of the valley outlines the situation as follows:

> The Mexicans are satisfied to live anywhere. It is hard to get white labor to do the work and live as they do. Our intensive labor and short seasons make standard housing prohibitive for the Mexicans with their large families. We couldn't employ Mexicans at the housing standards of others. Nevertheless, we must make some improvements to meet the better housing which other sections of the State are beginning to offer to Mexicans.

The growers' attitudes toward the housing inspectors' activities range from indifference to unmistakable opposition. Nevertheless, in some cases a genuine attempt has been made, especially by two or three large companies, to raise their housing standards.

From the standpoint of health, however, the dependence on ditch water for drinking purposes is even more of a menace than the character of the housing. According to the health officer of the county, the use of such water is accountable for gastrointestinal complaints and some typhoid fever.

Mexicans as Social Charges

ONE of the outstanding objections to the immigration of Mexican manual workers is that many of them become public charges. Whatever may be the situation in other sections of the country, the support of poverty-stricken Mexicans does not seem to be a heavy burden on the Imperial Valley community. Indeed, an appreciable part of Mexican relief is provided by the Mexicans themselves through organizations and also through unorganized means of assistance which Mexican workers commonly extend to each other in times of need.

The chief reasons why Imperial Valley Mexicans do not become objects of charity in the same measure as in some other places are these: The community is almost entirely rural or dependent upon agriculture. It is not difficult to find some place to live rent free, if not with friends, then along some ditch bank. Mexicans who live in ranch camps are commonly allowed to continue to live there without charge during the dull season.

Ownership of Property

WHILE the rapid development of home ownership in the towns is one of the most significant aspects of the Mexican labor situation in the Imperial Valley, there was no indication in 1927 of any movement among the Mexicans in the valley toward the ownership of the land which they were cultivating.

Mexicans in Independent Business

AS YET there is no evidence that Mexican immigrants whose parents belong to the working class are competing with Americans in independent business or even establishing substantial business undertakings for their own race. Almost all of the Mexican merchants who are successful in conducting their stores on modern American business lines are middle or upper class Mexicans.

Education

NEARLY all of the Mexican children of school age in the Imperial Valley attend school. Up to the present, however, merely a handful have gone on to high schools. In the past public education in the valley has made very little change in the occupational status of the Mexicans living there, but there are indications of a gradually increasing appreciation of schools by the Mexican children, resulting mainly from contact with these institutions. Furthermore, parents and growers are showing "a greater willingness to cooperate in enforcement of the law" in regard to school attendance.

Isolation

IN THE valley towns, with the exception of Calexico, Mexicans live in colonies entirely apart from Americans.

The reasons for this separation are several. In the first place, most of the Mexicans outside of Calexico are poor, and poverty leaves them little choice of residence outside of the cheapest quarters. Furthermore, there is the natural tendency to gravitate toward the places where, in a strange land, others of one's language, class, and culture may be found. Finally, there is the social pressure from the American community, which generally does not desire Mexicans as neighbors. A symptom of this pressure is the race restriction sometimes included in the deeds to property.

Socially the line of demarcation between Americans and Mexicans is as sharply defined as the segregation of their homes. More or less separation of American and Mexican school children is found in half a dozen schools in valley towns, and in certain rural schools separate rooms are assigned for "Americanization" or "opportunity" classes which are almost wholly Mexican.

The segregation of school children upon a racial basis is illegal. It may be done, however, by making a school district coincide with a Mexican colony and establishing a school in that section. The rigidity of the practice of separation varies in different localities. In

one town at least, Mexicans with high American social and educational standards are sometimes allowed to transfer to American schools. In another town even upper-class Mexicans were refused transfers.

For the most part Mexicans raise "no serious objection to separation." It is reported, however, that "the belief that they would be obliged to continue in the east-side school was deterring some Mexicans above the age limit of compulsory attendance from prolonging their education."

Among the factors contributing to the segregation of Mexican children in the schools are: The difference between the American and Mexican standards of personal cleanliness, dread of diseases resulting from uncleanliness, race consciousness, and violent fluctuations in the number of children of migratory workers attending school. The migratory group being principally Mexicans, it is convenient to isolate the problem on a racial basis. Moreover, educational authorities have pointed out that this segregation of the Mexican children shields them from American social prejudice and also from discouragement arising from the realization of their slower progress in school as a result of language or other handicaps.

There is almost no social intercourse between Americans and Mexicans, even in the town of Calexico, and the isolation of rural Mexicans from the American population is even greater than that of the Mexicans in the towns.

> Mexicans are proud and sensitive to the prejudice against them. They keep to themselves the more because of consciousness of social ostracism instead of hurling themselves aggressively against it. In some cases, particularly, but not exclusively, among those who are above or are trying to rise above the lower levels of the Mexican population, there are defense reactions to the American prejudices in the form of sensitiveness to the American-made stigma of being "Mexican" or not being "white."

On the whole, the Mexican laborers of the Imperial Valley constitute a class apart with a culture of its own. Social ostracism is maintained by the combination of racial class and cultural differences, and this social ostracism in turn fortifies and renders more stable the differences upon which it is built up. The early immigrants from Europe to the United States who formed colonies in our large industrial centers and the Mexican migration to the Imperial Valley are both working-class migrations. The Mexican migration differs from the European mainly "in that it is rural and in that it involves a strong consciousness of racial difference." These differences tend to heighten "the domiciliary and social isolation" of the Mexicans of the Imperial Valley, retard the convergence of the two cultures (or the elimination of one), and delay "the blurring of the class line."

Governmental Help to Industrial Transference in England

IN DECEMBER, 1928, the English Parliament approved certain money resolutions planned to carry out the steps the Government wished to take for the relief of the distressed areas, among them being a plan for meeting the difficulty of men with families in moving to a place where they may have obtained employment. The

Ministry of Labor Gazette, in its issue for January, 1929, gives the following details as to the measures adopted:

> The Government have therefore arranged, in order to help genuinely unemployed married men to move from the depressed mining areas to approved employment in another area which has been found for them by an employment exchange, or which they have found for themselves, at the discretion of the Ministry of Labor, to pay both
>
> (A) A free grant toward lodging allowance and incidental expenses of removal; and
>
> (B) The reasonable costs of the removal of the family and household effects to the place where regular work and accommodation have been obtained.
>
> Under grant (A) a man whose wife is living with him, or who has one dependent in respect of whom dependents' benefit would be payable under the unemployment insurance acts, can obtain £6 [$29.20] in all, and £1 [$4.87] for every such additional dependent up to a limit of £12 [$58.40] in all.
>
> If the dependents accompany the workman to the new area, the grant can be paid in a lump sum as soon as the workman takes up his employment; but if he comes up before his family, it will be paid as lodging allowance at a rate not exceeding 12s. [$2.92] per week for a limited period, while he seeks accommodation for his family, the balance being paid over in a lump sum immediately upon the removal of the household effects.

Various restrictions are imposed, intended to prevent any abuse of the offered assistance, and it is provided that the railway fare of the workman himself, if advanced, will be regarded as a loan, repayable by installments under the ordinary procedure.

Reorganization and Amalgamations in the English Cotton-Spinning Industry

SINCE the commencement of the industrial depression which followed the World War the English cotton industry has had a particularly difficult time, and the greatest stress was felt in the section spinning American cotton. Working short time as a remedy was tried for several years, but proved ineffectual. In 1928 the employers made an effort to reduce wages, but the employees, who are strongly organized, refused to agree, and as the employers themselves were divided as to the wisdom of the plan no decisive action was taken. For some time a reorganization of the industry has been urged, on the grounds that the conditions of production were changing while Lancashire methods were not; that the mills had been overcapitalized at the close of the war and that it was impossible to make a fair return upon their nominal capital; that competition was developing in countries like India and Japan which had formerly been good customers; and that the new era demanded a new attitude toward the problems of the trade. A subcommittee appointed in 1928 by the Joint Committee of Cotton Trade Organizations to consider the situation has recently issued a report recommending large-scale amalgamations of the cotton-spinning mills in Lancashire. The report is given in full in the Manchester Guardian for December 5, 1928.

The committee first summarize the factors which have told against the Lancashire cotton trade as a whole. It has suffered from the rise of cotton industries in countries which formerly depended on Lancashire for their supplies and from increased production on the part of former competitors. The interruption to English produc-

tion during the war enabled some of these competitors to establish themselves in the world market, wide fluctuations in the price of American cotton affected the cost of production, the reduction of purchasing power following the war led to a demand for low-priced goods, whereas Lancashire excelled in the production of high-grade cottons, and the high local and national taxation prevailing in England added to the trade's difficulties. As special difficulties affecting the cotton-spinning branch of the industry the committee mentions the heavy fixed interest and depreciation charges on most of the mills owing to the recapitalization which followed the war, increased cost of supplies, insufficient production for the higher costs, and uneconomic competition within the trade itself. The most important of these causes, the committee found, was the capitalization of the mills at the artificial values created by the boom of 1919. This cause, it held, will continue to militate against profitable operation until one of two alternatives becomes effective:

> Either (1) the present process of slow liquidation and closing of mills by bankruptcy has contracted the industry to the point at which the remaining mills can just supply the existing demand at prices that show a bare margin of profit;
>
> Or (2) the financial conditions of the industry are so reorganized as to reduce or extinguish the burden of fixed interest, and the book values of fixed assets are written down to an economic figure.

The committee recommends the second alternative, although it is recognized that it involves heavy sacrifices in the matter of writing down capital. The best basis for financial reorganization and for the other economies which may follow is the grouping of the companies under large-scale amalgamations. The groups should be so arranged as not to be unwieldy, but must be large in order to secure the full benefits of amalgamation. It is essential that they should cooperate in a common policy, since competition between them might be as disastrous to the trade as the present competition between independent units. The whole object of the amalgamations would be to secure cheapness and quality of production, not to restrict output or secure high prices, so that there could be no ground for a complaint against monopolistic control. The benefits to be secured by amalgamation are thus summed up:

> (1) Saving in fixed interest charges; (2) better use and disposal of waste products; (3) bulk buying of cotton in whichever market offers the best possibilities; (4) bulk buying and centralization of stores; (5) specialization and centralization of production; (6) saving in management expenses; (7) saving in directors' fees; (8) central control of policy; (9) elimination of intermediaries wherever possible; (10) centralization and control of selling; (11) cooperation with succeeding sections of the trade, directed toward better marketing.

Following the publication of this report a plan was prepared for the amalgamation of a number of mills under the title of the Lancashire Cotton Corporation. There was some delay about organizing the new company, the principal difficulty apparently being to obtain the consent of the banks interested, without which nothing could be done. In its issue of January 12, the Economist (London) announced that "the promoters and banks have reached an agreement and arrangements have also been made for the finding of a substantial sum of money for the purpose of working capital," and that the new company would be registered shortly. Another company, however, suc-

ceeded in organizing more promptly. On January 15 the Manchester Guardian carried the following announcement:

> The scheme for the amalgamation of mills in the American spinning section of the Lancashire cotton trade, one of the provisions of which is that a 5-year moratorium in regard to uncalled capital will be granted to shareholders, has now been registered as a company under the title of Combined (American) Spinners (Ltd.).
>
> This is the first of the amalgamation schemes designed for the mills spinning American cotton to reach the stage of registration, but it is expected that the much larger scheme for the Lancashire Cotton Corporation, which has been formed by the Cotton Yarn Association, will be registered before many days are over.
>
> The Combined (American) Spinners (Ltd.) is stated to have the backing of men connected with mills owning several million spindles. Its main object is to secure control of the mills in order to effect economies, eliminate weak selling, and strengthen the whole organization. For that purpose a holding company has been formed to which each of the companies which join the amalgamation will transfer its shares and receive other shares in exchange. The present capital of the combine is the purely nominal one of £100, which will be increased as and when individual companies join up. Each company will trade separately, though under control.
>
> The scheme provides for compensating mills that are stopped in order that others may work full time. The aim of the promoters is to get over a hundred mills in the combine.

By January 23 the Lancashire Cotton Corporation (Ltd.) had accomplished its organization and was registered as ready for business. Like the Combined (American) Spinners, it took form as a holding company with a nominal capital of £100, to be increased when and as the company's needs should determine. Apparently the purpose of the corporation is to extend the benefits of united action to the whole cotton textile industry, not merely to the spinning branch.

> The objects enumerated include purchasing, growing, preparing, and selling all textile raw materials; the manufacture of dyeing and finishing materials; the production, finishing, and sale of all kinds of textile yarns and fabrics; the manufacture and sale of textile machinery; the proprietorship of collieries; and the businesses of brickmaking, timber merchanting, joinering, building, and contracting.

Agreement in the Mexican Textile Industry

ON SEPTEMBER 7, 1928, a collective agreement was concluded between employers and workers in the Mexican textile industry to regulate their relations in the future, according to a recent article.[1]

The agreement includes the principle of the 48-hour week and the compulsory weekly rest. It fixes the time for entering and leaving work places, as well as the rest periods which must be granted during each working-day.

The employment of women and children under 16 years of age in unhealthful or dangerous work is forbidden in the agreement. Working women are given a compulsory rest period three months before and two months after childbirth and an allowance of one month's wages. Nursing mothers shall be entitled to two rest periods each day.

Workers' unions organized under provisions of article 123 of the Federal constitution may be established within the enterprises.

[1] International Labor Office. Industrial and Labor Information, Geneva, Nov. 26, 1928, pp. 257, 258.

The workers shall designate an official representative with the duty of discussing with the management the questions which may arise in the working of the agreement. Internal organization of the unions shall be effected without interference of the management.

An agreement between the management and the union shall regulate the admission of new workers into any enterprise. Before being definitely employed the workers must submit to a medical examination, the results of which must show them to be free from tuberculosis, syphilis, or leprosy; then after a probationary period of 30 days they shall join the union.

The wages received by each class of workers is established in the agreements. Wages are to be paid weekly without deduction, and other remuneration is to include sanitary and healthful quarters, a paid holiday of six days each year, and where possible courses of vocational training are to be instituted.

Any difficulties arising between workers and employers shall be submitted for settlement to joint works committees consisting of representatives of the management and the union. Decisions of these committees shall be binding on the parties, and no strikes may be called until the committee has reached a decision. When the committee fails to settle a disagreement the matter is to be submitted to a district joint committee created for the purpose. Enforcement of the agreement is carried out by a national joint committee of the textile industry.

Labor Conditions in Rumania

THE following description of present labor conditions in Rumania is taken from a report by J. Rives Childs, American consul at Bucharest, made December 10, 1928.

Rumania is essentially an agricultural nation. Of its population of 17,000,000 inhabitants, 80 per cent are engaged in pursuits essentially agricultural. The old Kingdom was purely agricultural. The coal, iron, woodworking, textile, sugar, chemical, and other industries of Transylvania and Bukovina and the iron and steel works of the Banat were added to the industries of Rumania on the acquisition of those Provinces as a result of the World War, though in these Provinces, as well as in the old Kingdom, agriculture continues to be the chief occupation.

Importance and Location of Industries

ABOUT 216,000 people are engaged in the industries, as follows: Lumber industry, 47,000; metallurgical industry, 41,000; food industries, 31,000; textile industries, 28,000; oil industry, 25,000; building industry, 14,000; paper and printing industry, 9,000; leather industry, 8,000; chemical industry, 7,000; glass industry, 4,000; miscellaneous, 2,000. Of these, 70 per cent are in Transylvania and the Banat.

In the lumber industry, in which the largest number of workmen are employed, the proportion of unskilled labor is large, as the industry includes the furniture, box, and barrel factories, mostly sawmills, where the process of manufacture is simple. The woodworking industries are located mainly in Transylvania, while the sawmills are in Transylvania, Bukovina, and the old Kingdom.

The metallurgical industries center largely in the Banat, with a few in Transylvania and Bucharest. They include principally foundries, repair shops, machine shops, wire, nail, and sheet-iron factories, and those where iron furniture and metal containers are made. This industry contains more skilled workmen than any of the others.

The food industry, with about 300 flour mills and 13 large sugar plants, besides breweries, is scattered throughout the country. The textile industry is centered in the Banat, Transylvania, and Bucharest, the oil industry about Bucharest, and the leather, glass, and chemical industries mainly in Transylvania; while the building, paper, and printing industries are scattered throughout the country. The largest proportion of female workers is to be found in the textile industry.

Labor Supply

THE labor supply in Rumania is cheap and abundant and, generally speaking, there is little unemployment at any time. Before the war (in the old Kingdom) there was no industrial class, while the agricultural workers generally appeared to be contented. It was not until the annexation of Transylvania and the Banat that a labor problem arose in Rumania and even now this is not a serious one.

In the old Kingdom industry is an appendage to agriculture and subordinate thereto, but in the new Provinces it is an important and independent economic factor. Furthermore, the proportion of skilled workers in the Provinces is larger and it is mainly from them that skilled workmen are supplied to meet the needs of industry in the less developed industrial parts of Rumania.

Due to the relatively short time since Rumania obtained political and economic independence and to the fact that until recently labor in Rumania had a semioriental character, its efficiency is not on a level with labor in the more developed countries. The industries of the Provinces have been greatly stimulated since their annexation to the less developed old Kingdom, from which they were formerly separated by tariff walls, and likewise in the old Kingdom, particularly in Bucharest, a noteworthy industrial development has begun to attract many laborers from the industrial districts of Rumania, thereby reacting upon the labor supply in those districts. Thus the establishment of new industries or the extension of existing plants often necessitates the importation of skilled labor, particularly specialists and technicians.

Wages

THE supply of ordinary laborers and even of nonspecialist skilled workmen in the existing industrial branches is abundant and the relatively lower quality of the work is offset by lower wages. The current maximum hourly wages of skilled workmen and factory laborers in Transylvania and the Banat in the most important industries are as follows: [1]

	Skilled workers	Factory laborers
Metallurgical	$0. 17	$0. 08
Furniture and carpentry	. 19	. 08
Leather	. 17	. 07
Chemical	. 16	. 06

[1] Conversions in United States currency on basis of leu=0.625 cent.

In Bucharest the maximum wage of carpenters and of metallurgical skilled workmen, such as mechanics, locksmiths, and erectors, is 31 cents per hour, while the minimum wage of unskilled workmen is 12 cents per hour.

Collective Bargaining

WAGES and working conditions in many industrial plants are established by collective bargaining. Probably one-half of the industrial workers are covered by collective labor contracts. Such agreements generally provide for the recognition of the union, the 8-hour day, the 48-hour week, a regular wage scale, an overtime scale, a revision of the agreement after two months on the request of either employer or employees on the basis of changes in the cost of living, arbitration of controversies by direct negotiation between employer and employees if possible, and if not then between their respective organizations, or through the Ministry of Labor; in case of strike or lockout the workingmen agree to complete work where an interruption would cause damage to the employer and the employers agree not to evict workmen from company houses or deprive them of light, food, or anything else to which they may have been entitled as a part of their wages—provisions varying but little from those to which we are accustomed to find in agreements made in this country.

According to statistics published by the Ministry of Labor, 148 collective agreements affecting 41,505 workmen were made in 1927 and 133 agreements affecting 46,288 workmen continued over from the preceding year.

Labor Legislation

PRIOR to the war there was no labor legislation in Rumania. The Ministry of Labor was established in 1920 and it is only since that time that any attempt has been made to coordinate labor legislation into a systematic whole. The first labor act passed by the Rumanian Parliament in 1920 referred to the obligatory settlement of labor disputes in public utilities and in other cases where more than 10 employees are involved. Conciliation commissions were to be composed of delegates of employers and employees presided over by a government labor inspector or, in case of arbitration, by a judge. Strikes are punishable only if no previous recourse has been had to conciliation.

In 1921, employees were granted the right to organize unions. Subsequent legislation has tended to restrict their organization; now, before organization a union must file a copy of its by-laws with, and obtain a permit from, the Ministry of the Interior, thus preventing the unionization of small groups of workmen without the means of meeting the expenses of formal organization.

Free employment bureaus were organized in 1921, and in 1925 a law was passed providing for Sunday rest and 11 religious or national holidays yearly. In the latter year was also passed an act to protect domestic labor against the importation of foreign skilled labor, providing that a manufacturer desirous of importing foreign labor must file an application with the district bureau of the Ministry of Labor in which his plant is located. This application, with an opinion as to the necessity for the request, is transmitted by the bureau to the ministry, which on approval notifies the respective

Rumanian legation abroad that a visa for the applicant may be granted. The foreign employee entering with this visa receives a permit to stay for a stipulated time, which may be extended by the Ministry of Labor.

Labor Disputes

STRIKES and lockouts are not frequent in Rumania and seldom assume a serious character. There has been but one general industrial strike in Rumania, that of 1920, which was a failure due to the few industries existing in the country. Since 1920, the number of workmen involved in labor disputes year by year has been as follows: In 1920, 125,745; in 1921, 58,220; in 1922, 83,610; in 1923, 99,252; in 1924, 74,777; in 1925, 80,243; in 1926, 93,121; in 1927, 61,036. During 1927, there were 199 labor disputes, of which 109 occurred in Transylvania and the Banat, 61 in the old Kingdom, 18 in Bukovina, and 11 in Bessarabia. The number of labor conflicts is generally greater in Transylvania, largely because labor is better organized there. Fifty-one per cent of the disputes had reference to wages, and 21 per cent to working regulations. Of the 199 disputes, 48 resulted in strikes, involving 5,535 workmen, 3 in lockouts involving 969 workmen and 148 were latent disputes affecting 54,532. Of these 199 disputes 95 resulted in compromise, 68 were settled in favor of the employer, and 36 in favor of the employees. Sixty-seven per cent of all the settlements were brought about through the efforts of conciliators under the direction of the Ministry of Labor, 16 per cent by direct negotiation, 14 per cent by arbitration, and 3 per cent by the dismissal or resignation of the workmen.

Conclusions

WHILE the supply of unskilled labor is abundant and cheap and the supply of skilled labor satisfactory and cheap in Rumania, the economic and social aspect of the labor problem is regarded as satisfactory and favorable, as the great majority of the population are agricultural workers, many owning the land they cultivate, and for the industrial workman the questions of wages and hours of labor, which are distinctly more favorable than in agriculture, are not so vexing as to lead to significant labor disputes.

The new Rumanian Government includes in its general legislative program the institution of a labor code and the establishment of chambers of labor with a view to further improving labor conditions in order to keep pace with the industrial development of Rumania.

MINIMUM WAGE

Minimum Wage Legislation in Various Countries [1]

By Rudolf Broda, Antioch College

Principle of Wage Fixation

AUSTRALIA and New Zealand, starting from various opportunistic considerations, have applied more and more the principle of the "living wage." The United States (for females and minors, and with some modifications in Massachusetts), Canada, South Africa, Mexico, Argentina, and Hungary apply, with varying precision, the same principle.

In France (somewhat similarly in Spain and Norway) and in the British coal mines mere equalization of certain classes of wages are sought for specific reasons, which does not make for general results. The ability of the trade to bear wage increases is a secondary consideration in Massachusetts (next to the main principle of the living wage); it seems to have decreased opposition and contributed to the stabilization of the law. This consideration seems preponderant in Austria and of strong importance in Germany.

Political considerations seem to be decisive in Uruguay and Tucuman (Argentina). The wish to increase the efficiency of the workers is embodied in the rules for British agriculture, and obviously inspires the Russian provisions for wages rising with the productivity of the enterprise.

The historic starting point of minimum wage legislation was the wish to abolish sweating. Its basic justification remains the guaranty of a minimum of existence to all workers. This goal is attainable, by its very definition, only through fixation of a living wage.

Australia and New Zealand, in their systematic analysis of the principle of the living wage, have ascertained the fact of its relativity. Higher standards are legitimate in calculating the minimum of existence if the nation is prosperous.

The general productive power of the community must be one of the bases for determining a reasonable living wage. Is it indispensable also to take into account in determining the basic wage the particular prosperity of the industry for which a specific wage is to be fixed? Australia does not find it so, considering that industries which can not pay the basic living wage had better go out of business or depend on State aid.[2] But to allow for the different strength of the industries, a basic living wage for all industries, calculated with greatest prudence, may be supplemented by a secondary wage for prosperous industries.

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[1] Abstract from U. S. Bureau of Labor Statistics Bul. No. 467: Minimum wage legislation in various countries. Washington, 1928.

[2] Richardson, J. F.: The Minimum Wage. London, 1927, p. 81. Mr. Richardson, weighing the various factors of the problem, arrives at the conclusion that the general productivity of industry (but not the particular conditions of a given industry) should be taken into account as a basic principle for the fixation of the minimum wage.

Machinery of Wage Fixation

WAGES boards administer the laws in Victoria, Great Britain, Germany, Austria, Czechoslovakia, Norway, Hungary, most Provinces of Canada, most States of the United States of America, Argentina, Mexico, and South Africa. Sometimes they are replaced or supplemented by central commissions with state-wide jurisdiction to make possible the application of national policies. They have proved to be a really efficient method for the abolition of sweating in all unorganized trades (particularly home work and female work).

Where strong unions can take care of the sweating problem through their own strength, and preservation of industrial peace is the purpose of the laws, industrial arbitration is preferred. New South Wales and several other Australian States, New Zealand, Italy, and Rumania have chosen that method. The example of Australia and New Zealand shows that this way also is practicable. But the purpose of elimination of strikes has been better attained by the wages boards of Victoria, which settle all matters prior to a conflict.[3]

Direct fixation of minimum wages by the central State authorities is or has been the rule in the American States of Arizona, South Dakota, and Utah, in the Canadian Province of Alberta, in Uruguay, in Tucuman (Argentina), and in a particular way in the State trusts of Russia. It can be done that way in uniform communities, but useful flexibility is excluded by the method. It is less suitable for advanced industrial States than for a more primitive economy. No State which has reached high differentiation of its industries applies it.

Enforcement

FRANCE (for home workers) and Norway (for commercial employees) have relied on civil suits for enforcement of minimum wage decisions, but this method has practically failed. All other States rely on their regular inspection forces and empower them to impose fines for violations. Enforcement has been very efficient in the various nations of the British Commonwealth.

Enforcement has been good in the United States and reasonably good on the Continent of Europe. The particular experience of Massachusetts, relying on the disapproval of public opinion only as punishment for violations of the law (ascertained by inspectors), seems to have worked very well. The method can be recommended, for a transition period, in particular cases where political or legal difficulties render the regular way impracticable. Otherwise, enforcement of minimum-wage laws by the same methods by which other laws are enforced is the obvious method.

Results

Abolition of "Sweating"

ALL reports from Australia, New Zealand, and England are positive on the point that sweating, among home workers particularly, has been eliminated. Reasonably good results have been

[3] In a subsidiary way (with courts or boards), collective agreements between organizations of employers and employees are sometimes declared binding (by State authority) for the whole industry. This method is applied in some Australian States, in Germany, Austria, and South Africa. In Great Britain also proposals have been put forward to apply that procedure.

obtained also in the home-work trades of Norway and Argentina. There was no "sweating," to a similar extent, in the United States and Canada, since home work as the sole means of livelihood is rare in these countries, but the rather difficult economic status of female workers in shops and stores who do not live with their families has been much relieved.

The abolition of sweating depends, experience has shown, on efficient application of the laws; strict enforcement of awards has even more practical importance than generous determination of the amount to be paid.

General Increase in Wages

J. W. Macmillan, chairman of the Wages Board of Ontario, states that in that Province "the whole pillar of wage structure rises, although the top less than the bottom." Reports from Great Britain and the United States show that the minimum does not become the maximum. It is to the interest of the employer to attract more highly skilled workers to his shop, and for that reason he offers wages above the minimum to people who produce more than the less efficient workers in these unorganized trades do.

Reports from Australia and New Zealand give us a picture of a far-reaching standardization of wages; of slow increases, but stabilization, even in the face of industrial depression and falling prices, preventing thereby decreases of purchasing power of the laboring classes and further stringency of the crisis.

Australia and New Zealand offer, of course, minimum wages to a much wider range of workers—not only to women, as in the United States, or to unorganized trades, as in Great Britain, but to all trades. As in the case of collective bargaining generally, uniformity of wages seems to be favored by minimum wage legislation applied to highly organized trades, particularly where arbitration courts render decisions of a general binding character. The main factor on which the wage depends is not the importance the employer attaches to the hiring of an individual worker but the agreement between collective groups fixing wage scales valid for all. It remains, however, in the logic of the situation that foremen and workers of particular skill are compensated by higher wages.

Piecework achieves that frequently, in a quite automatic way. With the home-work legislation of France, Norway, Germany, Austria, and others, piecework also dominates and clever workers earn more than others. The statement that the minimum does not become the maximum remains therefore true for all these countries.

Legitimacy of Such Increase in Wages

As to whether the increase in wages resulting from minimum wage fixation is legitimate the problem is of course relative, and the answer depends on our standards. On the basis, however, of the prevalent Christian and humanitarian standards of our civilization, increase of "sweated" wages (mainly of home workers) to living wages is imperative, and minimum wage legislation is highly valuable in that respect. The interests of public health and of the upbringing of healthy children influence public opinion in the same direction.

In Great Britain the increase of wages in the unorganized trades and in agriculture has been accepted by public opinion, i. e., by the

mass of the consumers, although they have ultimately to pay the costs (increase of wages minus economies by more efficient work) in the form of higher prices. Even on the Continent of Europe, impoverished by the war, no objection has been raised to the ultimate ratio—higher wages of home workers and slightly increased cost of living of the mass of the population, which buys the goods produced by home workers.

In Australasia, as in Russia, the problem is of another order—the proper proportion of incomes of the wage-earning classes (protected by minimum wage) to those of the other economic classes—the farmers and business men in Australasia and the peasants in Russia.

Influence on Discharge of Slow Workers and Unemployment

Slow workers are sometimes discharged; the system of licenses, authorizing handicapped workers to accept wages below the minimum does not cover everywhere cases where defects are not of a tangible nature.

How important is the number of these cases in proportion to the number of workers benefiting by the laws? Reports from the United States and from Canada do not indicate that any great hardships have resulted for the women employed in stores and shops. The general situation of the labor market, the proportion of material resources to the human material, are so favorable to the workers that practically all are absorbed by the needs of industry.

The problem is different in Great Britain and in Australasia. Some homework trades, the competitive strength of which was based on low wages, have been replaced by factories. Not all home workers have been absorbed in industry. No serious hardship, however, has resulted in Australasia, the general conditions of the labor market being favorable. Great Britain suffers from general unemployment, but most of the reports do not indicate a serious increase due to the shifting from home work to factory work.

The slowness of the individual worker plays even a smaller rôle in the home-work trades of Australasia, Great Britain, and continental countries than with the shop and store workers in the United States and in Canada. Piece rates alone are possible for home work. The slow worker earns less, automatically, so there is no reason for the employer to discharge him.

The collective-employment problem of the home workers on the Continent is more serious. The increase of the French rates was too small to endanger the competitive strength of the home-work trades, but in Germany feeling prevailed that employment of home workers might be restricted by high minimum wages, and the home workers themselves do not insist thereon, for fear of unemployment.[4] In Silesia the rates have been kept low intentionally by the wages board. Actual loss of means of subsistence, however, is not reported—only prudent application of the law. Overprudent enforcement of the laws, for the same reasons, is reported from Austria.

The increase of unemployment through minimum wage legislation is not serious in most countries, though there is such a problem in Central Europe.

[4] Sociale Praxis, Berlin, No. 49, 1926.

Efficiency of Workers and Employers Under Minimum Wage Legislation

From Great Britain it is reported that workers are compelled to, and do, work harder in order not to be discharged. The Bureau of Labor of the State of Washington reports similar instances. The tendency is natural, but overemphasis would be out of place. The British minimum wage board for agriculture, in its explanation of the goal to be realized, recognizes that better nourished workers can also work harder.

More important yet is the European and Australasian situation as regards the shift from home work to factory work. The same worker is frequently put to work at an efficient machine, after having worked before without such a machine in his or her home. Obviously the worker is thereby enabled to produce more. The same applies also to the employer, who becomes more efficient by running a factory than by relying on home work.

The evidence of the British Cave Committee and the reports of the Minimum Wage Board of British Columbia show the tendency of some employers to make up for the higher wages by better supervision and application of better technique. The point has its importance because reducing the net cost of minimum wage to the industries.

Protection of Fair Employers

The report of the Massachusetts Minimum Wage Commission (1919), the standpoint of the employers of the Pacific Coast States, the attitude of the employers of Victoria, Australia, the stand taken by the British employers (as described in the testimony of Miss B. M. Power, chief inspector, before the Cave Committee), all testify that the fair employers are grateful for the elimination of competition by "sweaters."

The delegates of the British employers at the recent Geneva conference favored to a certain extent an international convention for minimum wage legislation. Great Britain has abolished sweating and wants to exclude competition from nations which have neglected to do so. From the same motives, employers who have abolished "sweating" in their own business welcome that protection against others who have not done so.

Effect on Industries

The British and American experience furnishes no instance of any manufacturing industry or any mercantile trade hurt in any perceptible way by the minimum wage, as the increase in cost of production which these limited laws bring about is too small proportionately. The prosperity of the women-employing industries of Massachusetts has grown since the introduction of the minimum wage.

Australia applies far more general laws and is ready, on principle, to suppress an industry if it is unable to pay a living wage. In practice accommodations have been found and the country continues to prosper. The same is true of New Zealand.

While home industries have been frequently put out of business through the application of minimum wage laws, that is the natural course of industrial progress.

Influence Toward Industrial Peace

There are three different situations covered by the laws, to be distinguished carefully in order to avoid confusion:

(*a*) Home-work trades and women's trades (as covered by the laws of the United States, Canada, and most countries on the European Continent, and by the British trade boards act of 1909) are practically immune against strikes; the industrial "peace of the cemetery" prevails. The minimum wage was introduced against sweating, not against strikes. In passing, reference will be made only to the statement of the chairman of the wages board of Ontario that the boards educate employers in a way favorable to industrial peace.

(*b*) The insufficiently organized trades covered by the British trade boards act of 1918 (protecting also men in factories) and by the British agricultural wages boards are more liable to be disturbed, but the danger has never been very great. The evidence before the Cave Committee shows that industrial relations have been bettered. In Victoria, boards were established first for unorganized and then for organized trades; the questions of both are settled before they grow into conflicts.

(*c*) The highly organized trades of New Zealand, of most States of Australia, and in Russia and Italy, are covered by compulsory arbitration. In the experience of Australasia the fixation of basic wages of general application by the arbitration courts of New Zealand and of the Commonwealth of Australia has proved to be more practical than specific settlements of specific disputes between workers' and employers' unions.

The arbitration courts settle wages as Parliament settles general problems, without waiting for disputes. Victoria, however, gives autonomy to the different trades; the representatives of employers and workers feel that they have made the laws they will have to obey. Strikes have been practically eliminated. The preventive and autonomous system of the wages boards of Victoria practically guarantees industrial peace.

Historical Aspects of Legal Fixation of Wages

DETERMINATION of wages by the free bargaining of the interested parties is of comparatively recent date. The guilds of the Middle Ages had great powers over the fixation of wages. The State later took over part of their functions. An Elizabethan statute enacted in 1563[5] instructed justices of the peace in England to determine laborers' wages and to take into account, as the basis of their decisions, the fluctuations of food prices. Contrary to the earlier custom of prescribing maxima only, in the interests of the employing class, protection of the laborers was specifically stated as the main objective of the law. That the justices of the peace, themselves belonging to the ruling class, were reasonably impartial is denied by most authorities on the subject;[6] also, the determinations frequently remained unapplied.

[5] Act VI Eliz., ch. 4 (1563); see Gibbins, H. de B.: Industry in England, New York, Chas. Scribners Sons, 1920, p. 253.
[6] Idem, p. 255.

The law was in force, however, for over 150 years, and records of numerous decisions thereunder are preserved. They show a steady increase in the amounts of wages to be paid, although not in sufficient proportion to the rise of food prices. Different rulings were made for urban artisans and agricultural laborers for summer, winter, and harvest time.[7]

The application of the law ceased with the beginning of the industrial revolution in the early part of the eighteenth century. All governmental interference in industrial matters was swept away for a while by the new productive forces. When exploitation of labor, particularly of children and women, again brought intervention by public authorities (since 1802), such intervention was restricted to problems of child labor, sanitary conditions, and working hours. Wages in the British Empire remained unaffected until 1896—in England until 1909. Since that time minimum-wage legislation has become a more and more important part of protective labor legislation generally.

In 1896 wages boards were established in the Australian State of Victoria. They were empowered to fix minimum wages in order to abolish the sweating of home workers and to fix reasonable rates in unorganized trades as the trade-unions do in organized trades.

Two years earlier New Zealand had adopted compulsory arbitration, starting at the opposite end of the industrial ladder in the endeavor to substitute methods of industrial peace for the strike weapon of powerful trade-unions.

Canadian legislation for compulsory inquiry into disputes in public utilities services, in order to prevent stoppage of indispensable branches of national activity, dates from 1907. At about the same time Victoria, inspired by the success of minimum wage legislation for home workers, extended this method of wage fixing more and more to its whole industrial life. In 1909 Great Britain, doing what Victoria had done in 1896, established wages boards for home workers. In 1912 she took a step somewhat similar to the one Canada had taken in 1907, wages boards for a semipublic service indispensable in the industrial life of the nation—coal mines—being established. Since that time the extension of minimum wage legislation from home workers to other insufficiently organized trades has made great progress in the British Isles, particularly since the new wages boards act of 1918. Minimum wages for agricultural laborers have been fixed in Great Britain, Hungary, and Uruguay. Home workers have been protected after the Anglo-Saxon model in Norway, Austria, and Czechoslovakia.

Canada has continued its endeavors for preserving industrial peace through compulsory arbitration, after the New Zealand model, but has also been inspired by the American laws to apply the benefits of minimum wage to female workers generally. But while the American legislation has been hampered by the veto power of the courts, Canada has become the standard bearer of the principle on the North American Continent.

South of the United States, Mexico, in its Federal constitution, has endeavored to introduce minimum wages into its whole indus-

[7] Idem, p. 257, giving a table of some of these assessments compiled from Rogers, James E. T.: Six Centuries of Work and Wages, New York, 1884, pp. 387, 398.

trial life, and Argentina has adopted the minimum wage both for home workers and for shop and factory workers.

In Norway for a short time commercial employees generally benefited by legal minimum wages. France has applied a prudent minimum wage law to female home workers since 1915, while Germany, since her revolution, has established wages boards for men and women in the home-work trades.

In 1925 South Africa applied minimum wages to all unorganized trades, both for white and colored workers, excepting only domestic service, agriculture, and allied activities.

The International Labor Organization, through its labor conference of 1927, endeavored to promote uniform and systematic minimum-wage legislation, and at the conference of 1928 it considered the adoption of a general convention to establish minimum wage fixing machinery in the States.

The timid Australasian experiments of the nineteenth century have spread far and wide. A superficial view might induce one to believe that the new principle has been applied in rather a haphazard way. More careful observation, however, shows that its application has proceeded not so much along the lines of least resistance but rather along the line of greatest need. Wherever the basic principle of fixation of wages through the free play of the law of supply and demand has led to the greatest inconvenience, the legislature has begun to replace it by fixation of wages by competent authorities, after examination of workers' needs and of industrial possibilities.

That necessity appeared clearest in the home-work trades, where the workers, because of being so scattered, seemed to be helpless, and in public services which could not be left to unrestricted industrial war. From these two extremes minimum-wage legislation, from the bottom of the unorganized trades, and compulsory arbitration, from the top of the highly organized trades, have spread toward the central spheres of industrial life, sometimes combining, sometimes overlapping.

To the question as to whether legal fixation of wages will ever supersede entirely the principle of free play of economic forces, the experience of these 30 years does not yet allow a decisive and unqualified answer. In Victoria wages are fixed everywhere by wages boards. In the other States of Australasia and in Great Britain a trend toward the same goal is clearly marked. Canada, South Africa, and Mexico follow along the same way, while Italy and Russia advance by different roads in a similar direction. Elsewhere, however, the movement toward legal wage fixation is slow.

The principle of legal fixation of wages seems to be particularly in keeping with the British tradition of continuous legal progress, of endeavor for harmony between the various branches of national life. Australasia, perhaps more purely British than Great Britain itself, has shown the way. Great Britain follows Australasia and Canada follows Great Britain. In the other countries there are more cross-currents, more diversity, less continuous development.

CHILD LABOR

Industrial Home Work of Children in New Jersey

THE Children's Bureau has recently published the results of an investigation, made in 1925, into the home work of children in New Jersey. The study covered 1,131 children, representing 628 families in 7 cities. The great majority (98.2 per cent) of these families were white, and in 90.6 per cent of the cases the fathers were foreign born. The study was confined to children who had been engaged on home work for at least 26 days during the preceding year though the days need not have been consecutive.

The children interviewed had been engaged in about 50 different kinds of work, ranging from finishing men's garments to carding safety pins, embroidering and beading dresses, making powder puffs, stringing tags, cutting out lace and embroidery, carding buttons, working on bead jewelry, and the like. Home work is usually a family activity, and persons of all ages and all degrees of skill made up the working group. Mothers and children under 16 made up a large proportion.

The 628 families visited in the course of the study included 4,353 persons, of whom 1,902 were home workers. Of these, 63 per cent were children under 16 years of age, and 27 per cent were married women, mothers of the children. Eighty-five per cent of all the mothers in the families represented in the study were home workers.[1]

One outstanding feature of home work is the fact that it can be done by very young children.

Of the 1,131 regular workers, almost one-fourth were under 10 years of age, and more than half were 10 to 13 years of age, inclusive. Only a little more than one-fifth had reached or advanced beyond their fourteenth birthday. Nineteen children only 6 years of age and 6 even younger were in the group.

Three out of four of the working children were girls, yet boys were found doing all the kinds of work represented in the study, "even acquiring some skill with the needle, such as sewing powder puffs, embroidering French knots on dresses, etc." The age distribution of the sexes showed some difference:

On the whole, the boys included among the home workers were younger than the girls. Of the boys, 33 per cent were 6 to 9 years of age, 52 per cent 10 to 13, and 14 per cent, 14 or 15; of the girls 20 per cent were 6 to 9, 56 per cent 10 to 13, and 23 per cent 14 or 15.

Generally speaking, the children's work was irregular, depending upon the steadiness with which work could be secured from the factory. During the vacation months they worked irregularly all through the

[1] United States. Department of Labor. Children's Bureau. Publication No. 185: Child Labor in New Jersey—Part 2, Children Engaged in Industrial Home Work. Washington, 1928.

day, but when school was in session the majority were accustomed to spend two or three hours a day, and a few four or more hours a day at home work whenever it was available. This usually meant night work. Reliable information as to the hours worked at night could be secured from only 336 children, but of these 46 per cent reported that they usually worked two hours or more, while 20 per cent worked three hours or more, the majority of these having been employed at least five days a week, more often six.

Economic necessity was the chief reason for undertaking home work. Information as to the annual earnings of the family from sources other than home work was secured in 475 cases. This showed that 33 families, with a membership of from four to nine, had incomes under $650; 96 families, with a membership of from four to 10, had incomes of $650 but under $1,050 a year, and 128 with the same membership had incomes of $1,050 but under $1,450. The earnings from home work, though much needed, did not help the situation materially.

The earnings derived from home work were very small, since the rates of pay were low and much of the work irregular. Of 356 children who were able to give any information as to their individual earnings, 67 per cent earned less than 15 cents an hour, 40 per cent less than 10 cents, and 12 per cent less than 5 cents when working at their best speed. Group earnings were similarly low, only 22 per cent of 368 families reporting their hourly earnings having made as much as 40 cents an hour, although the number of workers in the family ranged from two to six and with a few exceptions included one adult and frequently two. Of 334 families who kept an account of their yearly earnings from home work almost half reported that they had made less than $100 in the 12 months.

Employment of Philadelphia Children at Farm Labor

AT THE beginning of 1928 the Pennsylvania Bureau of Women and Children made an investigation as to the employment of Philadelphia children at farm labor during the season of 1927.[1] Nearly two thousand (1,920) elementary school children, it was found, had entered school late in the fall of 1927 because they or their families were migratory agricultural workers. Practically all came from school districts in South Philadelphia, and while they were in the main native born, in 97.5 per cent of the cases they had foreign-born fathers. No children under 6 were included, and only a few over 16 were found. Almost invariably the children were with their parents; less than 1 per cent were with persons other than members of their own family.

New Jersey was the field of work for 95 per cent of these children. To a large extent they were employed on fruit and truck farms.

The city children coming to these farms start with the picking of the early berries and continue through the season, gathering each succeeding crop of fruit and vegetables, and occasionally sorting and packing the produce. The season usually ends with the picking of cranberries * * *. Working in canneries, the one occupation given which is illegal for minors under 14 years, was reported as a major occupation by only 31 children, 25 of whom, however, were less than 14 years of age. A few children whose regular job was picking, also reported occasional work in the canneries. A variety of occupations was listed by children whose work was classified under miscellaneous, such as hoeing, planting, weeding, driving horses, and carrying water.

[1] Pennsylvania. Department of Labor and Industry. Special Bulletin No. 26: Migratory child workers and school attendance, prepared by the Bureau of Women and Children. Harrisburg, Pa.

More than three-fourths reported that they had worked regularly, their hours being approximately the same as those worked by their parents.

Loss of time from school was inevitable for these children. The work in which they are employed may cover an extended season, beginning as early as May, and closing late in November.

This means that the children going to the country leave before school closes in the spring as well as return after the school term is well under way in the fall. Practically all of the 1,920 children, who returned late to school in the fall of 1927 because their families had been working in the country, had for the same reason left school before the close of the term the preceding year.

The time thus lost from school, spring and fall, was often considerable, as shown by the following statement:

Time loss of—	Number	Per cent
Under 1 month [2]	291	19. 6
1 month and under 2 months	583	39. 2
2 months and under 3 months	353	23. 8
3 months and under 4 months	169	11. 4
4 months and under 5 months	61	4. 1
5 months and under 6 months	26	1. 7
6 months and over	3	. 2
Total reporting	1, 486	100. 0

Very few of these children had attended school in the country while absent from Philadelphia, and the natural result of the time lost from schooling was retardation. Some two-thirds of these migratory children were over age for their grade, a much larger proportion than obtained for all Philadelphia school children. Moreover, many of these children had been going to the country for several years, and the cumulative result of their irregular school attendance was evident in the extent to which they were behind.

Approximately 90 per cent of the 12 and 13 year old children had not reached the normal school grade for their age. Of the 230 children 14 and 15 years of age, 225, or 98 per cent, were over age for their school grade. There were 9 children 16 years of age or over included in this group of migratory children, all of whom were in the over age class. Most of the older children had been going to the country for several seasons.

The effect of the irregular attendance of these migratory children is not confined to the migrants alone. In the schools in some of the Philadelphia districts more than half the pupils join this yearly migration to the country. The pupils who remain in school suffer from the disorganization caused, first, by the exodus of these children, and even more from their tardy return in the fall. It is manifestly impossible to organize an entirely new set of classes, and children in regular attendance are inevitably held back to accommodate late comers. The effect of migratory farm work on Philadelphia school children can not therefore be considered in terms of the 2,000 migrant children alone; the children, regular in school attendance, sustain an educational loss from a situation for which they are in no wise responsible.

[2] 20 school days are considered as 1 month.

HEALTH AND INDUSTRIAL HYGIENE

Mortality Experience of International Typographical Union, 1928

By Frederick L. Hoffman, Consulting Statistician, Prudential Insurance Co.

THE following statistics for 1928 supplementing those already published by the Bureau of Labor Statistics,[1] will be of interest and value to those concerned with health conditions in the printing trades and in American industries generally.

The experience for 1928 represents 913 deaths, against 1,002 deaths for the previous year. It should have been explained in the earlier articles that the annual review does not coincide exactly with the calendar year in that the records have been obtained from the monthly Typographical Journal, reporting deaths for previous months, and in some cases, deaths long delayed, just as in the present article the 913 deaths include 789 which occurred in 1928, 123 in 1927, and 1 in 1926, but as this same method has been followed for so many years there would seem to be no advantage in changing the arrangement now.

The marked decline in pulmonary tuberculosis reported for 1927 has not continued. For that year out of a total of 1,002 deaths from all causes, 56 or 5.6 per cent were from pulmonary tuberculosis, while in 1928 out of 913 deaths from all causes, 74 or 8.1 per cent were from this particular disease. Curiously, the number of deaths from all causes for 1928 was precisely the same as for 1926, or 913. While in that year the number of deaths from pulmonary tuberculosis was 87, the number in 1928 was 74. The decline, therefore, for the year under review is not so marked as for the previous year, which was possibly exceptional.

In contrast to the increase in mortality from pulmonary tuberculosis, the mortality from cancer during the year under review decreased from 96 to 79. Cancer, next to diseases of the heart, is the second highest mortality factor in the experience of the International Typographical Union. The mortality from pneumonia declined from 85 deaths in 1927 to 75 deaths in 1928. Diseases of the heart increased slightly, from 181 in 1927 to 188 in 1928, but Bright's disease or chronic nephritis decreased from 47 deaths to 38 deaths. Chronic lead poisoning caused only one death during the year against two deaths each during 1926 and 1927. The relative significance of chronic lead poisoning in the experience of the International Typographical Union is best illustrated by the statement that out of

[1] Health survey of the printing trades (Bul. No. 427), and annual figures for 1926 and 1927 (published in Labor Review for July, 1927, and April, 1928).

2,828 deaths during the three years, 1926 to 1928, only 5 deaths were from this strictly occupational affliction. Recent experiences in this respect fully confirm the conclusions arrived at in the health survey of the printing trades. Details of the mortality for 1928 are given in the usual form in the table following.

MORTALITY EXPERIENCE OF INTERNATIONAL TYPOGRAPHICAL UNION, 1928, BY CAUSE AND BY AGE GROUP

International list No.	Cause of death	All ages	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and over
1a	Typhoid fever	1									1						
11b	Influenza	6				2							2	1	1		
21	Erysipelas	1								1							
23	Lethargic encephalitis	1			1												
24	Meningococcus meningitis	1									1						
31	Tuberculosis of the respiratory system	74	1	8	7	6	14	11	5	14	3	1	3	1			
37	Disseminated tuberculosis	1									1						
41	Purulent infection, septicemia	6	1		1				1	1			1			1	
43	Cancer of the buccal cavity	1									1						
44	Cancer of the stomach, liver	7					1		1	1	2	1	1				
45	Cancer of the peritoneum, intestines, rectum	3					1	1		1							
49	Cancer of other or unspecified organs	68	1		1	3	2	10	7	11	10	12	7	3	1		
50	Benign tumors and tumors not returned as malignant	5				1	1			1	2						
52	Chronic rheumatism, osteoarthritis, gout	3										1	1		1		
57	Diabetes mellitus	16					1			6		5	2		2		
58a	Pernicious anemia	7				1	1	1		1	1	1	1				
60b	Other diseases of the thyroid gland	1									1						
65a	Leukemia	1						1									
65b	Hodgkin's disease	2					1			1							
67a	Chronic lead poisoning	1						1									
69	Other general diseases	1										1					
70	Encephalitis	2								2							
74a	Cerebral hemorrhage	55		1	1	1	5	2	3	5	14	11	8	3	1		
74b	Cerebral embolism and thrombosis	3									1			2			
75b	Paralysis without specified cause	30				1		2	4	3	7	4	5	3	1		
76	General paralysis of the insane	3					1			1				1			
82	Neuralgia and neuritis	1									1						
84	Other diseases of the nervous system	2				1				1							
89	Angina pectoris	15				1	1		2	4	1	3	1	2			
90a	Endocarditis and myocarditis (over 45 years)	56					1	2	3	13	12	9	8	4	1	3	
90b	Other diseases of the heart	117		2	3	4	5	10	17	16	20	17	14	4	4	1	
91b	Arteriosclerosis	40							1	4	7	8	10	7	1	1	1
92	Embolism and thrombosis	8			1				1	2	2	2					
95	Hemorrhage without specified cause	7			1	2			1	1		1	1				
96	Other diseases of the circulatory system	1									1						
99b	Chronic bronchitis	1													1		
100a	Broncho-pneumonia	8				1	1			2	2		2				
101a	Lobar pneumonia	2						1		1							
101b	Pneumonia unspecified	65		1	5	2	4	10	6	6	6	10	4	7	2	2	
102	Pleurisy	1	1														
103	Congestion and hemorrhagic infarct of the lung	2					2										
105	Asthma	3					1				1	1					
106	Pulmonary emphysema	1							1								
109	Diseases of the pharynx and tonsils	2							1				1				
111a	Ulcer of the stomach	4			1			1		1							1
112	Other diseases of the stomach	10		1			1	1	1	1	3	2					
117	Appendicitis and typhlitis	12				1		3	4	1	2		1				
118a	Hernia	4							3		1						
118b	Intestinal obstruction	9		2	1		1	1	1			1	1	1			
119	Other diseases of the intestines	4			1						2		1				
122b	Cirrhosis of the liver	5						1	1	1		1	1				
123	Biliary calculi	2							1				1				
124	Other diseases of the liver	2							1	1							
126	Peritonitis without specified cause	10		2	1				1	4	1	1					
129	Chronic nephritis	[1] 37	1		1		1	5		7	4	8	4	5	1		
131	Other diseases of the kidneys and annexa	4									2		1	1			
133	Diseases of the bladder	2						1		1							
134b	Diseases of the urethra, urinary abscess	3								1			1		1		
151	Gangrene	1											1				

[1] Not including 1 case in which age was not reported.

MORTALITY EXPERIENCE OF INTERNATIONAL TYPOGRAPHICAL UNION, 1928, BY CAUSE AND BY AGE GROUP—Continued

International list No.	Cause of death	All ages	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and over
153	Acute abscess	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---
154	Other diseases of the skin and annexa	4	---	---	---	---	2	---	1	1	---	---	---	---	---	---	---
164	Senility	14	---	---	---	---	---	---	---	---	---	---	5	2	1	5	1
180	Accidental mechanical suffocation	4	---	1	---	1	1	---	---	1	---	---	---	---	---	---	---
181	Accidental absorption of irrespirable, irritating, or poisonous gas	3	---	1	1	---	1	---	---	---	---	---	---	---	---	---	---
182	Accidental drowning	3	---	---	---	1	---	1	1	---	---	---	---	---	---	---	---
188c	Automobile accidents	1	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---
193	Excessive cold	1	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---
201	Fracture (cause not specified)	6	---	---	1	---	---	1	---	1	1	---	---	---	2	---	---
202	Other external violence	29	---	1	---	2	4	3	5	5	1	3	3	---	2	---	---
205a	Ill-defined	[1] 65	---	---	2	1	5	3	5	3	14	16	7	7	1	1	---
205b	Not specified or unknown	39	---	3	3	3	3	2	5	2	6	8	1	1	1	1	---
	Total	[2] 911	5	23	34	36	58	78	83	130	137	128	100	56	26	14	3

[1] Not including 1 case in which age was not reported.
[2] Not including 2 cases in which age was not reported.

INDUSTRIAL ACCIDENTS

Accidents in Selected Manufacturing Industries, 1925, 1926, 1927[1]

IN 1926 the Bureau of Labor Statistics began, on a comprehensive scale, the collection of industrial accident statistics in selected manufacturing industries, covering the calendar year 1925. Prior to that time no attempt had been made by any Government agency to gather data of this kind that could be considered in any sense complete, except the experience in the iron and steel industry which this bureau has been assembling and publishing for many years.[2] The record of 1925 included 1,282 establishments employing 555,996 full-year workers, representing 24 industry groups and located in 11 States. In the following year the bureau was able to extend its investigation by the addition of 927 establishments (an increase of 72.3 per cent), employing 991,082 full-year workers (an increase of 78.3 per cent), covering 30 industry groups and located in 25 States. A further increase was made in 1927 when 2,676 establishments employing 1,075,282 full-year workers were covered. This was an increase over 1926 of 21.1 per cent in establishments and of 8.5 per cent in workers, although the number of industry groups was decreased by one, the carriages and wagons group being omitted. While three States—Kansas, Oklahoma, and Texas—were added, reports were not received from Montana and South Dakota, which were included in 1926, thus making a net gain of only one State.

In view of the apparent lack of progress in the number of industry groups and States covered, it should be stated that all the industry groups for which the bureau expects, at the present time at least, to obtain records have been covered, and nearly every State of sufficient industrial importance to furnish figures that may be considered adequate has been included in the 1927 report. Attention, therefore, will hereafter be directed more particularly to increasing the number of establishments and full-year workers included, in an effort to make the resulting data, which at best is only a sample of manufacturing activities throughout the country, as representative as possible. An attempt also will be made to cover several additional States. Efforts along this line will be continued from year to year as facilities of the bureau allow. With the cooperation of industry itself, and of the State authorities having in charge the collection of accident statistics, which help heretofore has been cordially given, it is hoped to render this annual survey of accidents in manufacturing

[1] Data from the bureau's forthcoming bulletin on statistics of industrial accidents in the United States to the end of 1927.

[2] The latest published report giving the accident experience of the iron and steel industry appeared in a pamphlet entitled, "Industrial accidents," reprinted from the Labor Review for October and November, 1927. This industry is not included in the tables which follow.

industries of increasing value to those responsible for the application of safety programs.

From the safety and accident-prevention standpoint, which constitutes the real purpose of the bureau in presenting accident statistics and in developing the scope of the work as rapidly as possible, the chief value of the data lies in the determination of accident rates and their classification by industry and by State, thus affording the only valid means of comparison. These rates, known as frequency and severity rates, are determined, respectively, by dividing the number of accidents by the number of man-hours' exposure and the number of days lost by the number of man-hours' exposure. The first expresses the incidence of occurrence, while the second gives a more accurate picture of the hazard involved because the element of time loss is introduced. Neither, however, is in itself sufficient as a correct measure of the accident hazard. What is needed is a method of combining the two into what might be accurately termed an "accident rate," but the factors are so essentially different that the determination of a combination rate which will stand statistical inspection appears at present unlikely.

The tables which follow include a brief summary of the accident experience data gathered by the bureau for the years 1925, 1926, and 1927. They present the record in two ways—for each industry group covering all States and for each State covering all industries. In both cases, however, the record is classified according to the extent to which accidents are reported in the various States covered. Thus, we find 18 States reporting all accidents in 1927, six States reporting accidents in which the temporary disabilities extended beyond one week, and so on. This arrangement renders the data more nearly comparable. In 1925 the number of full-year workers covered in States reporting all accidents was only 17.2 per cent of the whole number, while in 1927 the percentage was 57.1. It is hoped to increase this proportion from year to year.

As has been suggested, severity rates are considered a more accurate measure of accident hazard than frequency rates. An inspection of severity rates throughout the table shows considerable fluctuation from year to year, there being no consistent improvement. However, there are cases where the improvement in 1927 over both 1925 and 1926 is considerable. For example, considering only the group of States reporting all disabilities extending beyond the day of injury, it will be noted that in the manufacture of agricultural implements the rate declined each year from 4.39 in 1925 to 3.21 in 1927, and in slaughtering and meat packing there was a steady drop from 3.32 in 1925 to 2.30 in 1927. These are the only industries in this group showing a decline in each year. Several others declined in 1927 as compared with 1926.

On the other hand, the rates in the manufacture of electrical machinery, furniture, glass, and machine tools, and in planing mills, have steadily risen from year to year—from 0.62 to 1.74 in electrical machinery, from 1.84 to 2.18 in furniture, from 1.11 to 2.24 in glass, from 0.83 to 1.53 in machine tools, and from 2.09 to 5.12 in planing mills.

Turning to the record by States, the same general situation is found to exist. The following States show declining severity rates

from 1926 to 1927: Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, Ohio, Tennessee, West Virginia, and Wisconsin; while increasing rates are shown in the same period in Alabama, California, Georgia, Illinois, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, and New Jersey. Declines may be noted in New York, Pennsylvania, and Virginia, but they are not included in the list because the 1927 accidents in these States were reported on a different basis from those occurring in preceding years. In Illinois, Maryland, and New Jersey increases in rates are noted both in 1926 and in 1927, while Pennsylvania is the only State showing a decrease in each year. This, however, may be due to the fact that temporary disabilities were not reported in 1925 and 1926.

Generally speaking, the States showing declines in severity rates in 1927 as compared with 1926 also show declines in frequency rates. Of the States showing increases in severity rates in this period, California, Georgia, Illinois, Maryland, and Massachusetts also show increases in frequency rates, while Alabama, Kentucky, Maine, New Hampshire, and New Jersey show declining frequency rates.

With few exceptions, the figures in the table do not justify a statement that the accident situation is improving in any industry group or in any State, nor can it definitely be stated that the situation is growing worse. Variations in methods of reporting accidents and in the completeness of reports necessarily prevent exact comparability from year to year. But those States in which rates appear to be increasing may find here an opportunity to take note of that fact and to make every effort to enlarge upon their safety measures and accident-prevention activities through more specific legislative provisions or more liberal interpretation and more energetic application of factory inspection and other laws that now exist for the protection of workers.

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927

States reporting all disabilities extending beyond day of injury

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Agricultural implements:										
1925	6,113	7	0.38	2.29	755	41.17	2.10	762	41.55	4.39
1926	5,126				593	38.57	3.66	593	38.57	3.66
1927	7,282	6	27	1.65	626	28.65	1.56	632	28.92	3.21
Automobiles:										
1925	4,441				327	24.54	1.28	327	24.54	1.28
1926	28,360	10	.12	.71	2,325	27.33	5.54	2,335	27.45	6.25
1927	48,886	7	.05	.29	1,994	13.60	1.50	2,001	13.65	1.79
Automobile tires:										
1925	14,888	3	.07	.40	3,014	67.48	1.80	3,017	67.55	2.20
1926	17,951	3	.06	.33	2,945	54.66	1.18	2,948	54.72	1.51
1927	30,696	7	.08	.46	3,832	41.61	1.24	3,839	41.69	1.70

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927—Continued

States reporting all disabilities extending beyond day of injury—Continued

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Boots and shoes:										
1925	850				54	21.14	0.44	54	21.14	0.44
1926	14,779	1	0.02	0.14	321	7.24	.14	322	7.26	.28
1927	39,763	1	.01	.05	961	8.06	.61	962	8.07	.66
Brick:										
1925	4,778	3	.21	1.26	729	50.86	1.12	732	51.07	2.38
1926	4,703	3	.21	1.28	820	58.12	2.59	823	58.33	3.87
1927 [1]	13,660	[2] 9	.22	1.32	1,497	36.53	1.29	1,506	36.75	2.61
Carpets:										
1926	1,482				19	4.31	.08	19	4.31	.08
1927	15,321	1	.02	.13	226	4.92	.36	227	4.94	.49
Carriages and wagons: [3]										
1926	679				93	45.65	7.56	93	45.63	7.56
Chemicals:										
1925	1,330				45	11.28	.33	45	11.28	.33
1926	3,117				126	13.47	.31	126	13.47	.31
1927 [1]	8,540	5	.20	1.17	325	12.68	.90	330	12.88	2.07
Cotton goods:										
1926	44,194				1,194	9.00	.32	1,194	9.00	.32
1927	56,903	6	.04	.21	2,315	13.56	.60	2,321	13.60	.81
Electrical machinery:										
1925	7,499				530	23.55	.62	530	23.55	.62
1926	18,137	2	.04	.22	1,151	22.16	1.01	1,153	22.20	1.23
1927	60,927	11	.06	.36	2,821	15.43	1.38	2,832	15.49	1.74
Fertilizers:										
1926	1,309	1	.26	1.54	176	45.05	1.16	177	45.31	2.70
1927	2,498	3	.40	2.40	268	35.76	2.45	271	36.16	4.85
Flour:										
1925	3,615	4	.37	2.21	210	19.37	.84	214	19.74	3.05
1926	3,889	4	.34	2.06	325	27.86	2.44	329	28.20	4.50
1927 [1]	7,308	[2] 5	.23	1.37	523	23.85	1.31	528	24.08	2.68
Foundry and machine-shop products:										
1925	14,902	5	.11	.67	2,327	52.05	1.43	2,332	52.16	2.10
1926	27,069	17	.21	1.26	3,278	40.37	1.63	3,295	40.58	2.89
1927 [1]	73,183	[2] 38	.17	1.04	6,741	30.66	1.84	6,779	30.83	2.88
Furniture:										
1925	9,467				666	49.69	1.84	666	49.69	1.84
1926	11,726				855	24.31	1.97	855	24.31	1.97
1927 [1]	21,980	[2] 5	.08	.45	1,421	21.55	1.73	1,426	21.63	2.18
Glass:										
1925	2,603				483	61.85	1.11	483	61.85	1.11
1926	6,717	1	.05	30	814	40.39	1.53	815	40.44	1.83
1927	19,923	[2] 14	.23	1.40	2,274	38.04	.84	2,288	38.27	2.24
Hardware:										
1926	886				80	30.10	1.31	80	30.10	1.31
1927	3,764	1	.09	.53	345	30.55	1.46	346	30.64	1.99
Leather:										
1926	5,530	2	.12	.72	194	11.69	.88	196	11.81	1.60
1927	11,521	3	.09	.52	967	27.98	.84	970	28.07	1.36
Lumber—planing mills:										
1925	3,562	1	.09	.56	215	20.11	1.53	216	20.20	2.09
1926	5,242	3	.19	1.14	514	32.69	2.80	517	32.88	3.94
1927	9,416	9	.32	1.91	706	24.99	3.21	715	25.31	5.12
Lumber—sawmills:										
1925	2,248	1	.15	.89	130	19.27	1.46	131	19.42	2.35
1926	5,302	15	.94	5.66	1,045	65.69	4.87	1,060	66.63	10.51
1927	14,754	[2] 22	.50	2.98	2,575	58.17	4.72	2,597	58.67	7.70
Machine tools:										
1925	1,887				255	45.04	.83	255	45.04	.83
1926	9,303	3	.11	.64	638	22.86	.57	641	22.97	1.21
1927	12,207	3	.08	.49	808	22.06	1.04	811	22.14	1.53

[1] The record for Kansas included here covers 6 months only.
[2] Fatal accidents not reported in Oklahoma, which State is included for the first time in 1927.
[3] This industry group has been discontinued.

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927—Continued

States reporting all disabilities extending beyond day of injury—Continued

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Paper and pulp:										
1925	1,814	1	0.18	1.10	228	41.89	3.41	229	42.07	4.51
1926	16,770	7	.14	.83	1,598	31.77	1.34	1,605	31.91	2.17
1927 [1]	26,074	18	.23	1.38	2,350	30.04	1.22	2,368	30.27	3.60
Petroleum refining:										
1926	3,783	------	------	------	105	9.25	.52	105	9.25	.52
1927 [1]	21,730	[2] 25	.38	2.30	2,165	33.15	1.68	2,190	33.53	3.98
Pottery:										
1925	1,206	------	------	------	81	22.40	.81	81	22.40	.81
1926	3,946	1	.08	.51	144	12.17	.61	145	12.25	1.12
1927	6,053	2	.11	.66	235	12.94	.35	237	13.05	1.01
Shipbuilding, steel:										
1926	745	------	------	------	125	55.92	2.88	125	55.92	2.88
1927	6,011	5	.28	1.66	834	46.25	3.34	839	46.53	5.00
Slaughtering and meat packing:										
1925	7,488	3	.13	.80	918	40.87	2.52	921	41.00	3.32
1926	19,809	8	.13	.81	3,028	50.95	2.16	3,036	51.08	2.97
1927 [1]	37,362	[2] 15	.13	.80	4,006	35.74	1.50	4,021	35.87	2.30
Stamped and enameled ware:										
1925	1,473	------	------	------	78	17.65	.73	78	17.65	.73
1926	2,848	------	------	------	200	23.41	2.32	200	23.41	2.32
1927	6,260	2	.11	.64	268	14.27	1.39	270	14.38	2.03
Steam fittings, apparatus, and supplies:										
1925	936	------	------	------	167	59.47	1.11	167	59.47	1.11
1926	5,897	------	------	------	973	55.00	1.34	973	55.00	1.34
1927	19,396	2	.03	.21	1,657	28.47	.63	1,659	28.50	.84
Stoves:										
1925	2,724	------	------	------	355	43.45	.80	355	43.45	.80
1926	4,379	------	------	------	553	42.10	2.55	553	42.10	2.55
1927	7,515	1	.04	.27	1,027	45.55	1.66	1,028	45.59	1.93
Structural-iron work:										
1925	1,992	3	.50	3.01	472	78.98	2.06	475	79.48	5.07
1926	1,737	12	2.30	13.82	370	71.00	5.10	382	73.30	18.92
1927 [1]	8,979	[2] 23	.85	5.12	1,081	40.13	1.11	1,104	40.98	6.23
Woolen goods:										
1926	7,757	1	.04	.26	255	10.96	.36	256	11.00	.62
1927	15,796	1	.02	.13	454	9.58	.32	455	9.60	.45
All industry groups:										
1925	95,816	31	------	------	12,039	------	------	12,070	------	------
1926	283,172	94	------	------	24,857	------	------	24,951	------	------
1927	613,708	250	------	------	45,302	------	------	45,552	------	------

States reporting only disabilities extending beyond one week

Agricultural implements:										
1925	8,899	2	0.07	0.45	370	13.86	1.52	372	13.93	1.97
1926	9,881	3	.10	.61	553	18.65	1.98	556	18.75	2.59
1927	8,931	1	.04	.22	393	14.67	1.80	394	14.71	2.02
Automobiles:										
1925	177,092	51	.10	.58	4,583	8.63	1.17	4,634	8.73	1.75
1926	213,978	49	.08	.46	6,471	10.08	1.35	6,520	10.16	1.81
1927	179,064	61	.11	.68	5,140	9.57	1.12	5,201	9.68	1.80
Automobile tires:										
1925	2,749	1	.12	.73	107	12.97	2.40	108	13.09	3.13
1926	4,875	2	.14	.82	219	14.97	1.53	221	15.11	2.35
1927	3,697	------	------	------	77	6.94	1.01	77	6.94	1.01
Boots and shoes:										
1925	7,653	------	------	------	204	8.88	.35	204	8.88	.35
1926	25,942	4	.05	.31	510	6.55	.73	514	6.60	1.04
1927	6,735	------	------	------	148	7.32	.77	148	7.32	.77

[1] The record for Kansas included here covers 6 months only.
[2] Fatal accidents not reported in Oklahoma, which State is included for the first time in 1927.

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927—Continued

States reporting only disabilities extending beyond one week—Continued

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Brick:										
1925	6,710	3	0.15	0.89	347	17.23	1.66	350	17.38	2.55
1926	8,000	1	.04	.25	473	19.71	2.82	474	19.75	3.07
1927	6,427	1	.05	.31	286	14.83	1.68	287	14.88	1.99
Carpets:										
1925	6,428	3	.16	.93	124	6.43	2.58	127	6.59	3.51
1926	8,704	1	.04	.23	163	6.25	.89	164	6.29	1.12
1927	923				31	11.19	1.58	31	11.19	1.58
Carriages and wagons: [3]										
1926	116				10	28.73	9.07	10	28.73	9.07
Chemicals:										
1925	10,014	3	.10	.60	182	6.06	1.89	185	6.16	2.49
1926	11,523	6	.17	1.04	428	12.38	2.15	434	12.55	3.19
1927	8,804	12	.45	2.73	442	16.73	2.26	454	17.18	4.99
Cotton goods:										
1926	24,360	1	.01	.08	385	5.27	.44	386	5.28	.52
1927	32,389	7	.07	.43	539	5.55	.61	546	5.62	1.04
Electrical machinery:										
1925	33,727	6	.06	.36	800	7.90	1.72	806	7.96	2.08
1926	36,106	5	.05	.28	1,185	10.94	2.23	1,190	10.99	2.51
1927	18,984	1	.02	.11	432	7.58	1.25	433	7.60	1.36
Fertilizers:										
1926	1,087	1	.31	1.84	48	14.72	2.90	49	15.03	4.74
1927	2,764	4	.48	2.89	190	22.91	3.45	194	23.39	6.34
Flour:										
1926	2,042				114	18.61	2.65	114	18.61	2.65
1927	953	1	.05	.27	46	2.10	.10	47	2.15	.37
Foundry and machine-shop products:										
1925	33,379	8	.08	.48	1,371	13.69	2.36	1,379	13.77	2.84
1926	44,932	29	.22	1.29	3,263	24.21	3.38	3,292	24.43	4.67
1927	27,295	8	.10	.59	1,815	22.16	3.27	1,823	22.26	3.86
Furniture:										
1925	10,659				300	9.39	1.20	300	9.39	1.20
1926	20,745	3	.05	.29	736	11.83	1.95	739	11.88	2.24
1927	20,225	1	.02	.10	546	9.00	1.05	547	9.02	1.15
Glass:										
1925	4,632	1	.07	.43	57	4.10	.86	58	4.17	1.29
1927	2,588				73	9.40	2.04	73	9.40	2.04
Hardware:										
1926	3,023				121	13.34	2.36	121	13.34	2.36
1927	3,586				122	11.34	3.46	122	11.34	3.46
Leather:										
1925	5,431	2	.12	.74	210	12.89	1.65	212	13.01	2.39
1926	9,775	2	.07	.41	464	15.83	2.49	466	15.90	2.90
1927	8,181	1	.04	.24	269	10.96	2.18	270	11.00	2.42
Lumber—planing:										
1925	5,555	5	.30	1.80	382	22.92	4.22	387	23.22	6.02
1926	8,463	11	.43	2.60	773	30.44	4.68	784	30.87	7.28
1927	5,215	3	.19	1.15	407	26.01	3.45	410	26.20	4.60
Lumber—sawmills:										
1925	7,975	10	.42	2.51	461	19.26	1.05	471	19.68	3.56
1926	7,121	9	.42	2.53	901	42.17	3.00	910	42.59	5.53
1927	9,400	16	.57	3.40	1,087	38.54	2.37	1,103	39.11	5.77
Machine tools:										
1925	3,027	1	.11	.66	94	10.35	1.49	95	10.46	2.15
1926	5,635	1	.06	.35	300	17.75	3.14	301	17.81	3.49
1927	3,793	2	.18	1.05	153	13.44	1.97	155	13.62	3.02
Paper and pulp:										
1925	7,796	3	.13	.77	439	18.77	4.65	442	18.90	5.42
1926	17,649	12	.23	1.36	1,389	26.23	3.37	1,401	26.46	4.73
1927	8,630	10	.39	2.32	415	16.03	1.12	425	16.42	3.44
Petroleum refining:										
1926	13,320	9	.23	1.35	385	9.63	3.27	394	9.86	4.62
1927	9,579	1	.03	.21	209	7.27	3.01	210	7.30	3.2

[3] This industry group has been discontinued.

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927—Continued

States reporting only disabilities extending beyond one week—Continued

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Pottery:										
1925	1,943	1	0.17	1.03	78	13.38	1.51	79	13.55	2.54
1926	3,948	1	.08	.51	140	11.82	1.00	141	11.90	1.51
1927	2,450				105	14.29	1.33	105	14.29	1.33
Shipbuilding, steel:										
1926	5,196	4	.26	1.54	219	14.05	2.04	223	14.31	3.58
1927	5,765	5	.29	1.73	260	15.03	1.10	265	15.32	2.83
Slaughtering and meat packing:										
1925	16,412	12	.24	1.46	808	16.41	.83	820	16.65	2.29
1926	25,088	7	.09	.56	1,413	18.79	1.96	1,420	18.88	2.52
1927	20,868	11	.18	1.05	1,356	21.66	2.95	1,367	21.84	4.00
Stamped and enameled ware:										
1926	10,204	3	.10	.59	233	7.61	1.33	236	7.71	1.92
1927	3,985				82	6.86	.89	82	6.86	.89
Steam fittings, apparatus, and supplies:										
1925	2,607				200	25.58	4.84	200	25.58	4.84
1926	5,813	1	.06	.34	428	24.54	3.21	429	24.60	3.55
1927	3,411	1	.10	.59	217	21.21	3.57	218	21.31	4.16
Stoves:										
1926	3,160	1	.11	.63	158	16.67	1.68	159	16.78	2.31
1927	2,079	1	.16	.95	69	10.89	2.17	70	11.05	3.12
Structural-iron work:										
1925	1,850	2	.36	2.16	119	21.44	5.54	121	21.80	7.70
1926	2,428	7	.96	5.77	243	33.36	4.02	250	34.32	9.79
1927	2,274	2	.29	1.76	316	46.32	5.24	318	46.61	7.00
Woolen goods:										
1925	6,910				42	2.02	.28	42	2.02	.28
1926	5,722				98	5.71	1.76	98	5.71	1.76
1927	6,876				85	4.12	1.02	85	4.12	1.02
All industry groups:										
1925	361,448	114			11,278			11,392		
1926	538,836	173			21,823			21,996		
1927	415,871	150			15,310			15,460		

State reporting only disabilities extending beyond 10 days

Boots and shoes: 1926	1,664				18	3.60	0.92	18	3.60	0.92
Brick: 1926	274				8	10.00	1.14	8	10.00	1.14
Chemicals: 1926	851	2	0.77	4.70	87	33.46	8.36	89	34.23	13.06
Cotton goods: 1926	5,999				87	4.84	1.00	87	4.84	1.00
Fertilizers: 1926	517	4	2.50	15.48	40	25.01	1.04	44	27.51	16.52
Flour: 1926	78				5	25.00	3.53	5	25.00	3.53
Foundry and machine-shop products: 1926	717	1	.45	2.79	86	39.09	5.55	87	39.54	8.34
Furniture: 1926	559				19	11.18	1.61	19	11.18	1.61
Leather: 1926	113				11	36.67	1.30	11	36.67	1.30
Lumber—planing mills: 1926	480	1	.71	4.16	34	24.29	3.70	35	25.00	7.86
Lumber—sawmills: 1926	3,288	2	.20	1.21	212	21.42	1.91	214	21.62	3.12
Paper and pulp: 1926	388				14	11.67	.33	14	11.67	.33
Pottery: 1926	167				2	4.00	.05	2	4.00	.05
Shipbuilding, steel: 1926	4,233	2	.16	.94	143	11.26	2.34	145	11.42	3.28
Slaughtering and meat packing: 1926	53									
Stoves: 1926	73				7	35.00	.62	7	35.00	.62
Structural-iron work: 1926	43				9	90.00	27.21	9	90.00	27.21
Woolen goods: 1926	446				3	2.30	.06	3	2.30	.06
All industry groups: 1926	19,943	12			785			797		

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927—Continued

State reporting only disabilities extending beyond two weeks

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Cotton goods:										
1926	5,917	------	------	------	67	3.76	0.41	67	3.76	0.41
1927	6,353	------	------	------	70	3.67	.18	70	3.67	.18
Fertilizers: 1927	196	------	------	------	3	5.10	.28	3	5.10	.28
Foundry and machine-shop products:										
1926	2,092	------	------	------	108	17.14	1.29	108	17.14	1.29
1927	1,888	1	0.18	1.06	61	10.57	1.00	62	10.75	2.06
Lumber—sawmills:										
1926	2,312	1	.14	.86	52	7.54	.57	53	7.68	1.43
1927	2,182	1	.15	.92	86	13.14	1.93	87	13.29	2.85
Shipbuilding, steel: 1927	250	------	------	------	24	32.05	8.67	24	32.05	8.67
Slaughtering and meat packing:										
1926	47	------	------	------	1	10.00	.15	1	10.00	.15
1927	186	------	------	------	4	7.16	.27	4	7.16	.27
All industry groups:										
1926	10,368	1	------	------	228	------	------	229	------	------
1927	11,055	2	------	------	248	------	------	250	------	------

States reporting only fatalities and permanent disabilities

Agricultural implements:										
1925	1,282	------	------	------	3	0.78	0.34	3	0.78	0.34
1926	1,019	------	------	------	5	1.64	.93	5	1.64	.93
1927	614	------	------	------	6	3.26	2.61	6	3.26	2.61
Automobiles:										
1925	7,851	5	0.21	1.27	41	1.74	1.22	46	1.95	2.49
1926	9,555	6	.21	1.26	46	1.60	1.37	52	1.81	2.63
1927	915	------	------	------	3	1.09	.51	3	1.09	.51
Automobile tires:										
1925	2,459	------	------	------	9	1.22	1.13	9	1.22	1.13
1926	4,246	2	.16	.94	12	.94	.63	14	1.10	1.57
1927	2,165	1	.15	.92	4	.62	.57	5	.77	1.49
Boots and shoes:										
1925	2,697	------	------	------	------	------	------	------	------	------
1926	3,539	------	------	------	------	------	------	------	------	------
Brick:										
1925	4,106	2	.16	.97	3	.24	.30	5	.40	1.27
1926	6,037	3	.17	.99	17	.94	.67	20	1.11	1.66
1927	2,567	2	.26	1.56	------	------	------	2	.26	1.56
Carpets:										
1925	4,571	2	.15	.88	3	.22	.08	5	.37	.96
1926	2,440	------	------	------	4	.55	.41	4	.55	.41
Carriages and wagons:										
1926	53	------	------	------	------	------	------	------	------	------
Chemicals:										
1925	266	------	------	------	------	------	------	------	------	------
1926	1,166	1	.29	1.72	1	.29	.09	2	.58	1.81
1927	373	1	.89	5.36	1	.89	.45	2	1.78	5.81
Cotton goods: 1926	2,539	------	------	------	3	.39	.20	3	.39	.20
Electrical machinery:										
1925	19,441	7	.12	.72	69	1.18	.80	76	1.30	1.52
1926	21,146	4	.06	.38	21	.33	.22	25	.39	.60
1927	201	------	------	------	------	------	------	------	------	------
Fertilizers:										
1926	142	------	------	------	------	------	------	------	------	------
1927	68	------	------	------	------	------	------	------	------	------
Flour: 1926	93	------	------	------	------	------	------	------	------	------
Foundry and machine-shop products:										
1925	27,121	5	.06	.37	47	.58	.53	52	.64	.90
1926	30,483	17	.19	1.12	123	1.35	1.10	140	1.54	2.22
1927	2,056	2	.32	1.95	14	2.27	1.92	16	2.59	3.87

TABLE 1.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES FOR SPECIFIED INDUSTRIES, 1925, 1926, AND 1927—Continued

States reporting only fatalities and permanent disabilities—Continued

Industry and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)	Number of cases	Frequency rate (per 1,000,000 hours' exposure)	Severity rate (per 1,000 hours' exposure)
Furniture:										
1925	4,393				17	1.29	0.76	17	1.29	0.76
1926	3,839				12	1.04	.64	12	1.04	.64
1927	1,108	1	0.30	1.81	8	2.41	1.10	9	2.71	2.91
Glass:										
1925	4,903				7	.48	.59	7	.48	.59
1926	4,833	4	.28	1.66	14	.97	.97	18	1.25	2.63
1927	653	1	.51	3.06	1	.51	.15	2	1.02	3.21
Hardware: 1926	2,337				11	1.57	.53	11	1.57	.53
Leather:										
1925	3,870				2	.17	.05	2	.17	.05
1926	4,510	2	.15	.89	9	.67	.52	11	.72	1.41
1927	554	1	.61	3.61	3	1.80	.78	4	2.41	4.39
Lumber—planing mills:										
1925	735				2	.91	1.91	2	.91	1.91
1926	3,038				15	1.65	.99	15	1.65	.99
1927	6,371	10	.53	3.13	23	1.20	1.10	33	1.73	4.23
Lumber—sawmills:										
1926	13,520	27	.67	3.99	88	2.17	1.70	115	2.84	5.69
1927	6,958	15	.72	4.31	47	2.25	1.36	62	2.97	5.67
Machine tools:										
1925	1,119									
1926	196	1	1.67	10.18	1	1.67	.50	2	3.34	10.68
Paper and pulp:										
1925	1,532	1	.22	1.31	3	.65	.30	4	.87	1.61
1926	2,501	2	.27	1.59	4	.53	.24	6	.80	1.83
Petroleum refining:										
1926	6,072	12	.66	3.95	9	.49	.22	21	1.15	4.17
1927	3,927	15	1.27	7.64	30	2.55	1.44	45	3.82	9.08
Pottery:										
1926	277									
1927	249	1	1.34	8.03	2	2.67	1.07	3	4.01	9.10
Shipbuilding, steel:										
1926	3,563	3	.28	1.68	12	1.12	.48	15	1.40	2.16
1927	2,924	3	.34	2.05	8	.91	.46	11	1.25	2.51
Slaughtering and meat packing:										
1926	1,102									
1927	1,424	2	.47	2.81	4	.94	.48	6	1.41	3.29
Stamped and enameled ware:										
1926	108				1	.33	2.31	1	.33	2.31
1927	410									
Steam fittings, apparatus, and supplies:										
1925	2,669	1	.12	.75	6	.75	.26	7	.87	1.01
1926	2,173	1	.15	.92	2	.31	.16	3	.46	1.08
1927	43									
Stoves:										
1925	1,264	1	.26	1.58				1	.26	1.58
1926	821	1	.40	2.43	1	.40	.30	2	.80	2.73
1927	280				3	3.58	1.85	3	3.58	1.85
Structural-iron work:										
1925	2,681	1	.12	.75	10	1.24	.45	11	1.36	1.20
1926	3,374	4	.40	2.37	21	2.07	1.08	25	2.47	3.45
1927	647	2	1.03	6.19	4	2.06	.98	6	3.09	7.17
Woolen goods:										
1925	5,772	1	.06	.35	4	.23	.26	5	.29	.61
1926	4,041				6	.49	.66	6	.49	.66
1927	141									
All industry groups:										
1925	98,732	26			226			252		
1926	138,763	90			438			528		
1927	34,648	57			161			218		
Grand total:										
1925	555,996	171			23,543			23,714		
1926	991,082	370			48,131			48,501		
1927	1,075,282	459			61,021			61,480		

TABLE 2.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES, BY STATES, 1925, 1926, AND 1927

States reporting all disabilities extending beyond day of injury

State and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)	Number of cases	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)	Number of cases	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)
Indiana:										
1925	20,587	1	0.02	0.10	2,270	36.76	0.96	2,271	36.78	1.06
1926	39,907	12	.10	.60	3,555	29.50	4.99	3,567	29.60	5.59
1927	47,110	16	.11	.68	3,329	23.55	1.07	3,345	23.66	1.75
Iowa:										
1925	11,073	2	.06	.36	920	27.69	1.41	922	27.75	1.77
1926	12,105	6	.17	.99	1,063	29.28	1.44	1,069	29.45	2.43
1927	12,437	6	.16	.97	1,229	32.94	1.26	1,235	33.10	2.22
Kansas: 1927 [1]	11,281	3	.09	.53	823	24.32	.42	826	24.41	.95
Kentucky:										
1926	7,181				1,314	61.12	2.49	1,314	61.12	2.49
1927	6,671	2	.10	.60	962	48.06	2.18	964	48.16	2.78
Maine:										
1926	12,389	1	[2]	[2]	1,026	27.61	.98	1,027	27.61	.98
1927	13,318	5	.13	.75	739	18.50	1.17	744	18.63	1.92
Maryland:										
1925	7,198	1	.05	.28	490	22.69	1.29	491	22.74	1.57
1926	13,864	5	.12	.72	861	20.70	1.08	866	20.82	1.80
1927	15,310	8	.17	1.05	1,077	23.45	1.93	1,085	23.62	2.98
Massachusetts:										
1926	76,568	7	.03	.18	2,040	8.84	.36	2,047	8.87	.54
1927	80,205	3	.01	.07	3,571	14.84	.53	3,574	14.85	.60
Minnesota:										
1925	13,744	14	.34	2.04	1,196	29.00	1.95	1,210	29.34	3.99
1926	14,048	16	.38	2.28	2,749	65.30	3.94	2,765	65.68	6.22
1927	14,857	16	.36	2.15	1,862	41.77	2.67	1,878	42.13	4.82
Montana: 1926	934	2	.07	4.28	64	2.29	.37	66	2.36	4.65
Nebraska:										
1926	6,078	3	.16	.99	727	39.87	1.81	730	40.03	2.80
1927	6,080	1	.05	.33	726	39.80	.82	727	39.85	1.15
New Hampshire:										
1926	15,253	1	.02	.13	655	14.30	.36	656	14.32	.49
1927	15,679	2	.04	.26	569	12.10	.49	571	12.14	.75
New York: 1927	103,638	40	.13	.77	4,675	15.04	2.86	4,715	15.17	3.63
North Dakota:										
1926	137				61	152.50	17.18	61	152.50	17.18
1927	154				44	94.62	9.55	44	94.62	9.55
Ohio:										
1925	43,214	13	.10	.60	7,163	55.25	1.49	7,176	55.35	2.09
1926	64,208	35	.18	1.08	8,533	43.14	1.39	8,568	43.32	2.42
1927	115,303	52	.15	.90	10,483	30.30	1.22	10,535	30.45	2.12
Oklahoma: 1927	5,461	[3]			369	22.52	1.41	[3] 369	22.52	1.41
Pennsylvania: 1927	119,254	54	.15	.91	9,046	25.29	.61	9,100	25.44	1.52
South Dakota: 1926	1,080	1	.31	1.85	263	82.19	2.06	264	82.50	3.91
Tennessee:										
1926	10,171	3	.10	.59	1,005	32.94	1.88	1,008	33.04	2.47
1927	9,771	2	.07	.41	759	25.89	1.12	761	25.96	1.53
Texas: 1927	26,357	32	.40	2.43	4,171	52.75	3.29	4,203	53.15	5.72
West Virginia:										
1926	9,249	2	.07	.43	941	33.97	2.55	943	34.04	2.98
1927	10,822	8	.25	1.48	868	26.74	.87	876	26.99	2.35

States reporting only disabilities extending beyond one week

Georgia:										
1926	23,322	4	0.06	0.34	516	7.37	0.75	520	7.43	1.09
1927	25,868	7	.09	.54	705	9.08	.76	712	9.17	1.30
Illinois:										
1925	51,329	21	.14	.82	1,871	12.15	.96	1,892	12.29	1.78
1926	80,033	24	.10	.60	3,581	14.91	1.82	3,605	15.01	2.42
1927	74,644	20	.09	.54	3,575	15.97	2.57	3,595	16.06	3.11

[1] Covers 6 months only (July–December). [2] Less than 0.005. [3] Fatal accidents not reported.

TABLE 2.—NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES, BY STATES, 1925, 1926, AND 1927—Continued

States reporting only disabilities extending beyond one week—Continued

State and year	Full-year workers	Fatal			Nonfatal			Total		
		Number of cases	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)	Number of cases	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)	Number of cases	Frequency rates (per 1,000,000 hours' exposure)	Severity rates (per 1,000 hours' exposure)
Michigan:										
1925	165,918	48	0.10	0.58	4,204	8.45	1.06	4,252	8.55	1.64
1926	227,350	75	.11	.65	7,737	11.35	1.17	7,812	11.46	1.82
1927	200,895	78	.13	.78	6,428	10.66	1.03	6,506	10.79	1.81
New Jersey:[4]										
1925	46,064	7	.03	.30	1,233	5.68	1.78	1,240	5.71	2.08
1926	50,102	3	.02	.12	1,581	10.52	2.72	1,584	10.54	2.84
1927	53,601	6	.04	.22	1,485	9.24	3.15	1,491	9.28	3.37
New York:										
1925	70,055	26	.12	.74	2,244	10.68	3.16	2,270	10.80	3.90
1926	112,942	48	.14	.85	5,483	16.18	3.38	5,531	16.32	4.23
Virginia: 1927	17,880	10	.19	1.12	777	14.48	1.03	787	14.67	2.15
Wisconsin:										
1925	28,082	12	.14	.85	1,726	20.49	.96	1,738	20.63	1.81
1926	45,087	19	.14	.84	2,925	21.62	1.66	2,944	21.76	2.50
1927	42,983	29	.22	1.35	2,340	18.15	1.14	2,369	18.37	2.49
State reporting only disabilities extending beyond 10 days										
Virginia: 1926	19,943	12	0.20	1.20	785	13.12	2.00	797	13.32	3.20
State reporting only disabilities extending beyond two weeks										
Alabama:										
1926	10,368	1	0.03	0.19	228	10.58	0.88	229	10.61	1.07
1927	11,055	2	.06	.36	248	7.47	.87	250	7.53	1.23
States reporting only fatalities and permanent disabilities										
California:										
1926	30,703	41	0.45	2.67	147	1.60	1.18	188	2.05	3.85
1927	34,648	57	.55	3.29	161	1.55	1.00	218	2.10	4.29
Pennsylvania:										
1925	98,732	26	.26	1.54	226	2.23	1.66	252	2.49	3.20
1926	108,060	49	.16	.95	291	.94	.70	340	1.10	1.65
Grand total:										
1925	555,996	171	----	----	23,543	----	----	23,714	----	----
1926	991,082	370	----	----	48,131	----	----	48,501	----	----
1927	1,075,282	459	----	----	61,021	----	----	61,480	----	----

[4]Closed cases only are reported.

Death Claims Due to Automobile Accidents

A SURVEY has recently been made by the Fraternal Monitor (Rochester, N. Y.) among fraternal benefit societies to ascertain the increase, if any, in benefit claims resulting from automobile accidents, the work having been undertaken at the suggestion of Hon. James J. Davis, Secretary of Labor.

This survey, which is the first of its kind ever made, covers the period from 1923 through the first 10 months of 1928. The inquiry covered over 5,000,000 members and $5,567,711,484 insurance in force in the fraternal benefit field. The combined membership of the societies reporting on the subject was over 53 per cent of the total membership in the fraternal benefit field.

Difficulty was experienced in many instances in gathering the information owing to the fact that some of the societies could not supply data on death claims resulting from motor accidents in the first part of the period, other societies were new in the matter of handling insurance benefits, and others kept no separate records on claims resulting from automobile accidents. In some of the larger societies, branches handle these matters themselves and the central organization has no record.

Where comparative data on the period from 1923 through the first 10 months in 1928 were available, the hazard is shown to have increased per million from 0.000184 in 1923 to 0.000214 in 1928. The increase in the 5-year period was 16 per cent. Some societies reported as high as 200 per cent increase, and one reported 500 per cent. However, some societies report no increase, others state that figures are indefinite, and several find a decrease.

Of the societies reporting on death claims due to motor accidents, 17 showed an increase and 18 showed either no increase or a decrease, especially in rural communities. It is interesting to compare the membership of these two groups. The societies showing an increase comprise a membership of 3,069,973; those showing no increase or a decrease, 1,349,666.

Notes concerning some of the societies are here given.

The Brotherhood of Railroad Trainmen (172,326 members) reports that automobile fatalities show an increase of almost one-third in 1928 as compared with 1923. In 1923 there were 31 death claims from this source, and in 1928, 40 death claims.

The Foresters of America (200,000 members) reports a 25 per cent increase in death claims resulting from automobile accidents, 5 per cent of the total deaths resulting from this source. Increased city traffic is believed to be the leading cause.

The Modern Woodmen of America (1,121,097 members) states that there has been a small increase in the number of claims each year due to automobile accidents. In 1927 the average number of deaths per month from this cause was 26.8, while for the first 10 months of 1928 it was 27.3. The following figures were given for the years 1923 and 1928:

	1923	1928 (first 10 months)
Total number of deaths	11,368	12,141
Accidental deaths	742	736
Accidental deaths due to automobiles:		
Number	208	272
Per cent of all accidental deaths	28.0300	36.9500
Per cent of all deaths	.0183	.0224

The Neighbors of Woodcraft (75,419 adult and 5,829 juvenile members) states that the increase in fatalities has been slight, but that the order has had several juvenile deaths from automobile accidents in large cities.

The United American Mechanics (23,150 members) reports that increased traffic brings increased hazard and consequently more accidents and deaths due to the increasing number of automobiles in use. Claims for the 6-month period ending December 1, 1928, showed an increase of 133 per cent, as compared with 1923.

The Ancient Order of United Workmen of Kansas (24,836 members) reports 5 death claims resulting from automobile accidents in 1923 and 6 claims in 1928. "At least two-thirds of accidents are result of collision with or being struck by trains at grade crossings in the country."

The Woodmen's Circle (130,560 members) is of the opinion that accidents mainly can be traced to grade crossings and speeding on country highways. There were 12 death claims directly or indirectly resulting from automobile accidents in this society during the six months ending December 1, 1928, or an increase of 500 per cent over 1923.

On the other hand, the Loyal Orange Institution (32,686 members) reports that there has been no noticeable increase in accident or death claims during the last five years. There have been 115 deaths in the society in the last 27 months, none of which was the result of an automobile accident.

The report from the Royal Arcanum (104,375 members) shows 32 deaths in 1923, as compared with 29 in the first 11 months of 1928.

The Supreme Tribe of Ben-Hur (60,341 members) reports a decrease in 1928, as compared with 1923. In 1928 the claims amounted to $4,092 (1 per cent of the total), as compared with $7,000 (1½ per cent of the total) in 1923.

The Woman's Benefit Association (224,008 members) states that apparently traffic signals have done good work, as its records show a decrease from 17 deaths in the first 11 months of 1923, to 14 for the same period in 1928.

In addition to the fraternal benefit societies, information was obtained from the Commercial Travelers Mutual Accident Association. A study of these data shows that for the past several years there has been a gradual increase in the number of accidental injuries and deaths, resulting in greater pro-rata claim payments. While there was a slight increase in all kinds of accidents, the principal cause was the increase in the number of automobile accidents, as shown in the table below.

EXPERIENCE OF COMMERCIAL TRAVELERS MUTUAL ACCIDENT ASSOCIATION, 1924 TO 1927

Year	Total claim payments	Per capita total claim payments	Automobile accidents	
			Total claims paid	Claims paid per capita
1924	$2,029,240	$8.09	$605,032	$2.41
1925	2,259,307	8.13	689,953	2.51
1926	2,487,964	8.24	845,265	2.79
1927	2,850,956	8.74	968,840	2.97

The above table shows that in four years automobile claims increased 56 cents per member, compared with a total claim increase

of 65 cents per member. If the per capita claim payments for auto accidents had shown no increase during this period the general increase would have been only 9 cents per member.

It is not contended that the hazard from motor cars has to any great extent increased the death claims from all causes, even in the societies where there has been a marked increase in deaths from this cause. A greater knowledge of health rules, better sanitation, and gradual control of diseases have been making for better mortality records during the past few years. It would seem that the automobile hazard is now arising to nullify these gains in part.

Comments on the conditions which, the societies believe, have brought about this situation present an enlightening summary and point to measures which can help to solve this great casualty hazard problem.

Three principal causes given for the increase in the hazard are: (1) Increased city and country driving; (2) grade crossings; (3) night driving.

Measures which have tended to lower the hazard or have been of a decided beneficial nature in this respect are: (1) Block signals and traffic officers; (2) abolishment of hand cranking and substitution of self-starters; (3) greater rural membership of the reporting societies.

The survey shows a great opportunity for work toward the elimination of grade crossings, which rank next to increased traffic as the cause of deaths from automobile accidents. It also brings home to the membership of the societies represented the need of greater individual coverage. The amount of insurance carried by the average member of a fraternal benefit society has long been considered woefully inadequate. This greater hazard which every man, woman, and child who walks or drives on the streets to-day is facing makes insurance provision almost a necessity.

Industrial Accidents in Illinois in 1926

THE Illinois Department of Labor, in its tenth annual report, covering the year ending June 30, 1927, contains rather limited statistics on industrial accidents for the calendar year 1926. There are only four tables, which classify the 57,535 accidents by month and cause, by industry and cause, by nature and cause, and by age, wage, and sex. The largest proportion of the accidents occurred in manufacturing industries, 24,792, or 43.1 per cent, being so classified, and of this total the largest per cent (29.3) were due to handling objects, the number being 7,261. Mining and quarrying (petroleum) claimed the second largest total, with 11,472, or 19.9 per cent, and here the most prolific cause was vehicles, the percentage being 23.8. Fifteen per cent of the accidents were in the construction industry.

In the cause classification, handling objects stands first, with 15,288, or 26.6 per cent, and vehicles stands second, with 8,257, or 14.4 per cent. By nature of injury, the classification "bruises, contusions, and abrasions" is most important, causing 15,586, or 27.1 per cent. Cuts and lacerations came second, claiming 21.5 per cent of all the accidents.

About thirty-five per cent of those injured were earning $25 to $34 per week, most of these being males, there being in this group only 227 of the 1,934 females who were injured. About 40 per cent of the injured females were receiving from $15 to $19 per week, the number being 773.

The age classification shows 8,179, or 14.2 per cent of the injured males in the 25 to 29 age group, and 281, the largest proportion (14.5 per cent) of the injured females, in the 21 to 24 age group.

The report does not show how many of these accidents resulted in death, permanent disability, or temporary disability, nor is there any attempt to compute accident rates.

Industrial Accidents in South Dakota, 1927–28

THE eleventh annual report of the South Dakota Industrial Commissioner for the 12 months ending June 30, 1928, containing a discussion of the administration of the workmen's compensation law, includes a table showing the classification of labor and the number of injuries reported for each class. This table is as follows:

	Number of injuries		Number of injuries
Salesmen	60	Cement-manufacturing workers	52
Sawmill men	75	Butchers	32
Railroad laborers	130	Bottlers	9
Quarry and stone workers	81	Blacksmiths	11
Produce workers	40	Biscuit makers	36
Printers	62	Bakeries	29
Plumbers	22	Amusements	18
Police	8	Woodworkers	35
Service-station workers	49	Warehousemen	60
Nurseries	7	Telephone workers	55
Miscellaneous	290	Carpenters	131
Millers and grain buyers	22	Clerks	173
Mechanics	148	Construction laborers	192
Machinists	47	Farm laborers	225
Janitors	31	Garage and automobile workers	255
Laundry and dry cleaning	35	Highway and bridge constructors	213
Laborers	192	Hotels and restaurants	156
Ice-cream and candy manufacturing	39	Icemen	100
Implement dealers	45	Public utilities	194
Glaziers	9	Miners	555
Elevators	32	Transportation and truck driving	226
Firemen	10	Tinners	35
Packing-plant workers	484	Well drillers	10
Threshers	218	Casing workers	11
Brick masons	18	Steel workers	22
Electricians	16	Bus drivers	6
Creameries and dairies	112	Teamsters	47
Coal and lumber workers	78	Tractor operators	35
		Sugar refineries	110

Industrial Accidents in Spain, 1922 to 1924 and 1926 [1]

INDUSTRIAL accident statistics in Spain have been published recently by the Minister of Labor, Commerce, and Industry for the years 1922, 1923, 1924, and 1926. Those occurring in 1925 are not given in the report, due to incomplete data for that year. The following tables taken from this report give the number of accidents, by industry and by result:

NUMBER AND PER CENT OF ACCIDENTS, BY INDUSTRIES, 1922, 1923, 1924, AND 1926

Industry	1922		1923		1924		1926	
	Number	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
General State services	761	1.03	1,018	1.20	1,164	1.27	1,506	1.29
Industries carried on by the State	143	.20	157	.18	210	.23	434	.37
Mines, salt mines, and quarries	6,177	8.36	8,708	10.26	10,061	11.01	11,321	9.77
Metallurgical	2,825	3.82	3,229	3.80	3,374	3.69	5,141	4.42
Iron and other metal works	10,034	13.57	13,178	15.53	14,570	19.53	16,798	14.44
Chemical	1,837	2.48	1,728	2.04	1,978	2.16	4,250	3.55
Tobacco	364	.49	697	.82	757	.83	825	.71
Textile	2,349	3.18	2,944	3.47	3,070	3.35	4,372	3.76
Agriculture and forestry	541	.73	939	1.10	1,661	1.81	2,482	2.13
Construction	11,254	15.22	14,130	16.64	15,548	16.99	20,166	17.34
Electrical	1,169	1.58	1,440	1.69	1,666	1.82	1,924	1.65
Food	4,651	6.29	5,123	6.04	4,316	4.72	7,502	6.45
Book	339	.46	486	.57	519	.57	530	.46
Paper, cardboard, etc	651	.88	705	.83	665	.72	755	.65
Clothing	571	.77	697	.82	679	.74	626	.54
Hides and skins	526	.71	880	1.03	479	.52	599	.51
Lumber	3,042	4.12	3,963	467	5,577	6.11	5,128	4.41
Transportation	16,914	22.87	16,872	19.88	17,889	19.55	23,765	20.44
Ornamentation	392	.54	367	.43	293	.32	848	.73
Furniture	659	.89	690	.81	743	.81	1,367	1.18
Pottery and ceramics	194	.26	714	.84	746	.82	1,080	.93
Glass and crystal	697	.94	729	.86	889	.97	1,192	1.02
Public shows	77	.12	44	.05	6	-------	27	.02
Others	4,583	6.20	3,578	4.22	3,306	3.62	2,800	2.41
Unknown	3,176	4.29	1,888	2.22	1,315	1.44	835	.72
Total	73,926	100.00	84,904	100.00	91,481	100.00	116,313	100.00

NUMBER AND PER CENT OF ACCIDENTS, BY RESULT OF INJURY, 1922, 1923, 1924, AND 1926

Accidents resulting in—	1922		1923		1924		1926	
	Number	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*	*Number*	*Per cent*
Temporary disability	66,545	90.01	82,387	97.04	89,082	97.38	113,772	97.82
Permanent total disability	239	.33	550	.65	427	.46	105	.09
Permanent partial disability	122	.16	-------	-------	-------	-------	2,037	1.75
Unknown	6,717	9.08	1,575	1.85	1,535	1.68	-------	-------
Death	303	.42	392	.46	437	.48	399	.34
Total	73,926	100.00	84,904	100.00	91,481	100.00	116,313	100.00

[1] Spain. Ministerio de Trabajo, Comercio e Industria. Estadistica de los accidentes del trabajo. Madrid, 1928, pp. 23 and 29; 1926, p. 25.

SAFETY CODES

Status of Industrial Safety Regulations

IN AN effort to obtain from the various States a statement as to the specific safety codes, orders, rules, or regulations in force January 1, 1928, issued by the State industrial commission, the department of labor, the utility commission, or other agency charged with the protection of workers, the Bureau of Labor Statistics communicated with each State and received replies from all but two. For those States for which definite data were not received the information published in the Labor Review for October, 1926, has been used, supplemented by data compiled from other sources, including a careful research of State reports and statutory enactments. Each State has thus been given credit so far as possible, for whatever may have been done along this line, and the record here published is believed to be reasonably complete.

Lists of the codes approved or in process of development by the American Standards Association, known as the "National Safety Codes," were sent to each State, with the request that all subjects covered by law, by board order, or by rules or regulations be checked, and that kindred subjects not included in the lists be reported. While the replies indicate that most of the States have not formally adopted the codes as such, many of the States have issued rules and regulations covering the same or other subjects, under authority of specific or general statutory provisions.

It was not intended that the lists should be interpreted by the States as exclusive, and it is assumed that no rules or regulations exist on subjects not included, except as specifically noted in the supplemental list on page 107. If the State authorities omitted to specify subjects on which they have safety regulations, this report is to that extent incomplete. The appearance of the name of a State may mean that it has formally adopted the national safety code indicated or that, in the absence of a definite code, it has issued general or specific orders covering the subjects noted. The omission of the name of a State does not necessarily mean that it has made no provision covering any particular subject, but may indicate that the authorities made no reply to the bureau's communication, or that the information received is indefinite. In some cases this point is clarified by explanation to be found under the name of the State in the classification by States.

After the data were all assembled and this article prepared a copy was forwarded to each State, with the request that the pertinent portions be carefully checked. All but a few States responded and it is therefore assumed that their record as given herein is correct.

Because of special requirements in the mining industry and the absence of complete data from any State regarding safety provisions

covering mines and mine operations, this branch of industry has been purposely omitted.

The following lists include: (1) The codes approved by the American Standards Association as of January 1, 1928; (2) the codes in process of development; and (3) subjects not included in (1) and (2) but on which certain States have specifically noted the existence of safety rules or regulations. This information is classified by subject and State.

Safety Provisions Adopted, by Subject

Subjects Covered by Approved National Safety Codes

THE States in the following list have adopted rules, regulations, or orders covering the subjects indicated, which have been approved as codes by the American Standards Association. This does not mean that the codes themselves have been adopted or even approved by the State named.

Abrasive wheels.—Alabama, Arizona, California, Colorado, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming.

Aeronautics.—Kansas (in part), Wyoming.

Automobile brakes and brake testing.—Alabama, Kansas (in part), Michigan, New Hampshire, North Carolina, Pennsylvania, South Dakota, Utah (in part), Wyoming.

Dust explosions, prevention of.—Alabama, Colorado, Iowa, Kansas, Michigan, New Jersey, New York, Utah, Wyoming.

Electrical installations.—Alabama, Arizona, California, Colorado, Connecticut, Idaho, Illinois, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nebraska, Nevada, New Jersey, North Carolina, Oregon, Pennsyvania, Utah, Washington, Wisconsin.

Elevators and escalators.—Alabama, California, Colorado, Connecticut, Indiana, Iowa, Kansas, Louisiana, Maryland (Baltimore only), Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, Wisconsin, Wyoming.

Exits, building.—Alabama, Colorado, Connecticut, Delaware, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland (Baltimore only), Massachusetts, Michigan, Mississippi, Missouri, Nebraska, New Hampshire (in part), New Jersey, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin, Wyoming.

Foundries, protection of workers in.—Alabama, Colorado, Illinois, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri (in part), New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Tennessee, Utah (in part), Washington (in part), Wisconsin (in part), Vermont, Virginia, Wyoming.

Forging and hot-metal stamping.—Alabama, Iowa, Michigan, Minnesota, New Jersey, Pennsylvania, Utah, Wisconsin (in part), Wyoming.

Gas installations.—Alabama, California, Illinois, Kansas, Maryland (Baltimore only), Massachusetts, Michigan, New York, Pennsylvania.

Heads and eyes, protection of.—Alabama, Iowa, Kansas (in part), Maryland, Massachusetts, Michigan (in part), Missouri (in part), New Hampshire (in part), New Jersey, Pennsylvania, Utah (in part), Vermont, Washington, Wisconsin (in part).

Ladders.—California, Colorado, Illinois (in part), Iowa, Kansas, Massachusetts, Michigan, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oklahoma (in part), Oregon, Pennsylvania, Tennessee, Utah (in part), Washington, Wisconsin, Wyoming.

Laundry machinery and operation.—Alabama, California, Colorado, Illinois, Iowa, Kansas, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Oklahoma, Pennsylvania, Tennessee, Utah, West Virginia, Washington, Wisconsin, Wyoming.

Lighting factories, mills, etc.—Alabama, California, Colorado, Illinois, Kansas, Massachusetts, Michigan, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Wisconsin, Wyoming.

Lighting of school buildings.—Alabama, Colorado, Massachusetts, Michigan, North Carolina, Pennsylvania, South Dakota, Wisconsin.

Logging and sawmill machinery.—Alabama, California, Massachusetts, Minnesota, New Hampshire, Pennsylvania, Utah (in part), Vermont, Washington, Wisconsin (in part), Wyoming.

Paper and pulp mills.—Colorado, Iowa, Massachusetts, Michigan, New Hampshire, New York (factory rules), Pennsylvania, Tennessee, Vermont, Wisconsin, Wyoming.

Power presses and foot and hand presses.—Alabama, Colorado, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Tennessee, Utah (in part), Wisconsin, Wyoming.

Power-transmission apparatus.—Alabama, Arizona, California, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming.

Rubber machinery.—Iowa, Massachusetts, Michigan, New Jersey, Wisconsin (in part), Wyoming.

Textiles.—Alabama, Massachusetts, Michigan, New Hampshire, New York, Oklahoma, Pennsylvania, Tennessee, Utah, Vermont, Wisconsin, Wyoming.

Woodworking plants.—Alabama, California, Colorado, Illinois, Indiana, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Utah, Vermont, West Virginia, Washington, Wisconsin, Wyoming.

Subjects Covered by National Safety Codes in Process of Development

The following States have adopted rules, regulations, or orders covering the subjects indicated, which are at present in process of development as codes by the American Standards Association:

Amusement parks.—Kansas.

Automobile headlighting.—Alabama, Kansas, Maine, Maryland, Michigan, Missouri, New Hampshire, North Carolina, Pennsylvania, South Dakota, Utah (in part), Wisconsin, Wyoming.

Colors for traffic signals.—Alabama, Kansas, Michigan, Missouri, North Carolina, Pennsylvania, Wyoming.

Compressed-air machinery.—California (in part), Colorado, Massachusetts, New Hampshire, New York, Pennsylvania, Tennessee, Utah, Vermont, Wyoming.

Construction work.—Alabama, California, Colorado, Illinois (structural iron), Kansas, Kentucky, Louisiana, Maryland (Baltimore only), Massachusetts, Michigan, Missouri, Nebraska, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Utah, Vermont, Washington, Wisconsin, Wyoming.

Conveyors and conveying machinery.—California (in part), Colorado, Massachusetts, Michigan, New York, Tennessee, Utah, Vermont, Wyoming.

Cranes, derricks, and hoists.—California, Illinois (in part), Kansas, Massachusetts, Nebraska (in part), New Jersey, New York, Pennsylvania, Tennessee, Utah, Vermont, Wisconsin, Wyoming.

Exhaust systems.—California, Connecticut, Illinois, Kentucky, Louisiana, Massachusetts, Michigan, Nebraska, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Tennessee, Utah (in part), Wisconsin, Wyoming.

Floor and wall openings, railings, toe boards.—Alabama (in part), California Colorado, Illinois, Indiana, Kansas, Massachusetts, Michigan, Missouri, New Hampshire (in part), New Jersey, New York, Ohio (in part), Oklahoma, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Wisconsin (in part), Wyoming.

Gas-mask canisters, code for colors for.—Alabama, Kansas, Tennessee, Utah.

Lightning, protection against.—Massachusetts, North Carolina.

Plate and sheet metal working.—Colorado, Massachusetts, New York, Tennessee, Utah, Wyoming.

Power control, electrical.—California, Illinois, Kansas, Massachusetts, Michigan, New Jersey, North Carolina, Pennsylvania, Utah, West Virginia, Wisconsin, Wyoming.

Power control, mechanical.—California, Illinois, Massachusetts, Michigan, New Jersey, Pennsylvania, Tennessee, Utah, West Virginia, Wisconsin, Wyoming.
Refrigeration, mechanical.—Massachusetts, Minnesota, New Hampshire, New Jersey, Ohio, Tennessee, Utah, Wisconsin.
Sanitation, industrial.—Alabama, California, Colorado, Connecticut, Illinois, Kansas, Louisiana, Maine, Maryland (Baltimore only), Massachusetts, Michigan, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, Pennsylvania, Tennessee, Utah, Vermont, West Virginia, Wisconsin, Wyoming.
Tanneries.—Alabama, Massachusetts, New Hampshire, Pennsylvania (in part), Tennessee, Vermont, Wyoming.
Tools, machine.—Colorado, Kansas, New Hampshire, New York, Pennsylvania, Tennessee, Utah, Wisconsin, Wyoming.
Ventilation.—Alabama, California, Colorado, Illinois, Kansas, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, Ohio, Tennessee, Utah (in part), Vermont, West Virginia, Wisconsin, Wyoming.
Walk-way surfaces.—California (in part), Colorado, Kansas, New Hampshire, Oklahoma, Tennessee, Utah, Vermont, Wyoming.
Window washing.—California, New Jersey, New York, Pennsylvania, Wisconsin, Wyoming.

Subjects Not Included in National Safety Codes

States in the following list have definitely stated that they have rules, regulations or orders covering the subjects indicated. These subjects, however, are not at present under consideration by the American Standards Association with a view to forming definite codes. This classification probably is more or less incomplete, for it is safe to assume that some of the States have safety regulations on subjects not noted herein which they did not specify in their replies to the bureau. For example, most of the States have boiler regulations, and yet this list includes just half of them. The explanation is that some which have such regulations did not so state and their names could not therefore be included in the boiler group.

Air pressure tanks.—California.
Boilers.—Arkansas, California, Colorado, Connecticut, Indiana, Kansas (in part), Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Utah, West Virginia, Washington, Wisconsin.
Ceramics.—Ohio.
Chemicals.—New Jersey, Pennsylvania.
Dredges.—California, Wisconsin.
Dry-cleaning and dyeing establishments.—California, Colorado, Kansas, Kentucky, New York, Pennsylvania, Tennessee, Utah, Wisconsin.
Engines.—California, Pennsylvania (steam), Tennessee, Utah, Wisconsin (steam).
Explosives.—Alabama, California, Kansas, Massachusetts, New Jersey, New York, Ohio, Oklahoma (in part), Pennsylvania, South Dakota, Utah, Wisconsin.
Metal working.—Ohio, Tennessee, Utah.
Oil drilling.—California, Kansas, Oklahoma, Utah.
Painting.—Massachusetts.
Plumbing.—Alabama, Iowa, Maine, Utah, Wisconsin.
Potteries.—New Jersey, Ohio.
Printing.—New Jersey, Pennsylvania, Tennessee, Utah.
Quarries.—California, Kansas, New York, Pennsylvania, Utah, Vermont, Wisconsin.
Scaffolds and staging.—California, Colorado, Illinois, Kansas, Maryland, Massachusetts, Missouri, Nebraska, New York, Ohio, Oklahoma (in part), Pennsylvania, Utah, Vermont, Wisconsin.
Shipbuilding.—California.
Spray coating.—Colorado, Illinois, Michigan, Tennessee, Utah, Wisconsin.
Steam shovels.—California.
Steel mills.—Ohio, Utah.
Tunnels.—California.

Safety Provisions Adopted, by States

IN THE following classification brief explanatory notes, derived from correspondence, are included, followed by the subjects covered by safety orders. In some instances these orders are authorized specifically by statute and in others they are promulgated under authority of the industrial commission or department of labor to carry out the general provisions of law which authorizes safety measures, without definite specification.

Alabama.—None of the national safety codes have been adopted and there are no industrial safety laws in force. "The safety rules and codes of the National Safety Council are mainly used," and the following subjects are covered:

Abrasive wheels.
Automobile brakes and brake testing.
Automobile headlighting.
Building exits.
Colors for traffic signals.
Construction work.
Dust explosions, prevention of.
Electrical installations.
Elevators and escalators.
Explosives.
Floor and wall openings, railings, toe boards.
Forging and hot-metal stamping.
Foundries, protection of workers in.
Gas installations.
Gas-mask canisters, code.
Heads and eyes, protection of.
Laundry machinery and operation.
Lighting factories, mills, etc.
Lighting of school buildings.
Logging and sawmill machinery.
Plumbing.
Power presses and foot and hand presses.
Power-transmission apparatus.
Sanitation, industrial.
Textiles.
Ventilation.
Woodworking plants.

Arizona.—Safety provisions cover the following subjects, conforming to the national safety codes: Abrasive wheels, electrical installations, power-transmission apparatus.

Arkansas.—The only codes observed are those promulgated by electrical and American engineering associations. In general, whatever safety measures are enforced are largely voluntary. Some proprietors of laundries, woodworking plants, printing plants, etc., provide safety appliances in conformity with recommendations of companies manufacturing such appliances. A statutory provision covers boilers.

California.—Safety orders concerning most of the subjects have been adopted, but they are not statutory nor are they codes that have been approved by the American Standards Association. The following subjects are covered:

Abrasive wheels.
Air-pressure tanks.
Boilers.
Compressed-air machinery (in part).
Construction work.
Conveyors and conveying machinery (in part).
Cranes, derricks, and hoists.
Dredges.
Dry-cleaning and dyeing establishments.
Electrical installations.
Elevators and escalators.
Engines.
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards.
Gas installations.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Logging and sawmill machinery.
Oil drilling.
Power control, electrical.
Power control, mechanical.
Power-transmission apparatus.
Quarries.
Sanitation, industrial.
Scaffolds and staging.
Shipbuilding.
Steam shovels.
Ventilation.
Walk-way surfaces (in part).
Window washing.
Woodworking plants.

Colorado.—None of the codes have been adopted, but they are used by the State factory inspectors wherever practicable. Safety provisions cover the following subjects:

Abrasive wheels.
Boilers.
Building exits.
Construction work.
Compressed-air machinery.
Conveyors and conveying machinery.
Dry-cleaning and dyeing establishments.
Dust explosions, prevention of.
Electrical installations.
Elevators and escalators.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Lighting of school buildings.
Paper and pulp mills.
Plate and sheet-metal working.
Power presses and foot and hand presses.
Sanitation, industrial.
Scaffolds and staging.
Spray coating.
Tools, machine.
Ventilation.
Walk-way surfaces.
Woodworking plants.

Connecticut.—None of the codes adopted. However, the following subjects are otherwise covered:

Boilers.
Building exits.
Electrical installations.
Elevators and escalators.
Exhaust systems.
Power transmission.
Sanitation, industrial.

Delaware.—State has no official safety code, but uses the Pennsylvania provisions. However, a legislative act covers building exits.

Florida.—Latest information available indicates that no safety codes of any kind have been adopted. The child-labor law contains safety features applicable to children under 16.

Georgia.—None of the codes adopted. "Neither the department of commerce and labor nor the industrial commission has authority under the law to promulgate safety codes and none has been approved by either department." A statutory provision covers building exits.

Idaho.—None of the codes adopted. "However, we recommend all of them as standards for employers of labor to work toward." Safety provisions cover the following subjects: Building exits, and electrical installations.

Illinois.—None of the codes adopted. The division of factory inspection of the State labor department plans to bring the matter to the attention of the general assembly. Safety provisions cover the following subjects:

Abrasive wheels.
Building exits.
Construction work (structural iron).
Cranes, derricks, and hoists (limited).
Electrical installations.
Exhaust systems.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Gas installations.
Ladders (in part).
Laundry machinery and operation.
Lighting factories, mills, etc.
Power control, electrical.
Power control, mechanical.
Power-transmission apparatus.
Sanitation, industrial.
Scaffolds and staging.
Spray coating.
Ventilation.
Woodworking plants.

Indiana.—None of the codes adopted, and the State law contains only general provisions as to safety. However, safety provisions cover the following subjects:

Abrasive wheels.
Boilers.
Building exits.
Elevators and escalators.
Floor and wall openings, railings, toe boards.
Power-transmission apparatus.
Woodworking plants.

Iowa.—None of the codes adopted, but those indicated below are used as a standard by the State bureau of labor in issuing its safety orders:

Abrasive wheels.
Building exits.
Dust explosions, prevention of.
Electrical installations.
Elevators and escalators.
Foundries, protection of workers in.
Forging and hot-metal stamping.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Paper and pulp.
Plumbing.
Power presses and foot and hand presses.
Power-transmission apparatus.
Rubber machinery.
Woodworking plants.

Kansas.—None of the codes adopted, but inspectors are instructed to use them as a standard in issuing orders. Considerable authority in this connection is given by statute and the following subjects are covered:

Aeronautics (in part).
Abrasive wheels.
Amusement parks.
Automobile brakes.
Automobile headlighting.
Boilers (in part).
Building exits.
Colors for traffic signals.
Construction work.
Cranes, derricks, and hoists.
Dry-cleaning and dyeing establishments.
Dust explosions, prevention of.
Electrical installations.
Elevators and esculators.
Explosives.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Gas installations.
Gas-mask canisters, code for colors for.
Heads and eyes, protection of (in part).
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Oil drilling.
Power control, electrical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Quarries.
Sanitation, industrial.
Scaffolds and staging.
Tools, machine.
Ventilation.
Walk-way surfaces.
Woodworking plants.

Kentucky.—None of the codes adopted. "Kentucky has not adopted any regulations whatever for the safeguarding of places of employment except in coal mines." However, safety provisions cover the following subjects:

Construction work (building).
Dry-cleaning and dyeing establishments.
Exhaust systems.

Louisiana.—None of the codes adopted. Statutory provisions cover—

Building exits.
Construction work.
Elevators and escalators.
Exhaust systems.
Sanitation, industrial.

Maine.—None of the codes adopted. The department of labor and industry is permitted by law "to order changes in ways, works, and machinery where same are necessary, in our estimation, for the protection of life, limb, and health of employees." Safety provisions cover the following subjects:

Automobile headlighting.
Building exits.
Plumbing.
Power-transmission apparatus.
Sanitation, industrial.

Maryland.—No power to formulate codes. However, safety provisions cover the following subjects:

Automobile headlighting.
Boilers.
Building exits (Baltimore only).
Construction work (Baltimore only).
Electrical installations (Baltimore only).
Elevators and escalators (Baltimore only).
Gas installations (Baltimore only).
Heads and eyes, protection of.
Sanitation, industrial (Baltimore only).
Scaffolds and staging.

Massachusetts.—None of the codes adopted. However, the following subjects are otherwise covered:

Abrasive wheels.
Boilers.
Building exits.
Compressed-air machinery.
Construction work.
Conveyors and conveying machinery.
Cranes, derricks, and hoists.
Electrical installations.
Elevators and escalators.
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Gas installations.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Lighting of school buildings.
Lightning, protection against.
Logging and sawmill machinery.
Painting.
Paper and pulp mills.
Plate and sheet-metal working.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses.
Refrigeration, mechanical.
Power-transmission apparatus.
Rubber machinery.
Sanitation, industrial.
Scaffolds and staging.
Tanneries.
Textiles.
Ventilation.
Woodworking plants.

Michigan.—Safety regulations cover the following subjects:

Automobile brakes and brake testing.
Automobile headlighting.
Abrasive wheels.
Building exits.
Boilers.
Colors for traffic signals.
Construction work.
Conveyors and conveying machinery.
Dust explosions, prevention of.
Electrical installations.
Elevators and escalators.
Exhaust system.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Forging and hot-metal stamping.
Gas installations.
Ladders.
Heads and eyes, protection of.
Laundry machinery and operation.
Lighting factories, mills, etc.
Lighting of school buildings.
Paper and pulp mills.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Rubber machinery.
Sanitation, industrial.
Spray coating.
Textiles.
Ventilation.
Woodworking plants.

Minnesota.—The following codes (except that pertaining to mechanical refrigeration), while not formally adopted by statute or in the form of rules or regulations of the industrial commission, are being used as supplemental to the safety laws in force in Minnesota. "The statutes relating to industrial safety are very general in their application, which leaves it largely to the discretion of the industrial commission to formulate rules and regulations relative thereto."

Abrasive wheels.
Boilers.
Electrical installations.
Elevators and escalators.
Foundries, protection of workers in.
Forging and hot-metal stamping.
Logging and sawmill machinery.
Power presses and foot and hand presses.
Power-transmission apparatus.
Refrigeration, mechanical.
Woodworking plants.

Mississippi.—None of the codes adopted. "We have no special code in this State upon safety devices." There are statutory provisions covering building exits, power transmission, and sanitation, industrial.

Missouri.—None of the codes adopted, but the following subjects are otherwise covered:

Abrasive wheels.
Automobile headlighting.
Boilers.
Building exits.
Colors for traffic signals.
Construction work.
Floor and wall openings, railings, toe boards.

Foundries, protection of workers in (in part).
Heads and eyes, protection of.
Sanitation, industrial.
Scaffolds and staging.
Woodworking plants.

Montana.—No codes adopted, but the State requirements are substantially the same as those of the codes, although the subjects covered are not specifically mentioned. There are provisions covering boilers and electrical installations.

Nebraska.—None of the codes adopted. Provision for the issuance of rules and regulations is made by the health and safety regulations of the State labor law. Safety provisions cover the following subjects:

Abrasive wheels.
Boilers.
Building exits.
Construction work.
Cranes, derricks, hoists (in part).
Electrical installations.
Elevators and escalators.
Exhaust systems.
Ladders.
Power-transmission apparatus.
Sanitation, industrial.
Scaffolds and staging.
Woodworking plants.

Nevada.—None of the codes adopted. Some of the State requirements are said to be substantially the same, however, and the following subjects are covered:

Abrasive wheels.
Building exits.
Electrical installations.
Floor and wall openings, railings, toe boards.
Ladders.
Power-transmission apparatus.

New Hampshire.—None of the codes adopted, but where rules are issued they are substantially the same as those of the national codes. The factory inspection law permits issuance of orders covering "any condition that is dangerous to the life and limb of workers, and we have in our work covered most of the subjects."

Abrasive wheels.
Automobile brakes and brake testing.
Automobile headlights.
Boilers.
Building exits (in part).
Compressed-air machinery.
Elevators and escalators.
Exhaust systems.
Floor and wall openings, railings, toe boards (in part).
Foundries, protection of workers in.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Logging and sawmill machinery.
Paper and pulp mills.
Power presses and foot and hand presses.
Power-transmission apparatus.
Refrigeration, mechanical.
Sanitation, industrial.
Tanneries.
Textiles.
Tools, machine.
Ventilation.
Walk-way surfaces.
Woodworking plants.

New Jersey.—Some of the national safety codes have been adopted. Including these, safety provisions cover the following subjects:

Abrasive wheels.
Boilers.
Building exits.
Chemicals.
Construction work.
Cranes, derricks, and hoists.
Dust explosions, prevention of.
Electrical installations.
Elevators and escalators.
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards.
Forging and hot-metal stamping.
Foundries, protection of workers in.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Potteries.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Printing.
Refrigeration, mechanical.
Rubber machinery.
Sanitation, industrial.
Ventilation.
Window washing.
Woodworking plants.

New Mexico.—Latest available information indicates that no safety codes of any kind have been adopted.

New York.—"The New York State Legislature has authorized this department (of labor) to formulate and adopt rules which have the same force and effect as the statutes proper which are enacted by the legislature." Safety provisions exist covering the following subjects:

Abrasive wheels.
Boilers.
Building exits.
Construction work.
Compressed-air machinery.
Conveyors and conveying machinery.
Cranes, derricks, and hoists.
Dry-cleaning and dyeing establishments.
Dust explosions, prevention of.
Elevators and escalators.
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Gas installations.
Ladders.
Laundry machinery and operations.
Lighting factories, mills, etc.
Paper and pulp mills (factory rules).
Plate and sheet-metal working.
Power presses and foot and hand presses.
Power-transmission apparatus.
Quarries.
Sanitation, industrial.
Scaffolds and staging.
Textiles.
Tools, machine.
Ventilation.
Window washing.
Woodworking plants.

North Carolina.—The following national safety codes and proposed codes have been adopted:

Automobile brakes and brake testing.
Automobile headlighting.
Colors for traffic signals.
Electrical installations.
Elevators and escalators.
Lighting factories, mills, etc.
Lighting of school buildings.
Lightning, protection against.
Power control, electrical.
Power-transmission apparatus.

North Dakota.—None of the codes adopted. However, the following subject is covered: Building exits.

Ohio.—None of the codes adopted. Practically all the codes in force in Ohio were formulated prior to the publication of the national codes. The following subjects are covered:

Abrasive wheels.
Boilers.
Building exits.
Ceramics.
Construction work.
Elevators and escalators.
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Ladders.
Lighting factories, mills, etc.
Metal working.
Potteries.
Refrigeration, mechanical.
Power-transmission apparatus.
Scaffolds and staging.
Steel mills.
Ventilation.
Woodworking plants.

Oklahoma.—Most of the codes adopted are those sponsored by the American Society of Mechanical Engineers. Safety provisions cover the following subjects:

Abrasive wheels.
Boilers.
Building exits.
Construction work.
Elevators and escalators.
Explosives (in part).
Floor and wall openings, railings, toe boards.
Ladders and stairways (in part).
Laundry machinery and operation.
Lighting factories, mills, etc.
Oil drilling.
Power-transmission apparatus.
Textiles.
Walk-way surfaces.
Woodworking plants.

Oregon.—Only one of the codes adopted. Safety provisions cover the following subjects:

Abrasive wheels.
Construction work.
Boilers.
Electrical installations.
Elevators and escalators.
Floor and wall openings, railings, toe boards (limited).
Ladders.
Lighting factories, mills, etc.
Power-transmission apparatus.
Woodworking plants.

Pennsylvania.—The policy of the State department of labor and industry is to adopt the national safety codes wherever the provisions are applicable to conditions in the State. Safety rules or orders have been issued covering the following subjects:

Abrasive wheels.
Automobile headlighting.
Automobile brakes and brake testing.
Boilers.
Building exits.
Chemicals.
Colors for traffic signals.
Construction work.
Compressed-air machinery.
Cranes, derricks, and hoists.
Dry-cleaning and dyeing establishments.
Electrical installations.
Elevators and escalators.
Engines (steam).
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards.
Forging and hot-metal stamping.
Foundries, protection of workers in.
Gas installations.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Lighting of school buildings.
Logging and sawmill machinery.
Paper and pulp mills.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Printing.
Quarries.
Sanitation, industrial.
Scaffolds and staging.
Tanneries (in part).
Textiles.
Tools, machine.
Window washing.
Woodworking plants.

Rhode Island.—None of the codes adopted. Statutory provisions cover building exits and elevators and escalators.

South Carolina.—Latest available information indicates that no safety codes of any kind have been adopted. There is no State labor organization.

South Dakota.—Safety provisions cover the following subjects:

Automobile brakes and brake testing.
Automobile headlighting.
Boilers.
Building exits.
Lighting of school buildings.

Tennessee.—The following subjects are covered:

Abrasive wheels.
Building exits.
Compressed-air machinery.
Conveyors and conveying machinery.
Cranes, derricks, and hoists.
Dry-cleaning and dyeing establishments.
Elevators and escalators.
Engines.
Exhaust systems.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Gas-mask canisters, code for colors for.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Metal working.
Paper and pulp mills.
Plate and sheet-metal working.
Power control, mechanical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Printing.
Refrigeration, mechanical.
Sanitation, industrial.
Spray coating.
Tanneries.
Textiles.
Tools, machine.
Ventilation.
Walk-way surfaces.
Woodworking plants.

Texas.—None of the codes adopted "but wherever possible American Engineering Standards Committee standard is enforced." There appears to be a statutory provision covering building exits.

Utah.—Several of the codes have been adopted in full and several others in part. Safety provisions cover the following subjects:

Abrasive wheels.
Automobile brakes and brake testing (in part).
Automobile headlighting (in part).
Boilers.
Building exits.
Compressed-air machinery.
Construction work.
Conveyors and conveying machinery.
Cranes, derricks, and hoists.
Dry-cleaning and dyeing establishments.
Dust explosions, prevention of.
Electrical installations.
Elevators and escalators.
Engines.
Exhaust systems (in part).
Explosives.
Floor and wall openings, railings, toe boards.
Forging and hot-metal stamping.
Foundries, protection of workers in (in part).
Gas-mask canisters, code for colors for.
Heads and eyes, protection of (in part).
Ladders (in part).
Laundry machinery and operation.
Lighting factories, mills, etc. (in part).
Logging and sawmill machinery (in part).
Metal working.
Oil drilling.
Plate and sheet-metal working.
Plumbing.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses (in part).
Power-transmission apparatus.
Printing.
Quarries.
Refrigeration, mechanical.
Sanitation, industrial.
Scaffolds and staging.
Spray coating.
Steel mills.
Textiles.
Tools, machine.
Ventilation (in part).
Walk-way surfaces.
Woodworking plants.

Vermont.—None of the codes adopted, but "this department has attempted to make suggestions and orders when orders are necessary to fit the situations as they arise." Safety provisions cover the following:

Abrasive wheels.
Building exits.
Compressed-air machinery.
Construction work.
Conveyors and conveying machinery.
Cranes, derricks, and hoists.
Elevators and escalators.
Floor and wall openings, railings, toe boards.
Foundries, protection of workers in.
Heads and eyes, protection of.
Laundry machinery and operation.
Lighting factories, mills, etc.
Logging and sawmill machinery.
Paper and pulp mills.
Power-transmission apparatus.
Quarries.
Sanitation, industrial.
Scaffolds and staging.
Tanneries.
Textiles.
Ventilation.
Walk-way surfaces.
Woodworking plants.

Virginia.—State laws do not permit the department of labor and industry to adopt safety codes, but national codes are "used in an educational way" among the various industrial plants. Safety provisions cover the following: Abrasive wheels, building exits, and power-transmission apparatus.

Washington.—General safety standards of the State, adopted January 1, 1924, "partially cover most of the industries" covered by national codes. Specifically noted as covered by the general safety standards are—

Abrasive wheels.
Boilers.
Construction work.
Electrical installations.
Foundries, protection of workers in.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Logging and sawmill machinery.
Power-transmission apparatus.
Woodworking plants.

West Virginia.—No rules, but the State bureau of labor "looks with favor" upon the national codes, and factory inspectors are governed by these codes. There are statutory provisions covering—

Abrasive wheels.
Boilers.
Building exits.
Elevators and escalators.
Laundry machinery and operation.
Power control, electrical.
Power control, mechanical.
Power-transmission apparatus.
Sanitation, industrial.
Ventilation.
Woodworking plants.

Wisconsin.—None of the codes adopted. However, safety provisions cover the following subjects:

Abrasive wheels.
Automobile headlighting.
Boilers.
Building exits.
Construction work.
Cranes, derricks, and hoists.
Dredges.
Dry-cleaning and dyeing establishments.
Electrical installations.
Elevators and escalators.
Engines (steam).
Exhaust systems.
Explosives.
Floor and wall openings, railings, toe boards (in part).
Forging and hot-metal stamping.
Foundries, protection of workers in.
Heads and eyes, protection of.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Lighting of school buildings.
Logging and sawmill machinery (in part).
Paper and pulp mills.
Plumbing.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Quarries.
Refrigeration, mechanical.
Rubber machinery (in part).
Sanitation, industrial.
Scaffolds and staging.
Spray coating.
Textiles.
Tools, machine.
Ventilation.
Window washing.
Woodworking plants.

Wyoming.—Such safety orders as seem necessary are issued by the commissioner of labor under the authority of the act creating the department of labor. Subjects covered include—

Abrasive wheels.
Aeronautics.
Automobile brakes and brake testing.
Automobile headlighting.
Building exits.
Colors for traffic signals.
Compressed-air machinery.
Construction work.
Conveyors and conveying machinery.
Cranes, derricks, and hoists.
Dust explosions, prevention of.
Elevators and escalators.
Exhaust systems.
Floor and wall openings, railings, toe boards.
Forging and hot-metal stamping.
Foundries, protection of workers in.
Ladders.
Laundry machinery and operation.
Lighting factories, mills, etc.
Logging and sawmill machinery.
Paper and pulp mills.
Plate and sheet-metal working.
Power control, electrical.
Power control, mechanical.
Power presses and foot and hand presses.
Power-transmission apparatus.
Refrigeration, mechanical.
Rubber machinery.
Sanitation, industrial.
Tanneries.
Textiles.
Tools, machine.
Ventilation.
Walk-way surfaces.
Window washing.
Woodworking plants.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE

Convicts Under Workmen's Compensation Laws

IN 1927, two State legislatures (those of Maryland and Wisconsin) passed legislation extending the benefits of the workmen's compensation laws to convicts injured while engaged in prison industries, while another (that of California) passed a law excluding certain convicts from awards under the compensation act after the courts of that State had affirmed an award in favor of a convict injured while engaged in working on the State highway.

The use of convicts in prison industries has subjected prisoners to dangers that affect health, safety, and even life, and in some cases to greater hazards than free labor is subject to, as the labor is forced and there is less incentive to protect the workmen against injury. Several cases have arisen in which convicts engaged in prison manufacture have received permanent injuries for which no relief was granted. In 1925, a bill was introduced in the New York Legislature with a view to extending certain benefits of the workmen's compensation act to convicts receiving injuries of a permanent nature. This bill provided as follows:[1]

> Every convict, except a convict serving life sentence, who, while in the performance of his work in connection with the maintenance of the institution or of any industry maintained therein, suffers the loss of a foot, a leg, a hand, an arm, or an eye, except where the injury is occasioned by the willful intention of the injured convict to bring about the injury of himself or of another, shall upon his discharge from such institution, be paid workmen's compensation in an amount to be determined by the prison-industries board and approved by the State industrial board. Such compensation shall not exceed $500, may be paid in such installments and at such times as the prison-industries board may recommend, and shall be paid out of the net earnings of the prison industries.

On December 18, 1926, the Supreme Court of California held, in the case of California Highway Commission *v.* Industrial Accident Commission (251 Pac. 808), that a convict injured while engaged in working on the highways, under the direction of the California Highway Commission, was entitled to compensation under the workmen's compensation act, reasoning that the convict road camp bill (Acts of 1923, ch. 667) made the convict an employee within the meaning of the compensation act. The following year, the Legislature of the State of California passed an act (Acts of 1927, ch. 653) concerning the use of convict labor on State highways and in it provided as follows:

> SECTION 9. This act is not intended to restore, in whole or in part, the civil rights of any convict used hereunder and said act shall not be so construed. No convict so used on the State highway or roads shall be considered as an employee

[1] American Labor Legislation Review, vol. 15, 1925, p. 132.

or be employed by the State highway commission, nor shall any such convict come within any of the provisions of the workmen's compensation, insurance, and safety act of 1917 or be entitled to any benefits thereunder whether on behalf of himself or that of any other person.

During the same year the Legislatures of Maryland (Acts of 1927, ch. 660) and Wisconsin (Acts of 1927, ch. 241) passed legislation extending to convicts the benefits of the workmen's compensation laws. Because of the peculiar situation of convicts, in that they are forced to labor, no matter how dangerous the employment, and seldom receive wages, which makes difficult the problem of finding a basis for the computation of a compensation award, the two acts extending the benefits of the compensation laws to convicts are quoted in full.

The Maryland Act (Acts of 1927, ch. 660) reads as follows:

35–A. Whenever any prisoner in the Maryland Penitentiary or the Maryland House of Correction shall be engaged in any extra hazardous employment within the meaning of this article for which wages or a stipulated sum are paid either to the institution or to the prisoner, this article shall be applicable thereto. The average weekly wages of any such prisoner shall be the average weekly wages or remuneration which the employer pays for the labor of said prisoner, whether to the institution or the prisoner, or both; and the State industrial accident commission in awarding compensation in cases of injuries to prisoners in the course of their employment, shall direct that all of the compensation for which the employer of said prisoner is liable hereunder, shall be paid to the institution in which the said prisoner is confined at the time of his injury, and out of the compensation paid to any such institution under the provisions of this article, the institution shall retain a sum equal to the average weekly amount received by said institution (if the compensation shall amount to so much) for the labor of said prisoner over and above any bonus received by or for the use of said prisoner, and the surplus of any such compensation, if any, shall be credited to and belong to the injured prisoner. The disposition of the compensation as above provided shall continue until the prisoner shall resume work or until his death or discharge from the institution. When such prisoner shall resume work any compensation to which he may still be entitled by reason of partial disability, temporary or permanent, shall be payable to the institution and first applied toward reimbursement to the institution for any loss which it may sustain in the earnings of said prisoner by reason of his injuries, and the balance, if any, shall belong to and be credited to the amount [*sic*] of such prisoner. Upon the discharge of the prisoner, whether by reason of the expiration of the term, or, by reason of a pardon or parole, the remainder of the compensation for which the employer may be liable hereunder shall be paid directly to the prisoner, and it shall be the duty of the institution in which any prisoner, who is receiving compensation under the provisions of this article, is confined, to promptly notify the State industrial accident commission of the discharge of any such prisoner in order that an amended award may be made directing the payment to the said prisoner of any future compensation to which the prisoner may be entitled.

Whenever any prisoner in the Maryland Penitentiary or the Maryland House of Correction shall be engaged in any extrahazardous work within the meaning of this article for which wages or a stipulated sum are paid by said institution this article shall be applicable thereto, and the average weekly wages of any such prisoner injured in the course of his or her employment shall be the average weekly wages paid by the institution to such prisoner, and in addition thereto a fair and reasonable sum to be determined by the State industrial accident commission for the board and maintenance of such prisoner not to exceed the amount customarily received by the institution for its own use for prisoners engaged in extrahazardous employments for private employers. The State industrial accident commission in making awards to such prisoners so injured in the course of their employment, shall direct the institution employing such prisoner to deduct from its award the sum found by it to be reasonable for the board and maintenance of such prisoner, in determining the average weekly wages, and the balance, if any, shall belong to and be credited to the account of such prisoner. Upon the discharge of such prisoner whether by reason of the expiration of the sentence or by parole or pardon, the said institution shall pay the remainder of the compensation to which any said prisoner shall be entitled, to the prisoner, and shall

promptly notify the State industrial accident commission of the discharge of any such prisoner in order that its award may be modified accordingly.

Upon the death of any prisoner resulting from accidental injuries arising out of and in the course of his employment within the meaning of this article his dependents shall be entitled to compensation as determined by this article and based upon average weekly wages as hereinabove defined.

SEC. 2. This act shall take effect on the 1st day of June, 1927.

Approved April 26, 1927.

The Wisconsin act (act of 1927, ch. 241) reads as follows:

SECTION 1. A new section is added to the statutes to read: (56.21) (1) if an inmate of a State institution shall in the performance of his work in connection with the maintenance of such institution, or of any industry maintained therein, be injured in such a way as to permanently incapacitate such inmate or materially reduce his earning power, he may, upon his discharge from such institution, be allowed and paid such compensation therefor as he shall be found entitled to by the industrial commission. Such loss shall be compensated for on the same basis as though such injury had been covered by the workmen's compensation act, except that the total of the sum paid to any such inmate shall not exceed $1,000, and such sum may be paid to such inmate in partial payments.

(2) In the case of penal institutions, where injury results from employment in a prison industry, such payment shall be made from the revolving appropriation for the operation of such industry.

SEC. 2. Subsection (8) of section 20.57 of the statutes is amended to read: (20.57) (8) Annually, such sums as may be necessary, for compensation of persons injured while in the State service, as provided in sections 102.01 to 102.34 and for compensation to inmates of State institutions injured in the performance of work in such institutions, except persons injured in prison industries, as provided in section 56.21.

SEC. 3. This act shall take effect upon passage and publication.

Approved June 16, 1927.

Recent Workmen's Compensation Reports

Connecticut

THE ninth report of the Board of Compensation Commissioners of Connecticut, covering the 2-year period from November 1, 1926, to November 1, 1928, summarizes the experience under the act of that State. The report contains some interesting statements concerning the ratio between direct compensation payments and statutory aid (medical, surgical, and hospital service). These are in part as follows:

The direct compensation payments, either to injured workmen or their dependents, made through the insurance companies doing business in the State in the period covered by this report was $3,514,028.23. The amounts expended by the insurance companies for statutory aid during the same period was $2,462,-833. During the same period the self-insurers paid out for direct compensation payments $715,496.10, and for statutory aid payments $614,374.57. Anyone sufficiently interested to compare these figures with our previous reports will at once be impressed with the fact that the ratio between compensation payments and statutory aid by the insurance carrier has been and now is rapidly rising and that it remains nearly a stationary ratio as to the self-insurer. This means that the great insurance interests are more and more realizing that they can minimize their compensation payments by giving a constantly better medical, surgical, and hospital service. These figures also indicate that the large self-insurers are reducing their compensation payments by an increase in medical, surgical, and hospital care.

Nebraska

THE 1927 session of the Legislature of Nebraska authorized the governor to appoint a commission of seven members to make a study and a survey of the Nebraska compensation law. The report

of the commission, dated December 1, 1928, contains recommendations reprinted below and upon which comment was made in the report. The recommendations are such that they will be of wide interest to other States interested in the subjects covered.

Lump-sum settlements

1. That the power of the district court to approve lump-sum settlements be abolished, and that the compensation commissioner be given the power to order lump-sum settlements when such settlements are deemed advisable by him. Appeals from such order of the commissioner are to be taken to the courts as in other cases.
2. That the amount or amounts payable in lump sums must equal the total sum of the probable future payments, capitalized at their present value calculated at 5 per cent per annum with annual rests, and that no other method of commutation be permitted.

Medical aid

1. That the compensation commissioner, with the advice and assistance of such experts as he may deem necessary, be authorized to establish a medical and hospital fee schedule which may be changed and adjusted from time to time, as circumstances may warrant.
2. That the compensation commissioner be given the power to determine the necessity for all disassociated operations and treatments which are not usual by the nature of the injury involved.
3. That the physicians, surgeons, and hospitals be made a party at interest before the courts and the commissioner in order that they may secure payment for their services without relying upon the willingness of the injured man to bring the action.
4. That the compensation commissioner be given full authority to approve all bills for medical, surgical, and hospital services and medicines in cases arising under the workmen's compensation law.

Accident prevention

1. That the Nebraska safety act be amended to give the secretary of labor a broad power to formulate safety codes for the various industries of the State and that the secretary of labor be permitted to establish advisory committees of workers and employers to assist in the formation of such codes.
2. That an appropriation be made for the department of labor, for maintaining a competent factory inspector and to enable the department to conduct a campaign of safety education and to publish statistics and information on accident prevention.

Administration of compensation law

1. That the compensation department be supplied with sufficient deputies to enable the deputies to hear all contested cases.
2. That appeals be taken from the deputies to the compensation commissioner; that the hearing before the compensation commissioner be made a matter of record. However, the compensation commissioner may, in his discretion, order that a record be made of the hearing before the deputy, such record shall be the evidence submitted to the compensation commissioner, if appealed.
3. That appeals from the commissioner be taken direct to the supreme court, based on the record before the commissioner.
4. That the staff of the department of labor be sufficiently enlarged that the division of compensation will not be required to participate in the administration of any of the other labor laws.

Technical improvement in phraseology and minor changes

1. That the wording of sections 3029, 3038, 3044, 3048, 3049, 3053, and 3080 be slightly altered so as to clarify the meaning of the law, and to make such minor changes as are indicated below.
2. That section 3057 be changed so as to permit the commissioner to modify awards for total and permanent disability when the earning power of the injured

employee has been restored, and after all payments for specific losses have been made.

3. That section 3074 be amended so as to make an order of the compensation commissioner a judgment enforceable for collection upon filing the same in the district court.

4. In case the recommendations of the commission with respect to the taking of appeals direct to the supreme court is not incorporated into law, that the time limit for notices of appeals be increased to 14 days.

Alternate proposals

The adoption of the following proposals is recommended in case the legislature does not deem it advisable to adopt the complete recommendations of the commission with reference to the administrative organization of the compensation law.

Proposed law

SECTION 3060. *Arbitration.* All disputed claims for compensation or for benefits under this article must be submitted to the compensation commissioner for an award. If either party at interest is dissatisfied with the award of the compensation commissioner, then the matter may be submitted to the district court of the county in which the accident occurred, either at or during the regular term of the district court of said county or during any period of time between the regular term time of the district court of said county, which court shall have authority to hear and determine the cause as in equity and enter final judgment therein determining all questions of law and fact in accordance with the provisions of this article, which judgment shall be final and conclusive unless reversed, dismissed, or modified on appeal or otherwise modified pursuant to the provisions of this act. In case the accident occurred outside the boundaries of the State of Nebraska, the appeal shall be taken to the district court of the county which would have jurisdiction over a civil action between the parties: *Provided, however,* If either party appeals from the award of the compensation commissioner, notice of the appeal shall be given to the commissioner and the petition on appeal filed in the district court within 14 days from the date of the award.

New York

IN THE December, 1928, issue of the Industrial Bulletin, published by the New York Department of Labor, there is presented an article entitled "Occupational dermatitis and compensation." In explanation of the investigation the article contains the following introductory remarks:

The New York State compensation law gives compensation for occupational diseases caused by 19 specified substances. Dermatitis, per se, is not recognized as an occupational disease unless the substances from which the worker contracts the dermatitis is mentioned among the 19. A worker suffering from dermatitis, therefore, has an advantage if he contracts the disease from a substance mentioned under the law. If the substance is not mentioned under the law he does not receive compensation although he is just as much disabled—loses just as much time and wages.

From the worker's standpoint, dermatitis is a serious handicap. Although it may attack any part of the body, the hands are most frequently affected. In addition to this local effect, in many cases there is a general constitutional reaction in an endeavor on the part of the body to get rid of the irritant. There is also in some cases a severe nervous reaction due to constant itching of the affected parts, which often causes loss of sleep, etc.

A representative of the bureau of women in industry has analyzed the cases which appear on the occupational disease calendar each week in an effort to determine what proportion of the dermatitis cases are eligible for compensation and what proportion are not. The present study, therefore, is concerned with a group of 134 cases of occupational dermatitis which came up for hearing on the occupational disease calendar in the Workmen's Compensation Bureau of the New York State Department of Labor, between July 1, 1927, and June 30, 1928.

The dermatitis cases, classified according to causative agent and occupation, are as follows:

NUMBER OF CASES OF DERMATITIS BY CAUSATIVE AGENT AND BY OCCUPATION

Causative agent or occupation	Disallowed	Awards	Pending	No claim	Total cases
Causative agent:					
Dyes	21	8	4		33
Soaps and cleaners	15		2		17
Volatile hydrocarbons	10	1	1		12
Chromic acid	3	6		1	10
Methyl alcohol	1	4	3		8
Acid	8				8
Oil and grease	6				6
Lead		2	2		4
Trauma	1		3		4
Ink	3				3
Flour, sugar, cinnamon	2				2
Formaldehyde	1	1			2
Fruit	2				2
Polish			1		1
Lotions	1				1
Plants			1		1
Miscellaneous	11		4	1	16
Unknown	3	1			4
Total	88	23	21	2	134
Occupation:					
Fur, leather	19	7	3		29
Domestic and personal service	16		3		19
Printing and paper	5	3	4	2	14
Clothing	8	1	3		12
Wood	6	2	3		11
Metals	8	3			11
Food	7	2	1		10
Chemical	6	1	1		8
Textiles	2				2
Miscellaneous	10	4	3		17
Unknown	1				1
Total	88	23	21	2	134

North Dakota

THE ninth annual report of the North Dakota Workmen's Compensation Bureau for the fiscal year ending June 30, 1928, presents a statement of assets and liabilities and receipts and disbursements of the State fund. The report also contains a table, a summary of which is given below, including all claims which occurred during this period and on which final awards had been made on June 30. Medical cases are not included.

DISTRIBUTION OF CLAIMS BY GENERAL CAUSES

General cause	Number of claims			Total awards		
	Deaths and permanent total disabilities	Permanent partial	Temporary	Deaths and permanent total disabilities	Permanent partial	Temporary compensation
Machinery	2	20	151		$11,625.36	$12,649.84
Boiler and steam pressure apparatus			7			314.43
Vehicles	3	3	333	$26,622.92	960.00	26,904.79
Explosive, electricity, fires, corrosive substances	3	5	84	35,036.45	3,220.10	6,714.69
Poisonous substances			10			662.07
Falls of persons	4	2	262	20,799.97	1,450.00	20,611.17
Stepping on or striking against objects	1	1	135	12,737.50	2,000.00	7,257.97
Falling objects	1		53			3,534.09
Objects being handled	2	6	590	6,194.53	2,256.18	35,989.73
Hand tools		4	165		1,689.08	8,470.14
Animals			47			3,109.27
Miscellaneous	4	2	69	14,928.39	292.92	3,578.14
Total	20	43	1,906	116,319.76	23,493.64	129,796.33

Pennsylvania

THE annual report of the Bureau of Workmen's Compensation of the Department of Labor and Industry of Pennsylvania, for the calendar year 1928, contains some interesting figures showing the result of the experience of Pennsylvania under the workmen's compensation law. The report contains the table below, covering 152,513 accidents involving a time loss of two days or more. There was a decrease of 5.1 per cent in the number of accidents reported during the year 1928 as compared with 1927.

NUMBER OF FATAL AND NONFATAL ACCIDENTS IN PENNSYLVANIA IN 1928, BY INDUSTRY GROUPS

Industry group	Fatal	Nonfatal	Total
Construction and contracting	227	18,355	18,582
Manufacturing	356	52,501	52,857
Mining, anthracite coal	474	25,417	25,891
Mining, bituminous coal	544	22,580	23,124
Quarrying and mining other than coal mining	32	2,295	2,327
Transportation and public utilities	213	9,441	9,654
Retail trade	50	6,584	6,634
Wholesale trade	11	1,696	1,707
State and municipal	101	3,778	3,879
Miscellaneous	72	7,786	7,858
Total	2,080	150,433	152,513

Compensation payments were authorized during the year in 80,906 cases, either upon the approval of agreements executed by the interested parties or upon awards made by the referees or the workmen's compensation board, the amounts of liability being, in fatal cases, $6,238,121; in permanent disability cases, $3,579,530; and in temporary disability cases, $5,466,361. These figures do not include the amount paid for medical, surgical and hospital service, and medicines and supplies as required by law, which it was estimated amounted to about one-third of the compensation liability. There were 1,827 fatal cases in which compensation was authorized, either by agreement or award during the year.

Widows who were receiving compensation payments remarried in 229 cases. In 617 fatal cases in 1928 there were no minor dependents. The sole beneficiaries in 387 of these cases were widows; in 22 cases, fathers; in 80 cases, mothers; and in 128 cases, fathers and mothers. Of the 1,827 fatal cases, 1,553 were dependency cases in which the compensation incurred amounted to $6,202,338 or an average of $3,993.78; 274 were nondependency cases involving payments of $35,783 or an average of $130.59 per case for funeral expenses.

With regard to reporting accidents the report stated the following:

> In order that the workmen's compensation law may be satisfactorily administered, it is of the utmost importance that accidents be reported promptly to the bureau and compensation agreements filed for approval with the least possible delay.
>
> During the year 1927 a study of the records in the bureau disclosed that the average time required for reporting accidents was 18 and a fraction days while the average time required for filing agreements for the payment of compensation was 48 days.
>
> Using these figures as a basis, a campaign was inaugurated during the latter part of the year 1927 for the purpose of securing a reduction in these figures during the year 1928. The records of the first nine months of the year 1928

show that the average time for reporting accidents has been reduced to 17 and a fraction days while the average time for filing agreements for the payment of compensation has been reduced from 48 to 44 days. The 1928 record for the insurance companies is 19 days for reporting accidents and 44 days for filing agreements while the 1928 record of companies operating as self-insurers is 15 days for reporting accidents and 43 days for filing agreements for the payment of compensation.

While this improvement is commendable, the elapsed time can be further decreased by proper effort on the part of the companies whose record is above the average.

West Virginia

THE State Compensation Commissioner of West Virginia has issued an official preliminary report covering the fiscal year ending June 30, 1928. Concerning the ascertaining of the correct financial conditions of the State insurance fund the report contains the following:

After determining the incurred liability of the department * * * it was found that the actual deficit outstanding as of June 30, 1927, was $5,067,667.82. This deficit has all practically accrued since July 1, 1923, at which time, you will recall, the legislature increased the benefits payable by the fund to a large degree: Widows from $20 to $30 per month; age limit of children from 15 to 16 years, and the maximum rate of compensation to injured workmen and total disabilities to $16 per week, at the same time, increased the base of calculation for the minimum and maximum from an average of 50 per cent of the former earnings to 66⅔ per cent of the former earnings. The premium rates in effect at that time were not changed or increased until October 1, 1926, and then in a less percentage than was contained in the legislative increase of benefits.

The survey that we have completed shows the department with 94 classifications, 5 of which are obsolete. To project the manual rates in effect July 1, 1927, to the present level of benefits paid, it was necessary to increase the base rate of 64 classifications, the increase varying from 10 cents in one classification to $3.50 as the maximum increase in another. At the same time, the analyzation shows that a decrease should be made in 8 classifications, varying from 5 cents in one classification to 40 cents in another. These manual rate changes will not reduce the deficit but are calculated as sufficient to take care of all liability incurred by the department beginning October 1, 1928, at which time they are effective.

In providing for the retirement of the department's deficit, it was deemed advisable to assess a specific loading against each classification in relation to their shown loss ratio in each schedule as the total amount of deficit shown in each schedule bears to the total deficit. This loading varies from 2 cents on the $100 of pay roll against one classification to 40 cents on the $100 in others. The catastrophe loading was determined in like manner, ranging from 2 cents specific loading for catastrophe in one classification to 20 cents in others. The deficit loading is calculated against the total average premium income of the department to retire the deficit in a period of five years. The continuance of the catastrophe loading from year to year will depend, of course, on the catastrophes that occur in the State, if any. If none occur, the loading will be dropped. If the cost of catastrophes continues to increase, the loading for that purpose will have to be proportionately increased.

The administrative cost is provided by charging 10 cents for each $100 of pay roll reported. No change has been made in the experience or merit rating plan. The base rate of a subscriber can fluctuate according to his own loss ratio 100 per cent up or 40 per cent down. An employer's adjusted rate is determined by arriving at his individual merit rate to which then is added the deficit and catastrophe loadings applicable to his classification.

Under the heading "Why the deficit" the report contained the following:

We find on July 1, 1927, that we have 2,215 widows, 5,537 children, 282 permanently disabled, 279 dependent parents and others, 2,090 permanently maimed claimants known as permanent partial disabilities, that the commuted

value of these claims as of July 1, 1927, amounts to $16,074,978. The fund as of that date had total liabilities as follows:

Reserve for fatal claims with which to pay the future liability to widows and children	$11, 478, 961. 00
Permanent total reserve liability with which to pay the permanent totals for the remainder of their lives	2, 834, 399. 00
Permanent partial claim reserve	1, 761, 618. 00
Indeterminate liabilities	3, 284, 455. 00
Medical claims outstanding	50, 000. 00
Advanced deposits on employer's account or premium guaranty	545, 685. 00
Uncanceled and outstanding compensation claim vouchers	38, 830. 35
Total liability	19, 993, 948. 35

We find on July 1, 1927, the assets of the compensation fund made up of the following items:

Cash balance	$749, 185. 85
Invested in securities	13, 817, 900. 00
Accrued interest	280, 567. 00
Furniture and equipment	42, 873. 50
Supplies and stationery	5, 332. 38
Past-due premium	30, 421. 80
Total assets	14, 926, 280. 53
Leaving a deficit balance of	5, 067, 667. 82

In the face of the fact that the past loss ratio of the department made a general increase in rates necessary, the department still stands in the undisputed position of furnishing workmen's compensation insurance to the industries of West Virginia at a net cost in premiums far below that which it would be necessary for them to pay if the same protection were furnished through any other insurance carrier. The department has long since justified its organization and its operation by a saving to the industries of the State of West Virginia, from its organization in 1913 up to the present time, of at least twenty millions of dollars in insurance premiums, by reason of the fact that it has always operated at a premium cost of approximately 50 per cent less than insurance company carriers were charging for the same class of protection.

Extension of National Health and Pensions Insurance in Great Britain

BY AN act passed in 1928 and effective January 1, 1929, certain classes of workers who were not previously insurable either for compulsory health insurance or for unemployment insurance are brought within the scope of the acts relating to health insurance and the contributory old-age pension plan. The Ministry of Labor Gazette for January, 1929, gives a summary of the new act.

The classes of employment affected by the new provisions, which do not apply to unemployment insurance, are:

(1) Employment by way of manual labor under a contract for the performance of such labor for the purposes of any trade or business, except in so far as such employment is excluded by a special order.

(2) Employment as a master or member of the crew of any fishing or other vessel registered in the United Kingdom, or of any other British vessel of which the owner, or if there be more than one owner the managing owner or manager, resides or has his principal place of business in the United Kingdom, when the person so employed is remunerated by a share in the profits or gross earnings of the vessel, except in so far as such employment is excluded by special order.

As regards (1) it is stated by the Ministry of Health that the effect, in general, is to bring into compulsory insurance persons engaged to perform manual labor,

although they may be engaged as independent contractors or subcontractors and not under a contract of service. It is to be noted, however, that the provision only applies (*a*) where the person undertaking the manual work takes an active part in it himself and (*b*) where the work is performed for the purposes of the employer's trade or business. Thus, it does not apply to a contractor or subcontractor who only supervises the work of his assistants, without taking any substantial part in the manual work himself or who is carrying out work not for the purposes of the trade or business of the person with whom he contracts—e. g., private domestic work where the person employed contracts directly with the householder.

As regards (2)—share fishermen—it is stated that the effect of the new provisions is to bring into compulsory health and pensions insurance share fishermen who work as coadventurers and are not already insured as being employed under a contract of service. The new clause applies irrespectively of whether the fisherman has any share in the ownership of the boat or gear or whether he is only contributing his labor to the venture.

LABOR LAWS

Federal Convict Labor Act of 1929

ON JANUARY 19, 1929, the President signed the Cooper–Hawes convict labor bill, technically known as H. R. 7729 and S. 1940, passed by the House of Representatives at the first session of the Seventieth Congress on May 15, 1928, and amended and passed by the Senate at the second session of the same Congress on December 19, 1928. The act divests convict-made goods of their interstate character, and reads as follows:

SECTION 1. All goods, wares, and merchandise manufactured, produced, or mined, wholly or in part, by convicts or prisoners, except convicts or prisoners on parole or probation, or in any penal and/or reformatory institutions, except commodities manufactured in Federal penal and correctional institutions for use by the Federal Government, transported into any State or Territory of the United States and remaining therein for use, consumption, sale, or storage, shall upon arrival and delivery in such State or Territory be subject to the operation and effect of the laws of such State or Territory to the same extent and in the same manner as though such goods, wares, and merchandise had been manufactured, produced, or mined in such State or Territory, and shall not be exempt therefrom by reason of being introduced in the original package or otherwise.

SEC. 2. This act shall take effect five years after the date of its approval.

State Convict Labor Legislation

THE United States, all the States, and Alaska, Hawaii, Porto Rico, and the Philippines, have enacted legislation concerning the employment of convicts during the term of their detention. The systems of employment under which the convicts are employed are six in number and have been defined as follows:

Contract system: Under this system the State feeds, clothes, houses, and guards the convict. To do this the State maintains an institution and a force of guards and other employees. A contractor engages with the State for the labor of the convict, which is performed within or near the institution. The contractor pays the State a stipulated amount per capita for the services of the convict, supplies his own raw material, and superintends the work.

Piece-price system: This system differs from the contract system mainly in method of payment for the labor of convicts. The State maintains the institution and feeds, clothes, and guards the convicts. The contractor supplies the raw material and pays the State an agreed amount for the work done on each piece or article manufactured by the convicts. The supervision of the work is generally performed by a prison official, although sometimes by the contractors. The officials of the prison not only maintain discipline but also dictate daily quantity of work required.

Public-account system: So far as the convict is concerned, this system does not differ from the piece-price system, but for the institution it is entirely different. In the piece-price system the contractor

finances the business and assumes all the chances of profit or loss. In the public-account system the State enters the field of manufacturing on its own account. It buys the raw material, manufactures and puts the product on the market, and assumes all the risk of conducting a manufacturing business. The State has the entire care and control of the convicts and with them conducts an ordinary factory. The institution may sell the product direct or through an agent.

State-use system: Under this system the State conducts a business of manufacture or production, as in the public-account system, but the use or sale of goods produced is limited to the same institution or to other State institutions. The principle of the system is that the State shall produce articles of merchandise for governmental supply requirements only and shall not compete in the open market with the business of manufacturers employing free labor.

Public works and ways system: This system is very nearly like the State-use system. Under this system the labor is applied not to the manufacture of articles of consumption but to the construction and repair of the prison or of other public buildings, roads, parks, breakwaters, and permanent public structures.

Lease system: Under this system the State enters into a contract with a lessee, who agrees to receive the convict, to feed, clothe, house, and guard him, to keep him at work, and to pay the State a specified amount for his labor. The State reserves the right to make rules for the care of the convict and to inspect the convict's quarters and place of work. No institution is maintained by the State other than a place of detention, where the convicts can be held until placed in the hands of the lessee and in which to confine convicts who are unable to work. In other words, the prisoners themselves are leased to the contractor.

In the analysis of the Federal, State, and Territorial legislation below, the system of employment is given, with the kinds of work done and regulations as to the marking of convict-made goods, the licensing of persons handling convict-made goods, or other regulations concerning their sale and disposition, together with the legal sources from which the analysis has been made.

ALABAMA

Systems of employment.—State use; public account; public works and ways; apparently the contract system allowed.

Kinds of work.—On public roads and bridges; in quarries, gravel pits, and plants for production of road material; and on convict farms. No woman may be employed on public roads, but may prepare meals for convict crews.

Sources: Code of 1923, secs. 1337, 1359–1374, 3589, 3592, 3611, 3624–3627, 3637, 3648, 3650, 3662, 3675–3690; acts of 1923, No. 595; acts of 1927, Nos. 70, 72, 347.

ALASKA

System of employment.—The public-works-and-ways system is apparently the only system authorized.

Source: C. L. 1913, sec. 2082.

ARIZONA

Systems of employment.—Public works and ways. Other forms of employment are apparently authorized, but on what system is not indicated.

Kinds of work.—On public roads, highways and bridges, streets and avenues; and on work provided for county convicts inside or outside of any jail.

Sources: Civil Code of 1913, sec. 5141; Penal Code, secs. 1448, 1482, 1483; Acts of 1927, ch. 58 and ch. 2 of 4th Special session, p. 21.

ARKANSAS

Systems of employment.—Public works and ways; public account; State use. Leasing of State convicts is forbidden, but apparently not of county convicts.

Kinds of work.—On public roads; in preparing road materials; crushing limestone for sale to farmers; on convict farms; in manufacture of cotton goods, furniture, brick, and twine as the penitentiary board may provide, apparently for sale in the open market. County convicts may be hired out; also State convicts on road and farm labor.

Sources: Digest of 1921, secs. 2046, 2048, 2060, 2061, 2081, 5213–5217, 5362, 5395, 9658, 9693–9695; Acts of 1923, Nos. 128, 328, 759; Acts of 1925, No. 152; Acts of 1927, No. 170.

CALIFORNIA

Systems of employment.—State use; public account; public works and ways. The letting of convict labor by contract is forbidden by the constitution.

Kinds of work.—In manufacture of articles for the State and its municipalities; on roads and highways; in preparation of road materials; in manufacture of hemp and jute products and other articles, manufacture of which is permitted by law; and work on industrial farms. Women at San Quentin may make and sell needlework.

Regulations.—Only articles designated by law may be offered for sale. Articles of apparel offered for sale within the State must be marked so as to show in what institution they were manufactured; dealers must post notices stating the fact.

Sources: Const., Art. X, sec. 6; Penal Code, secs., 679a, 1586 (as amended 1923, ch. 158), 1613; pp. 710, 716, 719; Acts of 1911, ch. 570; Acts of 1915, ch. 13; Acts of 1917, ch. 164; Acts of 1919, ch. 316; Acts of 1921, ch. 843; Acts of 1923, ch. 316; Acts of 1927, chs. 479, 637, 653.

COLORADO

Systems of employment.—State use; public works and ways; and, apparently, public account. Leasing is forbidden.

Kinds of work.—On highways; in quarries; in manufacture of clothing, shoes, etc., for inmates of public institutions, and furniture, supplies, etc., for such institutions; in propagation of fish; and in manufacture of automobile license plates. County convicts may be employed on highways, but not on bridges where skilled labor is required.

Regulations.—Goods made for other institutions are to be furnished at prices corresponding to the market value. Products shall be those that least conflict with free labor. Dealers in convict-made goods must be licensed, and the goods marked. Prohibits competition with free labor.

Sources: C. L. 1921, secs. 766, 768, 780–796, 3745–3755, 7138–7140, 8878–8886; Acts of 1923, ch. 88; Acts of 1925, ch. 141; Acts of 1927, chs. 63, 142.

CONNECTICUT

Systems of employment.—Contract or piece price; public works and ways; and, apparently, public account and State use.

Kinds of work.—In such manufacturing as board of prison directors may provide; on highways, bridges, public property, etc.; county convicts in workhouses; work on tobacco or any article which comes in contact with the mouth of a human being is forbidden, unless provided for by regulations of the State department of health.

Sources: G. S. 1918, secs. 1932, 1935, 1936, 1969; Acts of 1919, ch. 341; Acts of 1925, ch. 263; Acts of 1927, ch. 88.

DELAWARE

Systems of employment.—Public works and ways; leasing; apparently contract and public account; State use.

Kinds of work.—On roads and highways; on farms; "suitable employment" in workhouses.

Sources: R. C. 1915, secs. 3605, 3606, 3608a–3608k (all added 1917, ch. 241), 3613, 3613a (added 1921, ch. 202), 3615a (added 1923, ch. 222), 4811.

DISTRICT OF COLUMBIA

Systems of employment.—The public-account system is used, but products are sold only to contractors on public works of the District; State use.

Kinds of work.—Employment is at such labor and under such regulations as prescribed by the Supreme Court of the District; farming and the manufacture of brick and of brooms are provided for; also work pertaining to the maintenance of the institutions in which prisoners are confined.

Source: Code, sec. 1192.

FLORIDA

Systems of employment.—Public works and ways; State use; apparently public account. Leasing is forbidden, all contracts null and void on December 31, 1923.

Kinds of work.—On farms; on public roads, bridges, and other public works.

Sources: G. S. 1920, secs. 6113, 6217, 6218 (two latter amended 1923, ch. 9203), 6225, 6226, 6248, 6290, 6294; Acts of 1919, ch. 7833 (as amended 1923, ch. 9126); Acts of 1923, ch. 9203; Acts of 1925, ch. 10271.

GEORGIA

Systems of employment.—Public works and ways; State use; public account. Leasing county convicts is forbidden.

Kinds of work.—On farms, public roads, bridges, and other public works; in industrial enterprises deemed advisable by the prison commission; in manufacture of implements and other articles needed on the State farm, shoes and clothing for the use of inmates of other State institutions, etc., but no article so manufactured may be offered for sale to the public; surplus products of the penitentiary are authorized to be sold.

Sources: Pol. Code, 1911, secs. 429, 697; Penal Code, secs. 1065, 1201–1218, 1280, 1282; Acts of 1924, p. 119.

HAWAII

Systems of employment.—Public works and ways; State use; and, apparently, public account.

Kinds of work.—Sanitation; on public works; all employment to be for the Territory or a political or other subdivision thereof. Female prisoners are to be employed in making mats, sewing, laundry work, and "such other suitable occupations as the high sheriff shall direct."

Sources: R. L. 1915, secs. 934, 1463–1467, 2220; Acts of 1925, chs. 22, 100, 250.

IDAHO

Systems of employment.—Public works and ways; leasing; public account.

Kinds of work.—On highways; in manufactures as provided, no article to be produced which is extensively manufactured in the State of Idaho.

Sources: C. S. secs. 1572, 9356, 9392 (as amended 1923, ch. 35), 9431; Acts of 1927, ch. 74.

ILLINOIS

Systems of employment.—Public account, in limited measure; State use; public works and ways. Leasing and the contract system are forbidden.

Kinds of work.—In manufacture of supplies for State and public institutions, schools, and road districts; in production of crushed rock and road material; in manufacture of articles and supplies needed and used in State and other public institutions; on highways and the improvement of river channels; county convicts, in workhouses.

Regulations.—Goods manufactured for sale are not to enter into conflict with the established industries of the State in excess of the production of 40 per cent of the prisoners in penal and reformatory institutions. Convicts are to be divided into three classes, the first to be employed chiefly in occupations that will give them industrial training and instruction, the second in the production of useful articles and supplies, the third in such occupations as will secure needed exercise and the preservation of health, or articles for State use. Crushed rock to be furnished free to the State highway department or sold at cost to cities, counties, and villages for highway use, or else to railroads at an agreed price in exchange for transportation service.

Sources: Constitution, separate sec. adopted 1886; R. S. 1917, ch. 34, sec. 25; ch. 38, sec. 168a; ch. 108, secs. 76–90, 103–106; Acts of 1927, p. 208.

INDIANA

Systems of employment.—Public works and ways; public account; State use. Contract system prohibited. Piece price apparently permitted.

Kinds of work.—On farms; on public highways; in manufacture of binder twine and cordage and the production of articles needed by the State, its institutions, and political divisions, including brick, paving, and road materials; in the care and development of State parks and other public reservations; county convicts in workhouses.

Regulations.—Dealers in convict-made goods must have a license and goods must be marked "convict made." No printing machinery or material may be purchased, except that a trade school may be established in the reformatory, in which books or blanks may be printed for the use of the reformatory only.

Sources: A. S. 1914, secs. 8262–8272, 9846 (as amended 1917, ch. 152), 9847–9854, 9918–9926k, 10029; Acts of 1917, ch. 83; Acts of 1919, ch. 53, sec. 30; ch. 60, sec. 18; Acts of 1925, ch. 113.

IOWA

Systems of employment.—Public account; State use; public works and ways. Leasing is forbidden.

Kinds of work.—In employments conducive to the teaching of useful trades and callings; on highways or public works; in preparation of stone for road material and other uses; in operation of quarries; on or about public buildings or grounds. Trusties may be employed in State parks.

Sources: Code, 1907, Supp. 1913, 1915, secs. 5652–5654, 5707, 5708, 5718–a11, 5718–a28a; Acts of 1927, ch. 78.

KANSAS

Systems of employment.—Contract, but no work for private citizens may be done outside the penitentiary grounds, except on highways; State use; public works and ways; public account.

Kinds of work.—Mining coal; in manufacture of twine, automobile license plates, and bricks; on highways, streets, and alleys; in preparation of stone for road material, but not on bridges or like structures which require the employment of skilled labor; county convicts may be employed on public roads, streets, poor farm, or any public work.

Sources: G. S. 1915, secs. 8286–8289, 10003, 10007–10026, 10029–10035, 10066; Acts of 1920, ch. 65; Acts of 1923, ch. 45; Acts of 1925, chs. 27, 28, 30, 65, 253; Acts of 1927, chs. 46, 238, 311, 312, 313, 314, 315.

KENTUCKY

Systems of employment.—Contract; public works and ways; State use and apparently public account; county convicts may be leased.

Kinds of work.—On public works; on highways; in preparation of road and bridge material; in quarries; on capitol grounds and on farms; county convicts, in workhouses.

Regulations.—All convict-made goods brought into Kentucky from any other State for sale must be plainly marked "convict made."

Sources: Const., secs. 253, 254; Stats. 1915, secs. 524–526a, 1377, 1379, 3811, 4867, 4869–4871; Acts of 1920, ch. 159; Acts of 1922, ch. 34; Acts of 1926, chs. 150, 151, 153.

LOUISIANA

Systems of employment.—State use; public works and ways; public account. Leasing or hiring of State convicts is prohibited, but county convicts may be leased.

Kinds of work.—On highways, streets, and levees; on farms; in manufactories established by the State, and workhouses for county convicts. Production of brooms is mentioned, and the erection and equipment of a sugar refinery authorized.

Regulations.—Brooms made in the State penitentiary by convicts must be plainly stamped "convict made" if offered for sale in the State of Louisiana.

Sources: Const., arts. 196, 292; R. L. 1897, p. 249; Acts of 1894, No. 132, p. 668; Acts of 1879, No. 38; Acts of 1898, No. 136; Acts of 1900, No. 70; Acts of 1908, No. 204; Acts of 1910, No. 34; Acts of 1918, No. 235; Acts of 1926, Nos. 200, 203, 290; Acts of 1928, Nos. 189, 293.

MAINE

Systems of employment.—Contract; public account; State use; public works and ways.

Kinds of work.—In preparation of road material; on highways; in workhouses; in manufactories as established.

Regulations.—Not more than 20 per cent of the male convicts in the prison shall be employed in the manufacture of any one kind of goods, and as far as practicable competition in the manufacture of articles made elsewhere in the State must be avoided. Products are to be distinctly labeled "Manufactured at the Maine State Prison."

Sources: R. S. 1916, ch. 83, secs. 12–14; ch. 130, sec. 32; ch. 142, secs. 34, 35.

MARYLAND

Systems of employment.—State use; public works and ways; apparently, public account and contract.

Kinds of work.—On farms; on highways, streets, and bridges; in the preparation of road material; at such employments (presumably manufacturing) as will give employment to supersede the former system of contract labor.

Sources: A. C., art. 27, sec. 522; secs. 629a–629j (all as amended 1917, ch. 15); sec. 630 (as amended 1918, ch. 354); Acts of 1917, extra sess., ch. 4; Acts of 1927, chs. 655, 660.

MASSACHUSETTS

Systems of employment.—State use; public account; piece price; public works and ways. The contract system is forbidden.

Kinds of work.—On farms; on highways; on public lands and buildings; in clearing waste lands; in forestry; in manufacture of furniture and other articles for State offices and institutions; in production of manufactured articles, such as brushes, chairs, clothing, mats, harnesses, shoes, shoe heels, trunks, umbrellas; stonecutting; and laundry work.

Regulations.—The number of convicts who may be employed in manufacturing the various specified articles is fixed by statute. Goods may not be sold at less than the current wholesale market price.

Sources: G. L., ch. 126, secs. 35–37; ch. 127, secs. 50–85; Acts of 1927, ch. 289; Acts of 1928, ch. 387.

MICHIGAN

Systems of employment.—State use; public works and ways; public account.

Kinds of work.—On farms; on highways; in manufacture of articles for State institutions, of twine and cordage, of brick and tile, and of goods, wares, and merchandise as provided for.

Regulations.—Binder twine and cordage must be sold at a price fixed by the warden and board of control as may be found for the best interest of the State. No mechanical trades are to be taught except the manufacture of articles chiefly produced outside the State. Convicts may not be employed on the building of bridges or other structures which require the employment of skilled labor.

Sources: Const., art. 18, sec. 3; C. L., secs. 1700, 1708, 1730, 1733, 1781, 1786, 1798–1815, 2531; Acts of 1917, Nos. 57, 78; Acts of 1927, Nos. 64, 175, 316, 323.

MINNESOTA

Systems of employment.—Public account; State use; public works and ways; piece price. Contract system and leasing are forbidden.

Kinds of work.—In manufacture of binder twine, agricultural machinery; in preparing road material; on highways, streets, public places, and grounds; and on farms.

Regulations.—The number of prisoners employed in a single industry may not exceed 10 per cent of the total number of persons employed in such industry in the State unless a greater number is needed to produce machinery or articles for State use. Binder twine and agricultural machinery and other manufactured products may be sold through agencies at a price to cover costs of production plus a fixed percentage.

Sources: G. S., secs. 9311–9316, 9328–9330, 9340, 9374, 9377; Acts of 1915, ch. 212; Acts of 1927, chs. 142, 172.

MISSISSIPPI

Systems of employment.—Public works and ways; State use; public account. Leasing or hiring of convicts is forbidden.

Kinds of work.—On public roads; on highways and levees; on farms; in manufacture of agricultural implements, shoes, harness; in operation of sawmills, gristmills; in manufacture of clothing, brick, and tile; in grinding limestone for agricultural use; in production of foodstuffs; in care of public buildings and grounds.

Regulations.—Products are to be sold as the trustees may deem most advantageous to the State.

Sources: Const., secs. 85, 223–226; Code, secs. 3606–3610, 3621, 3622; Acts of 1908, ch. 109; Acts of 1910, chs. 167, 371; Acts of 1912, ch. 146; Acts of 1914, chs. 132, 205; Acts of 1916, chs. 575, 576; Acts of 1928, ch. 45.

MISSOURI

Systems of employment.—State use; public account; public works and ways. Leasing and contracting forbidden.

Kinds of work.—A wide range of manufactured products is suggested, including road material, binder twine, lime for agricultural and other purposes, furniture, clothing, farm implements, fertilizer, brick, etc.; on farms and highways; in quarries, gravel pits; on streets and alleys; and on public grounds.

Regulations.—The prices of products are fixed by the prison board, those offered in the open market to be sold at the market price. The State retains a contingent interest in twine sold to secure its disposition according to the provisions of the law.

Sources: R. S., secs. 3704, 3705, 8648, 12415–12420, 12473, 12482, 12526, 12532; Acts of 1927, pp. 363–365, 382.

MONTANA

Systems of employment.—Public works and ways; State use or public account, either or both. The contract system is forbidden.

Kinds of work.—In improvement of public grounds or buildings, or public works or ways of counties, and such mechanical pursuits as the prison board may decide upon, automobile license plates, wearing apparel.

Regulations.—Convict-made goods offered for sale must be plainly marked "Prison made."

Sources: Const., art. 18, sec. 2; R. C., secs. 11572, 11573, 12446, 12447, 12484; Acts of 1927, ch. 152, H. B. No. 124, p. 526.

NEBRASKA

Systems of employment.—State use; public works and ways; public account and apparently piece price. Contracts may be made for the labor of county convicts.

Kinds of work.—On roads and other public works; in manufacture of twine; of supplies for State institutions; on farms; in workhouses for county convicts; and in such industrial enterprises as the board of control may deem advisable, "having in mind a minimum of competition with free labor."

Regulations.—Products shall be sold at not less than a fair market price.

Sources: C. S., secs. 986, 992–997, 2996, 3016, 3017, 6973–6976, 6983, 7016, 7029, 7057, 10209, 10210.

NEVADA

Systems of employment.—Public works and ways; State use; public account; contract.

Kinds of work.—On public highways, farms, public works, buildings, or grounds; in such mechanical pursuits as the board of prison commissioners may determine. Prisoners of good record may be given permission to manufacture goods on their account to be sold for them by the State; competition with free labor to be avoided.

Regulations.—Sales of surplus products are to be at reasonable market value.

Sources: R. L., secs. 6623, 7569 (as amended 1921, ch. 226), 7570, 7598, 7609, 7619; Acts of 1913, chs. 115, 187; Acts of 1927, ch. 104.

NEW HAMPSHIRE

Systems of employment.—Contract; public account; State use; public works and ways.

Kinds of work.—On articles for the use of the public institutions within the State; on highways; in preparation of road material; in forestry.

Sources: P. S., ch. 282, sec. 14; ch. 285, secs. 5, 7 (both as amended 1917, ch. 45); Acts of 1917, ch. 119; Acts of 1921, ch. 135; Acts of 1927, ch. 112.

NEW JERSEY

Systems of employment.—State use; public account; public works and ways. The contract system is forbidden.

Kinds of work.—In manufacture of articles for State institutions, departments, and agencies; in such manufactures as the State board provides; on highways; on farms; county convicts, in workhouses.

Regulations.—Surplus products are to be sold so as not to compete unfairly with the product of free labor. All articles must be marked "convict made."

Sources: Acts of 1915, ch. 119; Acts of 1917, chs. 157, 271; Acts of 1918, ch. 147; Acts of 1926, ch. 83; Acts of 1927, ch. 319.

NEW MEXICO

Systems of employment.—Public works and ways; public account; State use, to a limited extent. Leasing is prohibited.

Kinds of work.—On highways, streets, and alleys; in such manufacturing as the board provides; in production of electricity to be furnished certain public institutions.

Sources: Const., art. 20, secs. 15, 18; Stats., secs. 2641, 2708, 3052, 5041, 5050, 5051, 5069 (as amended 1921, ch. 58).

NEW YORK

Systems of employment.—State use; public works and ways. The contract system is prohibited.

Kinds of work.—In production of supplies for State institutions, public buildings and offices; on farms; at quarrying and stone crushing; on highways; in forestry; building sea walls to protect public property; on public buildings and grounds; county convicts, in workhouses.

Regulations.—Convict-made goods may not be sold within the State without being marked "Convict-made." Convicts are required to be classified; those in class 1 are to be given such training and instruction as will fit them for employment after discharge as a primary aim, but otherwise their labor shall be so directed as to produce the greatest amount of useful products and supplies for the State and its institutions. The labor of those in class 2 is primarily for the production of articles and supplies required; while in class 3 the preservation of health is a prime consideration, but manufactures of the above classes are to be kept in view. Vendors must be registered.

No printing or photo-engraving may be done in any printing establishment except such printing as may be required by the penal and charitable institutions of the State, etc., official reports, and the printing required for official use.

Sources: Const., sec. 53; C. L. ch. 11, sec. 93; ch. 31, secs. 193–195; ch. 43, secs. 75 (as amended 1917, ch. 391), 170–178, 179 (as amended 1919, ch. 420), 181, secs. 182, 184 (both as amended 1924, ch. 601); ch. 65, sec. 50 (as amended 1914, ch. 451), 184–a (added 1915, ch. 457); Acts of 1901, ch. 466, secs. 700, 701; Acts of 1925, chs. 457, 496; Acts of 1926, ch. 606; Acts of 1927, chs. 87, 285; Acts of 1928, chs. 146, 167, 805.

NORTH CAROLINA

Systems of employment.—Public works and ways; contract; State use; public account.

Kinds of work.—On public works, streets and highways; on farms; county convicts, in workhouses.

Sources: Const., art. 11, sec. 1; C. S., secs. 1297, 1356, 1359, 3591, 3678, 3812–3816, 4409, 7707, 7712, 7758–7763; Acts of 1925, ch. 163; Acts of 1927, ch. 219.

NORTH DAKOTA

Systems of employment.—Public account; public works and ways; State use. The contract system is prohibited.

Kinds of work.—In manufacture of twine and cordage and brick; in industries established at the penitentiary; on highways.

Regulations.—The price of twine is regulated by the board of trustees and may be sold only for use in the State up to May 1. Rope may be sold outside the State at any time.

Sources: R. C., secs. 10376, 10381 (as amended 1911, ch. 203), 10390 (as amended 1913, ch. 190), 10394, 10442; Acts of 1909, ch. 228; Acts of 1913, ch. 217 (as amended 1915, ch. 191); Acts of 1927, ch. 119.

OHIO

Systems of employment.—State use; public works and ways; apparently public account. Leasing, contract, and piece-price systems are forbidden.

Kinds of work.—In preparation of road material; in manufacture of brick, tile, and pipe, and articles for the use of the State, its institutions, and political divisions; in production of electric current for State institutions; on streets and highways; county convicts, in workhouses.

Regulations.—Goods offered for sale within the State must be conspicuously marked "Prison made." The number of prisoners employed in the manufacture of any one kind of goods may not exceed 10 per cent of the number of free laborers employed in the same industry; this provision does not apply to industries in which not more than 50 free laborers are employed.

Sources: Const., Art. II, sec. 41; G. C., sec., 1224-1 (added 1917, p. 134), sec. 2183 (as amended 1915, p. 65), secs. 2227-1–2227-4 (all added 1913, p. 725), 2228, 2230, 2230-1 (added 1911, p. 418), 2231–2235, 2135-1 (added 1911, p. 106), 2243, 2244, 6213–6217, 7496–7505, 7513 (all as amended 1915, p. 574); Acts of 1927, pp. 474, 502.

OKLAHOMA

Systems of employment.—State use; public works and ways; public account and apparently piece price. The contract system is forbidden.

Kinds of work.—In mining coal; in fabricating structural steel for bridges, public buildings, etc.; on highways; in manufacture of binder twine, cordage, cotton, or jute bagging, and ties; on farming; in such manufacturing as the State board may provide for.

Sources: Const., art. 23, sec. 2; C. L., secs. 4596, 4608; Acts of 1913, chs. 112, 215; Acts of 1915, ch. 57; Acts of 1916, ex. sess., chs., 29, 40; Acts of 1917, ch. 234; Acts of 1925, chs. 195, 277; Acts of 1927, chs. 64, 115, 234.

OREGON

Systems of employment.—Public works and ways; public account; and apparently State use. The contract system is forbidden.

Kinds of work.—On public highways; on or about any State institution; in manufacture of such products as may be provided for (flax industry and woodworking are mentioned).

Regulations.—Convict-made goods offered for sale in the State must be conspicuously marked or labeled.

Sources: Laws, secs. 2909–2915, 3542–3544, 4435; Acts of 1921, ch. 224; Acts of 1923, ch. 232; Acts of 1927, chs. 7, 8, 10.

PENNSYLVANIA

Systems of employment.—Public works and ways; State use; apparently public account.

Kinds of work.—On roads, streets, and highways, not including bridges or structures of like character requiring the employment of skilled labor; in production of road material, brick, tile, and pipe, and supplies for public institutions and other institutions, educational or charitable, receiving aid from the Commonwealth; forestry; on farms; in workhouses; printing.

Regulations.—Convict-made goods must be marked or labeled before being offered for sale. Road material, brick, tile, and concrete not needed for the institution at which made is to be offered for sale at a price fixed by the board of trustees, preference being given to the public authorities of the area in which the institution is located.

Sources: Stats., secs. 7535, 7541, 7542, 12703, 12712, 12722, 12724, 12730–12734; Acts of 1923, No. 172, No. 274, sec. 2012; Acts of 1925, Nos. 182, 167; Acts of 1927, Nos. 13, 164, 399, 440.

PHILIPPINE ISLANDS

Systems of employment.—Public works and ways; presumably public account.

Kinds of work.—On highways and other public works; the manufacture and sale of carts and cart wheels and axles is mentioned.

Sources: Acts of U. S. Philippine Com. Nos. 413, 1361, 1407, 1703, 3711 (sec. 2239).

PORTO RICO

Systems of employment.—Public works and ways.

Kinds of work.—On public roads and other public works.

Sources: R. S. & C., secs. 2292–2296, 6358, 6359.

RHODE ISLAND

Systems of employment.—Public works and ways; contract; and apparently State use, public account, piece price.

Kinds of work.—On farms and highways.

Sources: G. L., ch. 411, sec. 14; ch. 413, Art. I, secs. 3, 18; Art. V, sec. 32.

SOUTH CAROLINA

Systems of employment.—Public works and ways; leasing; contract; and apparently public account and State use.

Kinds of work.—On public highways and sanitary drainage; on farms; in quarries for procuring road material; on streets and other public works, including bridges, ferries, and public buildings.

Regulations.—No leasing or hiring may be made of convicts to work in phosphate mines.

Sources: Const., art. 12, sec. 6; Civil Code, secs. 956–972, 2276, 3057; Crim. Code, sec. 104 (as amended 1914, No. 291), 943, 944, 966–972, 981, 982, 985; Acts of 1914, No. 366; Acts of 1924, No. 552; Acts of 1928, No. 892.

SOUTH DAKOTA

Systems of employment.—Public works and ways; public account; and apparently State use.

Kinds of work.—On highways, streets, and public buildings and grounds; on farms; on quarrying stone; in manufacture of binder twine and cordage.

Regulations.—Sales of twine and cordage are made at fixed prices and up to May 1 only to farmers or actual consumers resident in the State.

Sources: R. C., secs. 5378–5383, 5454 (as amended 1920, second extra sess., ch. 90), 10221; Acts of 1919, ch. 333, sec. 58 (as amended 1920, second extra sess., ch. 89); Acts of 1927, ch. 203.

TENNESSEE

Systems of employment.—Public works and ways; public account; contract; apparently State use and piece price.

Kinds of work.—On public roads and highways; on farms; in mining coal; in burning coke; in manufacture of such articles as the board of control approves, having in view a minimum of competition with free labor, either under the direction of the board or on contract; in cutting of timber; in manufacture of automobile number plates; county convicts, in workhouses; printing.

Sources: Code, secs. 1628a–8, 2577a–60, 7405, 7516a-1–7516a-11; Acts of 1919, chs. 40, 53, 60, 64; Acts of 1923, ch. 94; Acts of 1927, ch. 48.

TEXAS

Systems of employment.—Public works and ways; public account; and apparently State use. The contract system is forbidden.

Kinds of work.—On public roads, streets, and bridges; on farms; in factories such as the prison commission may establish; county convicts, in workhouses.

Regulations.—No sale of convict-made goods in intrastate commerce valid unless marked "Prison-made merchandise."

Sources: Const., Art. XVI, sec. 24; R. C. S., arts. 836, 6174 (as amended 1917, first extra sess., ch. 32), 6183–6187, 6232, 6238, 6281, 6967; Acts of 1927, chs. 212, 251.

UTAH

Systems of employment.—Public works and ways; public account; State use. The contract system is forbidden.

Kinds of work.—On highways, bridges and culverts, public buildings and grounds; in industries established by the prison board, conflict with local industries to be avoided; on irrigation works.

Sources: Const., Art. XVI, sec. 3; C. L., secs. 1400, 1400–15, 5455, 5472, 5475–5477, 5508, 5514.

VERMONT

Systems of employment.—Contract; public account; public works and ways; and apparently State use and piece price.

Kinds of work.—On farms; on public highways; in such industries as may be provided.

Sources: G. L., secs. 7136–7138, 7165, 7168, 7258, 7259.

VIRGINIA

Systems of employment.—Public works and ways; public account; State use; apparently contract.

Kinds of work.—On roads and highways but no females on road work; in quarries and gravel pits; in preparation of road material; in grinding of limestone, oyster shells or marl; in manufacture of articles required by the State departments; also automobile license plates.

Regulations.—Surplus of manufactured articles not required by the State may be sold as may be deemed for the best interest of the State; ground limestone, oyster shells, and marls are to be disposed of at a price to cover cost of production, wear and tear, upkeep, etc.

Sources: Code, secs. 1267, 1268, 1971, 2073 (as amended 1924, ch. 88), 2075, 3061, 4993, 5014; Acts of 1918, ch. 9 (as amended 1924, ch. 43); Acts of 1926, chs. 65, 426; Acts of 1928, chs. 150, 153, 154, 487, 511, 525, 526.

WASHINGTON

Systems of employment.—State use; public account; public works and ways The contract system is forbidden.

Kinds of work.—On public roads and public works; in quarries and rock-crushing plants; in manufacture of articles for the State, jute fabrics, and brick; in workhouses, for county convicts.

Regulations.—Jute grain sacks and other products are to be sold only to consumers in the State until June 1. The output of factories, rock crushers, etc., not needed by the State is to be sold at not less than the cost of production, prior right of purchase being given citizens of the State. Prohibits the sale of convict-made goods unless disinfected and labeled "Convict made."

Sources: Const., Art. II, sec. 29; C. and S., secs. 3895, 3896, secs. 5910–5912 (all as amended 1911, ch. 114), 8494, 8519, 8570–8575, 8586; Acts of 1911, ch. 132 (amended 1913, ch. 38; 1917, ch. 56); Acts of 1913, chs. 114, 132 (as amended 1917, ch. 121); Acts of 1917, ch. 103, sec. 3; Acts of 1927, chs. 27, 125, 212, 249, 294, 305.

WEST VIRGINIA

Systems of employment.—Contract; State use; public works and ways; piece price; apparently public account.

Kinds of work.—In manufacture of articles for use in State institutions; on streets and highways; in stone quarries, gravel pits, sand banks, crushers, brick kilns. The board may designate what articles or classes of articles shall be manufactured by contractors for the labor of convicts.

Sources: Code, secs. 1508, 5670, 5671, 5686, 5687; Acts of 1921, ch. 112, secs. 34, 35, 44, 48; Acts of 1925, chs. 12, 17.

WISCONSIN

Systems of employment.—State use; public account; public works and ways; contract; apparently piece price.

Kinds of work.—In manufacture of articles for State and municipalities in workhouses; on farms; on roads and highways; in quarries; in procuring road-building material and limestone for agricultural use; in manufacture of binder twine and cordage, and automobile license plates.

Regulations.—Goods made outside the State and brought into it for sale must be plainly marked "Convict made." Binder twine and cordage are to be sold at prices fixed by the authorities, citizens to have preference in purchase. Articles not required for State use are to be sold in the open market at as near the market price as possible.

Sources: Stats., secs. 33.04, 56.01–56.19, 59.19, 132.13; Acts of 1925, ch. 386; Acts of 1927, ch. 34.

WYOMING

Systems of employment.—State use; public account; public works and ways; apparently piece price.

Kinds of work.—In production of articles for use of State institutions; on highways, streets, alleys, and parks.

Regulations.—Goods not required by the State or its subdivisions may be sold at open market or disposed of as shall be deemed advisable, but no building material shall be sold in competition with established local industry.

Sources: C. S., secs. 6398, 6399, 6401; Acts of 1911, ch. 61 (sec. 4 amended 1917, ch. 109); Acts of 1927, ch. 74.

UNITED STATES

Systems of employment.—State use. The contract system is forbidden.

Kinds of work.—In manufacture of cotton fabrics, cotton duck, and canvas for the War and Navy Departments, mail service, etc., of shoes, brooms, and brushes to supply the requirements of the various departments of the United States Government; on farms.

Regulations.—The importation of convict-made goods is forbidden. Products of the factories and farms are to be sold at current market prices only to the Government of the United States for the use of its various services.

Sources: C. S., secs. 5304, 10524, 10563a–10563c; Acts of 1924, ch. 17; Acts of 1925, ch. 32 (43 Stat. 724).

HOUSING

New Housing Activities of Amalgamated Clothing Workers [1]

ON JANUARY 13, 1929, ground was broken for another cooperative apartment building to be built by the Amalgamated Clothing Workers of America. This is the seventh of such buildings erected in New York City by the union.[2] The first group of six provided housing accommodations for 303 families; this new building will contain 3, 4, and 5 room apartments for 192 more families, and will cost about $1,500,000.

As in the former group, the preference will be given to members of the union, but other unionists will also be admitted to ownership. Stock will be bought by the prospective tenant to the amount of $500 for each room of his apartment, besides which he will pay "rent" (covering cost of upkeep, interest on mortgages, etc.) of $12.50 per room. This is $1.50 more than was charged in the first group of buildings, but the additional charge, it is explained, is to cover the cost of elevator service which the first buildings did not have.

It is now announced that the rents for apartments on the upper floors of the original group will be reduced to $9.50 per room. This was made possible by the unexpectedly good results of last year's operation, the year having been closed "with a surplus, above all operating expenses and interest and amortization payments."

Expenditures for Different Classes of Work in Residential and Nonresidential Buildings in Three Selected Cities

EARLY in 1928 the Bureau of Labor Statistics collected information showing the percentage that each class of work formed of the total cost of building, not including overhead. This information was compiled by the agents of the bureau in the cities of Cincinnati, Ohio, Decatur, Ill., and Washington, D. C., and was published in the January, 1929, Labor Review.

The bureau has recently received from the building commissioners of these three cities reports of building operations as shown by building permits issued during 1928.

The data shown in the tables below were obtained by applying the percentage that each class of work formed of the total cost of the building to the total amount spent in each city for residential buildings and to the total amount spent for nonresidential buildings.

[1] The Advance, New York City, Jan. 18, and Feb. 1, 1929.

[2] For a detailed account of the housing work of this union see Labor Review, August, 1928, p. 1, or Bulletin No. 465, Ch. VII.

Table 1 shows the amount of money spent for each class of work in residential buildings in each of the three selected cities.

TABLE 1.—ESTIMATED AMOUNT SPENT FOR EACH CLASS OF WORK IN **RESIDENTIAL** BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 1928 IN 3 SELECTED CITIES

Class of work	Amount spent for each specified class of work in 1928		
	Cincinnati, Ohio	Decatur, Ill.	Washington, D. C.
Excavating and grading	$523,000	$39,000	$633,000
Brick work	2,888,000	232,000	6,134,000
Carpenter work (including lumber, millwork and hardware)	7,141,000	885,000	11,001,000
Tile work	637,000	20,000	533,000
Concrete work	2,570,000	140,000	2,800,000
Electric wiring and fixtures	819,000	49,000	767,000
Heating	1,274.000	126,000	1,767,000
Plumbing	2,502,000	153,000	2,767,000
Plastering and lathing	2,047,000	116,000	2,800,000
Painting	637,000	108,000	1,800,000
Papering	182,000	14,000	333,000
Roofing	364,000	82,000	833,000
Miscellaneous	1,160,000	2,000	1,167,000
Total	22,744,000	1,966,000	33,335,000

These figures include labor, material, and overhead costs on each item shown.

Carpenter work accounts for the largest expenditure of money in each of these three cities. In Washington over $11,000,000 was spent for carpenter work during 1928, over $7,000,000 in Cincinnati, and in Decatur nearly $1,000,000.

The total amount spent for residential buildings in Cincinnati during 1928 was $22,744,000. Of this amount, $2,888,000 was spent for brick work and $2,570,000 for concrete work.

Other items accounting for the expenditure of over $1,000,000 in Cincinnati were plumbing, plastering and lathing, heating, and miscellaneous.

In Decatur the total expenditure for new residential buildings was $1,966,000. Here too, brickwork accounted for the second largest proportion of the total cost of building, $232,000 being expended for this item during the year 1928. Plumbing, concrete work, heating, plastering and lathing, and painting each accounted for an expenditure of over $100,000.

In Washington, brickwork also ranked next to carpenter work in recorded expenditure. An outlay of $6,134,000 was made in Washington for the brickwork on residential buildings. Concrete work, and plastering and lathing each accounted for an expenditure of $2,800,000; $2,767,000 was spent for plumbing and over a million dollars each for heating and painting. The total expenditure for new residential buildings was $33,335,000.

Table 2 shows the estimated amount spent for nonresidential buildings in each of the three selected cities.

TABLE 2.—ESTIMATED AMOUNT SPENT FOR EACH CLASS OF WORK IN **NONRESIDENTIAL** BUILDINGS FOR WHICH PERMITS WERE ISSUED DURING THE YEAR 1928 IN 3 SELECTED CITIES

Class of work	Amount spent for each specified class of work in 1928		
	Cincinnati, Ohio	Decatur, Ill.	Washington, D. C.
Excavating and grading	$95,000	$43,000	$390,000
Brickwork	881,000	248,000	3,779,000
Carpenter work (including lumber, millwork, and hardware)	1,024,000	306,000	2,508,000
Tile work	579,000	17,000	1,169,000
Concrete work	1,452,000	621,000	2,017,000
Structural steel	738,000	130,000	1,695,000
Electric wiring and fixtures	294,000	124,000	542,000
Heating and ventilating	571,000	120,000	966,000
Plumbing	452,000	114,000	712,000
Plastering and lathing	579,000	45,000	915,000
Painting	127,000	52,000	390,000
Roofing	24,000	47,000	220,000
Glass and glazing	127,000	45,000	237,000
Miscellaneous	1,000,000	27,000	1,424,000
Total	7,943,000	1,939,000	16,964,000

In Cincinnati the largest expenditure for any single item in nonresidential building during 1928 was the $1,452,000 spent for concrete work. This was followed by $1,024,000 for carpenter work. The total expenditure for nonresidential building was $7,943,000.

In Decatur also the largest amount expended for any part of nonresidential building was $621,000 for concrete work. The amount expended for carpenter work was $306,000 and for brickwork $248,000. No other item accounted for an expenditure of as much as $200,000.

In Washington $16,964,000 was spent for nonresidential buildings according to permits issued during 1928. The largest part of this amount that was expended for any one item was the $3,779,000 which went for brickwork. Carpenter work and concrete work each accounted for an expenditure of over $2,000,000 and structural steel and tile work for over $1,000,000.

COOPERATION

League of Belgian Peasants

A REPORT from William C. Burdett, American consul at Brussels, gives a detailed account of the Boerenbond, or League of Belgian Peasants, and its work.

The Boerenbond was established in 1890 and is one of the most influential organizations in Belgium. It is a close federation of some 1,200 local guilds whose membership of 112,918 [1] persons is drawn from the ranks of small farmers and farm laborers of the Flemish or northern part of the country. The local societies are concerned with the general welfare of the members along moral, social, and economic lines. The Boerenbond is the central organization of these local societies and its executive departments correspond to the sections in the guilds themselves.

The whole structure is Roman Catholic and closely connected with the church, its direction being largely in the hands of the priests of the church. "While the primary object of the Boerenbond is the material improvement of the lot of the peasant, the religious aspect is always present. * * * The parish priest is the spiritual director of each of the guilds and in his position as chaplain he has great influence over the members and can intensify the work for the general uplift of the peasant. It must be said parenthetically that this system has worked very well both from the standpoint of the religious worker and from that of the agricultural expert."

Anyone interested in farming may join a guild, but one of the strict requirements is "that prospective members fulfill their church obligations." Only the head of the family is enrolled as a member but all the family is considered as affiliated and any member of it may take advantage of any of the services of the Boerenbond.

The central organization is directed by a committee composed of seven members, three of whom are priests and four are laymen. This committee is "appointed by and under the guidance of a council composed of 40 prominent citizens from the arrondissements or districts. Approximately half of this council are priests."

Agricultural activities.—One of the departments of the Boerenbond is that devoted to stock raising. This section endeavors to improve the strain, carries on experimental and educational work, animal hygiene and care, etc.

Other agricultural services include a plant experimental work, study of soils and the crops adapted to them, study of plant and animal diseases, insurance service, and purchase of farm supplies.

Some 166 dairies are affiliated with the Boerenbond, ranging from primitive dairies where all the work is done by hand to the large steam-operated dairies.

[1] 1,184 guilds reporting.

The league owns a flour and feed mill and acts as distributor for the products of several other mills. It also carries on an inspection service for the local guilds and keeps in touch with developments in the import and export trade, taxation, legislation affecting agriculture, etc.

Business activities.—Members may buy through their local guild all the raw materials and supplies necessary for operation of the farm, the orders so given being pooled. In 1927 the supplies so purchased amounted to $10,122,057, in addition to agricultural and dairy machinery valued at $136,838.

Some marketing is also done through the guilds, mainly of butter, eggs, fruit, and vegetables.

There are 111 regional warehouses through which this business is done.

The league does not itself operate retail stores but does, jointly with the League of Christian Workers, control an enterprise operating 235 retail stores. The business so done amounts to about $1,400,000 per year.

The Central Credit Bank is the financial branch of the league and acts as the central bank for 949 rural savings and loan banks ("people's banks").

Educational and other activities.—Much vocational education work is done by the league. During 1927 it arranged 5,103 lectures by specialists, inspectors of farms, agricultural engineers, etc. These covered a wide range of subjects, such as: Religion; explanation of the organization and operation of the Boerenbond itself; botany and plant culture; theory of fertilization; vegetable growing; fruit growing; plant diseases; cattle raising; poultry raising; goat raising; dairying; drainage; elementary hydraulics; electricity; road building; rural economy; domestic economy; taxes; pensions; farm leases; farm insurance; civic affairs; hygiene; and proper raising of children.

Its courses for boys include primary school work where the children receive elementary instruction in agriculture and horticulture, agricultural courses held after school and in regional schools, intermediate courses for children between 13 and 17, and institutes where engineers and agricultural experts are trained. For the girls the courses cover gardening, home economics, and teacher training.

The women's branch carries on work among the farm women "to improve the religious and social conditions of its members while directing general education in preparation for their rôles as mothers, housekeepers, and farm workers." There are at present enrolled 59,536 housewives and 19,124 others. Courses are given for these women also.

Societies are formed for the young people, and there are now some 354 such societies for young men with 12,925 members.

The league publishes a weekly and monthly periodical in Flemish and French. In this connection the consul states:

> The weeklies are read by all the members of the family and their influence is considerable. This farm journal with a religious background would seem rather incongruous in other settings, but works extremely well in Belgium. The editors are priests who have deep understanding of the viewpoint of the peasant and who write in a simple style that profoundly influences the readers.

Other publications include technical manuals on various agricultural subjects, booklets on matters of current interest, a cook book, a farm almanac, etc.

Condition of the Cooperative Movement in Great Britain, 1927

CONSIDERABLE progress in the cooperative movement in Great Britain is shown by statistics compiled by the Chief Registrar of Friendly Societies and published in the Ministry of Labor Gazette for November, 1927, and November, 1928. The data include those societies registered under the industrial and provident societies act and do not include agricultural societies.

The figures show an increase in membership during the year of 392,000, or 7.6 per cent; increase in capital of £7,794,000 ($37,930,000), or 5 per cent; and an increase in business of £28,300,000 ($137,721,950), or 10 per cent.

During the past three years the consumers' cooperative movement has gained nearly 900,000 new members. This increase is attributed to intensive membership campaigns, increased advertising, and the adoption of credit trading by many societies.[1] From 1925 to 1926 the business fell about £800,000 ($3,893,200), due largely to the prolonged coal strike; as already shown, business showed a large increase in 1927, even in spite of falling prices. Two of the largest retail societies in the south of England gained new members at the rate of 2,000 a week during 1927 and their business increased nearly 40 per cent.

The following statement shows comparative data for 1926 and 1927, conversions being made into United States currency on the par basis; i. e., pound sterling = $4.8665.

	1926	1927
Retail societies:		
Number	1, 318	1, 314
Membership	5, 129, 000	5, 520, 000
Sales	$894, 560, 643	$964, 408, 175
Capital	$531, 358, 535	$561, 973, 687
Value of goods manufactured	$160, 353, 837	$184, 475, 160
Dividends on sales	[2]	$87, 499, 670
Wholesale societies:		
Number	[3] 2	[3] 2
Affiliated societies	2, 034	2, 007
Sales	$447, 806, 478	$509, 096, 410
Capital	$210, 816, 780	$216, 802, 575
Value of goods manufactured	$165, 522, 688	$174, 855, 369
Workers' societies:		
Number	87	89
Membership	[4] 29, 293	29, 658
Sales	[4] $15, 572, 800	$17, 509, 667
Capital	[4] $7, 445, 745	[5] $9, 976, 325
Value of goods manufactured	$14, 017, 306	$16, 646, 433
All types:		
Number	1, 473	1, 472
Membership	5, 177, 000	5, 569, 000
Sales	$1, 378, 192, 800	$1, 515, 914, 800
Net surplus	$112, 805, 470	$128, 120, 346

[1] There is considerable controversy within the movement itself as to the advisability of this step.
[2] No data.
[3] Not including the joint society which administers the tea estates.
[4] 80 associations.
[5] Includes reserve also.

Progress Since 1913

THE Cooperative Union has recently issued a report analyzing the progress made by the movement in that country from 1913 to 1926,[6] from which the following data are taken:

Retail societies.—Cooperative members and their families form from 40 to 45 per cent of the total population in Great Britain, and in Scotland alone from 45 to 50 per cent. During the period since the war, the membership has risen from 3,264,811 (in 1915) to 5,186,728 (in 1926), the greatest expansion having taken place, not in the manufacturing and industrial areas, but in the rural (southern) portions of the country. The distribution by geographical sections is shown below:

	1913	1926
Irish section	18, 746	47, 549
Scottish section	432, 048	677, 258
Northern section	334, 229	540, 956
Northeastern section	459, 202	766, 928
Northwestern section	695, 686	1, 138, 553
Midland section	369, 973	728, 068
Southern section	361, 811	867, 051
Southwestern section	109, 149	240, 497
Western section	97, 804	179, 868
Total	2, 878, 648	5, 186, 728

The tendency during the past decade has been toward the creation of larger societies. In 1914 the largest retail society was that of Leeds, with 47,967 members; but by the end of 1926 the largest was that of London, with 177,339 members, while the Royal Arsenal Society at Woolwich and the Birmingham society had 140,988 and 106,993 members, respectively. The smallest societies are chiefly in northern Scotland and the moorland villages of Lancashire and Yorkshire. The changes in size of society since 1914 are shown in the following table:

NUMBER AND MEMBERSHIP OF RETAIL COOPERATIVE SOCIETIES OF CLASSIFIED SIZE, 1914 AND 1926

Size of society	Number of societies with classified number of members		Total membership in each group, 1926
	1914	1926	
1,000 members or less	821	594	259, 338
1,001 to 2,000 members	222	232	330, 353
2,001 to 5,000 members	189	225	695, 818
5,001 to 10,000 members	70	105	729, 942
10,001 to 20,000 members	48	74	1, 040, 265
20,001 to 50,000 members	21	40	1, 199, 476
Over 50,000 members		10	931, 536
Total	1, 371	1, 280	5, 186, 728

The trading operations of the retail societies cover not only the distributive trading but also such services as hairdressing and painting and productive operations. More than 80 per cent of their total business, however, is in the sale of foodstuffs, while the sale of coal, a rapidly increasing line of business, accounts for 7.8 per cent. Since 1913 the average sales per member (at 1913 values) has declined from £29.1 ($141.62) to £21.2 ($103.17), or about 30 per cent. This "disconcerting tendency," as the author characterizes it, is explained

[6] Twigg, H. J.: The economic advance of British cooperation, 1913 to 1926. Manchester, The Cooperative Union (Ltd.), 1928.

by the decreased purchasing power of the membership, due to unemployment and underemployment, the tendency to take into membership all members of the family, the development of service departments, and the intensified competition from private businesses. "Nevertheless, this falling off in individual loyalty (which, it may be noted, is a phenomenon dating farther back than 1913) is a matter for serious concern to cooperators, and should influence the movement in the determination of its business policy as to prices, range of service offered, etc."

Trading surpluses have also fallen off, attributable "in large part" to "the growing realization that cooperative societies must seek the trade of the poorest classes of workers, and thus maintain low price levels," and to the increasingly severe competition already noted. As regards actual money surpluses, "cooperative capital (only part of which is invested in trading assets) earned in 1913 about 30 per cent per annum, and in 1926 about 20 per cent per annum—results which, judged by ordinary commercial standards, would be regarded as exceptionally good."

During the war years 1914 to 1918, when prices were rapidly rising, most cooperative societies were reluctant to advance retail prices as rapidly as the rise of wholesale prices would have justified. Had societies, in this period of rising prices, adopted the policy of selling at replacement costs, supluses could have been considerably enlarged. As things were, cooperative consumers gained advantages in the form of low prices rather than in the form of high dividends.

Wholesale societies.—There are three wholesale societies, the (English) Cooperative Wholesale Society, the Scottish Cooperative Wholesale Society, and the Irish Agricultural Wholesale Society; and a society, owned jointly by the English and Scottish societies.

The English society's activities include:

(*a*) Wholesale distribution of food, clothing, and furniture on a very large scale, involving the handling of a very wide range of commodities.

(*b*) A steadily increasing business with agricultural cooperative societies in the supply of agricultural requisites, etc. Incidentally, part of its purchases of produce are made through these agricultural cooperative societies.

(*c*) Operation of a very large number of factories, mills, and workshops, and the marketing of its own productions from these centers.

(*d*) Ownership and operation of a coal mine.

(*e*) Operation of a number of farms concerned in most branches of agricultural production.

(*f*) Its own banking department.

(*g*) A variety of special departments rendering miscellaneous services to the cooperative movement (e. g., auditing department, excursion department, health insurance section, architects' department, building department, solicitors' department, etc.).

The productive enterprises of the English Society include 2 biscuit works, 5 preserve works, 3 soap works, 10 flour mills, 1 tobacco factory, 1 lard refinery, 1 margarine works, 1 oil and cake mill, 4 printing works, 1 rope mill, 1 colliery, 3 flannel mills, 1 hosiery factory, 2 corset factories, 4 shirt factories, 3 underclothing factories, 4 woolen factories, 4 weaving sheds, 6 clothing factories, 10 boot and shoe works, 1 cannery, 4 cabinet factories, 1 brush works, 1 iron works 1 bucket and fender works, 1 tin plate works, 1 paint and varnish works, 1 pottery, and a cycle and jewelery establishment, and several farms.

FAMILY ALLOWANCES

Progress of Family Endowment Movement in Australia and New Zealand [1]

THE pioneering of Australia and New Zealand with governmental regulation of wages has attracted world-wide attention among economists and other students of labor problems. This fact naturally leads to an international interest in the passage in the last two years of family endowment acts in both of these countries (although the Australian law is confined to New South Wales).[2] This interest deepens when a study of the genesis of these laws shows that they are a direct development of the long experience of these two countries in attempting to fix a minimum wage based on the cost of the support of an average family.

In the discussion which preceded the enactment of family endowment legislation in New South Wales and New Zealand, emphasis was put upon the drawbacks to the practice of providing in the basic wage for family responsibilities which many of the workers did not have. Yet neither of these new measures offers a complete escape from such practice by clearing the way at once for a basic wage for a single male adult, as the New Zealand act grants no allowance for the wife and the first two children and the New South Wales child endowment law is tied up with a basic wage supposed to provide for a man and his wife.

Although family endowment, generally speaking, has had the support of labor in Australia and New Zealand, the workers in both countries seem to be greatly disappointed in the present acts not only because of the inadequacy of the allowances but because they fear the repercussion of such legislation upon their minimum basic wage. A brief survey of the immediate background of these measures and of the present status of family endowment in Australia and New Zealand follows:

[1] This article is based on data from United States Bureau of Labor Statistics Bul. No. 401, Family Allowances in Foreign Countries, Washington, 1926, pp. 114, 119, 122, 123, 129; Labor Review, April (pp. 102–103), June (p. 127), November (p. 114), 1927; Australia, Royal Commission on the Basic Wage, Report, Melbourne, 1920, p. 13; Australia (Western Australia), [Court of Arbitration], Basic wage declaration for the year 1927–28 [under industrial arbritration act, 1912–1925] and reasons of the court, Perth, 1927; British Ministry of Labor Gazette, London, July, 1927, p. 253; International Labor Office, Industrial and Labor Information, Geneva, Feb. 16, 1925 (p. 22), May 9, 1927 (p. 229); International Labor Office, Legislative Series—N. Z. 5, Act—Family allowances, Geneva; Queensland Industrial Gazette, Brisbane, April, 1924 (pp. 190, 213), April, 1927 (p. 267); New South Wales Industrial Gazette, Sydney, Dec. 31, 1927 (p. 1371), June 30, 1928 (pp. 843–845); New Zealand Department of Labor, Pronouncements of the court re cost of living, Wellington, 1922, p. 23; Australian Worker, Sydney, Aug. 3, Sept. 14, Dec. 7 and 14, 1927, Sept. 19, 1928; Economic Journal, London, September, 1927, pp. 369–383; Family Endowment Society, Monthly Notes, London, August–September, December, 1927, January, May, June, July to October, 1928; Labor Magazine, London, May, 1924, p. 44; New Zealand Worker, Wellington, June 17, 1925, Apr. 27, 1927; The next step—A family basic income, by A. B. Piddington, London, 1922, pp. 11, 22, 66, Second impression; The Prosperity of Australia—An Economic Analysis, by Fredrick C. Benham, London, 1928, pp. 240–241.

[2] Family allowances have, however, been paid in the Commonwealth civil service since 1920.

New Zealand Experience

THE passage of the family allowance act in September, 1926, had been preceded by considerable discussion on the principle of child endowment and by several efforts to enact legislation embodying this principle. In 1922 a bill for "child sustenance" was introduced into Parliament providing that "all payments for wages or salaries for adult male workers by way of a basic wage shall in future be based on a family of two (man and wife)," and that "every employer of adult workers shall pay into the child sustenance fund such amount as shall be assessed for each day or part day worked by each employee." The same year Judge L. V. Frazer of the New Zealand Court of Arbitration declared "that justice to all can not be attained by working on the basis of an average family." He agreed that if all adult males were paid the same basic wage some would have more than a fair living wage, others would have the proper amount to meet their needs, and others would not have sufficient. He presented statistics showing that, of 375,000 adult males in the New Zealand population, 150,000 were unmarried, 70,000 were married without children under 14, and 53,500 had only 1 child under 14. The New Zealand Industrial Bulletin (official organ of the New Zealand Employers' Federation) of November 10, 1924, states that although it is widely conceded that the present wage payment system results in injustice to the man who is attempting to educate a young family, the question is fraught with difficulties and New Zealand statistics supply no adequate basis "upon which to make such a plunge."

At the annual meeting of the New Zealand Associated Chambers of Commerce which was held at Wanganui, November 19–21, 1924, it was urged in a unanimous recommendation that Parliament insist upon the establishment of a "more equitable standard" for the legal minimum wage, as such wage is now "based upon the estimated requirements of a married man with two children or equivalent dependents," while the responsibilities of 75 per cent of the wage earners are acknowledged to be less.

Prior to July, 1925, the New Zealand Labor Party had twice introduced bills for motherhood endowment, providing 10 shillings per week for each child after the second until such child completed his or her fourteenth year.

Proposal of the New Zealand Labor Department

In the report of the New Zealand Department of Labor for 1925 it was suggested that without increasing the total wages "paid by any employer or in industry generally, the amounts ordinarily due to the workers would be adjusted, through a central fund, according to the number of dependents (if any) on each worker. It is ascertained that there is approximately one child under 14 years of age to every adult male worker; if, therefore, the sum that it is desired to allow for each child—say 7s. 6d. per week—was deducted from each worker's wages or salary, the amounts so deducted would in the aggregate provide approximately that sum for each child less an allowance for administrative expenses; in actual practice each em-

ployer would be required to deduct the sum decided on from the wages of each of his employees and to pay that amount to the central fund in the locality."

Provisions of the Family Allowance Act

The family allowance act of September 9, 1926, which came into force April 1, 1927, is somewhat different from the proposal of the labor department, as the allowances are paid out of public funds and borne by the general taxpayer and the grants are made beginning with the third child. It will be noted, however, that the amounts of the allowances are very much lower than those suggested in the labor department report, being 2 shillings (49 cents) per week per child in excess of two. Moreover, in order to benefit under the act, the average weekly income of the family, including allowance, must not exceed £4 ($19.47) plus 2 shillings (49 cents) for each child in excess of two. The term "child" under the law means a child under 15 years of age who is a son, daughter, stepson, or stepdaughter of the father applying for the allowance. An allowance will also be granted for a child legally adopted by either the applicant or his wife. A child who is not actually supported as a member of the family or for whom a public pension is already being received is excluded from the benefits of the act. Under certain circumstances, however, allowances may be paid after a child has completed his or her fifteenth year.

In computing the income in connection with decisions as to the eligibility of an applicant for such benefit the following items are considered:

(*a*) All money or money's worth received within the period of one year immediately preceding the date of the application from all sources by any member of the family for his own use or benefit or for the use or benefit of any member of the family, exclusive of any payment by way of sick allowance or funeral benefit received from a registered friendly society.

(*b*) Interest at the rate of 5 per cent per annum (or such higher rate as may actually be received) on the value of the beneficial interest of any member of the family in any real or personal property (other than property on which the family resides, or furniture and personal effects in the possession of the family).

In special cases expected increases or reductions in income may be taken into consideration. Expenditures in the production of income are to be deducted from income as computed above.

The father is designated as the proper applicant for an allowance. The allowance itself, however, is usually paid to the mother, although in some exceptional cases it may be paid to the father.

Aside from conditions as to children and income, the applicant (except when the benefit is not payable to the mother) and his wife must have lived in New Zealand for at least a year, and the children for whom the allowance is payable must either have been born in the Dominion or resided therein one year. Neither aliens nor Asiatics, whether British subjects or not, may benefit under the act except with the direction of the minister in charge of the pension department.

Bad character or dishonest action for the purpose of benefiting by the allowances may be regarded as a basis for refusal to make such grants.

Allowances must be applied toward the maintenance or education of the children for whom they are granted and may be withheld unless it be shown that such payments will be so used.

Mr. R. M. Campbell, in the Economic Journal (London) September, 1927, declares that the strongest argument for this remedial legislation was "the present plight of an immense number of children." The quinquennial census was taken a short time before the Government's family allowance bill was introduced and it was found that 50,000 children, or not less than 12½ per cent of the total child population of New Zealand, were dangerously near destitution. The minister in charge of the bill quoted figures showing that 32,762 bread-winners with 80,265 dependent children had incomes below £4 a week, and that 50,989 of these children belonged to families which had three or more children.

Experience Under the New Legislation

The annual report of the New Zealand Pension Department for the year ended March 31, 1928, states that the estimate of the number of applications which would be made for family allowances under the act effective April 1, 1927, has so far not been realized. At the close of the first year these grants had been made for nearly 10,000 children beginning with the third child, representing in round figures 3,000 families whose total children numbered 16,000. It is pointed out that early experience with old-age pensions and widows' pensions was somewhat similar. Certain classes of people either were unacquainted with the provisions passed for their benefit or were diffident about availing themselves of such advantages. It is thought that at least another full year's operation of this act will be required before a reliable estimate can be made.

Of the 3,980 claims made during the year 411 were rejected because the family income exceeded the fixed limit and 74 others because the required evidence was not presented. The total amount paid in allowances was £37,652 ($183,233).

The principal occupations of the fathers of the children receiving allowances were: Laborers, 1,350; farm hands, 298; farmers, 290; public servants, 122; waterside workers, 101. The number in other occupations was below 100.

The number receiving specified rates of allowances were as follows:

Weekly rate of—	Number of families	Weekly rate of—	Number of families
1s	17	11s	1
2s	583	12s	144
3s	36	14s	43
4s	749	15s	1
5s	22	16s	21
6s	712	18s	6
7s	20	20s	1
8s	488		
9s	8	Total	3, 154
10s	302		

The weekly incomes of families receiving allowances are given below:

	Number of families
£1 and under	110
Over £1 and up to £2	342
Over £2 and up to £3	789
Over £3 and up to £4	1, 691
Over £4 and up to £5	222
	3, 154

The numbers of families having specified numbers of children in excess of two are shown in the following statement:

	Number of families		Number of families
1 child	549	7 children	51
2 children	751	8 children	26
3 children	706	9 children	7
4 children	542	10 children	1
5 children	343		
6 children	178		3,154

The cost of administration of the act for the period under review was £70,843 ($344,757), nearly half of which was for salaries, including those of medical officers.

Attitude of Labor

Commenting upon the 1926 measure, the New Zealand Worker of August 25, 1926, declares that the Labor Party considers the bill "as an admission of the justice of the claims it has made for several years past and as far as it goes as a humane and praiseworthy departure in law." It was further stated that labor would strive energetically "to make the allowance square with the parents' needs."

At the first conference of woman members of the New Zealand Labor Party at Wellington on April 15, 1927, a resolution was adopted, expressing satisfaction at the passage of the family allowance act as a result of the "sustained demand of the Labor Party for the endowment of motherhood" and at the same time emphasizing the necessity of constantly pressing for a higher scale of payments.

At the time of the passage of the bill labor seemed somewhat optimistic over the possibilities of securing in the future a higher allowance. The fact that more than a year after the act went into force the amount still remains 2 shillings per child seems to have had a discouraging effect on the workers.

Trend Toward Family Endowment in Australia

WHILE in actual practice family allowances in Australia from 1920 to 1927 were entirely restricted to persons in the service of the Commonwealth, important proposals had been made for such allowances for private wage earners before the New South Wales Legislature and by governmental commissions and at national and State trade-union conferences. The growing dissatisfaction with the decisions of the Commonwealth Court of Conciliation and Arbitration led in 1919 to the appointment of the Royal Basic Wage Commission. As soon as the report of this body was submitted the Prime Minister secured from the Commonwealth Statistician a statement as to the practicability of paying every male adult a wage of £5 16s. ($28.23) per week. In this statement the latter official declared that such a wage could not be paid to all adult employees because the whole produced wealth of the country did not yield the required amount. Whereupon Mr. H. B. Piddington, the chairman of the commission, advanced his much-quoted statement that Australian industries in 1920 were paying for 450,000 nonexistent wives and 2,100,000 nonexistent children and suggested a redistribution of wages based on the number of children of the wage earners or as an alternative scheme the raising of a fund for children's allowances by

a tax on employers. Shortly afterwards the Federal Government established a system of family endowment for its employees.[2]

In 1921 the All-Australian Congress of Trade-Unions at Melbourne unanimously resolved "to indorse the principle of the endowment of motherhood and childhood" as a charge on the whole community.

The Victorian section of the Labor Party at its Easter conference in 1924 backed a proposal approving the principle of universal endowment for mothers and children. A special committee had considered the problem and recommended, as a preliminary to full maintenance by the State, that a labor government upon assuming office should "pay from State funds 5s. per week for each child until it reaches the school-leaving age." The question of the manner in which financial provision should be made for family allowances was to be referred to the Federal Labor Party.

It was reported early in 1924 that the Melbourne Trades Hall Council had adopted the statement of the committee appointed to promote the principle of equal pay for men and women, that "the dual standard, if allowed to remain, is bound to become an evil of the first magnitude" and "that the only measures that deal effectively with the situation are the uniform basic wage for the sexes, and child and motherhood endowment by the State."

Some years ago Hon. Thomas H. McCawley, president of the court of arbitration of Queensland and chief justice of the Supreme Court of that State, reached the conclusion that the next move should be the establishment of children's allowances on a national scale, as he could "see no other way of substantially raising the standard of living of those who are at present the most unfairly treated—married men with young dependent children, who now receive the basic wage or a little more."

The Economic Commission on the Queensland Basic Wage appointed December 30, 1924, declared the chief advantage in family allowances was the possibility such grants offer of securing to every family with more than one dependent child a higher standard of comfort without placing further burdens on industry or without infringement upon the "Harvester equivalent" for single childless men.[3] Family allowances, according to the commission, are not only likely to increase efficiency but to add to the general welfare in other ways. For example, an effective demand from the married would, on the whole, be "more likely to increase the production of the necessities and of goods and services leading to the welfare of the community" than if such demand were to a greater extent from men without children.

In Western Australia the question of family allowances was quietly under discussion even before 1925.

Justice Dwyer of the Arbitration Court at Perth, in connection with his declaration of the basic wage for 1927–28, suggested that the proper way of providing for children under 14 years of age in excess of two in the family was through child endowment. Furthermore the Perth conference of trade-unions in July, 1927, indorsed the child endowment policy of the Western Australian Labor Party and decided to back a Commonwealth endowment scheme providing for

[2] This system was referred to in an article in the December, 1928, Labor Review, pp. 20–27.

[3] The term "Harvester equivalent" was used to express the nominal wage at any given time, which represented 7s. per day in 1907—the "basic wage" fixed in the Harvester case. (Bul. No. 401, p. 121.)

10s. 6d. per week per child in excess of two, together with endowment for all dependent children of widows, deserted wives, and unmarried mothers.

New South Wales Plan

WHILE the question of family endowment has, as noted above, aroused considerable interest in all the Australian States, New South Wales was the first of these States to enact legislation on this matter. This measure came into effect in June, 1927.

As far back as 1916 the possibility of instituting family allowances was being considered. In 1919 the State Government introduced a child maintenance bill which failed to become a law. In April, 1921, the New South Wales State Conference of the Australian Labor Party submitted to the Federal Labor Party for its consideration a motion which included among other matters a recommendation that the latter party adopt a "national comprehensive scheme * * * for the maintenance of all children of the nation by a direct charge on the whole community by means of a graduated tax on incomes." The same year another unsuccessful attempt was made to put through a child endowment bill.

On December 15, 1926, the New South Wales industrial commissioner announced that there would be no change in the basic wage for adult males that had been fixed August, 1925, at £4 4s. ($20.34). At the same time he recommended to the Government that a family allowance scheme be established in connection with the living wage.

The workers, however, took the position that living had advanced since that date and that it was an injustice to them to fix such a low basic wage with the promise of compensating for it by child endowment. The following March a movement was made by a committee created by the South Wales Trades Union Congress to persuade all unions to demand a basic wage of £5 16s,. a week.

A measure was finally enacted of which the following is a summary:

The family endowment act, 1927, which was passed at the end of March last, provides for the payment to mothers in certain circumstances of an allowance at the rate of 5 shillings a week for each child, for the maintenance, training and advancement of children under 14 years of age. Allowances may be continued up to the age of 16 years in the case of children incapacitated from earning a living by reason of a physical or mental defect.

Various conditions must be satisfied before the allowance becomes payable, the chief of which are:

(*a*) At the date on which the claim to an allowance is made the mother must be resident in New South Wales and have had her home there for the two years immediately preceding the date of the claim.

(*b*) Claims can be considered only in respect of children who have been resident for not less than two years in New South Wales, or, if below the age of 2 years, were born in that State.

(*c*) Allowances are not generally payable in respect of illegitimate children, nor in cases where the mother is already in receipt of a pension under the widows' pension act, 1925.

(*d*) Children of an alien father, an Asiatic father, or of an aboriginal native of Africa, the Pacific Islands, or New Zealand, are excluded from benefit, unless born in Australia.

(*e*) Where the total family income, as defined in the act, in the 12 months preceding the date of the claim exceeds the amount of the living wage for one year based on the requirement of a man and wife without children plus £13 for each child under 14 years, no allowance is payable.

(*f*) In cases where the payment of the full endowment would increase the family income beyond the limiting qualifying income, such part of the endowment shall be paid as will bring the total family income up to the qualifying limit.

A further act, the finance (family endowment tax) act, 1927, provides that employers shall pay into a newly constituted family endowment fund amounts equal to 3 per cent of their total wages bill, and from this fund the family allowances will be paid.

The family endowment act will come into operation on a date to be fixed by the governor, but in any case not until after the declaration of the living wage for a man and wife without children has been made by the Industrial Commission of New South Wales. This declaration, according to the provisions of the industrial arbitration (living wage declaration) act, 1927, must be made not later than the end of September, 1927. Previously the living wage has been based on a man, wife, and two children.

The income limit under which children's allowances are granted is very much lower in the law than in the original proposals made by the government.

New Basic Wage

On June 27, 1927, the basic wage was declared to be £4 5s. ($20.68) per week for men and £2 6s. ($11.19) for women—an increase of 1s. (24.3 cents) for the former and of 3s. 6d. (85 cents) for the latter over the previous rate. The basic wage for men, however, was now to provide for a man and wife without children instead of a family of four. Following this declaration the family endowment act became effective June 30, 1927.

Amendments to Child Endowment Act

The next December several amendments were made to the family endowment legislation, among them a provision for the discontinuance "for a certain period the imposition of the contributions by employers to the family endowment fund and to enable the governor to extend such period by proclamation;" and to provide "for the assessment and collection of the tax imposed by the finance (family endowment tax) act, 1927, by the commissioner of taxation and to confer on him certain additional powers for this purpose."

Another amendatory act, assented to June 16, 1928, eliminated certain anomalies in the original law. Under the new provisions the pensions of children of ex-soldiers are not to be considered in computing the income of a family. Temporary absence from home because of sickness, on account of education or other special circumstances is not a disqualification for endowment. Allowances will be paid for children born outside of New South Wales to mothers temporarily absent from the State. In computing the family income the following items will be excluded: Endowment, payments for medical and hospital treatment under the workmen's compensation act and payments by the education department for bursaries, and similar grants. When the incomes of the spouse and children under 14 years of age can not after proper investigation be ascertained, such incomes may be disregarded in calculating the family income. In cases where a child was under 14 at the time the claim was lodged, endowment may be allowed even though this child may have reached that age or died at or previous to the commissioner's determination of such claim.

Financing Endowment

Up to March 31, 1928, there were 40,567 claims received, of which 23,310 were granted, 5,245 rejected, 371 withdrawn, and 7,364 pending. The families endowed number 23,310 and the child beneficiaries 58,375. The amount of endowment paid was £513,368 ($2,498,305) and the administration costs were £42,147 ($205,108). It is estimated by the Government that the cost for endowment for 1928–29 will be about £1,750,000. The alternatives for raising the fund are a 1½ per cent tax on the wages bill and a super tax. "It is prophesied that the Government will adopt the latter method, as it is a tax upon profits; while the wages bill tax hits the employer whose business is a losing proposition."

Application for Another Cost of Living Inquiry

According to the Australian Worker of September 26, 1928, the Employers' Federation and others have applied to the New South Wales Industrial Commission to investigate the standard of living and "to declare a living wage based on such standard for other than rural workers." Two of the justices agreed that such application should be granted, but Justice Piddington dissented, holding in a separate judgment "that the application was an attempt to spell out from the living wage declaration act a meaning which would make the commission the spear-head of a general attempt to reduce the standard of living throughout the Commonwealth."

The application should be refused in the public interest, because no facts had been offered to show that the settlement of rights and obligations effected by the legislature and the judgment of 1927 had been injurious to the community or to the applicants. A reduction of the living wage to £3 14s. [$18] a week would mean a contemplated general reduction of £5,500,000 of the amount obtained by employees under State awards. The application aimed at the reduction of all award wages under State law, the declared living wage being the pivot of that law.

In reference to the press statements forecasting a reduction of the basic wage the secretary of the Australian Workers' Union said: "We are going to fight hard to prevent any reduction. There should be no decrease, because, on Mr. Justice Piddington's admission, the wage would have been £4 15s. ($23.12) if it had not been for child endowment. We say that child endowment and the basic wage are separate and distinct matters."

Conference of Commonwealth Premiers

IN JUNE, 1927, several months after the passage of the family endowment act in New South Wales, a conference of State premiers was held at the call of the Commonwealth Government to discuss the problem of family endowment from a national viewpoint. Such action was the outcome of the realization that matters could not be dealt with by the individual States without disturbing the foundations of interstate trade.

At this conference the Prime Minister presented various estimates of the cost of endowment for dependent children under 14 years of age at 5 shillings a week. These estimates ran from £24,437,000 per annum for all such children to £7,578,000 a year if the first and second

children in a family were excluded. These amounts were in addition to the basic wage and were subject to modification if wage limits were applied. For example, it was estimated that if the income limit was £500 there would be a reduction of 2 per cent in the above estimated costs of endowment, and if the income limit were £300 the reduction would be equivalent to 8 per cent

It was suggested by the Prime Minister of the Commonwealth that the States might take uniform legislative action to generalize child endowment, but in the opinion of the Federal Government there is no way in which "to impose the cost of child endowment on the general revenue, or to add it to the existing obligations of industry, without having the most detrimental effect upon the general development of the country, the expansion of our industries, and the cost of living."

Royal Federal Commission on Child Endowment

AT THE above-mentioned interstate conference of prime ministers a decision was reached to appoint a Royal Commission on Child Endowment to consider the matter from the viewpoint of the Commonwealth as a whole. One of the five members of this body is a woman.

This commission began its investigations in Queensland and has been holding extended hearings. Published excerpts from these hearings indicate a bewildering variety of opinion on the question at issue, especially with regard to the ways and means of operating a child endowment scheme.

An examination of these statements and declarations by representatives of differing interests before the commission discloses that even employers' federations do not think alike on the subject. For example the Chamber of Manufacturers of New South Wales and several employers' associations in Queensland are in favor of child endowment, while a member of the Employers' Federation of Victoria listed what he felt would be the dire effects of child endowment, and announced that "Australia was heading straight for bankruptcy and was demoralized by doles."

Another fact shown in these summarized hearings is the substantial number of representatives of women's organizations who approve child endowment. On the other hand, there are representatives of other women's organizations who are definitely opposed to the scheme.

It is also disclosed in the evidence before the Royal Commission that the Australian Council of Trade Unions "considered child endowment imperative if Australia was to be assured in the future of healthy, well-educated, efficient, producing and service-giving population."

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in January, 1929

DATA regarding industrial disputes in the United States for January, 1929, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

The bureau is dependent upon trade journals, newspapers and labor periodicals for notices of strikes. These reports are followed up by correspondence and when necessary by personal visits of representatives of the Conciliation Service or of this bureau.

Table 1 is a summary table showing for each of the months—January, 1927, to January, 1929, inclusive—the number of disputes which began in those months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss in man-days. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO JANUARY, 1929

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
1927					
January	37	18	5,915	2,287	58,125
February	65	45	9,756	5,717	115,229
March	74	67	13,142	8,182	214,283
April	87	88	202,406	199,701	5,265,420
May	107	116	22,245	200,702	5,136,006
June	80	88	18,957	196,323	4,863,345
July	65	63	33,994	199,287	5,308,123
August	57	53	8,150	198,444	4,999,751
September	57	58	12,282	196,829	4,945,702
October	50	58	13,024	82,095	2,724,117
November	27	51	5,282	82,607	2,040,140
December	28	54	4,281	81,229	2,129,153
1928					
January	43	62	18,263	81,676	2,135,092
February	47	61	33,602	104,883	2,155,559
March	34	63	7,145	78,362	2,343,415
April	62	70	143,834	134,382	4,884,430
May	72	74	15,138	136,094	3,526,608
June	40	64	20,941	134,406	3,580,719
July	53	60	17,232	134,102	3,365,803
August	57	59	8,279	129,210	3,577,599
September	48	48	8,041	63,650	2,605,713
October	49	43	26,615	41,420	1,304,647
November	43	39	37,650	38,553	1,295,134
December [1]	23	33	5,729	36,276	1,002,630
1929					
January [1]	42	44	13,975	40,317	967,822

[1] Preliminary figures subject to revision.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in November and December, 1928, and January, 1929, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN NOVEMBER AND DECEMBER, 1928, AND JANUARY, 1929

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	November	December	January	November	December	January
Automobile, carriage, and wagon workers			1			20
Building trades	7	8	2	279	520	100
Chauffeurs and teamsters	2		3	359		110
Clothing workers	5	3	9	990	361	875
Farm labor	1			80		
Furniture workers		2	1		110	150
Glass workers	2			157		
Hospital employees			1			15
Laundry workers			1			3,000
Metal trades	1	1	1	36	90	22
Mine workers	9	5	7	33,760	4,136	8,753
Motion-picture operators, actors, and theatrical workers	1		1	8		20
Pottery workers	1			250		
Printing and publishing	2	1		213	45	
Rubber workers	1			800		
Stationary engineers	1			13		
Teachers	1			11		
Textile workers	8	3	15	665	467	910
Miscellaneous	1			29		
Total	43	23	42	37,650	5,729	13,975

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in January, 1929, classified by number of workers and by industries:

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN JANUARY, 1929, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in January, 1929, involving—					
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	5,000 and over
Automobile, carriage, and wagon workers		1				
Building trades		2				
Chauffeurs and teamsters	1	2				
Clothing workers		7	2			
Furniture workers			1			
Hospital employees	1					
Laundry workers						
Metal trades		1			1	
Mine workers			4	2		1
Motion-picture operators, actors, and theatrical workers		1				
Textile workers	4	10		1		
Total	6	24	7	3	1	1

In Table 4 are shown the number of industrial disputes ending in January, 1929, by industries and classified duration:

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN JANUARY, 1929, BY INDUSTRIES AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in January, 1929				
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months
Building trades	2				
Teamsters and chauffeurs	1				
Clothing workers	4	1	1		
Furniture workers	1				
Metal trades	1	1			
Mine workers	5				
Motion-picture operators and theatrical workers	1				
Textile workers	11				2
Total	26	2	1		2

Principal Strikes and Lockouts Beginning in January, 1929

FURNITURE workers, Michigan.—The Johnson-Randall Co., of Traverse City, manufacturers of fiber furniture, was affected by a strike of 150 furniture workers from January 10 to January 14 for the reestablishment of the old piece-work rates, which had been reduced about 10 per cent in the weaving department on November 26, 1928. The old rates were restored.

Textile workers, Rhode Island.—A strike of about 500 employees of the Lonsdale Co., Berkeley, began on January 21 because the company discharged four men. The company agreed to restore the discharged men and the workers returned on January 24.

Shoe workers, Massachusetts.—About 300 shoe workers, members of Wood Heel Makers' Local 11 of the Shoe Workers' Protective Union, went out on strike in the afternoon of January 21 against five firms because it was alleged that crews of the firms where strike was called made independent agreements with them which cut the prices agreed upon, making it unfair for the firms paying the regulation prices. Moreover, such independent agreements constituted a violation on the part of both worker and employer of the agreement with the union.

The strike practically ended with the return of most of the workers on January 23, the union having concluded negotiations with the manufacturers and obtained their assurance that they will observe union prices and conditions.

Anthracite miners, Pennsylvania.—A 1-day strike of 5,814 miners against the Lehigh Coal & Navigation Co., at Lansford, occurred on January 29. This followed a 1-day "button" strike of 799 miners at the company's No. 6 shaft on January 25, where the men returned to work on the previous basis. Following the button strike, the Lansford Colliery (No. 6 shaft) was suspended for one day by the company and all other collieries remained idle on January 29 on sympathy strike as a protest against the suspension of No. 6 shaft.

Laundry workers, California.—According to press reports some 3,000 Chinese laundry workers in San Francisco conducted a successful strike from January 30 to February 4 for a workday of 10 hours instead of 15 on Saturdays, with Sundays, or occasional Sundays, off, the main point of contention being the shorter workday on Saturdays. The new work schedule, it is understood, calls for 15 hours a day for 5 days, 10 hours on Saturday, and 12 hours on alternate Sundays. The strike involved about 50 owners of Chinese laundries.

Principal Strikes and Lockouts Continuing in January, 1929

BITUMINOUS coal strike.—The suspension of April 1, 1927, has not been reported as over in the States of Pennsylvania and Ohio, but according to press reports the union is steadily losing ground in those States and the miners have been drifting back to work.

Central Pennsylvania is now, it is said, to all intents and purposes a nonunion district, conditions being normal at all mines.

Technically the strike still continues in the Pittsburgh district, but there is said to be no production difficulty, the only difficulty being to sell coal.

Conciliation Work of the Department of Labor in January, 1929

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 46 labor disputes during January, 1929, These disputes affected a known total of 12,611 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On February 1, 1929, there were 33 strikes before the department for settlement and in addition 19 controversies which had not reached the strike stage. The total number of cases pending was 52.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, JANUARY, 1929

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
					1928	1929		
Oriental Upholstering Co., Lynn, Mass.	Strike	Upholsterers	Validity of union contract	Adjusted. Will abide by contract	Sept. 30	Feb. 2	20	
Lehigh Coal Co., Exeter, Pa.	do	Miners	Working conditions	Adjusted. Returned: district committee to fix terms.	Dec. 12	Jan. 3	840	10
Hamlet Textile Co., Pawtucket, R. I.	do	Weavers	do	Adjusted. Satisfactory agreement concluded.	Dec. 28	do	50	6
Broadway-Stevens Building, Camden, N. J.	do	Building crafts	Objection to nonunion electrical workers.	Pending	Dec. 29		39	
Moon Silk Co., Summit, N. J.	do	Textile workers	Wages and working conditions.	Adjusted. Allowed 8-hour day and increase of 1 and 2 cents per yard.	Oct. 16	Jan. 28	60	7
					1929			
Beacon Mills, New Bedford, Mass.	do	Nappers	do	Adjusted. Satisfactory settlement	Jan. 2	Jan. 3	50	
Photo-engravers, Philadelphia, Pa.	do	Engravers	Company refused to renew union agreement.	Unclassified. Open shop effective before commissioner's arrival.	Jan. 1	Jan. 14	16	
Philadelphia Storage Battery Co., Philadelphia, Pa.	Controversy	Tool makers	Working conditions	Unable to adjust. Company established open-shop conditions.	Jan. 10	Jan. 27	28	
Kupfer, Schlassberg & Co. (Inc.), New York City.	Strike	Coat makers	Discharges, in alleged violation of contract.	Adjusted. Work resumed; discharged employees to be reinstated later.	Jan. 1	Jan. 9	4	41
United Electric Coal Co., Duquoin, Ill.	do	Laborers	Asked 35 cents per hour increase (to 75 cents per hour).	Pending.	do		2	149
L. Brayton Foundry Co., West Warwick, R. I.	do	Molders	Wages cut 10 per cent	Adjusted. Returned; accepted 10 per cent wage cut.	Jan. 3	Jan. 7	36	
Standard Sanitary Manufacturing Co., Louisville, Ky.	Controversy	Metal polishers	Asked 10 per cent increase	Adjusted. Signed agreement without increase.	Jan. 1	do	300	3,000
Park Silk Co., Paterson, N. J.	Strike	Weavers and warpers	Man discharged; alleged imperfect work.	Adjusted. Man reinstated	Jan. 5	Jan. 11	1	44
Guarantee Silk Co., Paterson, N. J.	Controversy	Textile workers	Dispute with shop chairman	Pending	Jan. 11		24	
Glen Alden Coal Co., West Nanticoke, Pa.	Strike	Miners	Disagreement on amount of wages paid; deductions.	Adjusted. Returned; district officers to fix terms.	do	Jan. 11	490	10
Gulf Production Co., Ft. Worth, Tex.	Controversy	Oil workers	Discharges; alleged discrimination for union activity.	Pending	Jan. 15		3	50
Contract shops, Ozone Park, N. Y.	Strike	Dressmakers	Change from week to piece work.	Adjusted. Agreed on 6 months' trial of working conditions.	Jan. 1	Jan. 8	277	101
Goss Granite Quarry Corp., Stonington, Me.	Controversy	Granite workers	Dispute relative union or nonunion conditions.	Adjusted. Satisfactory union agreement concluded.	Jan. 9	Jan. 12	75	3,000
Max Weiss Silk Co., Paterson, N. J.	Threatened strike.	Silk workers	Proposed 10-hour day	Adjusted. Eight-hour day continued.	do	Jan. 11	39	4
J. Meyerson (Inc.), Greenpoint, L. I., N. Y.	Strike	Fur dyers	Proposed 10 per cent wage cut, etc.	Adjusted. Returned. No wage cut and no change in conditions.	Jan. 15	Jan. 23	30	20
State hospital building, Allentown, Pa.	Threatened strike.	Building	Dispute relative nonunion ironworkers.	Adjusted. Satisfactory agreement; no trouble with ironworkers.	Jan. 2	Jan. 12	75	

Gilbert Shoe Co., Haverhill, Mass.	Strike	Shoe workers	Discharge of cutter	Adjusted. Cutter reinstated	Jan. 8	Jan. 9	70		
New England Wood Heel Co., Haverhill, Mass.	do	Heel makers	Employer refused to sign union agreement.	Unable to adjust	Jan. 1	Feb. 2	70		
Williamson-Dickey Co., Fort Worth, Tex.	Lockout	Garment workers	Wage cut and discontinuance of union label.	Pending	do		185	15	
Arrow Silk Co., McAdoo, Pa.	Strike	Weavers	Proposed cut in wages of loom fixers.	Adjusted. No cut in wages; regular conferences to be held.	Jan. 18	Jan. 21	50		
Shafran Silk Co., Paterson, N. J.	do	Weavers and warpers	Proposed 9¼-hour day	Adjusted. Eight-hour day continued.	Jan. 15	Jan. 19	15	3	
Providence Silk Co., Paterson, N. J.	do	do	Asked 8-hour day	Adjusted. Eight-hour day allowed	do	Jan. 15	22	9	
Wolf & Opper Silk Co., Paterson, N. J.	do	do	Proposed 14 per cent wage cut (from 8 to 7 cents per yard).	Pending	do		47	8	
Vincent Horowitz Slipper Co., New York City.	do	Slipper workers	Wages for new work	Unclassified. Part of workers returned on company's terms; others may be reinstated later.	Jan. 8	Jan. 24	45	11	
Building trades, Washington, D. C.	Controversy	Carpenters and iron workers.	Jurisdiction of metal door frames.	Temporary adjustment. Work proceeding.	Jan. 11		83	385	
Berkeley Mills, Pawtucket, R. I.	Strike	Textile workers	Discharge of 4 workers	Adjusted. Workers reinstated; mill resumed work with 48-hour week instead of 54.	Jan. 21	Jan. 23	500		
Kroger Building, Indianapolis, Ind.	do	Building trades	Jurisdiction of brick and asbestos work on baking ovens.	Pending	Jan. 24		15	110	
Indiana, American, and Broadway theaters, Indiana Harbor, Ind.	Controversy	Stage hands	Number of men employed	Adjusted. Signed agreement for one year.	Jan. 23	Jan. 31	5	29	
Indiana, American, Broadway, and Garden theaters, Indiana Harbor, Ind.	do	Film operators	Asked wage increase; number of men employed.	do	do	do	20	14	
Sovereign Silk Co., Paterson, N. J.	Strike	Textile workers	Poor material, causing breaks	Adjusted. Allowed 2½ cents per yard increase in wages.	Jan. 21	Jan. 26	54	12	
Seneca Iron & Steel Co., Blasdell, N. Y.	do	Steel workers	Rates of pay; schedules	Adjusted. Returned. Continued system in use.	Jan. 28	Jan. 29	10	25	
Palace and Tivoli theaters, Gary, Ind.	Threatened strike.	Stage hands	Number employed; rates of pay.	Adjusted. No change in wages. Signed agreement for two years.	Jan. 30	Feb. 1	10	128	
Do	do	Film operators	do	do	do	do	28	110	
Shirley Shoe Co., New York City.	Strike	Shoe workers	Asked restoration of 7½ per cent wage cut.	Adjusted. Allowed restoration of wage cut and union recognition.	Jan. 29	Feb. 11	45	11	
Rogat Shirt Co., New York City	do	Shirt makers	Wage cut	Adjusted. Returned; no cut in wages.	do	Feb. 7	36		
Shelbourne Shirt Co., New York City.	do	do	Protested overtime work without extra compensation.	Pending. Company may move plant.	do		85		
Glen Alden Coal Co., Plymouth, Pa.	do	Miners	Rates of pay	Adjusted. Returned; district committee to fix terms.	Jan. 30	Feb. 5	610	15	
Otis Co., Three Rivers, Mass.	do	Spool-room workers	Working conditions	Adjusted. Satisfactory modification of conditions.	Jan. 23	Jan. 30	100	300	
Feifer Bros. Slipper Co., New York City.	do	Slipper workers	Violation of agreement	Adjusted. Company agreed to comply with agreement.	Jan. 22	Jan. 28	40	10	
Madison Shoe Co., Marlboro, Mass.	do	Shoe workers	Asked increase	Unable to adjust	Jan. 2	Feb. 2	20		
Pennsylvania Textile Mills (Inc.), Clifton, N. J.	Controversy	Textile workers	Discharge of beamers; wage dispute.	Adjusted. Beamers agreed to accept 80 cents per hour; reinstated.	Jan. 29	Feb. 13	3	347	
Total							4,627	7,984	

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WAGES AND HOURS OF LABOR

Earnings of Members of International Typographical Union

THE following data regarding average annual earnings of members of the International Typographical Union from 1909 to 1927 are taken from a publication of that organization.[1]

AVERAGE ANNUAL EARNINGS OF MEMBERS OF INTERNATIONAL TYPOGRAPHICAL UNION, 1909 TO 1927

Year ending May 31—	Average annual earnings	Year ending May 31—	Average annual earnings	Year ending May 31—	Average annual earnings
1909	$897.00	1916	$1,041.18	1923	$1,919.23
1910	953.00	1917	1,086.43	1924	2,093.69
1911	974.00	1918	1,145.15	1925	2,172.03
1912	992.00	1919	1,264.88	1926	2,325.41
1913	1,023.00	1920	1,615.25	1927	2,328.71
1914	1,042.00	1921	1,909.03		
1915	1,026.51	1922	1,795.44		

Wage Increase for Railway Terminal Employees Established by Recent Arbitration Award

THE Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees requested of the Kansas City Terminal Co. an increase of $1 per day for the mail and baggage handlers, checkmen, gatemen, and others, which the carrier refused. Under the railway labor act, a board of arbitration was created by an agreement dated May 5, 1928.

The Kansas City Terminal Co. selected W. M. Corbett, and the Brotherhood of Railway Clerks selected J. H. Sylvester, as arbitrators. These two being unable to select the third arbitrator, the United States Board of Mediation appointed F. H. Kreismann as the neutral arbitrator.

On January 17 the majority of the board made the following award:

1. Add to the rates of pay of all daily rated positions 25 cents per day.
2. Add to the rates of all hourly rated positions 3.125 cents per hour.
3. Add to the rates of all monthly rated positions $6.375 per month.
4. The foregoing specified increases shall not apply to those certain twelve positions designated as assistant foreman and/or mail dispatchers whose rates of pay were voluntarily increased or readjusted by the carrier on September 1, 1927; but such increases shall apply to all positions covered by this arbitration occupied by employees who are now or may hereafter be found to have been in the service of the carrier for a period of one year or longer.
5. This award shall become effective January 16, 1929; shall continue in force for the period of one year from the effective date thereof, and thereafter subject to 30 days' notice by or to the company.

W. M. Corbett, representing the carrier, dissented from the findings of the majority of the board.

[1] International Typographical Union. Facts concerning the International Typographical Union. Indianapolis, 1928.

Wage Rates in the Government Printing Office

THE principal rates of wages paid to employees of the Government Printing Office in 1913, 1921, and 1928 are listed in the following table, taken from the annual report of the Public Printer for 1928.

The report states that the average annual compensation for each employee, including skilled, unskilled, and clerical, for the eight years 1913–1920 was $1,264.47 and for the eight years 1921–1928, $1,836.25, an increase of $571.78 or 45 per cent.

PRINCIPAL HOURLY RATES OF WAGES OF EMPLOYEES IN THE GOVERNMENT PRINTING OFFICE IN 1913, 1921, AND 1928

Occupation	1913	1921 [1]	1928
Compositor	$0.50	$0.85	$1.00–$1.05
Linotype and monotype operator	.60	.85	1.05–1.10–1.15
Proof reader	.60	.85	1.10
Imposer	.60	.85	1.10
Maker-up	.60	.85	1.10
Copy editor	.65	.85	1.10
Type machinist	.60	.90	1.10
Monotype casterman	.35	.65	.70
Type-machine helper	.35–.40	.65	.60–.85
Stereotyper	.60	.90	1.10
Electrotype finisher and molder	.60	.90	1.10
Photo-engraver			1.20
Pressman, cylinder	.55	.85	1.10
Pressman, platen	.55	.85	1.00
Press feeder, cylinder	.27½	.55	.70
Press feeder, platen	.27½	.55	.65
Bander	.27½	.55	.70
Bookbinder	.50	.85	1.00
Bookbinder machine operator	.55	.85	1.05
Bindery operative:			
Folder			
Folding-machine operator			
Signature pressman			
Perforator	.25–.40	.45–.70	.55–1.05
Sewing-machine operator			
Ruling-machine feeder			
Supervisor			
Stock keeper	.30–.55	.55–.80	.70–1.00
Carpenter	.50	.85	1.10
Painter	.50	.85	1.10
Electrician	.55	.90	1.10
Machinist	.55	.90	1.10
Pipe fitter (steam fitter and plumber)	.50	.85	1.10
Skilled laborer	.25	.45	.55

[1] Including the $240 bonus, amounting to 10 cents an hour, granted by Congress in 1921.

Adoption of 5-day Week in Large Eastern Plant

A LARGE manufacturer of check-writing machinery and adding machines in the East is reported to have placed its 600 employees on the 5-day week basis without a reduction in wages, according to Domestic Commerce for January 7, 1929, published by the United States Bureau of Foreign and Domestic Commerce. A check will be kept on all departments of the plant, it is stated, in an effort "to bear out the conviction of the company's officers that the longer recreation period will produce more satisfied and efficient workers."

Earnings in Massachusetts Manufacturing Industries

THE average yearly earnings of employees in manufacturing industries in Massachusetts from 1913 to 1927, together with the total wages bill and the average number of wage earners employed, are shown in the following figures taken from a recent press release of the Massachusetts Department of Labor and Industries:

AVERAGE NUMBER OF EMPLOYEES, AVERAGE YEARLY EARNINGS, AND TOTAL WAGES BILL IN MASSACHUSETTS MANUFACTURING INDUSTRIES, 1913 TO 1927

Year	Average number of employees	Amount of wages paid	Average yearly earnings	Year	Average number of employees	Amount of wages paid	Average yearly earnings
1913	616, 927	$351, 299, 706	$569. 43	1921	579, 071	$641, 360, 936	$1, 107. 57
1914	606, 698	341, 309, 517	562. 57	1922	612, 682	678, 073, 968	1, 106. 73
1915	596, 348	346, 243, 472	580. 61	1923	667, 443	799, 363, 111	1, 197. 65
1916	682, 621	447, 957, 731	656. 23	1924	589, 364	711, 812, 104	1, 207. 76
1917	708, 421	537, 144, 629	758. 23	1925	591, 438	716, 155, 593	1, 210. 87
1918	719, 210	679, 401, 273	944. 65	1926	602, 343	738, 208, 510	1, 225. 56
1919	713, 836	766, 623, 337	1, 073. 95	1927	577, 463	704, 983, 988	1, 220. 83
1920	695, 832	891, 176, 822	1, 280. 74				

Prices and Earnings in the Scallop Industry of North Carolina

A BRIEF discussion of prices and earnings in the scallop industry of North Carolina is contained in a report of the United States Bureau of Fisheries.[1] The information on these points is summarized in the following paragraphs.

In early days scallop fishermen sold their catches to dealers by the bushel, the price received, it is said, being as low as 25 cents. Later the catches were sold by the gallon, and for the year 1897 the price is given as 40 to 45 cents. Wholesale prices in recent years are reported to have been as high as $5 or $5.50. During the season of 1927–28, up to mid-February, prices ranged about as follows, according to the report: Mediums, $1.50 to $2.25 (chiefly $1.75 to $2.25); large mediums, $2.50 to $3.25 (chiefly $2.50 to $3); and large, $3.50 to $4. Prices increased somewhat after this time.

The report states that at the beginning of the season a raker might take enough scallops to shuck 4 to 6 gallons, which would bring him from $6 to $15, "depending upon the percentage of large mediums or of large meats, the current price, and the quantity. The charge for shucking would be $4 to $6. The wage return for a day's scallop fishing thus figured would be $4 to $12." According to varying information, the catch per man per day had dropped by mid-February of 1928 to about 1 gallon, which brought $2.25 to $2.50. By mid-March, or even earlier, catches as small as half a gallon are said to be not unusual.

When a dredge boat is used, a catch of 40 bushels is considered a good day's work, although catches up to about 60 bushels a day may be obtained. The report states that small scallops, from dredging areas, shucked by the investigator about the time the season opened, yielded from 2½ to a little over 3 pints per bushel, but that in areas where scallops giving the best yield of meats are to be found

[1] United States. Department of Commerce. Bureau of Fisheries. Document No. 1043: Scallop industry of North Carolina, by James S. Gutsell. Washington, 1928.

"doubtless many large catches of scallops that yield half a gallon to the bushel are taken early in the season." Later in the season the yield per bushel, the size, and the price improve, but the catch becomes much smaller. Sample catches made by Marshallberg dredgers on February 27, 1928, were sold there for $2.50 a gallon, the gross return per man varying from $5 to $18.75 per day. The cost of shucking reduced these figures to $4 and $15, respectively, "to cover expenses, wear and tear, overhead, and wage."

The standard pay for opening scallops in the season of 1927–28 is reported to have been 50 cents per gallon of meats, which was "an increase of 10 cents a gallon over the rate prevalent a few years ago and of 37½ to 40 cents over that reported for the seventies and eighties." An expert can open a bushel or more of scallops per hour if they are large, and these may yield as much as a gallon per bushel or only 2½ pints and perhaps less.

The demand for hired shuckers occurs principally early in the season when catches are large, and from the dredgers, who make much larger catches than do the rakers. At this time a bushel yields less than it does later in the season. The average size of scallops taken by dredgers is small, so that, even if they give a good yield per bushel, many must be opened in order to make a gallon. Therefore, the rôle of the professional shucker can scarcely be a well-paying one; although he or she might make $5 a day, probably $2 to $3 would be more representative.

International Comparison of Real Wages, October, 1928

A COMPARISON of real wages in various large cities of the world in October, 1928, is contained in the International Labor Review (Geneva) for January, 1929, in continuation of similar figures compiled periodically by the International Labor Office.

The table given below presents the more important points in the comparison. The figures are in the form of index numbers, London being used as the base, or 100. It should be noted that the wage data relate only to a few classes of workers, namely, those in the building, metal, furniture, and printing and publishing trades, and that the price data are limited to certain articles of food and to rent. Thus, the index numbers can be taken only as a very rough indication of the relative levels of real wages of adult male workers in certain occupations and cities. In many instances, however, the figures shown indicate such wide differences between cities that they may be accepted as reflecting real differences in the level of well-being of the workers in different countries.

It will be seen that Philadelphia had the highest real wage level of any of the 17 cities included, its index number, based on food only, being 189, or 89 per cent higher than that of London. Ottawa had the next highest figure, with Copenhagen, the highest of the European cities, coming next, while the wage level in Rome was less than one-fourth that of Philadelphia. However, the International Labor Office points out that the low level of Rome may be accounted for in part by the differences in the items of food consumption in the southern European countries from those ordinarily consumed in most of the other countries represented in the table.

INDEX NUMBERS OF COMPARATIVE REAL WAGES IN VARIOUS CITIES, OCTOBER, 1928

[London, October, 1928=100]

City	General average index numbers		City	General average index numbers	
	Based on food only	With allowance for rent		Based on food only	With allowance for rent
Philadelphia	189	189	Madrid	52	
Ottawa	154	152	Brussels	51	55
Copenhagen	108	107	Milan	49	48
London	100	100	Lodz	48	53
Dublin	98	107	Prague	47	50
Stockholm [1]	88	86	Rome	46	41
Amsterdam	83	83	Vienna	43	48
Berlin	70	65	Warsaw	42	43
Paris	58				

[1] The figures are based on wages in the building, furniture-making, and printing industries only. For other cities, the metal industry is also included.

Wages in the Brussels District, Belgium

A REPORT received from William C. Burdett, American consul at Brussels, reviews the economic situation in Belgium and gives the average hourly wages in force in representative industries.

Since the stabilization of the Belgian franc at approximately 36 to the dollar the wage trend has been consistently upward and it is predicted that wages will continue to rise for several years.

At the present time the country is said to be extremely prosperous and there is practically no unemployment. Production in most industries now exceeds that of pre-war years and, with the exception of coal mining, all the major industries are working full time. The lace-making industry and the manufacture of firearms are two minor exceptions to the general industrial prosperity.

The following table shows the average wages paid in representative trades in the region of Brussels, or in some cases the minimum wages fixed by collective agreements between operators and unions, on January 1, 1928, and November 1, 1928. The wages, which have been converted into United States currency on the basis of the stabilized franc (2.78 cents), show the wage increases which had come into effect during the 10-month period.

AVERAGE HOURLY WAGES IN THE BRUSSELS DISTRICT IN REPRESENTATIVE INDUSTRIES, JANUARY 1, 1928, AND NOVEMBER 1, 1928

[Conversions to United States currency made on the basis of the stabilized franc= 2.78 cents]

Occupation	Average hourly wages		Occupation	Average hourly wages	
	Jan. 1 1928	Nov. 1, 1928		Jan. 1, 1928	Nov. 1, 1928
	Cents	*Cents*		*Cents*	*Cents*
Lathe hands	13.2	14.5	Tailors	13.3	16.1
Machinists	13.2	14.5	Concrete workers	8.9	13.4
Iron founders	12.5	13.3	Millwrights	12.1	17.0
Molders	13.9	15.4	Masons	13.3	16.8
Blacksmiths	14.7	16.2	Marble workers	11.2	16.1
Sheet-metal workers	14.7	16.2	Painters	11.4	14.4
Boiler makers	13.2	14.5	Plasterers	10.7	16.3
Riveters	11.2	12.3	Glazers	10.4	14.9
Solderers	14.7	16.2	Coach makers	15.0	16.3
Enamel workers	11.2	12.3	Wheelwrights	11.4	14.4
Plumbers	11.9	16.3	Carpenters	14.0	16.8
Armature winders	11.3	12.6	Coopers	10.9	14.9
Electricians	11.9	15.4	Jewelers	12.5	12.5
Copper founders	16.4	17.6	Silversmiths	11.2	11.2
Biscuit makers	12.0	12 5	Gardeners	9.0	11.9
Bakers	13.7	15.4	Unskilled labor, male	9.0	10.7
Chocolate makers	11.8	13.3	Female mill hands	4.9	6.5

Wages in the Tool Industry in Germany

UNDER date of January 19, 1929, J. Klahr Huddle, the American consul at Cologne, Germany, transmits the following data on the wages and hours of labor in Solingen and Remscheid, Germany, in tool making, including edge tools and cutlery.

Solingen District

THE following table, based upon the collective agreement between the employers and the Deutscher Metallarbeiter Verband at Solingen, shows the wage rates of certain classes of male workers in that district. The minimum rate is the agreed basic rate on which time rates and piece rates actually paid are founded. Piece rates are fixed with the intent to make earnings on piecework 25 per cent or more above the minimum basic time rate.

The "skilled workers" are those in possession of a certificate of past apprenticeship, those who have received an extensive practical training or have had practical working experience considered as equal to a term of apprenticeship, and those qualified to perform all kinds of work in their line without outside assistance. As is seen, the agreement establishes two classes of "special workmen," all skilled workers, Class Ia includes hand and machine formers, metal melters, Martin furnace melters, crucible melters (with the exception of mold placers) wet grinders, hammersmiths, hot rollers, and operators of hammers of 1,000 kilograms driving weight and more. Class Ib includes those who have received regular training, hold an apprentice's certificate, and belong to one of the following trades: Locksmiths, turners, and related trades, hand grinders, hand smiths, plumbers, electricians, model joiners, damask workers, galvanizers, engravers, shear controllers, machine operators, boiler at-

tendants, steam-boiler firemen, fitters, when engaged in making patterns or acting as skilled foremen. Since these classes of workers are not enabled to engage in piecework they receive higher hourly rates—those of the first group 35 per cent above the wages of the ordinary skilled workmen, and those of the second group 20 per cent more. Semiskilled workmen are those who have worked for a considerable time in their respective trades and are engaged in simple work.

TABLE 1.—HOURLY WAGE RATES OF SPECIFIED CLASSES OF MALE WORKERS IN SOLINGEN DISTRICT [1]

[Conversions into United States currency on basis of pfennig=0.2382 cent]

Age	Skilled workers				Special workmen				Semiskilled workers				Assistants			
	Minimum rate		Time-work rate (10 per cent extra)		Class Ia (35 per cent extra)		Class Ib (20 per cent extra)		Minimum rate		Time-work rate (10 per cent extra)		Minimum rate		Time-work rate (10 per cent extra)	
	Pfgs.	Cts.	Pfgs.	Cts.	Pfgs.	Cts.	Pfgs.	Cts.	Pfgs.	Cts.	Pfgs.	Cts.	Pfgs.	Cts.	Pfgs.	Cts.
14 years	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	19	4.5	21	5.0
15 years	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	23	5.5	25	6.0
16 years	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	28	6.7	31	7.4
17 years	39	9.3	43	10.2	54	12.9	48	11.4	35	8.3	39	9.3	35	8.3	39	9.3
18 years	46	11.0	51	12.1	63	15.0	56	13.3	44	10.5	48	11.4	39	9.3	43	10.2
19 and 20 years	55	13.1	61	14.5	73	17.4	66	15.7	50	11.9	55	13.1	46	11.0	51	12.1
21 and 22 years	62	14.8	68	16.2	84	20.0	74	17.6	59	14.1	65	15.5	54	12.9	59	14.1
23 years	65	15.5	72	17.2	89	21.2	78	18.6	62	14.8	68	16.2	57	13.6	63	15.0
24 years and over	70	16.7	77	18.3	94	22.4	84	20.0	65	15.5	72	17.2	61	14.5	67	16.0

[1] In the tables furnished the bureau the extra compensation for time-workers was not in all cases exactly 10 per cent, although closely approximate.

Wage rates per hour (including additional compensation) of male apprentices in Solingen are as shown below:

	Pfennigs	Cents
Metallurgical work:		
First year	23	5.5
Second year	29	6.9
Third year	34	8.1
Fourth year	40	9.5
Tool work:		
First year	19	4.5
Second year	23	5.5
Third year	31	7.4
Fourth year	37	8.8

The hourly rates of female workers of specified ages in Solingen are as follows:

	Pfennigs	Cents
Minimum rate:		
14 years	19	4.5
15 years	21	5.0
16 years	25	6.0
17 years	29	6.9
18 and 19 years	35	8.3
20 years	39	9.3
21 years	45	10.7
Time-work rate (10 per cent extra):		
14 years	21	5.0
15 years	23	5.5
16 years	28	6.7
17 years	32	7.6
18 and 19 years	39	9.3
20 years	43	10.2
21 years	50	11.9

Male and female workers of the groups of skilled workers, semi-skilled workers, assistants, women and girls, all receive the additional compensation of 10 per cent if they are engaged in time-work.

All operators receive an additional payment of 10 per cent for the time they are engaged in furnace work and working in abnormal heat.

The rate for piecework is calculated in such a way that an additional payment above the basic minimum rate is reckoned on the average of hourly wages according to the agreed rates of all workmen belonging to the same group, and the result thus obtained constitutes the minimum piecework basic rate. In any case, however, the highest scheduled wage of the group should be reached. An additional payment of 25 per cent is made on piecework.

For skilled hand and machine molders, hammersmiths, hot rollers, wet grinders, and operators of hammers with a driving force of 1,000 kilograms and more, the supplementary payment is 35 per cent.

For the calculation of piecework rate the hourly wages of the "special" workers are not taken into consideration as a piecework basis.

The hours of labor for the above workers are set at 8 or 9 hours daily or 48 to 52 hours per week.

Wage Rates of Home workers

For home workers of all trades the wages obtained are shown in Table 2. The rates shown are called "gross wages," and the second column shows the percentage which should be deducted for material. For these workers the working time averages 9 hours per day and 52 hours per week.

TABLE 2.—WEEKLY WAGE RATES OF HOME WORKERS AT SOLINGEN

[Conversions into United States currency on basis of mark = 23.82 cents.]

Occupation	Gross wages per week		Percentage deducted for material
	Marks	Dollars	
Razor-blade grinders	70	16.67	30
Razor-blade piece workers	53	12.62	
Razor-blade stroppers	53	12.62	12½
Knife grinders	75	17.87	33⅓
Fork and handle grinders	68	16.20	25
Pliers	68	16.20	25
Fitters	53	12.62	20
Butcher's, bread, and vegetable knives grinders	46–53	10.96–12.62	25
Scissor filers	35	8.34	12½
Scissor temperers	40–45	9.53–10.72	16⅔
Shear finishers	70	16.67	25
Shear grinders	60	14.29	25
Shear nailers	50	11.91	12½
Blade temperers	56	13.34	16⅔
Corkscrew grinders	56	13.34	25
Pen-nib workers	57	13.58	25
Pocketknife grinders	60	14.29	25
Pocketknife stroppers	45	10.72	20
Pocketknife finishers	60	14.29	25
Bicycle grinders	80	19.06	33⅓
Manicure and nipper grinders	60	14.29	25
Grinders of various articles	65–70	15.48–16.67	25
Clipper-blade grinders	80–85	19.06–20.25	20
Clipper-handle grinders	70–72	16.67–17.15	25
Instrument and nail-tweezer grinders	55–60	13.10–14.29	25
Fruit-knife finishers	[1] 85–90	[1] 20.25–21.44	30
Pruning-shears grinders	75	17.87	33⅓
Pruning-shears assemblers	30–60	7.15–14.29	15
Nickel polishers	60–70	14.29–16.67	33⅓
Penknife scissors grinders	60–65	14.29–15.48	20
Instrument makers			

[1] In plant; one-fifteenth of 1 per cent less for home work.

Remscheid District

IN THE Remscheid district, wet grinders work 8 hours per day or 48 hours per week, while the other grinders and polishers as well as all other laborers are employed 52 hours per week. The distribution of the weekly working hours is left to the discretion of the employers and the laborers assisted by the legal labor representatives. The weekly working hours per year vary considerably and can not be estimated because of the changing conditions that occur in the various factories.

From information furnished to the consul by the Deutscher Metallarbeiter Verband at Remscheid, the following table is drawn. The report, however, gives no explanation of what types of workers are included in the wage classes specified.

TABLE 3.—MINIMUM WAGE RATES PER HOUR OF SKILLED MALE WORKERS IN THE REMSCHEID DISTRICT

[Conversions into United States currency on basis of pfennig=0.2382 cent]

Age	Wage class									
	A		B		C		D		E	
	Pfennigs	*Cents*	*Pfennigs*	*Cents*	*Pfennigs*	*Cents*	*Pfennigs*	*Cents*	*Pfennigs*	*Cents*
14 years							21	5.0	20	4.8
15 years							24	5.7	22	5.2
16 years							30	7.1	28	6.7
17 years	42	10.0	40	9.5	39	9.3	35	8.3	33	7.9
18–19 years	54	12.9	50	11.9	48	11.4	45	10.7	43	10.2
20–21 years	63	15.0	61	14.5	59	14.1	56	13.3	51	12.1
22–23 years	77	18.3	74	17.6	71	16.9	65	15.5	61	14.5
24 and over	82	19.5	80	19.1	75	17.9	71	16.9	66	15.7

It is stated that about 80 per cent of the toolmakers are engaged in piecework and present wages average between 1 and 1.10 marks per hour. Polishers and wet grinders in the tool industry receive average wages of 1.20 to 1.40 marks per hour. Widows who are employed and who operate their own households are paid 20 per cent additional.

The minimum hourly wage rates for female workers of specified ages in Remscheid are as follows:

	Pfennigs	Cents
14 years	19	4.5
15 years	20	4.8
16 years	22	5.2
17 years	28	6.7
18 and 19 years	34	8.0
20 and 21 years	37	8.8
22 years and over	49	11.7

The minimum hourly wage rates for apprentices in Remscheid are shown below:

	Pfennigs	Cents
Wage class A:		
First year	20	4.8
Second year	22	5.2
Third year	28	6.7
Fourth year	42	10.0
Wage classes B and C:		
First year	19	4.5
Second year	21	5.0
Third year	27	6.4
Fourth year	40	9.5

Changes in Employment and Wage Rates in England

THE English Ministry of Labor Gazette in its issue for January, 1929, gives a résumé of the fluctuation in employment in the principal English industries during 1928. Employment was not maintained at the level of the preceding year. The average percentages of insured persons unemployed in Great Britain and Northern Ireland from 1921 onward have been as follows:

1921	[1] 17. 0	1925	11. 3
1922	14. 3	1926	[1] 12. 5
1923	11. 7	1927	9. 7
1924	10. 3	1928	10. 9

[1] Exclusive of persons in the coal-mining industry disqualified for unemployment benefit by reason of trade disputes.

A study of the figures by months, or 1928, shows that during the first quarter of the year the percentage of unemployment among the insured workers was not so high as in 1927, but that thereafter it became progressively worse. This decrease did not show itself uniformly.

The setback which occurred between the end of April and the end of June was confined almost entirely to six industries, viz, coal mining; shipbuilding and ship repairing; the cotton, woolen and worsted, and linen textile industries; and the boot and shoe industry. Out of a total increase of 145,612 in the numbers unemployed in all industries between these two dates, the wholly unemployed represented only 19,707 and the temporarily stopped, 125,905. Coal mining alone accounted for an increase of 9,368 in the wholly unemployed and 81,188 in the numbers temporarily stopped, while the other five industries mentioned accounted for an increase of 21,666 in the numbers wholly unemployed and of 32,747 in the numbers temporarily stopped. By the end of November there had been some improvement in the coal-mining, cotton, and linen industries, but this was almost entirely offset by a further decline in the shipbuilding, woolen and worsted, and boot and shoe industries. By the middle of December each of these six industries had shown some improvement as compared with the end of November, but in the case of the boot and shoe industry the improvement was negligible.

The statistics thus show that the apparent decline in employment in 1928, as compared with 1927, was not the result of a general and uniform decline in industry as a whole, but was very largely accounted for by the decline in the six industries already named. These industries included at July, 1928, 2,330,640 insured workers (1,714,760 males and 615,880 females), or about one-fifth of the numbers insured.

Changes in Rates of Wages

THE figures concerning wage rates do not include changes affecting agricultural laborers, Government employees, domestic servants, shop assistants, and clerks. Table 1 shows the changes in wage rates reported for 1927 and for 1928 and the net amount of change in the weekly rates for each of the principal groups of industries.

TABLE 1.—NUMBER AFFECTED BY INCREASE AND BY DECREASE IN WAGE RATES AND CHANGE IN TOTAL AMOUNT OF WAGES PAID, 1927 AND 1928

[Conversion to U. S. currency made on basis of par value of pound=$4.87]

Industry group	Number affected by changes in wage rates				Net weekly increase or decrease in amount of wages paid	
	1927		1928		1927	1928
	Increases	Decreases	Increases	Decreases		
Mining and quarrying	18,000	792,000	1,200	402,000	−$1,349,721	−$297,801
Brick, pottery, glass, chemicals, etc	1,350	4,750	200	4,250	−3,506	−3,336
Engineering and shipbuilding	185,000		55,000	106,000	+90,582	−12,297
Iron and steel	6,500	135,000	39,250	45,500	−119,072	−22,402
Other metal	33,000	43,500	2,400	49,250	−4,383	−14,902
Textile	1,800	232,000	56,500	71,000	−112,010	+11,688
Clothing	200	196,000	1,000	900	−91,848	+73
Food, drink, and tobacco	650	21,000	300	1,250	−9,253	−438
Woodworking, furniture, etc	800	17,500	3,200	4,000	−10,422	−974
Paper, printing, etc		26,000	100		−9,497	+49
Building and allied industries	15,000	57,250	7,100	422,000	−13,636	−185,791
Gas, water, and electricity	2,800	37,000	31,350	900	−14,756	+27,881
Transport	8,600	188,000	1,500	488,000	−56,979	−190,661
Public administration services	7,400	66,500	12,650	10,250	−24,594	−1,218
Other	900	38,500	250	2,700	−13,393	−925
Total	282,000	1,855,000	212,000	1,608,000	−1,742,488	−691,054

The Labor Gazette calls attention to the fact that this table deals only with full-time wage rates, and shows nothing as to the effect of unemployment upon the worker's earnings. It is also to be noted that the changes reported to the department and embodied in this table are mainly those arranged between organized groups of workers and employers, and that many changes affecting unorganized workers, especially where only the employees of a single corporation are concerned, are not reported.

Mining and quarrying, the building, and the transport industries account for the greater part of the net decrease during the year.

In the coal-mining industry rates of wages were reduced in January in Yorkshire to the minimum percentage on basis rates permissible under the district agreement; in March there were reductions in Northumberland and Durham consequent on the lowering of the minimum. In the building industry there was a general reduction in February, under a cost-of-living sliding scale, of ½d. (1 cent) per hour in the rates agreed upon by the National Joint Council for the Building Industry. In the transport group the principal reduction took the form of a temporary deduction, in August, of 2½ per cent from the earnings of railway workers. This deduction also accounted for most of the net decrease in the engineering and shipbuilding group, in which the railway shopmen are classified for the purpose of these statistics. The reductions in the textile group, which were small in amount, affected mainly pieceworkers and certain other classes in the bleaching, dyeing, etc., industry.

The most important increase in wages during the year took place in the federated shipyards, resulting from the restoration of the bonus paid to adult plain time workers to 10s. ($2.43) a week, involving an increase of 3s. (73 cents) a week for most classes of skilled workers and increases varying up to that figure for many unskilled and semi-skilled men. Increases were received also in the electricity supply industry, and in some branches of the textile industry.

Methods by Which Changes Were Arranged

WHILE some workers received increases and some suffered reductions during 1928, in a number of cases the same workpeople obtained increases and sustained reductions at different times in the year. The total of all the reductions was equivalent to £182,000 ($886,340) a week, and the total of all the increases to £40,100 ($195.287) a week, the net effect being a decrease of £141,900 ($691,053) a week.

Of the total reduction of £182,000 ($886,340) a week, about £57,700($280,999) took effect under sliding scales based on the cost of living, including over £47,100 ($229,377) under scales arranged by joint industrial councils or other joint standing bodies of employers and workpeople, and £2,150 ($10,471) under scales embodied in trade board orders. Other reductions arranged by joint standing bodies accounted for £16,000 ($77,920) and those by trade boards for about £150 ($731). Under arbitration or conciliation proceedings there were reductions amounting to about £42,300 ($206,501). Sliding scales based on selling prices of manufactured iron, steel, etc., accounted for £7,250 ($35,308). The remaining sum of £58,600 ($285,382) was the result of direct negotiation between employers and workpeople. Reductions preceded by disputes causing stoppage of work accounted for about £2,200 ($10,714) of the above amounts.

Of the total increase of £40,100 ($195,287) a week, about £17,000 ($82,790) took effect under sliding scales based on the cost of living, including £8,900 ($43,343) under scales arranged by joint industrial councils or other joint standing bodies of employers and workpeople, and £2,150 ($10,471) under scales embodied in trade board orders. Other increases arranged by joint standing bodies accounted for £5,900 ($28,733) and those by trade boards for £2,800 ($13,636). Sliding scales based on selling prices accounted for £1,700 ($8,279). Of the remaining sum, about £200 ($974) took effect under arbitration and £12,500 ($60,875) was the result of direct negotiations between employers and workpeople. Increases preceded by disputes causing stoppage of work accounted for less than £500 ($2,435) of the above amounts.

Changes in Wages Since 1919

THE Gazette gives the following table, showing the number of workers inthe services for which statistics are received whose rates of wages were increased or reduced in each of the specified years and also the net amount of increase or decrease in the weekly wage rates:

TABLE 2.—NUMBER OF WORKERS AFFECTED BY INCREASE AND BY DECREASE IN WAGE RATES AND CHANGE IN TOTAL AMOUNT OF WAGES PAID, 1919 TO 1928

[Conversion to U. S. currency made on basis of par value of pound=$4.87]

Year	Number of workers affected—by		Net weekly amount of change in rates of wages		Net weekly increase or decrease in amount of wages paid workers affected
	Increases	Decreases	Increases	Decreases	
1919	6,240,000	100	$12,404,864	$292	+$12,404,804
1920	7,867,000	500	23,342,884	877	+23,342,007
1921	78,000	7,244,000	66,232	2,958,330	−2,892,098
1922	73,700	7,633,000	55,762	20,558,705	−20,502,943
1923	1,202,000	3,079,000	823,030	2,366,820	−1,543,790
1924	3,019,000	481,500	2,999,920	302,427	+2,697,493
1925	873,000	851,000	393,983	774,330	−380,347
1926	420,000	740,000	647,710	407,619	+240,091
1927	282,000	1,855,000	149,509	1,891,995	−1,742,486
1928	212,000	1,608,000	103,000	794,054	−691,054

In view of the limitations to which attention has been drawn above, and particularly of the fact that certain large groups of workpeople (notably agricultural laborers) are not covered by these statistics, the figures given in this table should not be regarded as affording more than a general indication of the movement of wages in any year and a very rough measure of the extent of such movement in comparison with that of other years; and special significance should not be attached to small differences in the amount of change as between one year and another.

Changes in Hours of Labor

CHANGES in normal hours of labor during 1928, as reported to the department, affected only 2,400 workers. Of these, 1,500 had an average reduction of nearly 3 hours per week, and 900 an increase of about 3⅔ hours per week. The principal change was a reduction of 4 hours per week in the working hours of tramway and omnibus workers at Cardiff.

The following table shows the number of workers whose hours were reported as changed in each of the years 1919 to 1928, together with the aggregate amount of the change in the weekly hours:

TABLE 3.—NUMBER OF WORKERS WHOSE HOURS WERE CHANGED AND AGGREGATE INCREASE OR DECREASE IN WEEKLY HOURS, 1919 TO 1928

Year	Number of workers whose hours of labor were—		Aggregate net increase or decrease in weekly hours	Year	Number of workers whose hours of labor were—		Aggregate net increase or decrease in weekly hours
	Increased	Reduced			Increased	Reduced	
1919	1,150	6,305,000	−40,651,000	1924	13,150	16,150	+12,500
1920	2,000	570,000	−2,114,000	1925	1,300	3,925	−11,750
1921	31,500	12,900	+14,500	1926	934,200	340	+3,985,000
1922	16,000	302,700	−93,000	1927	18,700	1,700	+59,000
1923	325,000	9,600	+108,750	1928	900	1,500	−1,150

The great increase in 1926 was almost entirely due to the longer hours for the coal miners established in that year.

Wages of Mexican Railway Workers, 1926 and 1927

THE average daily wages of railway workers for the 18 months' period from July 1, 1926, to December 31, 1927, are published in the nineteenth annual report of the National Railways of Mexico (*Ferrocarriles Nacionales de México*). The following table is taken from this report and from the eighteenth annual report, issued in 1927:

AVERAGE DAILY WAGES OF WORKERS ON MEXICAN RAILWAYS IN 1926 AND 1927, BY OCCUPATION

[Conversions into U. S. currency made on basis of average exchange rate of peso=48.31 cents for 1926, 47.2 cents for 1927]

Department and occupation	January 1 to June 30, 1926	July 1, 1926, to December 31, 1927
Maintenance of way		
Section foremen	$0.93	$1.55
Laborers	.70	.93
Telegraph linemen	2.35	1.94
Civil engineers	3.38	3.46
Quarrymen and masons	1.31	1.43
Maintenance of equipment		
Mechanics	3.00	3.48
Carpenters	2.45	1.94
Boiler makers	3.76	3.99
Foundry men	1.61	2.26
Tinsmiths and coppersmiths	2.33	2.52
Blacksmiths	1.87	2.25
Transportation		
Station agents	4.38	3.76
Loaders	1.94	2.08
Transportation—Continued		
Locomotive engineers	$7.90	$10.16
Conductors	7.44	8.18
Brakemen	4.15	4.04
Firemen	4.06	5.26
Coal passers	2.37	2.28
Yard workers	3.01	2.83
Dispatchers	7.56	10.59
Telegraph operators	4.00	3.94
Flagmen, watchmen, switchmen	1.05	1.15
Storehouse employees	2.27	1.60
Express		
Express agents	5.93	4.45
Traveling inspectors	7.20	5.21
Messengers	3.29	2.39
Day and night watchmen	1.35	1.87
Chauffeurs	2.98	2.71
Loaders, cleaners, messenger boys	1.29	1.18

TREND OF EMPLOYMENT

Summary for January, 1929

EMPLOYMENT *decreased* 0.6 per cent in January, 1929, as compared with December, 1928, and pay-roll totals *decreased* 2.9 per cent, according to reports made to the Bureau of Labor Statistics.

Inventory-taking, weather conditions, and reaction from the trade activities of December make such decreases customary in January.

The classes of employment surveyed, the number of establishments reporting in each class, the number of employees covered, and total pay rolls for one week, for both December and January, together with the per cents of change in January, are shown in the following statement.

PER CENT OF CHANGE IN EACH LINE OF EMPLOYMENT DECEMBER, 1928, TO JANUARY, 1929

Line of employment	Establishments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
1. Manufacturing	**12,138**	**3,302,534**	**3,321,227**	[1] **−0.3**	**$89,979,694**	**$87,564,382**	[1] **−3.3**
2. Coal mining	**949**	**215,951**	**216,220**	**+0.1**	**6,014,993**	**5,710,564**	**−5.1**
Anthracite	91	68,232	67,220	−1.5	2,215,231	1,977,808	−10.7
Bituminous	858	147,719	149,000	+0.9	3,799,762	3,732,756	−1.8
3. Metalliferous mining	**290**	**46,591**	**46,754**	**+0.3**	**1,394,794**	**1,339,641**	**−4.0**
4. Public utilities	**6,404**	**494,219**	**483,948**	**−2.1**	**14,276,770**	**14,162,259**	**−0.8**
5. Trade	**2,913**	**217,253**	**179,236**	**−17.5**	**5,047,509**	**4,439,879**	**−12.0**
Wholesale	1,146	34,737	33,888	−2.4	1,013,601	997,576	−1.6
Retail	1,767	182,516	145,348	−20.4	4,033,908	3,442,303	−14.7
6. Hotels	**1,041**	**110,544**	**111,943**	**+1.3**	[2] **1,921,365**	[2] **1,924,973**	**+0.2**
Total	**23,735**	**4,387,092**	**4,359,328**	**−0.6**	**118,635,125**	**115,141,698**	**−2.9**

[1] Weighted per cent of change; the remaining per cents of change, including total, are unweighted.
[2] Cash payments only; see text, p. 216.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of November and December instead of for December and January, consequently, the figures can not be combined with the industries presented in the foregoing statement.[1]

Line of employment [1]	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Nov. 15, 1928	Dec. 15, 1928		November, 1928	December, 1928	
Class I railroads	1,663,608	1,605,038	−3.5	$230,379,569	$223,098,606	−3.2

The total number of employees included in this summary is more than 6,000,000, with pay-roll totals, in one week, of approximately $169,000,000.

[1] For further details, see pp. 217 and 218.

1. Employment in Selected Manufacturing Industries in January, 1929

EMPLOYMENT in manufacturing industries decreased 0.3 per cent in January, 1929, as compared with December, 1928, and pay-roll totals decreased 3.3 per cent, as shown by reports made to the Bureau of Labor Statistics by 12,138 establishments in 54 of the principal manufacturing industries of the United States. These establishments in January had nearly 3⅓ millions of employees whose combined earnings in one week were more than 87½ millions of dollars. These employees represent 51 per cent of all employees in the 54 industries considered and 40 per cent of the total number of employees in all manufacturing industries of the United States.

The Bureau of Labor Statistics' weighted index of employment in manufacturing industries for January, 1929, is 95.2, as compared with 95.5 for December, 1928, 95.4 for November, 1928, and 91.6 for January, 1928; the weighted index of pay-roll totals in January, 1929, is 94.5, as compared with 97.7 for December, 1928, 96.1 for November, 1928, and 89.6 for January, 1928. The monthly average for 1926 equals 100.

Twenty-one of the fifty-four separate industries had more employees in January, 1929, than in December, 1928, the outstanding increases having been 11.5 per cent in steam fittings and 10.1 per cent in automobiles, the increases in both industries having followed a period of several months of declining employment. Millinery and lace goods, shipbuilding, boots and shoes, automobile tires, and agricultural implements also reported notable increases in employment, the increases ranging from 5.6 per cent to 4 per cent, while much smaller increases were reported in the cotton goods, carpet, women's clothing, iron and steel, foundry and machine shop, hardware, machine tools, millwork, leather, paper and pulp, fertilizer, chewing tobacco, electric-car building, and electrical machinery industries.

Part-time work in January was evidenced by reports for pay-roll totals; only 8 of the 21 industries reporting increased employment showed increased pay-roll totals as well. Moreover, four of these eight industries—steam fittings, automobiles, agricultural implements, and shipbuilding—reported a much smaller percentage of gain in pay rolls than in employment. Always inventory-taking and repairs during the early part of January, in a large number of industries, have a depressing effect upon the pay-roll totals of such industries, this effect as a rule considerably exceeding the decrease in employment.

The notable decreases in employment and pay-roll totals in January were from 10.1 to 13.5 per cent each in the first item and from 10.9 to 21.1 per cent each in the second item, and were in the confectionery, stove, brick, cigar, and carriage and wagon industries. These decreases were all seasonal.

The East North Central geographic division reported a gain in employment of 2.7 per cent in January, and the East South Central division a gain of 0.8 per cent, while all other changes in geographic divisions, both in employment and pay-roll totals, were decreases, the Pacific division having shown the greatest of these in each item, and the West North Central the smallest; the Middle Atlantic division reported the same decrease in employment as the West North Central division, but with a much greater decrease in pay-roll totals.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
Food and kindred products	**1,800**	**233,967**	**226,893**	(1)	**$6,052,065**	**$5,823,496**	(1)
Slaughtering and meat packing	199	92,632	92,593	−(2)	2,477,334	2,435,196	−1.7
Confectionery	302	36,495	31,890	−12.6	676,007	586,289	−13.3
Ice cream	312	10,451	10,322	−1.2	350,884	337,326	−3.9
Flour	330	16,550	16,243	−1.9	435,110	424,817	−2.4
Baking	641	67,038	65,235	−2.7	1,780,978	1,724,936	−3.1
Sugar refining, cane	16	10,801	10,610	−1.8	331,752	314,932	−5.1
Textiles and their products	**2,112**	**620,638**	**616,372**	(1)	**12,392,187**	**11,895,119**	(1)
Cotton goods	465	220,394	220,969	+0.3	3,569,737	3,491,734	−2.2
Hosiery and knit goods	332	91,992	89,788	−2.4	1,778,697	1,637,621	−7.9
Silk goods	287	66,402	64,516	−2.8	1,428,518	1,292,091	−9.6
Woolen and worsted goods	191	65,304	64,569	−1.1	1,492,848	1,440,691	−3.5
Carpets and rugs	29	25,169	25,508	+1.3	657,296	641,015	−2.5
Dyeing and finishing textiles	102	32,685	32,265	−1.3	834,194	792,785	−5.0
Clothing, men's	309	63,357	63,343	−(2)	1,503,682	1,467,216	−2.4
Shirts and collars	121	22,572	21,999	−2.5	365,309	337,725	−7.6
Clothing, women's	204	22,832	22,931	+0.4	537,595	557,946	+3.8
Millinery and lace goods	72	9,931	10,484	+5.6	224,311	236,295	+5.3
Iron and steel and their products	**1,809**	**681,784**	**688,112**	(1)	**20,991,608**	**20,697,489**	(1)
Iron and steel	203	272,886	274,864	+0.7	8,652,405	8,624,546	−0.3
Cast-iron pipe	37	11,060	10,925	−1.2	263,630	236,149	−10.4
Structural ironwork	164	25,757	24,866	−3.5	773,700	710,249	−8.2
Foundry and machine shop products	971	253,637	257,035	+1.3	7,771,388	7,672,802	−1.3
Hardware	65	31,464	31,477	+(2)	827,286	803,130	−2.9
Machine tools	146	36,794	37,385	+1.6	1,261,462	1,225,900	−2.8
Steam fittings and steam and hot-water heating apparatus	111	30,816	34,359	+11.5	892,000	968,854	+8.6
Stoves	112	19,370	17,201	−11.2	549,737	455,859	−17.1
Lumber and its products	**1,416**	**244,375**	**237,182**	(1)	**5,416,004**	**4,979,033**	(1)
Lumber, sawmills	660	143,606	138,460	−3.6	2,950,216	2,681,889	−9.1
Lumber, millwork	337	33,973	34,215	+0.7	818,786	778,355	−4.9
Furniture	419	66,796	64,507	−3.4	1,647,002	1,518,789	−7.8
Leather and its products	**367**	**117,560**	**121,855**	(1)	**2,567,966**	**2,692,059**	(1)
Leather	132	25,281	25,685	+1.6	634,668	624,468	−1.6
Boots and shoes	235	92,279	96,170	+4.2	1,933,298	2,067,591	+6.9
Paper and printing	**1,169**	**206,687**	**204,667**	(1)	**6,950,399**	**6,805,482**	(1)
Paper and pulp	213	59,003	59,253	+0.4	1,618,411	1,598,150	−1.3
Paper boxes	181	20,391	19,207	−5.8	472,160	434,699	−7.9
Printing, book and job	318	47,298	47,270	−0.1	1,673,366	1,660,092	−0.8
Printing, newspapers	457	79,995	78,937	−1.3	3,186,462	3,112,541	−2.3
Chemical and allied products	**345**	**92,490**	**92,239**	(1)	**2,733,362**	**2,686,413**	(1)
Chemicals	140	37,012	37,011	−(2)	1,040,766	1,025,349	−1.5
Fertilizers	152	9,959	10,008	+0.5	191,956	188,371	−1.9
Petroleum refining	53	45,519	45,220	−0.7	1,500,640	1,472,693	−1.9
Stone, clay, and glass products	**942**	**122,375**	**116,126**	(1)	**3,168,829**	**2,848,687**	(1)
Cement	113	24,719	23,427	−5.2	704,622	625,890	−11.2
Brick, tile, and terra cotta	579	37,208	33,443	−10.1	922,377	779,868	−15.5
Pottery	123	20,594	20,180	−2.0	502,148	458,520	−8.7
Glass	127	39,854	39,076	−2.0	1,039,682	984,409	−5.3
Metal products, other than iron and steel	**218**	**52,610**	**51,937**	(1)	**1,463,813**	**1,382,499**	(1)
Stamped and enameled ware	74	19,897	19,259	−3.2	496,066	444,032	−10.5
Brass, bronze, and copper products	144	32,713	32,678	−0.1	967,747	938,467	−3.0
Tobacco products	**260**	**66,656**	**58,996**	(1)	**1,150,008**	**943,469**	(1)
Chewing and smoking tobacco and snuff	29	8,922	9,032	+1.2	143,500	149,146	+3.9
Cigars and cigarettes	231	57,734	49,964	−13.5	1,006,508	794,323	−21.1

(See footnotes at end of table)

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
Vehicles for land transportation	**1,239**	**559,451**	**597,723**	(1)	**$17,857,645**	**$17,764,009**	(1)
Automobiles	214	396,373	436,332	+10.1	12,902,620	13,146,111	+1.9
Carriages and wagons	53	1,529	1,368	−10.5	33,887	30,202	−10.9
Car building and repairing, electric-railroad	407	24,206	24,209	+(2)	758,345	746,902	−1.5
Car building and repairing, steam-railroad	565	137,343	135,814	−1.1	4,162,793	3,840,794	−7.7
Miscellaneous industries	**461**	**303,941**	**309,125**	(1)	**9,235,808**	**9,046,627**	(1)
Agricultural implements	82	24,620	25,598	+4.0	708,004	713,787	+0.8
Electrical machinery, apparatus, and supplies	176	166,561	168,105	+0.9	5,179,095	5,065,434	−2.2
Pianos and organs	71	8,748	8,477	−3.1	282,603	246,014	−12.9
Rubber boots and shoes	12	18,870	18,231	−3.4	466,083	421,281	−9.6
Automobile tires	43	55,595	57,887	+4.1	1,704,824	1,702,834	−0.1
Shipbuilding	77	29,547	30,827	+4.3	895,199	897,277	+0.2
All industries	**12,138**	**3,302,534**	**3,321,227**	(1)	**89,979,694**	**87,564,382**	(1)

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISION							
New England [3]	1,456	402,516	400,431	−0.5	$10,167,464	$9,861,735	−3.0
Middle Atlantic [4]	2,799	862,209	860,842	−0.2	24,989,689	24,339,873	−2.6
East North Central [5]	3,093	1,149,495	1,180,819	+2.7	34,846,106	34,162,287	−2.0
West North Central [6]	1,108	171,089	170,736	−0.2	4,290,834	4,256,714	−0.8
South Atlantic [7]	1,534	338,284	334,987	−1.0	6,697,823	6,397,762	−4.5
East South Central [8]	626	124,665	125,615	+0.8	2,439,601	2,329,186	−4.5
West South Central [9]	539	89,760	88,006	−2.0	1,993,512	1,909,495	−4.2
Mountain [10]	221	32,516	31,597	−2.8	899,179	867,771	−3.5
Pacific [11]	762	132,000	128,194	−2.9	3,655,486	3,439,559	−5.9
All divisions	**12,138**	**3,302,534**	**3,321,227**	(1)	**89,979,694**	**87,564,382**	(1)

[1] The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

[2] Less than one-tenth of 1 per cent.

[3] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

[4] New Jersey, New York, Pennsylvania.

[5] Illinois, Indiana, Michigan, Ohio, Wisconsin.

[6] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

[7] Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

[8] Alabama, Kentucky, Mississippi, Tennessee.

[9] Arkansas, Louisiana, Oklahoma, Texas.

[10] Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.

[11] California, Oregon, Washington.

TABLE 2.—PER CENTS OF CHANGE, DECEMBER, 1928, TO JANUARY, 1929—12 GROUPS OF INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change, December, 1928, to January, 1929		Group	Per cent of change, December, 1928, to January, 1929	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	−3.6	−4.6	Metal products, other than iron and steel	−1.4	−5.4
Textiles and their products	−0.8	−3.2	Tobacco products	−11.9	−18.6
Iron and steel and their products	−0.2	−2.6	Vehicles for land transportation	+5.5	−0.9
Lumber and its products	−2.7	−7.2	Miscellaneous industries	+5.0	+1.6
Leather and its products	+3.6	+4.2			
Paper and printing	−1.6	−1.8	**All industries**	**−0.3**	**−3.3**
Chemicals and allied products	−0.7	−2.2			
Stone, clay, and glass products	−6.5	−12.3			

Comparison of Employment and Pay-Roll Totals in January, 1929, and January, 1928

THE level of employment in manufacturing industries in January, 1929, was 3.9 per cent higher than in January, 1928, and pay-roll totals were 5.5 per cent higher.

Enormous gains in employment were made, in this comparison over a 12-month period, in the following industries: Machine tools, 36 per cent; automobiles, 31.9 per cent; agricultural implements, 21.3 per cent; brass products, 15.6 per cent; electrical machinery, 14.3 per cent; foundry and machine-shop products and automobile tires, 13.1 per cent each; and stoves, 11.1 per cent. The iron and steel industry, structural ironwork, stamped ware, and cane-sugar refining gained from 7.5 to 9.8 per cent each; slaughtering, carpets, chemicals, carriages, and shipbuilding gained from 5.1 to 6 per cent each.

The outstanding decreases between January, 1929, and January, 1928, were in cotton goods, hosiery, men's clothing, shirts and collars, cast-iron pipe, leather, cement, brick, the two tobacco industries, electric-car repairing, and rubber boots and shoes.

Thirty-one of the 54 industries had more employees in January, 1929, than in 1928, and in one other industry there was no change.

The East North Central geographic division stands out notably in improved employment and pay-roll totals in January, 1929, over January, 1928, the percentage increases having been 14.7 and 15.9, respectively, due largely to increased activities in the automobile industry and consequent increases in allied industries.

The Middle Atlantic, West North Central, East South Central, Mountain, and Pacific divisions also showed gains in employment, while the losses in the three remaining divisions were each less than 1 per cent; the West South Central division alone showed a lower level of pay-roll totals in January, 1929.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS, JANUARY, 1929, WITH JANUARY, 1928

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change January, 1929, compared with January, 1928	
	Number on pay roll	Amount of pay roll
Food and kindred products	**+1.7**	**+1.6**
Slaughtering and meat packing	+5.5	+6.8
Confectionery	−1.2	−0.2
Ice cream	+1.0	−2.7
Flour	+1.4	−0.8
Baking	+0.1	−0.4
Sugar refining, cane	+8.5	+7.8
Textiles and their products	**−3.0**	**−3.1**
Cotton goods	−3.7	−2.2
Hosiery and knit goods	−5.0	−6.3
Silk goods	−1.9	−1.7
Woolen and worsted goods	+0.3	+0.1
Carpets and rugs	+5.4	+0.7
Dyeing and finishing textiles	(1)	+3.6
Clothing, men's	−6.7	−8.8
Shirts and collars	−5.9	−6.4
Clothing, women's	+0.3	−2.0
Millinery and lace goods	−2.3	−1.9
Iron and steel and their products	**+10.1**	**+15.8**
Iron and steel	+7.5	+14.4
Cast-iron pipe	−8.1	+0.6
Structural ironwork	+8.9	+10.1
Foundry and machine-shop products	+13.1	+18.6
Hardware	+4.5	+11.2
Machine tools	+36.0	+46.0
Steam fittings and steam and hot-water heating apparatus	+0.5	+3.8
Stoves	+11.1	+10.1
Lumber and its products	**+0.5**	**+0.6**
Lumber, sawmills	−0.6	−2.5
Lumber, millwork	+0.7	+3.3
Furniture	+1.9	+3.3
Leather and its products	**−4.8**	**−5.9**
Leather	−8.4	−10.2
Boots and shoes	−3.5	−3.9
Paper and printing	**−0.6**	**+1.1**
Paper and pulp	−1.0	+0.7
Paper boxes	−2.7	(1)
Paper and printing—Contd.		
Printing, book and job	−1.4	−1.9
Printing, newspapers	+2.4	+3.6
Chemicals and allied products	**+3.3**	**+1.1**
Chemicals	+5.1	+3.0
Fertilizers	+2.0	−2.8
Petroleum refining	+2.9	+1.3
Stone, clay, and glass products	**−2.5**	**−5.3**
Cement	−5.8	−13.4
Brick, title, and terra cotta	−5.0	−6.5
Pottery	+0.6	−9.1
Glass	+3.1	+7.4
Metal products, other than iron and steel	**+13.6**	**+20.5**
Stamped and enameled ware	+9.8	+10.6
Brass, bronze, and copper products	+15.6	+24.6
Tobacco products	**−5.4**	**−10.2**
Chewing and smoking tobacco and snuff	−7.2	−4.7
Cigars and cigarettes	−4.8	−10.7
Vehicles for land transportation	**+15.0**	**+14.2**
Automobiles	+31.9	+29.8
Carriages and wagons	+6.0	+10.9
Car building and repairing, electric-railroad	−7.7	−8.9
Car building and repairing, steam-railroad	−1.3	−2.2
Miscellaneous industries	**+11.7**	**+9.0**
Agricultural implements	+21.3	+20.6
Electrical machinery, apparatus, and supplies	+14.3	+14.4
Pianos and organs	−2.1	+0.6
Rubber boots and shoes	−10.1	−17.3
Automobile tires	+13.1	+7.8
Shipbuilding	+5.3	+1.4
All industries	**+3.9**	**+5.5**

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISION [2]		
New England	−0.3	+2.5
Middle Atlantic	+2.5	+5.0
East North Central	+14.7	+15.9
West North Central	+3.6	+4.1
South Atlantic	−0.2	+1.7
East South Central	+1.3	+2.6
GEOGRAPHIC DIVISION—contd.		
West South Central	−0.9	−1.7
Mountain	+4.6	+5.3
Pacific	+2.5	+1.2
All divisions	**+3.9**	**+5.5**

[1] No change.

[2] See footnotes 3 to 11 p. 179.

Per Capita Earnings

PER CAPITA earnings of employees in the combined 54 manufacturing industries in January, 1929, were 2.9 per cent lower than in December, 1928, and 1.5 per cent higher than in January, 1928.

In January, 1929, only 3 of the 54 separate industries—women's clothing, chewing and smoking tobacco, and boots and shoes—showed increased per capita earnings as compared with December, 1928, while 24 industries reported higher per capita earnings than in January, 1928.

The outstanding increases over the 12-month period were from 9.3 per cent to 6.1 per cent and were in the following industries: Cast-iron pipe, machine tools, iron and steel, brass products, and hardware; the outstanding decreases over this period were equally large and were in the pottery, rubber boot and shoe, cement, and cigar industries.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS, JANUARY, 1929, WITH DECEMBER, 1928, AND JANUARY, 1928

Industry	Per cent of change January, 1929, compared with—		Industry	Per cent of change January, 1929, compared with—	
	December, 1928	January, 1928		December, 1928	January, 1928
Clothing, women's	+3.3	−2.6	Electrical machinery, apparatus, and supplies	−3.1	(1)
Chewing and smoking tobacco, and snuff	+2.7	+3.0	Leather	−3.1	−1.9
Boots and shoes	+2.6	−0.7	Glass	−3.4	+3.8
Millinery and lace goods	−0.2	+0.3	Sugar refining, cane	−3.4	−1.0
Carriages and wagons	−0.4	+4.7	Dyeing and finishing textiles	−3.7	+3.5
Baking	−0.5	−0.6	Carpets and rugs	−3.8	−4.6
Flour	−0.5	−2.2	Shipbuilding	−3.9	−3.7
Printing, book and job	−0.7	−0.5	Automobile tires	−4.1	−4.7
Confectionery	−0.8	+1.1	Machine tools	−4.3	+7.1
Iron and steel	−1.0	+6.6	Furniture	−4.5	+1.6
Printing, newspapers	−1.0	+1.0	Structural ironwork	−4.9	+1.0
Petroleum refining	−1.2	−1.3	Shirts and collars	−5.1	−0.5
Car building and repairing, electric-railroad	−1.5	−1.4	Lumber, millwork	−5.6	+2.6
Chemicals	−1.5	−1.9	Hosiery and knit goods	−5.7	−1.7
Slaughtering and meat packing	−1.6	+1.5	Lumber, sawmills	−5.7	−1.9
Paper and pulp	−1.7	+1.6	Brick, tile, and terra cotta	−5.9	−1.7
Fertilizers	−2.3	−4.2	Cement	−6.3	−7.7
Paper boxes	−2.3	+3.1	Rubber boots and shoes	−6.4	−8.0
Clothing, men's	−2.4	−2.5	Stoves	−6.6	−0.5
Woolen and worsted goods	−2.4	−0.3	Car building and repairing, steam-railroad	−6.7	−1.0
Cotton goods	−2.5	+1.6	Pottery	−6.8	−2.4
Foundry and machine-shop products	−2.6	+4.8	Silk goods	−6.9	+0.3
Steam fittings and steam and hot-water heating apparatus	−2.6	+3.3	Automobiles	−7.4	−1.5
Ice cream	−2.7	−3.7	Stamped and enameled ware	−7.5	+0.8
Brass, bronze, and copper products	−2.9	+7.9	Cigars and cigarettes	−8.8	−6.2
Hardware	−3.0	+6.1	Cast-iron pipe	−9.3	+9.3
Agricultural implements	−3.1	−0.5	Pianos and organs	−10.2	+2.3
			All industries	**−2.9**	**+1.5**

[1] No change.

Wage Changes

EIGHTY establishments in 16 industries reported wage-rate increases made during the month ending January 15, 1929. These increases averaged 2.5 per cent and affected 10,121 employees, or 21 per cent of all employees in the establishments concerned.

Twenty-six establishments in 14 industries reported wage-rate decreases during the same period. These decreases averaged 6.9 per cent and affected 4,723 employees, or 78 per cent of all employees in the establishments concerned.

Thirty-seven establishments in the two printing industries reported increases in wage rates affecting 1,960 employees, or 19 per cent of the total number employed by these firms; 7 establishments in the electrical machinery industry reported increases affecting 6,374 employees, or 21 per cent of their total number of employees; 8 establishments in the cotton goods industry reported decreases in wage rates affecting 3,737 employees, or 99 per cent of the total number employed by them. No especial significance can be attached to the wage-rate changes in any other industry.

TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN DECEMBER 15, 1928, AND JANUARY 15, 1929

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected			
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees		
						In establishments reporting increase or decrease in wage rates	In all establishments reporting	
			Increases					
Confectionery	302	4	5.0–10.0	8.8	28	17	(1)	
Baking	641	1	6.4	6.4	45	7	(1)	
Hosiery and knit goods	332	3	3.0– 8.0	5.3	53	11	(1)	
Silk goods	287	1	11.0	11.0	58	11	(1)	
Clothing, men's	309	1	10.0	10.0	18	7	(1)	
Millinery and lace goods	72	1	10.0	10.0	15	27	(1)	
Iron and steel	203	5	1.3– 2.5	1.9	1,034	36	(1)	
Foundry and machine-shop products	971	6	4.0–16.7	8.4	62	9	(1)	
Machine tools	146	2	3.5– 5.0	4.3	22	7	(1)	
Lumber, sawmills	660	2	12.5–14.0	13.0	171	98	(1)	
Printing, book and job	318	15	1.7–10.6	2.2	901	19		1
Printing, newspapers	457	22	1.0–13.0	3.4	1,059	19		1
Chemicals	140	2	5.0–10.0	8.7	158	8	(1)	
Petroleum refining	53	2	5.0	5.0	77	86	(1)	
Glass	127	1	0.1	0.1	29	9	(1)	
Car building and repairing, electric-railroad	407	6	2.8–11.2	9.5	46	35	(1)	
Electrical machinery, apparatus and supplies	176	7	1.0–10.0	1.6	6,374	21		4
			Decreases					
Baking	641	2	10.0–15.0	11.7	9	31	(1)	
Cotton goods	465	8	5.0–20.0	6.0	3,737	99		2
Silk goods	287	1	12.5	12.5	34	44	(1)	
Woolen and worsted goods	191	1	20.0	20.0	55	100	(1)	
Clothing, men's	309	1	10.0	10.0	14	13	(1)	
Shirts and collars	121	3	10.0–11.0	10.0	380	94		2
Iron and steel	203	2	5.0	5.0	32	9	(1)	
Steam fittings and steam and hot-water heating apparatus	111	1	15.0	15.0	28	8	(1)	
Boots and shoes	235	1	10.0	10.0	116	58	(1)	
Cement	113	1	8.0	8.0	34	24	(1)	
Brick, tile, and terra cotta	579	2	5.0–16.0	6.4	114	67	(1)	
Cigars and cigarettes	231	2	5.0–10.0	9.0	150	37	(1)	
Automobile tires	43	1	10.0	10.0	20	100	(1)	

[1] Less than one-half of 1 per cent.

Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX numbers for January, November, and December, 1928, and for January, 1929, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 industries surveyed by the Bureau of Labor Statistics, together with general index for the combined 12 groups of industries, appear in Table 6.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY, NOVEMBER, AND DECEMBER, 1928, AND JANUARY, 1929

[Monthly average 1926=100]

Industry	Employment				Pay-roll totals			
	1928			1929	1928			1929
	Jan.	Nov.	Dec.	Jan.	Jan.	Nov.	Dec.	Jan.
General index	**91.6**	**95.4**	**95.5**	**95.2**	**89.6**	**96.1**	**97.7**	**94.5**
Food and kindred products	**96.8**	**101.9**	**102.1**	**98.4**	**98.0**	**102.3**	**104.4**	**99.6**
Slaughtering and meat packing	100.4	100.9	105.9	105.9	101.5	103.3	110.3	108.4
Confectionery	92.0	108.4	104.0	90.9	92.1	106.4	106.0	91.9
Ice cream	79.1	83.5	80.9	79.9	81.1	84.0	82.1	78.9
Flour	99.7	103.5	103.1	101.1	102.3	104.2	104.0	101.5
Baking	98.6	102.4	101.4	98.7	98.9	103.0	101.7	98.5
Sugar refining, cane	83.3	95.9	92.1	90.4	86.1	96.9	97.8	92.8
Textiles and their products	**99.9**	**97.2**	**97.7**	**96.9**	**99.4**	**96.5**	**99.5**	**96.3**
Cotton goods	102.4	97.0	98.3	98.6	99.8	96.3	99.8	97.6
Hosiery and knit goods	97.8	95.6	95.2	92.9	100.1	101.0	101.9	93.8
Silk goods	97.0	96.9	97.9	95.2	94.4	97.6	102.7	92.8
Woolen and worsted goods	98.0	99.8	99.4	98.3	98.5	99.9	102.2	98.6
Carpets and rugs	102.4	104.9	106.5	107.9	101.3	101.7	104.6	102.0
Dyeing and finishing textiles	102.0	101.9	103.3	102.0	100.6	106.7	109.7	104.2
Clothing, men's	95.7	89.0	89.3	89.3	95.3	81.3	89.0	86.9
Shirts and collars	97.3	94.1	93.9	91.6	92.0	94.4	93.2	86.1
Clothing, women's	105.3	106.2	105.2	105.6	109.6	102.9	103.5	107.4
Millinery and lace goods	94.8	88.7	87.7	92.6	91.6	86.6	85.4	89.9
Iron and steel and their products	**86.1**	**94.8**	**95.0**	**94.8**	**82.5**	**97.7**	**98.0**	**95.5**
Iron and steel	86.9	93.1	92.8	93.4	83.5	97.6	95.8	95.5
Cast-iron pipe	79.8	75.9	74.2	73.3	66.6	73.5	74.8	67.0
Structural ironwork	89.7	98.5	101.2	97.7	87.5	104.3	104.9	96.3
Foundry and machine shop products	86.3	95.6	96.3	97.6	82.4	96.8	99.0	97.7
Hardware	88.2	91.5	92.2	92.2	83.6	94.3	95.8	93.0
Machine tools	88.3	114.2	118.2	120.1	88.4	125.6	132.8	129.1
Steam fittings and steam and hot-water heating apparatus	80.8	79.4	72.8	81.2	75.5	78.1	72.2	78.4
Stoves	73.0	95.2	91.3	81.1	67.0	94.2	89.0	73.8
Lumber and its products	**84.8**	**90.0**	**87.6**	**85.2**	**81.4**	**92.0**	**88.3**	**81.9**
Lumber, sawmills	82.7	88.1	85.3	82.2	79.9	89.7	85.7	77.9
Lumber, millwork	82.7	85.4	82.7	83.3	76.6	85.2	83.2	79.1
Furniture	92.4	98.4	97.5	94.2	89.1	103.6	99.8	92.0
Leather and its products	**95.6**	**88.6**	**87.8**	**91.0**	**92.6**	**78.6**	**83.6**	**87.1**
Leather	99.1	90.9	89.4	90.8	97.6	87.8	89.0	87.6
Boots and shoes	94.3	87.8	87.3	91.0	90.4	74.5	81.3	86.9
Paper and printing	**100.2**	**101.2**	**101.2**	**99.6**	**102.1**	**103.4**	**105.1**	**103.2**
Paper and pulp	95.5	95.5	94.1	94.5	95.0	97.0	97.0	95.7
Paper boxes	94.8	101.4	97.7	92.2	97.4	111.2	105.8	97.4
Printing, book and job	102.2	99.5	100.9	100.8	105.2	99.4	104.0	103.2
Printing, newspapers	104.6	107.4	108.5	107.1	106.3	110.2	112.7	110.1
Chemicals and allied products	**91.4**	**94.4**	**95.1**	**94.4**	**94.1**	**97.2**	**97.2**	**95.1**
Chemicals	97.7	102.7	102.7	102.7	101.7	106.8	106.4	104.8
Fertilizers	90.2	88.9	91.5	92.0	93.0	91.0	92.2	90.4
Petroleum refining	83.7	86.1	86.7	86.1	85.7	88.4	88.5	86.8
Stone, clay, and glass products	**83.7**	**89.2**	**87.3**	**81.6**	**81.8**	**90.6**	**88.4**	**77.5**
Cement	83.3	86.6	82.8	78.5	83.1	85.4	81.1	72.0
Brick, tile, and terra cotta	76.5	84.3	80.9	72.7	72.3	82.5	80.0	67.6
Pottery	93.7	96.6	96.2	94.3	93.7	92.5	93.3	85.2
Glass	87.0	92.0	91.5	89.7	84.9	98.5	96.3	91.2
Metal products, other than iron and steel	**85.6**	**97.8**	**98.6**	**97.2**	**85.0**	**106.2**	**108.2**	**102.4**
Stamped and enameled ware	80.0	90.6	90.7	87.8	76.7	94.0	94.8	84.8
Brass, bronze, and copper products	88.0	100.8	101.8	101.7	87.7	110.2	112.7	109.3

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY, NOVEMBER, AND DECEMBER, 1928, AND JANUARY, 1929—Continued

Industry	Employment				Pay-roll totals			
	1928			1929	1928			1929
	Jan.	Nov.	Dec.	Jan.	Jan.	Nov.	Dec.	Jan.
Tobacco products	**91.2**	**101.2**	**98.0**	**86.3**	**90.2**	**99.3**	**99.5**	**81.0**
Chewing and smoking tobacco and snuff	102.5	93.7	94.0	95.1	101.6	88.7	93.2	96.8
Cigars and cigarettes	89.5	102.1	98.5	85.2	88.6	100.7	100.3	79.1
Vehicles for land transportation	**86.8**	**95.5**	**94.6**	**99.8**	**83.6**	**97.5**	**96.4**	**95.5**
Automobiles	91.8	111.5	110.0	121.1	85.8	111.4	109.3	111.4
Carriages and wagons	65.3	80.6	77.3	69.2	67.0	86.7	83.4	74.3
Car building and repairing, electric-railroad	98.0	92.2	90.5	90.5	99.4	93.4	92.0	90.6
Car building and repairing, steam-railroad	82.7	82.7	82.5	81.6	81.4	86.5	86.2	79.6
Miscellaneous industries	**92.0**	**94.0**	**97.9**	**102.8**	**93.3**	**91.9**	**100.1**	**101.7**
Agricultural implements	100.0	111.7	116.6	121.3	102.9	116.0	123.1	124.1
Electrical machinery, apparatus, and supplies	90.5	100.6	102.5	103.4	90.7	101.6	106.1	103.8
Pianos and organs	77.9	80.6	78.7	76.3	71.4	83.1	82.4	71.8
Rubber boots and shoes	111.0	104.0	103.3	99.8	116.2	104.3	106.3	96.1
Automobile tires	95.7	103.9	103.9	108.2	95.9	102.1	103.5	103.4
Shipbuilding	89.4	82.6	90.2	94.1	92.3	80.2	93.4	93.6

Table 7 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to January, 1929.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO JANUARY, 1929

[Monthly average, 1926=100]

Month	Employment							Pay-roll totals						
	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
January	106.6	103.8	97.9	100.4	97.3	91.6	95.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5
February	108.4	105.1	99.7	101.5	99.0	93.0	------	99.4	103.8	99.3	102.2	100.6	93.9	------
March	110.8	104.9	100.4	102.0	99.5	93.7	------	104.7	103.3	100.8	103.4	102.0	95.2	------
April	110.8	102.8	100.2	101.0	98.6	93.3	------	105.7	101.1	98.3	101.5	100.8	93.8	------
May	110.8	98.8	98.9	99.8	97.6	93.0	------	109.4	96.5	98.5	99.8	99.8	94.1	------
June	110.9	95.6	98.0	99.3	97.0	93.1	------	109.3	90.8	95.7	99.7	97.4	94.2	------
July	109.2	92.3	97.2	97.7	95.0	92.2	------	104.3	84.3	93.5	95.2	93.0	91.2	------
August	108.5	92.5	97.8	98.7	95.1	93.6	------	103.7	87.2	95.4	98.7	95.0	94.2	------
September	108.6	94.3	98.9	100.3	95.8	95.0	------	104.4	89.8	94.4	99.3	94.1	95.4	------
October	108.1	95.6	100.4	100.7	95.3	95.9	------	106.8	92.4	100.4	102.9	95.2	99.0	------
November	107.4	95.5	100.7	99.5	93.5	95.4	------	105.4	91.4	100.4	99.6	91.6	96.1	------
December	105.4	97.3	100.8	98.9	92.6	95.5	------	103.2	95.7	101.6	99.8	93.2	97.7	------
Average	**108.8**	**98.2**	**99.2**	**100.0**	**96.4**	**93.8**	------	**104.3**	**94.6**	**97.7**	**100.0**	**96.5**	**94.5**	------

Index numbers of employment and of pay-roll totals for each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and for each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries are shown in Tables 8 and 9 for each month of 1923, 1924, 1925, 1926, 1927, and 1928.

In these tables, as in Tables 6 and 7, the monthly average for 1926 is the base, or 100 per cent, the previously published indexes of the bureau, in which the monthly average for 1923 was the base, or 100 per cent, having been turned over to the 1926 base.

In computing the general index and the group indexes the index numbers of separate industries are weighted according to the importance of the industries.

Following Table 9 is a chart, made from the index numbers of Table 7, showing clearly the trend of employment and the trend of pay-roll totals for the 54 industries combined, month by month, from January, 1926, to January, 1929.

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES

[Monthly average, 1926=100]

Year and month	General index	Food and kindred products						
		Group index	Slaughtering	Confectionery	Ice cream	Flour	Baking	Sugar
1923								
January	106.6	106.6	121.5	----------	----------	113.2	90.2	----------
February	108.4	106.2	116.2	----------	----------	112.0	94.5	----------
March	110.8	106.6	114.7	----------	----------	112.2	97.5	----------
April	110.8	105.3	114.3	105.3	81.3	110.2	96.0	128.2
May	110.8	106.5	118.2	101.0	103.7	107.5	96.6	125.1
June	110.9	109.8	121.5	103.3	120.9	106.6	100.5	119.0
July	109.2	111.7	124.6	100.0	122.3	109.0	104.7	111.0
August	108.5	113.1	125.6	107.9	115.3	121.6	103.3	97.0
September	108.6	116.4	126.2	127.4	108.2	121.6	102.7	100.9
October	108.1	119.3	128.1	140.9	99.2	122.9	104.7	102.7
November	107.4	117.8	131.0	140.0	93.0	118.7	100.4	101.4
December	105.4	113.4	132.6	120.8	91.6	114.4	99.5	76.4
Average	108.8	111.1	122.9	116.3	103.9	114.2	99.2	106.8
1924								
January	103.8	108.8	129.1	105.1	89.4	112.3	97.4	78.4
February	105.1	109.9	124.0	103.5	89.9	113.4	101.3	110.8
March	104.9	107.7	118.6	103.7	92.8	109.0	101.4	111.0
April	102.8	103.8	113.1	94.4	100.0	105.5	99.2	108.2
May	98.8	102.7	111.0	89.4	107.8	101.7	99.5	116.0
June	95.6	104.9	111.8	93.3	110.7	102.6	102.0	117.2
July	92.3	105.1	113.1	90.6	118.3	104.9	101.5	115.9
August	92.5	105.3	111.2	99.1	116.8	108.3	100.0	110.4
September	94.3	108.1	110.4	115.0	108.7	111.2	101.1	113.4
October	95.6	108.2	108.8	123.8	96.5	112.0	101.8	100.5
November	95.5	106.0	112.0	111.2	88.0	109.8	101.3	89.7
December	97.3	106.5	118.6	109.1	84.5	106.6	99.7	83.7
Average	98.2	106.4	115.1	103.2	100.3	108.1	100.5	104.6
1925								
January	97.9	103.3	116.8	96.7	82.6	107.9	97.5	85.3
February	99.7	103.3	110.8	99.0	84.9	109.2	98.8	105.0
March	100.4	100.3	104.7	96.3	87.8	103.4	97.5	112.6
April	100.2	96.3	98.3	88.6	94.8	98.3	96.3	108.2
May	98.9	96.4	98.5	87.3	103.5	94.5	96.6	111.1
June	98.0	99.4	101.4	87.2	126.2	96.8	99.5	109.1
July	97.2	99.6	102.5	83.5	123.2	101.9	99.1	110.1
August	97.8	100.1	102.3	93.4	116.9	102.4	97.5	107.3
September	98.9	102.8	102.3	106.2	113.7	106.6	98.9	105.1
October	100.4	105.6	102.9	116.2	100.1	108.1	103.4	102.2
November	100.7	104.3	105.8	114.0	92.0	105.3	100.7	98.2
December	100.8	103.0	106.4	109.3	89.9	103.3	99.1	99.5
Average	99.2	101.2	104.4	98.1	101.3	103.1	98.7	104.5
1926								
January	100.4	100.6	106.5	100.5	87.1	101.5	96.8	98.2
February	101.5	99.6	102.3	101.3	88.5	98.6	96.6	108.9
March	102.0	98.3	97.5	98.3	90.0	97.9	99.0	107.3
April	101.0	95.3	93.6	91.0	94.6	93.8	98.0	106.0
May	99.8	96.7	95.6	90.5	108.2	92.7	99.1	103.1
June	99.3	98.8	97.9	89.0	118.1	93.9	102.4	103.8
July	97.7	99.3	98.8	88.0	119.6	99.2	102.2	99.6
August	98.7	100.0	99.8	92.4	117.5	105.6	100.0	99.8
September	100.3	102.9	100.4	109.7	105.2	105.6	101.7	97.5
October	100.7	105.0	101.5	119.8	97.1	106.2	103.4	94.3
November	99.5	102.9	102.0	113.7	87.8	104.9	101.1	95.0
December	98.9	100.7	103.7	105.2	85.7	100.3	99.3	86.1
Average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	General index	Food and kindred products—Continued						
		Group index	Slaughtering	Confectionery	Ice cream	Flour	Baking	Sugar
1927								
January	97.3	98.6	103.7	96.5	83.5	98.3	97.9	88.8
February	99.0	98.1	101.6	94.7	84.1	97.9	99.2	90.1
March	99.5	97.1	97.3	92.2	86.7	97.6	100.3	96.0
April	98.6	95.8	95.2	88.3	91.4	94.1	100.2	99.4
May	97.6	96.4	96.3	87.2	99.6	96.2	99.7	103.0
June	97.0	101.0	102.7	90.1	107.6	97.4	104.0	105.4
July	95.0	100.1	102.7	85.0	111.9	100.0	102.2	106.8
August	95.1	99.2	98.5	90.6	108.3	101.1	101.3	105.4
September	95.8	102.6	98.4	108.3	99.5	103.8	103.9	101.6
October	95.3	103.1	97.8	113.4	90.1	104.1	104.8	102.5
November	93.5	101.2	98.9	108.1	84.4	101.9	102.8	96.3
December	92.6	100.1	101.2	104.1	81.1	99.5	101.0	90.5
Average	96.4	99.4	99.5	96.5	94.0	99.3	101.4	98.8
1928								
January	91.6	96.8	100.4	92.0	79.1	99.7	98.6	83.3
February	93.0	97.9	103.1	92.4	79.3	99.9	98.6	87.7
March	93.7	97.3	100.7	90.3	82.8	100.1	99.4	89.5
April	93.3	95.3	96.8	85.8	89.4	96.7	98.9	92.2
May	93.0	95.5	95.8	84.8	96.3	96.6	100.7	86.6
June	93.1	96.9	99.0	83.5	103.6	94.5	102.1	85.0
July	92.2	97.3	99.4	80.3	112.9	97.5	101.3	95.0
August	93.6	96.9	97.2	83.3	110.7	101.3	100.0	95.8
September	95.0	100.0	96.6	99.0	100.7	102.7	103.4	93.4
October	95.9	102.3	97.8	111.7	90.0	104.3	103.9	96.3
November	95.4	101.9	100.9	108.4	83.5	103.5	102.4	95.9
December	95.5	102.1	105.9	104.0	80.9	103.1	101.4	92.1
Average	93.8	98.4	99.5	93.0	92.4	100.0	100.9	91.1

Year and month	Textiles and their products										
	Group index	Cotton goods	Hosiery	Silk goods	Woolen goods	Carpets	Dyeing	Clothing, men's	Shirts	Clothing, women's	Millinery
1923											
January	118.8	126.2	101.8	98.3	122.9	107.2	105.9	121.5	121.3	129.8	143.4
February	120.4	126.7	103.1	100.5	124.7	105.4	104.6	124.3	122.8	136.1	148.8
March	122.3	128.2	104.7	102.2	126.0	106.4	105.5	126.6	123.2	140.4	151.2
April	120.9	127.8	105.3	102.5	127.4	106.0	106.1	118.1	123.7	135.6	149.2
May	119.4	127.7	105.2	102.1	127.6	106.1	104.8	117.2	121.3	126.0	142.7
June	117.2	125.5	104.0	100.5	126.4	106.2	100.7	119.9	119.1	117.4	133.8
July	113.8	115.6	99.9	98.9	125.0	106.7	101.0	120.0	117.8	122.1	134.0
August	112.9	113.0	100.3	99.3	123.8	106.6	95.1	119.6	112.2	124.4	137.0
September	113.4	114.4	99.3	99.2	121.9	106.2	96.6	119.1	114.1	128.7	136.6
October	112.0	111.0	100.3	98.8	122.2	106.9	101.2	115.5	117.2	126.1	132.2
November	110.9	112.8	101.3	97.8	123.7	107.2	101.0	110.4	117.4	115.5	123.3
December	111.4	115.2	100.5	97.6	122.7	107.0	103.0	111.2	116.6	112.9	125.4
Average	116.1	120.3	102.1	99.8	124.5	106.5	102.1	118.6	118.9	126.3	138.1
1924											
January	111.4	112.4	99.8	96.8	120.5	106.2	92.3	117.2	114.7	124.2	128.6
February	113.2	112.0	101.2	98.8	120.3	107.1	97.7	120.8	113.4	131.1	131.9
March	111.5	108.1	102.5	98.2	119.4	109.7	96.8	116.4	112.7	131.6	129.0
April	106.4	103.5	100.7	95.1	113.1	103.5	96.0	103.1	109.4	126.1	126.0
May	101.7	99.8	96.6	92.5	110.1	98.4	93.0	99.9	104.6	112.1	121.1
June	98.4	97.0	91.9	90.5	106.1	89.7	90.3	108.3	98.7	96.8	113.4
July	91.5	87.8	78.7	87.5	101.1	85.3	88.7	107.1	90.8	90.0	112.2
August	94.0	89.7	81.5	91.0	102.5	88.9	86.4	105.9	82.9	103.4	113.7
September	97.2	91.8	85.7	93.3	109.2	91.4	92.3	103.9	91.6	108.1	121.1
October	100.6	96.5	88.7	95.8	116.8	95.3	96.1	102.3	95.1	111.2	118.2
November	99.7	96.6	91.1	95.0	119.2	99.0	98.0	97.5	95.7	102.7	113.1
December	103.0	103.4	93.2	94.9	120.9	102.8	100.7	99.9	97.6	105.9	114.9
Average	102.4	99.9	92.6	94.1	113.3	98.1	94.0	106.9	100.6	111.9	120.3

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	**Textiles and their products**—Continued										
	Group index	Cotton goods	Hosiery	Silk goods	Woolen goods	Carpets	Dyeing	Clothing, men's	Shirts	Clothing, women's	Millinery
1925											
January	**104.4**	105.1	94.4	95.9	118.4	103.5	102.0	102.6	98.1	108.2	122.4
February	**107.1**	106.1	98.6	98.4	117.1	104.0	104.0	107.5	101.8	114.8	128.2
March	**107.3**	105.7	100.5	100.2	114.4	104.9	105.0	105.6	102.7	117.4	130.9
April	**106.2**	105.8	101.0	100.7	112.8	105.2	105.2	100.0	104.4	112.2	129.0
May	**103.3**	104.0	100.5	101.5	109.3	104.0	102.8	95.6	105.1	102.3	119.5
June	**102.0**	101.9	99.7	102.5	108.3	100.4	97.7	102.6	103.3	94.6	113.8
July	**99.9**	93.4	98.1	103.8	106.8	94.8	98.1	103.7	102.7	100.8	112.3
August	**100.8**	93.7	98.4	105.5	107.1	96.3	97.2	106.0	99.6	104.2	114.5
September	**100.9**	92.4	100.2	106.4	107.5	96.7	99.0	105.6	102.3	105.3	111.0
October	**103.9**	100.0	103.3	107.4	108.7	97.1	102.9	103.9	104.2	106.6	108.4
November	**104.3**	102.3	104.4	107.5	109.6	100.6	103.4	102.0	107.4	101.5	106.6
December	**104.1**	102.8	103.8	107.9	108.8	101.3	103.0	102.1	108.0	98.9	108.1
Average	**103.7**	101.1	100.2	103.1	110.7	100.7	101.7	103.1	103.3	105.6	117.1
1926											
January	**104.3**	103.0	102.8	107.8	107.2	102.0	103.6	102.7	106.8	102.9	108.8
February	**104.6**	103.5	103.8	107.0	99.8	101.8	103.6	105.2	107.5	107.7	113.0
March	**104.5**	104.5	103.9	103.8	97.3	103.6	103.8	103.7	106.3	110.5	113.3
April	**102.1**	103.5	102.3	100.4	96.4	103.3	101.8	97.6	102.1	106.7	111.3
May	**99.5**	100.8	100.5	97.4	95.6	99.9	99.4	95.1	100.4	102.4	106.4
June	**97.6**	98.3	99.2	95.2	95.1	95.5	98.0	100.0	98.2	95.5	93.0
July	**93.1**	91.9	93.2	94.3	94.9	92.8	93.8	97.4	96.1	87.2	89.0
August	**94.7**	91.7	95.6	96.1	95.0	96.3	96.2	100.9	91.8	94.1	89.9
September	**97.8**	97.5	97.0	97.7	99.5	97.6	98.1	100.1	95.5	97.2	94.3
October	**100.3**	100.4	100.1	100.1	105.4	100.5	99.7	99.8	98.5	99.6	92.0
November	**100.0**	101.3	100.9	100.0	107.2	102.9	100.9	96.9	99.0	93.4	92.5
December	**101.9**	103.0	100.9	99.7	106.4	103.5	100.8	100.5	97.7	102.0	96.0
Average	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927											
January	**102.3**	103.7	99.8	98.7	105.9	104.6	100.3	99.4	96.8	107.7	99.4
February	**104.2**	105.2	100.4	99.2	106.1	104.8	101.5	102.8	97.7	113.9	103.2
March	**104.2**	105.7	100.3	101.1	102.2	104.8	102.1	100.9	95.5	117.8	102.8
April	**102.6**	105.4	100.4	101.0	99.3	104.2	102.2	94.4	93.9	114.4	101.5
May	**100.8**	105.1	99.7	100.1	96.9	102.8	100.4	93.1	93.1	107.8	96.4
June	**99.9**	105.4	99.3	97.6	97.4	102.2	99.3	97.9	92.4	97.6	89.6
July	**97.8**	104.9	93.0	96.5	93.0	101.2	97.3	98.1	91.2	94.9	86.2
August	**99.1**	104.2	94.6	97.5	97.3	100.4	98.6	100.6	91.0	97.0	92.3
September	**100.9**	105.3	98.6	97.9	98.3	100.3	100.4	99.5	93.9	102.0	96.7
October	**101.7**	105.8	100.2	97.0	99.4	100.1	102.2	98.6	96.6	106.2	92.5
November	**101.2**	105.8	101.6	95.9	100.5	100.6	103.2	94.3	99.0	102.7	92.5
December	**100.6**	103.7	99.9	98.0	99.8	104.0	102.9	94.4	98.5	103.2	93.8
Average	**101.3**	105.0	99.0	98.4	99.7	102.5	108.7	97.8	95.0	105.4	95.6
1928											
January	**99.9**	102.4	97.8	97.0	98.0	102.4	102.0	95.7	97.3	105.3	94.8
February	**101.2**	101.3	99.1	100.5	97.3	103.6	103.3	98.0	97.1	110.6	101.4
March	**100.3**	99.5	98.3	101.6	93.9	103.2	102.2	96.3	96.6	113.3	102.9
April	**97.2**	97.1	96.1	96.8	91.9	102.0	99.8	89.4	93.0	110.7	102.9
May	**94.7**	92.4	94.8	96.9	93.2	100.5	98.5	87.3	90.7	105.4	97.7
June	**94.1**	91.7	94.0	96.0	94.8	97.1	96.5	92.3	88.3	100.1	91.4
July	**90.9**	89.9	88.9	92.7	91.0	95.4	94.8	90.5	86.9	95.5	82.9
August	**91.9**	88.6	89.8	93.5	93.2	96.2	95.5	93.4	85.6	98.5	87.7
September	**93.6**	90.4	92.5	95.0	91.2	96.6	96.6	93.1	89.7	104.3	93.4
October	**96.5**	94.1	94.3	98.1	96.4	103.0	99.4	91.8	93.5	109.1	90.6
November	**97.2**	97.0	95.6	96.9	99.8	104.9	101.9	89.0	94.1	106.2	88.7
December	**97.7**	98.3	95.2	97.9	99.4	106.5	103.3	89.3	93.9	105.2	87.7
Average	**96.3**	95.2	94.7	96.9	95.0	101.0	99.5	92.2	92.2	105.4	93.5

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	Iron and steel and their products								
	Group index	Iron and steel	Cast-iron pipe	Structural	Foundry and machine-shop products	Hardware	Machine tools	Steam fittings	Stoves
1923									
January	**102.4**	96.5	85.5		107.7	111.0			117.8
February	**105.8**	99.3	87.8		112.0	112.8			119.7
March	**108.6**	101.0	90.5		115.8	114.7			122.4
April	**109.8**	101.3	92.3		118.0	116.6			121.0
May	**111.2**	103.3	93.4	96.2	118.7	114.2	107.9	106.2	120.1
June	**112.9**	105.9	97.2	101.1	119.8	114.5	107.0	106.0	119.7
July	**111.3**	102.8	99.3	98.6	120.5	115.8	104.2	105.3	109.7
August	**111.2**	105.4	98.5	104.9	120.0	115.4	80.2	105.6	110.0
September	**110.7**	104.5	96.6	104.3	118.0	113.4	98.9	104.8	113.6
October	**108.9**	104.2	97.3	102.8	114.3	113.0	98.4	103.4	115.1
November	**106.6**	102.2	97.1	101.0	111.5	109.4	94.2	99.3	115.5
December	**102.7**	98.3	96.6	97.5	107.7	109.8	94.2	96.0	110.8
Average	**108.5**	102.1	94.3	100.8	115.3	113.4	98.1	103.3	116.3
1924									
January	**100.9**	101.0	97.7	95.3	102.4	110.8	90.8	97.8	93.3
February	**102.3**	105.8	100.1	95.3	100.7	113.8	92.2	99.6	107.6
March	**102.8**	108.5	101.4	92.9	100.5	111.6	92.3	102.6	107.6
April	**102.1**	107.8	102.6	91.9	99.4	111.6	89.8	104.5	104.4
May	**96.6**	98.3	102.6	92.6	95.3	107.8	86.3	102.1	103.5
June	**92.5**	91.4	100.2	92.7	92.7	103.9	83.7	100.1	100.7
July	**87.4**	86.1	98.9	92.2	88.5	96.4	77.3	96.6	83.1
August	**85.8**	83.8	99.1	92.6	87.0	94.2	66.9	97.5	94.5
September	**86.8**	86.3	95.4	92.3	85.9	97.6	75.4	97.9	99.4
October	**88.3**	89.9	96.8	88.0	86.2	99.9	75.3	98.1	104.9
November	**88.8**	90.3	93.7	86.2	87.2	101.0	76.3	96.0	104.1
December	**91.8**	95.4	90.1	88.6	90.0	102.2	78.3	90.1	100.9
Average	**93.8**	95.4	98.2	91.7	93.0	104.2	82.0	98.6	100.3
1925									
January	**93.7**	100.2	90.8	88.4	90.4	103.3	80.7	96.5	87.6
February	**95.9**	102.0	93.6	88.6	92.5	104.6	81.9	98.6	101.5
March	**96.5**	102.7	95.3	89.1	93.4	105.3	81.4	98.6	101.7
April	**95.7**	100.4	94.8	89.2	93.8	104.5	81.6	97.5	95.0
May	**94.9**	98.2	96.2	91.4	93.4	104.1	82.1	97.0	96.4
June	**94.1**	95.4	95.1	93.5	93.8	103.5	83.5	96.9	96.9
July	**92.9**	94.0	96.0	96.6	92.6	99.1	84.9	97.2	82.6
August	**92.9**	94.0	97.5	95.7	92.0	102.4	79.0	99.7	95.0
September	**93.9**	94.5	97.5	94.8	92.4	102.8	88.3	101.9	100.3
October	**95.4**	95.8	97.5	95.9	93.3	104.0	92.0	105.8	105.5
November	**96.4**	97.2	95.7	93.6	94.1	104.4	95.7	105.8	107.8
December	**97.9**	100.1	96.6	93.2	95.4	105.1	98.8	105.2	102.8
Average	**95.0**	97.9	95.6	92.5	93.1	103.6	85.8	100.1	97.8
1926									
January	**98.4**	100.5	95.8	92.5	96.9	105.6	100.2	103.0	91.4
February	**100.7**	102.0	98.0	94.2	99.7	106.0	100.6	105.0	99.2
March	**101.2**	101.7	99.3	94.4	101.2	104.5	102.0	103.4	100.6
April	**101.5**	102.3	100.6	97.1	101.2	103.6	101.5	102.6	102.1
May	**100.7**	101.0	100.6	98.8	100.6	100.9	100.2	100.8	100.0
June	**100.9**	99.3	102.0	100.6	102.4	98.2	99.6	101.3	99.3
July	**99.7**	97.8	105.4	105.9	101.4	96.5	99.4	97.9	91.6
August	**99.8**	98.8	103.5	105.7	101.2	97.3	90.7	100.2	99.3
September	**100.7**	100.3	103.2	106.1	100.6	98.0	100.4	100.4	102.7
October	**100.2**	100.2	100.7	103.9	99.7	97.7	101.8	99.0	106.7
November	**98.4**	99.1	97.3	100.9	97.0	97.3	102.3	95.5	106.5
December	**97.6**	96.7	93.4	99.3	98.4	94.7	101.9	90.5	100.5
Average	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	Iron and steel and their products—Continued								
	Group index	Iron and steel	Cast-iron pipe	Structural	Foundry and machine-shop products	Hardware	Machine tools	Steam fittings	Stoves
1927									
January	**95.8**	95.0	91.7	94.9	97.1	95.1	100.9	90.8	87.0
February	**97.6**	96.4	91.1	94.9	99.4	96.0	100.1	94.9	93.0
March	**98.2**	97.7	93.8	94.3	99.5	96.3	98.8	93.9	95.5
April	**97.2**	97.3	94.2	95.0	98.0	95.4	97.0	94.0	93.5
May	**95.8**	96.4	95.9	95.3	96.0	94.0	94.4	92.9	94.0
June	**94.5**	94.3	94.2	96.5	94.9	93.0	93.3	93.6	93.6
July	**92.5**	92.3	92.5	96.3	93.7	90.0	90.6	94.1	78.3
August	**91.7**	91.2	90.2	97.9	93.2	87.1	81.1	94.5	89.4
September	**91.3**	90.6	86.3	96.8	91.1	91.0	90.4	96.1	93.7
October	**89.8**	89.5	83.8	93.9	89.3	90.4	90.2	93.7	95.5
November	**87.6**	87.8	81.9	92.1	86.6	89.5	88.6	88.3	93.3
December	**86.6**	86.5	82.4	91.3	86.4	89.1	88.5	83.4	87.7
Average	**93.2**	92.9	89.8	94.9	93.8	92.2	92.8	92.5	91.2
1928									
January	**86.1**	86.9	79.8	89.7	86.3	88.2	88.3	80.8	73.0
February	**88.6**	89.8	77.8	90.2	88.4	**89.0**	90.7	83.1	83.1
March	**90.0**	91.5	80.8	89.4	89.9	89.1	92.6	84.3	84.8
April	**90.5**	91.4	81.8	89.9	90.7	87.5	95.1	84.3	86.7
May	**91.6**	91.2	84.3	93.2	92.4	87.6	97.7	84.4	88.4
June	**91.7**	90.5	84.5	95.9	92.8	88.2	99.4	84.1	89.1
July	**91.0**	89.6	80.8	95.7	92.7	84.8	100.9	80.7	81.9
August	**92.1**	90.7	80.7	99.6	93.2	88.1	95.4	86.8	88.6
September	**93.2**	91.2	81.1	99.2	94.2	90.2	106.8	83.0	92.2
October	**93.9**	91.5	79.7	98.2	94.9	90.1	110.2	83.0	96.7
November	**94.8**	93.1	75.9	98.5	95.6	91.5	114.2	79.4	95.2
December	**95.0**	92.8	74.2	101.2	96.3	92.2	118.2	72.8	91.3
Average	**91.5**	90.9	80.1	95.0	92.3	88.9	100.8	82.2	87.6

Year and month	Lumber and its products				Leather and its products		
	Group index	Sawmills	Millwork	Furniture	**Group index**	Leather	Shoes
1923							
January	**104.0**	107.0	96.8	99.8	**115.5**	115.1	115.4
February	**106.1**	109.8	97.9	101.4	**116.6**	116.8	116.4
March	**107.3**	110.7	100.5	101.8	**116.6**	115.7	116.4
April	**109.7**	113.3	102.2	101.1	**114.4**	113.9	113.9
May	**111.0**	115.8	102.8	100.4	**110.7**	109.5	111.6
June	**112.6**	119.1	104.7	99.2	**108.0**	108.9	107.9
July	**113.3**	120.0	104.9	99.4	**106.3**	108.2	105.7
August	**112.8**	119.1	104.2	100.5	**109.1**	106.8	110.6
September	**112.9**	119.3	101.5	99.4	**108.9**	105.7	110.2
October	**111.5**	117.7	100.8	100.8	**108.0**	105.4	109.2
November	**111.0**	116.2	100.7	101.1	**108.3**	106.2	108.8
December	**108.4**	112.8	101.3	99.6	**106.6**	103.5	107.3
Average	**110.0**	115.1	101.5	100.4	**110.7**	109.6	111.1
1924							
January	**104.5**	108.5	99.8	96.5	**106.9**	103.8	107.7
February	**107.0**	110.5	102.8	99.0	**106.9**	104.3	108.2
March	**106.6**	109.7	104.2	99.1	**107.4**	103.4	108.8
April	**107.8**	111.3	105.7	97.2	**101.3**	99.2	102.7
May	**106.8**	112.0	104.2	93.7	**96.9**	94.4	98.1
June	**104.2**	109.0	102.0	89.8	**91.9**	91.6	92.3
July	**102.1**	107.2	99.3	88.3	**92.1**	88.9	93.2
August	**102.0**	106.7	99.3	89.5	**96.7**	89.9	98.9
September	**102.9**	106.7	99.6	93.1	**100.3**	94.7	102.2
October	**103.6**	106.8	99.5	96.7	**101.7**	95.9	103.6
November	**102.6**	104.9	98.1	98.5	**101.2**	97.3	102.6
December	**102.1**	102.8	99.8	101.2	**100.6**	99.1	101.0
Average	**104.4**	108.0	101.2	95.2	**100.3**	96.9	101.6

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	**Lumber and its products**—Continued				**Leather and its products**—Con.		
	Group index	Sawmills	Millwork	Furniture	**Group index**	Leather	Shoes
1925							
January	**101.2**	101.8	99.1	100.4	**103.9**	100.3	105.0
February	**102.8**	103.2	101.0	102.1	**105.6**	101.6	107.0
March	**101.9**	101.8	101.4	102.0	**105.6**	101.5	107.0
April	**103.2**	104.5	103.2	99.2	**101.6**	98.9	102.4
May	**102.8**	105.3	101.7	95.4	**99.2**	96.4	100.1
June	**103.2**	106.9	101.4	93.1	**95.1**	96.1	94.8
July	**102.2**	105.3	103.4	92.3	**98.0**	94.8	99.0
August	**102.4**	104.4	104.2	95.3	**102.9**	96.5	105.0
September	**103.7**	105.3	105.0	98.3	**105.0**	98.8	107.0
October	**103.9**	104.0	105.6	102.2	**104.8**	99.6	106.4
November	**102.6**	101.5	104.8	104.8	**101.8**	100.2	102.3
December	**100.9**	99.1	105.2	103.7	**98.8**	100.0	98.3
Average	**102.5**	103.6	103.0	99.1	**101.9**	98.7	102.9
1926							
January	**98.2**	96.5	102.4	100.9	**100.8**	101.5	100.6
February	**98.6**	96.3	102.7	102.6	**102.5**	102.3	102.7
March	**98.8**	96.7	103.7	102.4	**101.2**	102.4	100.9
April	**101.0**	101.0	101.5	100.3	**96.5**	99.9	95.3
May	**101.2**	103.0	100.4	96.3	**94.9**	97.9	93.9
June	**101.4**	103.9	100.2	94.4	**94.5**	95.1	94.2
July	**100.9**	103.3	100.0	93.9	**98.0**	96.8	98.3
August	**101.8**	103.8	100.1	96.8	**102.3**	99.5	103.3
September	**101.1**	101.6	98.9	101.0	**104.0**	101.2	104.9
October	**100.8**	99.9	98.6	104.7	**103.5**	101.0	104.4
November	**99.3**	98.3	97.2	104.1	**101.9**	101.1	102.2
December	**97.1**	96.0	94.0	102.6	**99.9**	101.3	99.4
Average	**100.0**	100.0	100.0	100.0	**100.0**	100.0	100.0
1927							
January	**92.5**	91.0	91.5	97.4	**101.4**	102.0	101.2
February	**91.6**	89.9	90.2	97.7	**102.0**	103.8	101.4
March	**91.3**	89.6	89.5	97.3	**101.4**	101.9	101.3
April	**91.2**	90.1	90.4	94.8	**96.5**	97.4	96.2
May	**92.3**	92.5	90.4	92.7	**94.7**	95.8	94.3
June	**92.5**	92.9	91.3	92.0	**94.4**	95.9	93.8
July	**92.2**	92.5	90.7	92.0	**97.7**	96.7	98.0
August	**93.1**	93.1	90.8	94.5	**100.8**	97.1	102.0
September	**93.7**	93.4	89.0	97.5	**101.1**	97.8	102.2
October	**93.1**	91.8	87.4	100.1	**99.0**	97.4	99.6
November	**91.4**	89.8	85.3	100.1	**93.7**	97.5	92.4
December	**87.9**	85.8	84.2	96.6	**91.8**	97.4	90.0
Average	**91.9**	91.0	89.2	96.1	**97.9**	98.4	97.7
1928							
January	**84.8**	82.7	82.7	92.4	**95.6**	99.1	94.3
February	**84.8**	82.4	83.1	93.2	**97.1**	99.9	96.2
March	**86.2**	84.5	83.4	93.5	**96.5**	99.1	95.6
April	**87.3**	86.5	85.5	90.7	**91.8**	95.8	90.4
May	**87.3**	87.2	87.0	87.7	**89.5**	95.8	87.3
June	**88.3**	88.8	87.7	87.1	**89.3**	94.5	87.6
July	**87.3**	87.2	87.9	87.3	**93.1**	95.1	92.6
August	**89.3**	89.1	88.9	90.5	**94.9**	95.5	94.8
September	**90.1**	89.4	87.2	94.1	**95.1**	95.3	95.1
October	**90.2**	88.8	84.6	97.7	**93.7**	94.0	93.6
November	**90.0**	88.1	85.4	98.4	**88.6**	90.9	87.8
December	**87.6**	85.3	82.7	97.5	**87.8**	89.4	87.3
Average	**87.8**	86.7	85.5	92.5	**92.8**	95.4	91.9

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	Paper and printing					Chemicals and allied products			
	Group index	Paper	Boxes	Book and job	Newspapers	**Group index**	Chemicals	Fertilizers	Petroleum refining
1923									
January	**94.4**	100.0	92.9	96.1	88.8	**99.3**	104.7	93.3	94.5
February	**94.7**	101.6	93.5	96.3	88.2	**103.5**	106.8	109.3	95.7
March	**96.8**	107.0	97.1	96.6	88.6	**107.2**	108.0	125.1	97.6
April	**96.9**	108.8	96.2	96.1	88.3	**105.6**	103.5	116.1	102.4
May	**96.3**	107.6	95.7	93.8	89.6	**103.4**	106.9	85.4	106.4
June	**96.7**	108.4	97.3	94.9	89.0	**100.6**	106.0	72.8	105.2
July	**96.2**	105.8	98.5	95.8	87.9	**99.7**	103.3	79.9	104.5
August	**96.0**	106.4	99.8	94.6	87.9	**100.5**	102.9	87.0	103.3
September	**96.6**	103.2	101.6	95.8	89.4	**101.3**	102.8	98.5	100.8
October	**97.3**	102.4	105.2	96.3	91.0	**100.9**	103.4	98.9	97.7
November	**98.1**	101.7	105.8	97.5	92.2	**100.0**	105.2	95.7	95.2
December	**98.3**	102.3	103.2	99.1	92.6	**99.0**	105.6	92.3	93.0
Average	**96.5**	104.6	98.9	96.1	89.5	**101.8**	104.9	96.2	99.7
1924									
January	**98.0**	100.9	99.0	100.1	92.8	**98.3**	104.6	93.6	92.2
February	**97.4**	101.9	98.4	98.8	92.5	**100.2**	104.4	105.5	92.8
March	**97.7**	101.3	99.8	98.8	92.8	**104.2**	103.3	132.7	92.8
April	**97.3**	101.0	98.1	96.8	93.6	**102.6**	101.7	124.3	93.5
May	**96.5**	100.3	94.4	97.3	93.5	**93.6**	97.5	81.5	93.5
June	**95.9**	99.3	94.2	96.8	92.7	**86.0**	89.8	57.1	93.5
July	**94.1**	95.4	92.1	96.1	91.9	**85.1**	89.1	55.2	93.4
August	**94.1**	95.4	95.1	95.1	91.7	**85.7**	89.3	60.3	92.3
September	**96.3**	96.2	99.4	98.0	93.6	**89.4**	90.9	82.8	90.5
October	**97.0**	97.4	103.5	97.9	93.2	**90.1**	93.4	82.6	89.3
November	**97.6**	97.4	103.6	98.5	94.4	**90.4**	94.3	82.0	89.2
December	**98.2**	96.9	101.4	101.2	95.0	**91.7**	96.2	84.8	88.9
Average	**96.7**	98.6	98.2	97.9	93.1	**93.1**	96.2	86.9	91.8
1925									
January	**97.4**	96.7	97.4	101.4	94.1	**92.0**	96.1	87.6	88.5
February	**97.3**	98.5	98.7	99.6	93.5	**93.8**	97.1	94.3	89.3
March	**98.0**	101.0	97.3	99.3	94.5	**100.6**	98.1	132.2	89.1
April	**97.1**	100.7	97.0	97.1	94.1	**103.5**	98.0	147.3	90.3
May	**96.2**	99.5	95.5	95.6	94.5	**90.4**	95.2	75.9	90.8
June	**95.9**	97.6	94.5	95.7	95.5	**88.5**	94.8	60.0	93.4
July	**95.9**	98.5	94.7	95.6	94.6	**90.3**	94.9	65.1	96.0
August	**95.7**	97.9	95.4	95.1	94.5	**92.9**	94.4	78.7	97.1
September	**96.7**	97.0	100.3	96.3	95.5	**98.9**	98.0	101.8	98.6
October	**98.4**	99.3	104.5	96.6	96.9	**99.6**	99.4	103.3	98.1
November	**99.4**	98.8	106.3	98.3	98.2	**99.2**	100.5	97.3	98.3
December	**100.0**	99.2	104.4	99.3	99.5	**99.6**	100.8	97.8	98.8
Average	**97.3**	98.7	98.8	97.5	95.4	**95.8**	97.3	95.1	94.0
1926									
January	**99.6**	99.5	100.2	101.0	98.2	**99.6**	100.0	103.4	97.3
February	**98.8**	99.7	98.9	98.8	98.4	**102.1**	100.0	117.6	97.7
March	**99.5**	100.0	98.7	99.8	99.1	**106.9**	100.1	147.4	97.1
April	**98.9**	100.5	97.3	98.4	99.0	**105.1**	100.4	132.3	98.6
May	**99.0**	100.8	96.5	98.0	99.6	**96.8**	98.7	87.8	98.5
June	**98.9**	100.3	96.6	98.8	99.0	**95.2**	99.3	72.0	100.6
July	**98.6**	99.3	97.9	98.6	98.2	**94.7**	97.6	71.5	101.5
August	**98.7**	99.6	99.0	98.4	98.5	**96.2**	98.2	79.5	101.3
September	**100.4**	100.3	101.3	100.8	99.7	**101.9**	100.6	104.5	102.4
October	**101.7**	100.6	104.5	100.9	102.2	**101.8**	101.7	101.0	102.4
November	**102.9**	100.2	106.0	102.9	103.7	**100.8**	101.6	97.0	101.4
December	**102.4**	98.7	102.9	103.9	103.8	**98.6**	101.2	86.0	100.8
Average	**100.0**	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	**Paper and printing**—Continued					**Chemicals and allied products**—Continued			
	Group index	Paper	Boxes	Book and job	Newspapers	**Group index**	Chemicals	Fertilizers	Petroleum refining
1927									
January	**100.7**	98.7	97.8	101.3	103.0	**99.9**	100.8	93.4	101.6
February	**100.8**	98.8	95.9	101.7	103.6	**101.6**	101.0	101.7	102.1
March	**100.8**	98.6	94.9	102.3	103.6	**106.7**	101.7	129.5	102.7
April	**100.0**	98.5	94.3	100.0	103.8	**106.9**	101.5	137.0	100.0
May	**99.2**	96.4	93.4	99.5	103.7	**95.8**	97.8	86.5	97.3
June	**98.8**	96.2	93.5	99.1	103.1	**91.8**	98.6	63.1	95.9
July	**98.3**	96.4	94.0	97.6	102.3	**90.9**	97.5	62.1	95.4
August	**98.8**	97.5	95.3	98.8	101.5	**91.5**	97.9	69.0	93.2
September	**99.8**	97.6	98.5	99.9	102.0	**95.3**	100.0	91.6	90.8
October	**100.6**	97.6	101.8	98.8	104.1	**94.1**	101.0	88.4	87.6
November	**101.4**	97.4	102.7	101.3	104.5	**93.2**	102.0	86.0	84.9
December	**101.7**	96.5	99.5	103.0	105.8	**91.9**	100.2	85.7	83.8
Average	**100.1**	97.5	96.8	100.3	103.4	**96.6**	100.0	91.2	94.6
1928									
January	**100.2**	95.5	94.8	102.2	104.6	**91.4**	97.7	90.2	83.7
February	**99.7**	94.6	93.3	102.3	104.3	**95.1**	100.4	105.1	83.5
March	**98.8**	94.6	93.2	99.1	104.5	**101.7**	100.0	146.1	83.6
April	**97.9**	93.9	91.1	96.5	105.3	**101.5**	99.7	148.4	82.4
May	**98.2**	93.5	90.4	98.3	105.2	**89.2**	96.9	83.3	82.2
June	**98.0**	94.0	90.8	97.4	104.9	**87.5**	97.7	65.8	84.0
July	**98.0**	93.5	90.2	98.8	104.0	**87.1**	96.1	66.1	84.9
August	**98.2**	94.4	90.7	99.2	103.5	**88.3**	96.0	71.3	86.0
September	**98.6**	94.7	94.5	97.7	104.4	**94.7**	100.1	94.5	87.6
October	**99.9**	94.7	99.4	98.3	106.0	**94.9**	102.0	93.5	86.4
November	**101.2**	95.5	101.4	99.5	107.4	**94.4**	102.7	88.9	86.1
December	**101.2**	94.1	97.7	100.9	108.5	**95.1**	102.7	91.5	86.7
Average	**99.2**	94.4	94.0	99.2	105.2	**93.4**	99.3	95.4	84.8

Year and month	**Stone, clay, and glass products**					**Metal products, other than iron and steel**		
	Group index	Cement	Brick	Pottery	Glass	**Group index**	Stamped ware	Brass
1923								
January	**92.3**	----------	83.8	86.4	101.4	**102.3**	110.3	98.6
February	**93.7**	----------	83.3	88.9	103.1	**105.9**	112.4	102.9
March	**96.8**	----------	90.1	90.4	102.9	**108.5**	116.3	104.9
April	**101.1**	103.3	101.0	91.2	103.8	**108.9**	114.9	106.4
May	**104.4**	106.5	105.3	93.2	107.4	**107.2**	112.5	104.8
June	**105.5**	108.1	107.1	94.4	107.3	**105.4**	108.1	104.2
July	**103.1**	111.2	108.5	90.7	99.7	**103.3**	105.9	101.8
August	**102.4**	110.4	108.5	97.2	95.7	**100.8**	97.8	102.0
September	**102.2**	110.9	106.9	97.7	95.8	**97.8**	96.5	98.3
October	**101.5**	110.1	103.7	98.2	97.9	**97.0**	96.8	97.0
November	**100.3**	111.2	98.9	96.9	99.4	**96.2**	93.7	97.2
December	**98.5**	109.6	94.5	98.8	98.8	**97.6**	96.7	98.0
Average	**100.2**	109.0	99.3	93.7	101.1	**102.6**	105.2	101.3
1924								
January	**93.8**	107.4	88.5	99.0	93.0	**98.4**	98.8	98.1
February	**95.1**	106.3	86.9	100.0	97.3	**103.4**	107.2	101.6
March	**99.4**	108.0	93.4	104.0	101.0	**104.2**	110.8	101.4
April	**102.4**	109.9	101.4	104.7	100.4	**102.5**	105.2	101.2
May	**102.6**	112.0	105.1	101.9	97.1	**99.0**	98.8	98.9
June	**99.7**	111.0	104.3	101.1	91.5	**93.6**	91.3	94.4
July	**94.0**	111.3	101.6	85.6	84.1	**87.6**	85.5	88.6
August	**96.2**	111.5	102.2	104.0	82.3	**86.3**	85.2	86.6
September	**95.3**	109.8	98.9	103.8	83.7	**87.2**	83.3	88.8
October	**95.6**	107.9	97.6	101.1	87.7	**91.1**	89.5	91.7
November	**95.1**	108.2	95.5	100.7	88.5	**92.4**	89.3	93.7
December	**94.6**	104.0	93.4	101.6	90.1	**95.8**	91.6	97.5
Average	**97.0**	108.9	97.4	100.6	91.4	**95.1**	94.7	95.2

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	**Stone, clay, and glass products**—Continued					**Metal products, other than iron and steel**—Continued		
	Group index	Cement	Brick	Pottery	Glass	**Group index**	Stamped ware	Brass
1925								
January	**90.4**	97.9	86.3	97.5	89.2	**96.0**	91.5	97.9
February	**91.9**	95.3	86.1	103.3	92.1	**97.9**	95.6	98.9
March	**95.8**	99.1	93.8	103.0	93.7	**99.8**	99.9	99.6
April	**100.0**	105.1	101.3	104.7	95.1	**97.9**	97.7	98.0
May	**100.7**	107.7	105.9	102.5	92.6	**98.4**	96.5	99.1
June	**101.0**	109.8	106.1	100.9	93.0	**98.4**	96.6	99.0
July	**96.8**	110.5	106.1	73.9	92.1	**97.8**	94.4	99.3
August	**99.1**	110.9	104.1	97.5	91.1	**97.9**	95.7	98.9
September	**100.1**	110.8	102.9	98.9	94.3	**98.8**	98.8	98.7
October	**100.8**	108.8	100.0	100.4	99.2	**100.8**	104.2	99.3
November	**100.0**	105.6	98.4	98.7	100.4	**102.8**	108.3	100.3
December	**98.6**	102.5	96.4	97.9	99.7	**104.1**	109.1	101.7
Average	**97.9**	105.3	98.9	98.3	94.4	**99.2**	99.0	99.2
1926								
January	**93.8**	94.2	90.3	96.3	96.2	**102.8**	104.5	101.8
February	**94.6**	92.9	89.2	100.3	98.3	**104.4**	106.7	103.3
March	**96.6**	92.5	91.1	100.7	101.7	**105.5**	108.3	104.2
April	**99.5**	96.2	97.7	102.6	101.1	**103.6**	106.6	102.1
May	**102.6**	101.2	105.6	101.4	100.5	**101.0**	101.3	100.8
June	**104.3**	104.3	107.7	101.7	101.9	**98.8**	98.1	99.0
July	**101.1**	105.5	108.7	91.7	95.7	**96.7**	96.2	96.9
August	**103.2**	106.0	109.3	100.8	97.0	**96.9**	96.0	97.3
September	**103.9**	105.3	106.7	101.7	101.6	**98.2**	95.9	99.1
October	**102.7**	103.9	102.4	100.6	103.1	**98.5**	98.8	98.3
November	**101.2**	101.3	98.3	101.8	103.7	**97.8**	96.1	98.5
December	**96.7**	96.1	92.5	100.4	99.7	**96.0**	90.9	98.2
Average	**100.0**	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0
1927								
January	**89.7**	89.4	85.8	97.2	90.7	**94.8**	88.0	97.7
February	**91.4**	87.4	83.9	102.2	95.8	**94.9**	90.5	96.7
March	**95.1**	92.5	90.7	101.9	97.7	**97.0**	94.2	98.1
April	**98.1**	96.2	99.0	99.0	97.5	**96.3**	92.7	97.8
May	**99.2**	98.6	103.3	97.1	96.0	**95.9**	90.5	98.1
June	**99.3**	100.7	103.4	96.1	96.0	**93.0**	88.5	94.9
July	**94.7**	101.7	102.8	76.4	91.3	**91.8**	87.1	93.7
August	**95.1**	101.6	100.2	88.8	90.4	**92.3**	86.8	94.6
September	**95.3**	100.8	97.1	90.5	93.5	**91.2**	87.2	92.8
October	**93.7**	98.1	92.2	92.3	94.3	**90.2**	87.7	91.1
November	**93.3**	94.5	89.5	94.6	96.3	**88.7**	87.8	89.1
December	**89.1**	88.1	83.7	97.3	91.4	**88.2**	86.0	89.1
Average	**94.5**	95.8	94.3	94.5	94.2	**92.9**	88.9	94.5
1928								
January	**83.7**	83.3	76.5	93.7	87.0	**85.6**	80.0	88.0
February	**84.3**	81.2	76.2	98.2	88.0	**89.0**	86.3	90.2
March	**87.3**	83.5	79.8	97.0	91.9	**90.7**	89.8	90.9
April	**89.4**	86.2	83.9	95.6	93.4	**92.5**	92.0	92.6
May	**92.7**	89.7	89.1	95.8	96.0	**92.5**	92.0	92.6
June	**93.4**	92.1	90.2	96.2	95.9	**92.0**	89.4	93.1
July	**90.6**	92.6	90.9	87.2	91.0	**91.7**	87.2	93.6
August	**93.7**	94.0	91.1	94.7	95.8	**93.1**	88.6	94.9
September	**93.4**	91.2	89.2	95.3	97.6	**94.2**	89.0	96.3
October	**91.6**	89.6	86.4	97.4	95.0	**95.8**	89.5	98.4
November	**89.2**	86.6	84.3	96.6	92.0	**97.8**	90.6	100.8
December	**87.3**	82.8	80.9	96.2	91.5	**98.6**	90.7	101.8
Average	**89.7**	87.7	84.9	95.3	92.9	**92.8**	88.8	94.4

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	Tobacco products			Vehicles for land transportation				
	Group index	Chewing and smoking	Cigars and cigarettes	**Group index**	Automobiles	Carriages	Car building and repairing, electric	Car building and repairing, steam
1923								
January	**120.3**	108.5	121.5	**104.8**	80.5	108.4	----------	124.6
February	**119.3**	108.4	120.7	**105.9**	87.8	112.8	----------	121.5
March	**120.4**	100.9	123.0	**109.4**	91.7	116.6	----------	123.6
April	**116.2**	101.1	118.8	**109.9**	95.7	123.0	----------	121.8
May	**117.1**	107.1	117.9	**111.0**	97.0	121.8	----------	122.8
June	**117.1**	107.5	117.8	**112.5**	96.6	118.6	105.5	126.2
July	**114.3**	109.2	114.4	**110.6**	93.5	110.9	111.0	125.2
August	**110.4**	103.0	111.1	**111.6**	92.7	108.4	113.5	127.5
September	**115.7**	103.9	117.3	**111.3**	93.8	101.7	116.0	125.6
October	**117.1**	107.4	118.3	**111.5**	95.3	93.4	115.0	126.1
November	**118.0**	106.8	119.9	**110.6**	95.7	94.8	115.6	123.6
December	**117.3**	100.9	119.3	**106.5**	95.2	95.5	112.6	116.5
Average	**116.9**	105.4	118.3	**109.6**	93.0	108.8	112.7	123.8
1924								
January	**112.1**	109.4	113.0	**104.8**	99.6	88.2	103.9	110.3
February	**113.8**	113.6	113.4	**104.8**	101.8	95.0	101.2	107.1
March	**111.4**	111.8	111.8	**105.2**	103.7	102.9	100.5	106.3
April	**108.1**	110.0	107.7	**103.7**	99.3	101.4	99.9	107.3
May	**107.7**	106.0	107.9	**98.9**	90.0	93.4	100.2	106.8
June	**107.7**	99.3	108.5	**93.5**	80.4	84.7	99.7	105.1
July	**108.8**	102.4	109.6	**91.7**	76.6	83.1	99.0	104.5
August	**108.1**	99.9	109.1	**91.8**	77.7	80.2	98.6	103.7
September	**110.9**	103.7	111.8	**92.3**	78.3	86.1	98.3	104.1
October	**103.2**	103.5	103.0	**93.5**	79.4	90.8	100.1	105.3
November	**113.3**	102.6	114.8	**92.3**	77.6	93.0	99.8	104.5
December	**112.5**	100.4	114.1	**93.6**	79.9	91.2	98.6	105.1
Average	**109.8**	105.2	110.4	**97.2**	87.0	90.8	100.0	105.8
1925								
January	**107.4**	98.7	108.5	**94.7**	83.6	83.2	96.7	104.7
February	**108.4**	104.6	108.9	**95.7**	84.7	89.9	98.0	105.3
March	**109.3**	98.2	110.8	**98.6**	90.7	96.4	100.6	105.3
April	**100.9**	94.1	101.8	**101.3**	98.0	103.3	100.7	104.1
May	**107.4**	95.2	109.0	**101.2**	103.5	99.0	100.5	99.5
June	**105.8**	93.7	107.5	**99.0**	99.0	91.3	101.0	99.3
July	**106.0**	96.6	107.2	**98.6**	98.4	91.1	98.9	99.0
August	**105.0**	97.9	105.9	**99.5**	100.0	103.4	96.7	99.0
September	**107.5**	96.4	109.0	**101.0**	104.3	110.3	99.3	98.0
October	**111.1**	98.8	112.8	**103.7**	110.9	118.7	100.5	97.3
November	**110.5**	95.2	112.7	**102.7**	109.8	108.5	101.2	96.8
December	**111.0**	94.4	113.3	**101.6**	104.5	107.3	101.5	99.1
Average	**107.5**	97.0	109.0	**99.8**	99.0	100.2	99.6	100.6
1926								
January	**99.3**	95.2	99.8	**101.6**	104.8	101.4	100.7	99.0
February	**104.0**	103.2	104.0	**103.4**	107.2	106.1	100.3	100.5
March	**103.0**	107.0	102.4	**105.4**	109.9	103.0	100.7	102.1
April	**98.6**	101.9	98.0	**104.5**	106.4	102.5	101.8	103.2
May	**98.1**	98.7	97.9	**102.5**	102.4	98.5	101.5	102.8
June	**101.3**	98.9	101.6	**101.0**	100.8	95.2	99.1	101.5
July	**97.8**	99.8	97.4	**99.6**	98.2	110.8	99.3	100.4
August	**94.9**	101.8	93.7	**100.2**	100.7	113.5	98.9	99.4
September	**99.4**	98.5	99.4	**100.1**	100.4	113.1	99.0	99.6
October	**102.0**	99.8	102.1	**97.6**	96.6	100.4	99.4	98.3
November	**101.4**	98.2	101.8	**93.3**	88.8	79.7	99.1	97.3
December	**100.8**	96.6	101.3	**90.6**	83.7	75.4	100.1	96.4
Average	**100.0**	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	**Tobacco products**—Contd.			**Vehicles for land transportation**—Continued				
	Group index	Chewing and smoking	Cigars and cigarettes	**Group index**	Automobiles	Carriages	Car building and repairing, electric	Car building and repairing, steam
1927								
January	**90.9**	97.3	89.8	**89.0**	83.9	68.1	99.3	93.4
February	**97.7**	104.2	96.6	**93.5**	94.5	79.9	100.5	92.8
March	**97.5**	103.1	96.6	**94.6**	98.6	81.1	100.9	91.5
April	**95.3**	95.5	95.1	**95.2**	99.3	79.8	100.9	91.8
May	**96.3**	93.8	96.6	**95.3**	99.6	80.6	99.7	92.0
June	**98.8**	94.0	99.4	**93.3**	94.4	76.7	101.2	92.5
July	**98.8**	92.0	99.8	**90.2**	88.6	73.6	101.8	91.6
August	**91.7**	96.0	91.0	**91.0**	92.1	78.9	102.4	89.9
September	**102.6**	96.2	103.4	**89.6**	89.4	82.9	102.4	89.1
October	**104.9**	100.8	105.3	**88.7**	88.5	81.4	101.5	88.4
November	**104.1**	100.0	104.5	**84.2**	81.0	80.0	100.2	86.0
December	**98.7**	99.3	98.6	**85.0**	84.6	81.4	99.7	84.4
Average	**98.1**	97.7	98.1	**90.8**	91.2	78.7	100.9	90.3
1928								
January	**91.2**	102.5	89.5	**86.8**	91.8	65.3	98.0	82.7
February	**95.1**	104.6	93.6	**90.7**	100.6	73.1	98.2	82.4
March	**96.0**	100.8	95.1	**93.2**	104.9	74.9	98.3	83.5
April	**93.5**	96.8	92.9	**94.7**	107.6	76.6	97.3	84.4
May	**94.5**	92.9	94.6	**97.6**	113.8	70.2	96.3	85.0
June	**95.3**	92.9	95.5	**97.7**	113.8	73.8	95.5	85.3
July	**90.2**	86.7	90.5	**97.0**	113.7	74.9	94.1	84.0
August	**96.8**	91.8	97.5	**100.2**	120.8	82.8	93.3	83.9
September	**98.9**	92.6	99.8	**101.5**	124.3	89.0	92.8	83.4
October	**101.3**	92.7	102.4	**100.3**	122.6	82.4	92.7	82.7
November	**101.2**	93.7	102.1	**95.5**	111.5	80.6	92.2	82.7
December	**98.0**	94.0	98.5	**94.6**	110.0	77.3	90.5	82.5
Average	**96.0**	95.2	96.0	**95.8**	111.3	76.7	94.9	83.5

Year and month	**Miscellaneous industries**						
	Group index	Agricultural implements	Electrical machinery	Pianos	Rubber boots	Automobile tires	Shipbuilding
1923							
January	**103.5**	98.6	94.3	100.2	----------	102.6	109.1
February	**105.6**	110.6	96.8	101.1	----------	107.5	109.0
March	**110.6**	115.4	99.8	104.0	----------	108.4	116.7
April	**110.3**	115.1	101.2	103.6	123.2	106.9	116.6
May	**108.7**	112.7	101.2	103.1	126.5	105.3	112.9
June	**107.4**	107.6	100.7	103.8	126.0	99.0	113.6
July	**103.8**	99.8	102.2	105.1	122.3	88.8	109.7
August	**98.8**	95.3	102.0	106.1	114.5	76.7	104.5
September	**96.6**	91.0	103.7	108.5	107.7	73.0	101.2
October	**97.2**	88.0	103.9	108.2	108.6	71.8	102.9
November	**98.8**	90.1	105.4	109.7	111.3	73.9	104.7
December	**98.6**	91.6	104.9	110.2	110.2	79.1	102.0
Average	**103.3**	101.3	101.3	105.3	116.7	91.1	108.6
1924							
January	**98.2**	95.0	104.0	109.7	104.6	82.2	99.5
February	**99.8**	97.0	102.9	107.6	99.9	85.2	103.1
March	**98.9**	97.3	103.4	106.8	93.2	87.0	101.4
April	**96.9**	90.6	102.2	102.5	89.4	86.8	99.1
May	**90.5**	81.7	97.4	93.5	87.0	86.3	89.1
June	**87.6**	71.4	92.6	89.6	83.0	84.1	88.8
July	**84.4**	65.6	88.3	85.2	73.0	82.0	86.9
August	**82.9**	67.7	88.6	94.8	51.7	89.4	80.6
September	**84.9**	69.4	89.7	97.5	61.6	97.7	80.0
October	**86.6**	74.5	91.1	100.8	62.7	96.6	82.5
November	**87.6**	78.9	89.8	104.2	92.2	92.6	83.8
December	**90.1**	84.9	90.7	106.7	94.5	93.7	87.3
Average	**90.7**	81.2	95.1	99.9	82.7	88.6	90.2

TABLE 8.—MONTHLY INDEXES OF **EMPLOYMENT** IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Con.

Year and month	**Miscellaneous industries**—Continued						
	Group index	Agricultural implements	Electrical machinery	Pianos	Rubber boots	Automobile tires	Shipbuilding
1925							
January	**92.9**	86.5	91.1	104.2	98.6	93.7	93.4
February	**95.1**	91.6	91.2	102.7	102.9	96.6	96.3
March	**96.3**	94.8	90.8	102.3	100.8	98.3	98.3
April	**97.4**	95.6	91.3	100.4	98.8	100.5	100.1
May	**96.1**	93.1	89.5	97.1	95.9	105.6	96.9
June	**93.9**	89.9	87.7	96.7	94.6	107.2	92.8
July	**93.9**	86.5	87.6	89.5	93.2	108.4	93.6
August	**93.2**	91.5	88.7	81.5	87.9	110.7	90.6
September	**93.1**	93.4	91.8	99.1	93.8	107.5	87.3
October	**92.1**	96.3	95.8	103.8	94.3	99.5	84.8
November	**94.0**	100.4	99.3	104.4	99.4	97.4	86.6
December	**97.3**	103.5	100.7	105.6	105.4	100.8	91.1
Average	**94.6**	93.6	92.1	98.9	97.1	102.2	92.6
1926							
January	**100.2**	107.5	100.8	103.7	108.2	102.6	96.6
February	**101.7**	109.0	100.5	101.7	105.5	103.6	100.0
March	**101.5**	107.5	100.2	101.1	107.9	101.8	100.8
April	**99.8**	106.5	98.3	100.1	106.3	101.6	98.3
May	**98.7**	102.3	98.0	98.5	103.7	98.2	98.0
June	**97.9**	99.5	98.0	98.7	100.6	97.3	97.5
July	**96.5**	93.3	97.7	92.4	74.8	98.9	97.4
August	**97.7**	95.2	98.8	97.2	93.7	101.2	96.2
September	**99.6**	94.4	100.7	99.4	97.3	104.6	97.8
October	**100.7**	94.3	104.1	102.2	98.2	102.6	98.9
November	**101.9**	95.0	102.6	102.8	101.3	94.3	105.5
December	**104.3**	94.9	100.3	102.2	102.9	92.8	113.5
Average	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0
1927							
January	**104.0**	95.0	97.6	98.2	104.4	93.3	114.5
February	**105.9**	97.9	96.4	94.9	104.3	95.0	119.0
March	**105.9**	97.9	95.0	92.0	102.2	96.4	119.5
April	**105.2**	95.0	94.7	88.9	100.8	101.8	116.6
May	**103.5**	92.4	93.9	87.3	101.5	105.6	112.1
June	**102.0**	90.7	96.0	87.3	100.9	103.6	108.3
July	**97.3**	86.4	93.2	83.4	94.0	101.5	101.3
August	**95.7**	87.7	93.6	88.2	94.2	100.5	97.0
September	**94.4**	85.1	95.1	90.0	104.3	97.2	93.7
October	**93.8**	88.8	96.4	92.4	107.4	93.0	92.2
November	**92.7**	89.8	95.6	93.1	110.2	88.6	91.1
December	**93.4**	95.9	93.2	89.5	115.1	90.8	92.4
Average	**99.5**	91.9	95.1	90.4	103.3	97.3	104.8
1928							
January	**92.0**	100.0	90.5	77.9	111.0	95.7	89.4
February	**90.6**	103.5	89.4	80.3	108.4	99.6	84.6
March	**89.7**	106.8	90.0	78.0	99.1	100.7	82.0
April	**90.0**	106.9	89.4	79.2	102.3	99.2	83.3
May	**89.8**	106.9	90.1	76.7	99.8	99.7	82.6
June	**90.0**	107.5	91.3	75.6	91.7	102.4	81.9
July	**89.8**	104.9	90.7	68.0	97.8	106.9	80.2
August	**90.4**	104.3	94.4	75.7	93.8	109.4	78.2
September	**91.7**	103.5	98.0	76.6	99.4	109.8	78.4
October	**93.2**	109.0	99.9	78.0	102.3	108.6	79.8
November	**94.0**	111.7	100.6	80.6	104.0	103.9	82.6
December	**97.9**	116.6	102.5	78.7	103.3	103.9	90.2
Average	**91.6**	106.8	93.9	77.1	101.1	103.3	82.8

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES

[Monthly average, 1926=100]

Year and month	General index	Food and kindred products						
		Group index	Slaughtering	Confectionery	Ice cream	Flour	Baking	Sugar
1923								
January	95.8	100.6	117.2			105.4	83.6	
February	99.4	98.8	108.8			104.0	88.6	
March	104.7	101.1	110.4			107.0	91.3	
April	105.7	101.6	112.3	101.5	86.9	104.9	89.2	118.3
May	109.4	103.3	114.0	91.7	94.7	104.2	94.2	120.6
June	109.3	106.6	119.3	88.7	105.9	104.8	98.2	116.4
July	104.3	107.2	120.1	84.5	109.1	106.9	100.9	103.7
August	103.7	106.0	118.1	91.3	105.0	116.9	96.7	92.5
September	104.4	111.3	120.5	120.4	96.6	119.0	100.3	101.6
October	106.8	113.4	121.7	137.5	91.2	124.2	98.5	106.8
November	105.4	114.0	128.4	129.1	86.9	118.3	98.8	99.9
December	103.2	111.6	129.7	118.0	85.7	115.1	97.3	81.8
Average	104.3	106.3	118.4	107.0	95.8	110.9	94.8	104.6
1924								
January	98.6	106.0	122.4	101.3	82.1	111.9	95.5	77.9
February	103.8	107.0	118.2	99.8	84.0	112.1	98.6	112.3
March	103.3	105.1	113.0	100.6	87.2	110.2	98.6	110.9
April	101.1	101.1	106.7	91.0	93.3	103.9	97.5	107.6
May	96.5	101.8	108.2	87.2	98.9	101.2	98.1	117.4
June	90.8	104.2	109.8	90.8	104.9	103.0	100.0	123.1
July	84.3	104.5	111.6	88.1	112.5	104.2	99.9	113.3
August	87.2	102.2	106.0	94.4	108.4	109.1	96.6	113.3
September	89.8	106.2	106.2	113.2	98.0	114.7	102.1	113.6
October	92.4	103.8	105.6	117.9	87.5	113.4	98.1	99.9
November	91.4	103.6	111.5	105.8	81.3	108.1	98.6	89.5
December	95.7	106.7	121.9	108.9	79.3	106.3	96.8	86.5
Average	94.6	104.4	111.8	99.9	93.1	108.2	98.4	105.4
1925								
January	93.9	102.3	115.5	95.7	77.5	106.3	94.9	86.9
February	99.3	100.9	107.9	97.9	79.7	109.4	94.6	104.2
March	100.8	98.7	100.7	98.0	84.6	102.3	95.6	115.3
April	98.3	93.4	94.3	83.7	90.2	94.1	93.9	107.0
May	98.5	96.4	97.2	87.8	98.9	93.5	96.9	110.6
June	95.7	99.5	100.8	86.3	122.6	95.7	98.8	109.0
July	93.5	98.9	100.8	80.7	123.1	102.1	97.3	107.2
August	95.4	98.9	100.2	91.0	114.8	102.1	95.6	108.8
September	94.4	99.1	96.9	100.5	111.9	103.5	97.4	105.6
October	100.4	103.9	102.8	113.3	96.2	111.1	102.1	98.7
November	100.4	103.5	107.2	110.8	91.4	105.9	99.0	100.6
December	101.6	103.1	106.9	110.8	88.3	104.1	98.9	100.9
Average	97.7	99.9	102.6	96.4	98.3	102.5	97.1	104.6
1926								
January	98.0	100.3	106.6	98.4	86.8	101.1	96.7	95.0
February	102.2	99.0	100.6	100.1	88.0	97.9	97.5	109.5
March	103.4	98.0	96.8	98.7	91.2	96.8	99.1	109.1
April	101.5	94.5	92.4	90.9	94.4	92.6	96.8	106.4
May	99.8	97.9	96.3	91.6	107.9	92.6	100.6	105.0
June	99.7	100.1	98.9	91.3	116.8	94.1	103.0	104.1
July	95.2	99.7	98.8	87.2	120.8	99.6	102.1	97.3
August	98.7	99.7	97.9	92.4	118.7	107.0	99.2	100.3
September	99.3	102.7	102.0	107.5	106.6	106.0	101.5	94.4
October	102.9	104.4	101.7	120.0	98.9	109.1	103.0	98.0
November	99.6	102.1	103.2	112.7	86.3	104.4	100.8	91.9
December	99.8	101.5	105.2	109.3	84.2	98.9	100.1	88.8
Average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	General index	Food and kindred products—Continued						
		Group index	Slaughtering	Confectionery	Ice cream	Flour	Baking	Sugar
1927								
January	94.9	98.8	103.8	97.9	82.5	97.5	98.1	87.4
February	100.6	98.2	99.4	96.9	82.4	96.9	100.7	91.7
March	102.0	97.0	95.4	95.2	86.3	95.8	101.5	95.7
April	100.8	95.9	94.7	87.9	91.1	92.6	100.9	98.8
May	99.8	98.8	98.3	90.3	98.5	96.9	101.8	105.4
June	97.4	102.8	103.7	93.7	106.0	98.6	104.6	109.2
July	93.0	101.8	104.4	86.3	111.7	98.1	103.0	105.6
August	95.0	99.9	99.1	91.6	107.2	100.3	101.8	104.8
September	94.1	102.2	99.2	108.1	100.0	102.5	104.4	99.6
October	95.2	102.7	98.1	111.8	90.0	108.3	105.0	101.8
November	91.6	101.1	99.6	107.1	84.0	103.7	103.4	95.1
December	93.2	100.9	102.7	107.6	80.9	102.0	100.9	90.1
Average	96.5	100.0	99.9	97.9	93.4	99.4	102.2	98.8
1928								
January	89.6	98.0	101.5	92.1	81.1	102.3	98.9	86.1
February	93.9	99.9	105.4	93.3	79.5	100.3	99.9	91.4
March	95.2	98.9	101.1	91.9	82.9	101.4	100.7	96.9
April	93.8	94.8	95.5	82.5	89.5	96.6	98.1	95.1
May	94.1	97.0	96.4	86.0	95.9	98.1	102.0	89.0
June	94.2	99.5	101.5	86.8	103.3	96.1	103.2	88.3
July	91.2	99.9	101.4	79.9	116.2	100.6	102.2	98.8
August	94.2	98.3	96.8	84.0	111.9	104.2	100.7	100.0
September	95.4	101.2	98.8	98.2	101.0	106.0	104.0	96.4
October	99.0	103.2	99.5	112.7	89.9	111.4	104.2	101.7
November	96.1	102.3	103.3	106.4	84.0	104.2	103.0	96.9
December	97.7	104.4	110.3	106.0	82.1	104.0	101.7	97.8
Average	94.5	99.8	101.0	93.3	93.1	102.1	101.6	94.9

Year and month	Textiles and their products										
	Group index	Cotton goods	Hosiery	Silk goods	Woolen goods	Carpets	Dyeing	Clothing, men's	Shirts	Clothing, women's	Millinery
1923											
January	114.8	120.5	84.0	85.4	118.1	110.4	101.3	129.4	117.7	136.2	133.0
February	119.1	120.7	89.5	91.0	120.3	104.6	101.8	136.7	117.3	148.6	137.0
March	123.6	123.3	94.0	94.9	122.3	107.4	103.7	143.0	123.1	155.6	152.9
April	119.4	127.2	96.4	95.7	124.3	104.6	104.5	125.7	124.7	133.1	145.8
May	122.1	135.9	98.4	99.8	138.1	113.2	108.6	129.4	123.4	115.7	137.9
June	119.1	130.0	95.0	98.2	136.2	112.8	100.2	138.5	119.9	106.6	132.4
July	114.8	119.0	85.8	92.6	130.0	108.3	96.1	135.8	117.1	119.0	128.9
August	114.1	120.9	86.7	93.9	123.6	109.0	87.5	128.6	103.4	126.7	131.2
September	113.7	125.2	87.3	95.2	125.6	112.3	93.0	123.7	112.5	113.1	133.8
October	114.9	116.0	91.4	96.3	128.5	115.6	100.0	121.8	121.7	129.6	126.6
November	109.3	116.2	92.5	92.1	126.1	115.2	98.3	113.2	111.1	107.6	116.0
December	112.0	126.5	94.0	91.6	127.8	108.1	103.8	114.5	113.1	100.7	122.2
Average	116.4	123.5	91.3	93.9	126.7	110.1	99.9	128.4	117.1	124.4	133.1
1924											
January	113.3	122.6	89.2	89.9	121.3	104.4	91.2	126.2	110.0	121.3	129.7
February	117.2	120.0	94.0	96.3	124.3	112.9	98.0	130.3	110.8	133.8	132.4
March	112.8	111.0	94.5	93.4	119.8	118.3	94.2	123.5	111.0	132.5	130.1
April	104.5	104.8	92.4	90.4	110.1	103.7	93.0	103.0	108.9	120.1	126.2
May	96.7	97.8	86.6	86.6	107.0	93.5	88.8	99.2	102.8	98.1	116.2
June	91.9	90.1	79.7	83.5	100.6	77.1	83.2	114.0	93.3	84.3	105.1
July	83.8	79.1	62.6	76.5	94.8	71.7	79.7	113.1	84.4	76.1	104.1
August	91.3	83.7	68.5	84.8	102.3	76.5	82.5	112.2	73.9	105.8	102.9
September	97.2	88.4	73.2	87.0	111.2	85.4	92.3	110.0	88.5	116.4	122.2
October	101.4	95.8	80.7	93.4	122.4	95.0	96.3	104.5	93.2	116.5	112.1
November	96.6	94.1	83.9	88.2	124.8	100.2	96.6	92.7	93.8	95.3	110.3
December	105.1	107.9	89.4	92.6	130.9	103.1	105.9	103.0	99.3	102.9	113.3
Average	101.0	99.6	82.9	88.6	114.1	95.2	91.8	111.0	97.5	108.6	117.1

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	**Textiles and their products**—Continued										
	Group index	Cotton goods	Hosiery	Silk goods	Woolen goods	Carpets	Dyeing	Clothing, men's	Shirts	Clothing, women's	Millinery
1925											
January	**106.9**	107.9	88.0	92.8	126.5	107.5	105.9	107.1	95.9	113.1	124.6
February	**111.9**	108.9	95.0	99.2	123.2	107.2	107.8	116.8	102.3	127.0	128.6
March	**112.9**	109.6	98.1	102.8	117.4	108.7	110.0	115.5	106.3	130.3	136.4
April	**106.1**	108.8	95.6	101.5	112.7	105.8	105.4	96.5	105.3	111.2	132.2
May	**102.2**	106.0	97.1	103.4	109.8	105.0	102.2	93.7	108.2	95.3	120.0
June	**98.7**	99.3	94.1	98.8	105.3	98.9	94.3	106.4	101.4	86.6	112.8
July	**98.8**	91.0	90.1	101.5	105.3	92.3	94.1	109.5	100.9	103.6	105.3
August	**101.5**	91.5	94.8	106.8	102.8	94.4	93.9	114.8	96.7	110.9	109.2
September	**96.9**	84.1	92.9	100.0	100.4	93.1	94.5	106.3	94.7	109.5	102.9
October	**105.1**	98.6	102.4	109.0	106.5	97.9	107.8	102.2	106.0	118.5	105.6
November	**104.3**	101.5	104.2	107.4	108.6	101.8	105.4	98.8	109.1	107.7	106.0
December	**104.8**	105.8	104.3	109.1	108.2	101.3	106.3	102.3	112.1	98.3	106.5
Average	**104.2**	101.1	96.4	102.7	110.6	101.2	102.3	105.8	103.2	109.3	115.8
1926											
January	**105.7**	105.4	98.7	107.9	107.4	104.0	104.5	105.9	109.6	108.1	109.7
February	**108.3**	106.7	104.4	108.9	98.7	100.9	106.5	110.1	109.4	120.1	116.0
March	**108.3**	108.0	104.9	105.1	96.4	102.0	106.3	107.6	108.7	123.5	119.4
April	**101.5**	106.3	101.4	98.8	93.8	100.9	102.5	93.1	107.4	105.0	116.6
May	**96.7**	98.5	101.5	97.7	93.9	94.5	97.8	88.7	101.4	96.1	103.3
June	**94.8**	95.6	98.5	93.0	94.7	94.1	94.1	99.9	97.2	88.2	88.3
July	**88.7**	85.2	89.5	91.5	94.3	88.7	89.0	98.8	90.9	78.6	84.4
August	**93.8**	88.1	95.3	97.1	94.7	95.5	93.1	105.9	87.4	91.8	87.6
September	**96.5**	96.4	94.6	96.6	97.7	98.1	98.0	99.6	90.3	95.9	95.6
October	**102.6**	101.0	103.7	104.0	110.5	101.9	102.7	98.7	99.6	104.2	92.3
November	**98.7**	102.3	103.9	99.7	108.0	109.5	102.2	90.9	100.7	86.4	90.1
December	**103.8**	106.9	103.6	99.7	110.4	109.6	102.8	101.3	97.5	101.7	95.9
Average	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927											
January	**103.4**	106.0	99.8	95.7	107.7	106.4	101.5	101.3	94.7	109.2	100.5
February	**109.4**	109.9	105.0	102.8	108.5	109.5	106.3	108.0	97.7	124.3	106.8
March	**109.4**	111.6	106.3	104.7	102.3	109.1	107.0	104.5	97.9	127.7	105.1
April	**103.5**	110.0	104.7	99.5	98.1	104.6	105.7	86.5	95.6	115.5	104.5
May	**101.3**	109.6	105.6	101.7	97.0	106.4	101.2	86.5	94.8	102.4	96.8
June	**100.3**	109.3	102.2	99.2	98.2	104.8	99.6	99.2	93.2	90.0	90.8
July	**97.2**	106.3	90.2	95.1	93.0	97.2	94.9	101.8	92.9	93.5	82.6
August	**100.7**	107.2	95.5	98.3	98.4	102.6	98.5	104.0	92.4	98.6	92.9
September	**103.1**	108.8	98.8	98.1	99.6	100.0	103.2	100.9	94.1	108.6	100.1
October	**105.0**	110.2	106.8	98.9	101.9	99.7	106.2	96.8	100.5	112.3	97.3
November	**100.5**	107.4	106.1	94.7	100.9	101.4	104.2	86.0	100.5	101.7	90.7
December	**102.3**	106.2	105.7	101.2	102.0	107.3	105.3	91.8	100.9	104.6	93.6
Average	**103.0**	108.5	102.2	99.2	100.6	104.1	102.8	97.3	96.3	107.4	96.8
1928											
January	**99.4**	99.8	100.1	94.4	98.5	101.3	100.6	95.3	92.0	109.6	91.6
February	**102.6**	98.0	102.4	104.3	98.0	100.1	105.6	99.0	95.7	118.3	101.9
March	**101.2**	95.4	101.5	106.6	91.4	101.3	105.7	94.7	95.4	120.3	104.5
April	**93.7**	91.4	95.9	100.1	87.7	93.5	100.5	77.7	89.9	108.1	105.1
May	**91.9**	87.5	96.4	100.5	93.2	93.2	100.2	78.7	88.9	97.9	94.3
June	**91.6**	85.7	96.2	100.9	94.4	87.0	95.6	90.4	86.3	91.5	89.3
July	**87.4**	84.8	85.1	93.4	88.5	85.7	91.6	89.2	79.7	89.9	77.6
August	**96.3**	82.7	90.0	98.3	91.0	89.6	94.1	92.6	82.6	96.8	88.3
September	**93.2**	86.4	94.1	99.2	89.2	93.3	97.3	90.8	85.8	105.7	97.3
October	**99.5**	93.1	102.4	104.3	99.1	100.0	104.0	88.7	95.0	117.8	90.4
November	**96.5**	96.3	101.0	97.6	99.9	101.7	106.7	81.3	94.4	102.9	86.6
December	**99.5**	99.8	101.9	102.7	102.2	104.6	109.7	89.0	93.2	103.5	85.4
Average	**95.6**	91.7	97.3	100.2	94.4	95.9	101.0	89.0	89.9	105.2	92.7

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	Iron and steel and their products								
	Group index	Iron and steel	Cast-iron pipe	Structural	Foundry and machine-shop products	Hardware	Machine tools	Steam fittings	Stoves
1923									
January	**90.2**	87.1	76.8		94.8	88.1			108.8
February	**95.7**	92.1	79.2		100.7	95.5			114.8
March	**100.0**	94.5	85.7		107.1	98.4			122.7
April	**101.5**	92.0	93.3		112.8	99.2			121.1
May	**108.8**	104.1	94.4	90.6	116.8	104.8	95.5	102.7	121.1
June	**110.6**	105.6	100.6	95.7	118.8	106.2	97.3	102.4	119.5
July	**102.7**	91.1	98.3	94.4	116.8	101.9	91.5	98.7	99.2
August	**105.3**	101.2	99.9	95.5	115.0	105.4	73.5	93.8	101.7
September	**105.0**	98.8	98.7	93.6	114.4	104.7	88.8	97.8	111.5
October	**107.3**	103.8	100.8	96.7	113.8	108.7	88.6	99.9	116.5
November	**103.7**	101.0	96.3	93.7	109.3	105.3	85.0	94.6	115.4
December	**101.3**	96.0	90.1	91.0	108.6	105.4	87.4	94.4	114.8
Average	**102.7**	97.3	92.8	93.9	110.7	102.0	88.5	98.0	113.9
1924									
January	**95.5**	97.5	96.8	86.9	95.9	104.0	83.6	92.7	88.4
February	**100.9**	107.8	101.9	89.3	96.0	106.9	85.8	100.5	110.7
March	**102.4**	110.2	102.0	87.1	96.6	108.5	86.1	105.0	115.1
April	**100.7**	107.3	100.3	87.9	96.1	105.3	84.4	104.8	110.4
May	**93.8**	96.3	101.9	87.6	91.7	102.4	80.9	102.2	106.0
June	**84.5**	80.1	100.7	89.8	87.0	93.9	77.5	97.8	99.7
July	**74.6**	69.7	93.0	83.9	78.2	82.3	66.9	90.9	75.6
August	**77.8**	77.2	97.0	86.5	78.2	80.9	57.8	91.6	88.0
September	**79.3**	79.8	105.2	85.1	77.5	84.7	65.3	94.4	99.1
October	**83.8**	86.4	98.4	85.1	80.4	90.5	67.2	97.4	110.0
November	**84.3**	87.3	91.8	79.5	81.7	93.8	69.1	83.0	103.6
December	**91.0**	96.2	84.8	86.6	87.6	95.1	74.4	84.2	105.6
Average	**89.1**	91.3	97.8	86.3	87.2	95.7	74.9	95.4	101.0
1925									
January	**92.3**	101.1	88.9	83.1	86.6	96.5	76.2	94.3	81.1
February	**95.8**	102.4	95.4	87.3	91.0	100.6	78.3	101.1	103.3
March	**96.7**	102.9	96.0	88.0	92.6	101.1	77.5	100.7	104.6
April	**93.8**	100.1	96.5	86.9	90.6	94.2	78.0	92.3	90.8
May	**94.3**	98.2	97.8	92.7	91.9	99.9	79.6	95.1	97.5
June	**91.3**	91.9	97.7	94.5	91.0	96.2	81.1	91.4	95.4
July	**87.1**	85.8	95.8	94.6	88.2	92.6	82.4	92.0	77.0
August	**89.5**	90.6	99.4	93.8	87.9	98.3	77.9	97.0	92.3
September	**87.9**	89.2	95.5	90.9	85.5	92.8	81.3	93.2	97.8
October	**95.1**	96.4	101.6	96.3	91.7	101.2	91.9	106.2	112.4
November	**95.6**	96.0	98.8	93.2	93.4	102.1	95.8	102.0	114.0
December	**99.7**	102.2	91.5	96.2	96.5	105.7	101.1	103.0	107.5
Average	**93.3**	96.4	96.2	91.5	90.6	98.4	83.4	97.4	97.8
1926									
January	**97.5**	99.8	96.6	88.0	95.7	103.9	100.4	102.4	89.5
February	**101.6**	102.7	100.4	95.8	100.9	104.8	101.0	104.9	99.4
March	**103.6**	104.4	101.8	96.3	103.4	108.1	102.1	105.0	102.1
April	**102.7**	103.4	102.4	97.7	102.3	102.2	101.9	102.5	105.1
May	**101.0**	100.3	102.6	100.0	102.0	101.2	99.4	100.7	100.1
June	**101.2**	99.2	103.6	102.7	103.7	97.2	99.1	103.7	97.5
July	**95.7**	93.3	104.9	102.5	98.2	92.0	96.8	96.3	83.6
August	**97.5**	95.1	99.2	105.8	100.0	98.1	90.1	99.8	94.6
September	**98.8**	99.2	101.1	102.0	97.8	96.9	98.2	100.8	102.7
October	**102.3**	103.7	99.7	105.5	100.2	100.1	102.8	101.1	112.4
November	**98.8**	100.2	97.8	100.6	96.3	99.0	103.6	93.1	110.9
December	**99.1**	98.5	90.1	102.9	99.6	96.1	104.5	89.6	102.3
Average	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	**Iron and steel and their products**—Continued								
	Group index	Iron and steel	Cast-iron pipe	Structural	Foundry and machine-shop products	Hardware	Machine tools	Steam fittings	Stoves
1927									
January	**93.5**	92.3	84.5	92.1	95.2	94.5	100.1	89.1	84.1
February	**99.2**	98.2	89.7	94.4	101.4	97.9	99.6	97.4	94.6
March	**100.6**	101.2	94.6	94.3	101.7	98.2	99.1	96.2	96.4
April	**99.2**	102.0	96.1	91.9	98.2	95.8	95.3	94.3	94.6
May	**96.2**	96.5	96.7	95.7	96.6	93.6	94.7	94.1	93.7
June	**94.4**	94.4	92.8	98.6	94.6	92.2	93.3	94.5	93.1
July	**87.0**	83.9	93.4	95.1	90.1	84.7	87.1	90.9	73.8
August	**89.6**	88.0	90.4	101.4	91.0	84.7	89.6	95.7	89.4
September	**87.1**	85.8	85.9	94.6	86.9	87.2	89.6	94.8	92.1
October	**86.8**	85.9	81.0	95.5	85.9	88.4	89.3	93.5	95.8
November	**84.0**	83.8	73.8	91.2	82.7	86.3	88.2	82.0	91.3
December	**85.2**	84.5	78.1	94.7	84.9	87.2	90.0	80.2	86.3
Average	**91.9**	91.4	88.1	95.0	92.4	90.9	92.2	91.9	90.4
1928									
January	**82.5**	83.5	66.6	87.5	82.4	83.6	88.4	75.5	67.0
February	**90.4**	93.4	74.6	91.4	88.2	90.9	94.1	84.9	82.7
March	**92.5**	95.3	80.5	91.0	90.8	89.0	98.2	84.9	82.1
April	**91.8**	93.1	80.6	92.2	91.1	85.9	101.5	82.2	84.7
May	**94.1**	95.3	83.1	97.8	93.6	85.6	104.0	86.1	85.3
June	**93.3**	91.7	76.9	99.5	94.8	87.4	106.3	85.5	85.8
July	**89.1**	86.5	76.0	97.2	91.8	81.9	103.5	80.4	74.7
August	**92.8**	92.2	74.0	102.5	93.6	85.6	100.8	87.8	81.1
September	**92.9**	91.0	73.5	100.8	93.7	88.1	113.4	82.4	89.3
October	**97.9**	96.7	76.3	105.7	97.9	92.6	120.9	82.8	100.2
November	**97.7**	97.6	73.5	104.3	96.8	94.3	125.6	78.1	94.2
December	**98.0**	95.8	74.8	104.9	99.0	95.8	132.8	72.2	89.0
Average	**92.8**	92.7	75.9	97.9	92.8	88.4	107.5	81.9	84.7

Year and month	**Lumber and its products**				**Leather and its products**		
	Group index	Sawmills	Millwork	Furniture	**Group index**	Leather	Shoes
1923							
January	**88.6**	89.1	84.5	89.7	**118.3**	104.2	124.6
February	**91.2**	91.9	86.3	92.4	**120.6**	108.0	126.2
March	**95.5**	96.8	90.4	94.8	**123.2**	109.7	129.2
April	**100.0**	102.3	96.4	95.1	**119.7**	108.6	124.6
May	**104.6**	109.2	98.5	94.8	**118.0**	110.2	121.4
June	**107.8**	114.1	100.9	93.1	**113.2**	108.9	115.2
July	**106.8**	113.3	98.8	92.1	**106.5**	105.6	106.9
August	**106.0**	112.6	97.1	92.1	**110.6**	103.7	113.7
September	**106.6**	112.9	96.5	93.5	**110.5**	104.7	113.1
October	**107.9**	113.1	98.6	98.0	**110.0**	107.6	111.1
November	**108.0**	113.1	98.9	98.1	**106.7**	106.5	106.8
December	**105.4**	109.8	99.5	96.1	**109.2**	105.8	110.8
Average	**102.4**	106.5	95.5	94.2	**113.9**	107.0	117.0
1924							
January	**96.0**	99.0	92.9	88.6	**109.5**	104.8	111.5
February	**102.6**	105.4	98.9	96.0	**110.6**	106.3	112.5
March	**103.2**	106.3	101.4	95.0	**109.5**	104.3	111.7
April	**104.3**	107.9	103.8	93.5	**100.0**	98.8	100.6
May	**103.4**	108.5	102.3	88.2	**94.5**	92.6	95.4
June	**101.2**	106.9	101.5	83.9	**90.1**	90.9	89.8
July	**94.1**	99.4	94.9	77.4	**88.4**	83.7	90.4
August	**95.3**	98.5	97.3	84.4	**98.9**	87.6	103.7
September	**97.9**	101.6	94.7	88.5	**103.9**	90.5	109.8
October	**99.9**	101.7	98.0	95.6	**104.7**	94.7	109.0
November	**98.1**	99.6	94.0	96.3	**96.6**	94.5	97.4
December	**99.0**	98.9	96.8	100.8	**100.6**	99.3	101.2
Average	**99.6**	102.8	98.0	90.7	**100.6**	95.7	102.8

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	**Lumber and its products**—Continued				**Leather and its products**—Con.		
	Group index	Sawmills	Millwork	Furniture	**Group index**	Leather	Shoes
1925							
January	**92.2**	91.6	93.6	93.4	**104.2**	99.4	106.4
February	**98.7**	98.6	99.1	98.5	**109.1**	103.4	111.6
March	**100.2**	100.7	99.0	99.5	**109.3**	103.2	112.0
April	**99.6**	101.5	100.6	93.4	**100.1**	95.3	102.2
May	**100.7**	103.9	101.8	90.4	**99.1**	95.9	100.5
June	**102.6**	107.6	102.5	87.6	**93.7**	93.4	93.9
July	**98.9**	103.1	102.3	83.9	**97.0**	89.7	100.2
August	**99.4**	101.0	104.8	91.0	**107.3**	94.8	112.7
September	**102.0**	104.9	100.8	94.3	**103.2**	94.1	107.1
October	**104.8**	104.7	107.3	103.7	**104.8**	99.6	107.1
November	**103.3**	101.9	104.8	106.4	**97.3**	100.3	96.0
December	**102.1**	100.4	105.5	105.4	**96.0**	100.9	93.9
Average	**100.4**	101.7	101.8	95.6	**101.8**	97.5	103.6
1926							
January	**93.0**	90.8	98.0	96.8	**99.0**	100.1	98.5
February	**98.0**	95.7	101.7	102.4	**103.8**	103.0	104.1
March	**98.6**	96.2	103.8	102.5	**102.7**	103.5	102.5
April	**99.4**	99.3	100.5	99.2	**93.6**	100.3	90.8
May	**100.6**	102.7	101.1	94.1	**90.4**	98.0	87.1
June	**102.4**	105.4	102.0	93.1	**94.2**	95.2	93.8
July	**97.6**	100.8	97.7	88.4	**98.9**	94.9	100.7
August	**101.9**	103.7	101.8	96.6	**106.7**	99.8	109.7
September	**102.6**	103.6	98.8	101.7	**106.6**	100.5	109.2
October	**104.4**	103.8	100.8	108.4	**106.6**	102.7	108.3
November	**102.4**	100.9	98.5	109.8	**99.5**	99.8	99.5
December	**98.7**	96.5	95.4	107.3	**97.9**	101.7	96.4
Average	**100.0**	100.0	100.0	100.0	**100.0**	100.0	100.0
1927							
January	**89.2**	87.2	87.4	96.1	**99.4**	102.0	98.4
February	**91.4**	89.1	87.6	101.0	**105.1**	104.0	105.7
March	**92.7**	90.7	88.5	101.5	**102.5**	100.9	103.3
April	**91.6**	89.7	90.7	98.3	**95.9**	96.1	95.8
May	**94.9**	95.3	92.5	95.0	**93.2**	94.5	92.6
June	**94.9**	96.0	93.1	93.0	**94.0**	95.3	93.5
July	**91.5**	92.3	89.9	90.1	**98.7**	93.9	100.9
August	**94.7**	94.5	93.4	96.3	**106.3**	96.7	110.4
September	**95.9**	96.2	89.1	99.5	**103.6**	95.0	107.5
October	**96.7**	95.8	88.9	104.6	**97.3**	95.2	98.1
November	**94.3**	93.4	84.9	103.1	**85.8**	94.9	81.9
December	**90.1**	88.3	84.2	99.5	**87.1**	97.8	82.5
Average	**93.1**	92.4	89.2	98.2	**97.4**	97.2	97.6
1928							
January	**81.4**	79.9	76.6	89.1	**92.6**	97.6	90.4
February	**84.9**	82.1	81.4	95.5	**98.1**	99.6	97.4
March	**87.6**	86.2	83.2	94.8	**96.8**	99.7	95.6
April	**88.3**	88.5	86.5	88.9	**84.2**	93.2	80.2
May	**89.6**	91.1	88.8	85.6	**81.7**	93.9	76.3
June	**90.2**	91.2	90.7	87.1	**85.0**	91.8	82.0
July	**87.4**	88.6	87.7	83.4	**91.2**	92.5	90.6
August	**90.1**	90.2	89.2	90.4	**96.5**	92.8	98.0
September	**91.7**	91.3	86.9	96.3	**95.7**	92.8	97.0
October	**93.6**	91.8	87.2	103.3	**92.6**	93.2	92.4
November	**92.0**	89.7	85.2	103.6	**78.6**	87.8	74.5
December	**88.3**	85.7	83.2	99.8	**83.6**	89.0	81.3
Average	**88.8**	88.0	85.6	93.2	**89.7**	93.7	88.0

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	Paper and printing					Chemicals and allied products			
	Group index	Paper	Boxes	Book and job	Newspapers	**Group index**	Chemicals	Fertilizers	Petroleum refining
1923									
January	**85.9**	90.8	82.3	87.0	81.7	**91.3**	89.5	80.8	96.5
February	**86.7**	93.1	83.3	87.2	82.1	**93.0**	91.2	88.2	96.6
March	**89.6**	98.6	88.5	88.6	83.4	**98.7**	94.6	105.4	101.5
April	**90.3**	100.9	89.6	87.9	84.2	**101.1**	95.2	108.2	105.8
May	**91.1**	103.0	90.3	87.2	85.4	**101.6**	99.0	88.2	108.8
June	**90.9**	103.1	92.1	86.5	84.8	**99.6**	97.4	77.7	109.1
July	**90.0**	100.0	91.9	87.5	83.3	**101.0**	96.6	87.2	110.3
August	**86.8**	98.1	90.8	81.2	81.8	**97.3**	95.2	85.1	103.8
September	**89.1**	96.5	93.2	87.4	83.6	**100.0**	96.1	100.6	104.4
October	**91.3**	96.0	97.4	90.2	86.8	**101.4**	102.0	96.3	102.1
November	**91.2**	94.6	98.2	90.1	87.5	**97.0**	101.5	91.0	93.7
December	**93.2**	96.0	98.5	92.7	89.8	**96.8**	101.0	93.2	93.1
Average	**89.7**	97.6	91.3	87.8	84.5	**98.2**	96.6	91.8	102.1
1924									
January	**92.6**	94.5	92.8	95.2	88.3	**93.1**	97.9	91.0	88.4
February	**92.9**	98.6	93.2	92.5	88.6	**95.4**	99.2	94.9	91.2
March	**93.5**	98.7	96.0	92.4	89.5	**99.6**	100.0	117.6	93.7
April	**93.2**	97.2	93.8	91.7	91.0	**98.3**	98.4	114.7	93.3
May	**92.1**	95.8	90.5	90.9	90.5	**92.6**	94.3	79.7	94.8
June	**90.6**	92.9	89.1	89.3	90.3	**87.0**	86.7	60.1	95.9
July	**86.7**	86.1	83.8	86.0	88.5	**84.0**	84.1	58.0	92.0
August	**87.1**	89.5	88.0	85.8	86.1	**85.6**	86.0	62.4	92.2
September	**90.8**	91.9	95.1	89.9	89.3	**87.4**	87.1	81.1	89.7
October	**92.6**	96.0	98.9	90.7	89.9	**88.4**	91.2	80.6	87.6
November	**92.7**	94.7	99.7	90.9	91.0	**90.6**	91.4	80.3	92.7
December	**95.2**	96.8	98.8	94.8	93.2	**90.3**	93.9	82.3	88.7
Average	**91.7**	94.4	93.3	90.8	89.7	**91.0**	92.5	83.6	91.7
1925									
January	**93.9**	96.0	94.1	95.8	90.2	**89.3**	92.9	83.5	87.0
February	**93.6**	98.2	93.3	93.2	90.4	**92.3**	95.4	85.3	91.1
March	**95.1**	100.5	94.5	94.7	91.0	**98.5**	97.1	117.8	94.2
April	**93.5**	98.7	92.0	90.7	92.2	**97.0**	93.3	130.3	90.8
May	**93.0**	96.5	92.3	90.6	92.6	**92.2**	94.1	76.1	95.2
June	**92.0**	94.0	90.8	90.3	92.3	**89.4**	91.6	61.7	95.5
July	**90.9**	93.2	91.2	89.5	90.4	**90.0**	91.5	69.3	94.6
August	**91.1**	94.5	93.4	88.8	89.9	**92.2**	89.1	79.1	99.9
September	**91.9**	90.5	94.0	91.7	92.8	**93.9**	90.8	98.3	96.2
October	**96.9**	98.6	101.9	94.3	96.4	**98.0**	96.7	96.9	100.1
November	**99.0**	100.2	106.0	97.4	97.5	**98.7**	99.1	91.5	100.5
December	**100.9**	100.8	104.2	100.2	100.6	**98.8**	100.4	96.8	97.7
Average	**94.3**	96.8	95.6	93.1	93.0	**94.2**	94.3	90.6	95.2
1926									
January	**98.7**	99.4	98.7	99.6	97.2	**98.4**	97.8	101.9	98.3
February	**98.4**	100.8	98.4	97.2	97.5	**99.0**	98.4	111.1	96.1
March	**100.2**	101.0	98.8	101.1	98.9	**103.9**	99.9	138.8	97.9
April	**99.6**	100.6	97.5	99.0	99.8	**102.9**	100.4	126.6	98.7
May	**99.6**	100.2	97.1	98.5	100.6	**98.2**	99.2	89.2	99.9
June	**99.4**	100.4	95.8	99.5	99.5	**98.2**	100.4	76.2	102.6
July	**97.3**	95.9	96.5	98.1	97.9	**95.2**	97.3	77.2	98.5
August	**97.9**	99.4	97.2	97.7	97.0	**97.2**	96.7	82.6	102.1
September	**99.4**	99.1	99.7	99.8	99.1	**100.7**	97.9	107.4	101.9
October	**102.4**	102.0	107.9	100.7	103.0	**102.8**	104.3	100.6	101.8
November	**103.1**	101.0	107.7	102.4	104.3	**101.8**	104.0	96.6	101.0
December	**104.3**	100.3	104.2	106.3	105.6	**101.7**	104.3	91.8	101.7
Average	**100.0**	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0	100.0

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	Paper and printing—Continued					Chemicals and allied products—Continued			
	Group index	Paper	Boxes	Book and job	Newspapers	**Group index**	Chemicals	Fertilizers	Petroleum refining
1927									
January	**101.1**	97.6	96.6	104.0	102.3	**100.1**	102.4	94.9	99.1
February	**101.6**	99.6	97.1	103.4	102.7	**104.1**	104.3	101.6	104.8
March	**102.4**	99.5	96.8	105.0	103.9	**108.1**	106.9	121.0	105.5
April	**101.3**	97.8	95.9	101.8	105.3	**107.6**	105.1	133.1	102.6
May	**101.0**	96.3	95.2	101.1	106.2	**98.4**	102.4	87.4	97.2
June	**99.6**	94.6	93.9	100.4	104.2	**98.2**	104.4	69.8	100.0
July	**97.8**	93.0	94.8	98.0	102.3	**93.4**	99.1	70.2	94.2
August	**99.2**	95.6	97.9	100.0	101.6	**94.7**	100.7	77.0	93.5
September	**100.2**	94.3	101.2	100.9	103.9	**96.8**	101.1	101.7	90.4
October	**102.0**	97.1	107.4	100.4	105.9	**96.6**	105.2	90.9	88.5
November	**102.9**	96.6	107.3	102.5	107.1	**95.2**	104.9	88.9	86.0
December	**104.9**	97.5	103.5	107.2	109.2	**96.5**	107.5	91.0	85.4
Average	**101.2**	96.6	99.0	102.1	104.6	**99.1**	103.7	94.0	95.6
1928									
January	**102.1**	95.0	97.4	105.2	106.3	**94.1**	101.7	93.0	85.7
February	**101.3**	95.8	95.2	102.9	106.0	**96.5**	104.6	102.2	85.4
March	**101.4**	95.9	97.3	102.2	106.3	**100.7**	105.4	133.2	85.3
April	**100.7**	94.7	94.5	100.5	107.5	**101.0**	104.2	138.0	85.9
May	**100.6**	94.0	95.2	100.8	107.5	**93.1**	102.0	90.8	83.8
June	**100.8**	93.7	98.4	100.4	107.5	**91.7**	101.5	74.5	85.9
July	**99.0**	91.1	94.0	100.8	105.2	**91.6**	98.9	74.7	88.4
August	**99.3**	94.0	95.5	100.1	103.9	**92.8**	99.5	78.5	89.6
September	**100.9**	93.9	100.8	101.5	106.2	**96.6**	101.2	100.6	90.1
October	**103.2**	96.8	107.9	101.3	108.9	**98.5**	107.5	96.3	89.0
November	**103.4**	97.0	111.2	99.4	110.2	**97.2**	106.8	91.0	88.4
December	**105.1**	97.0	105.8	104.0	112.7	**97.2**	106.4	92.2	88.5
Average	**101.5**	94.9	99.4	101.6	107.4	**95.9**	103.3	97.1	87.2

Year and month	Stone, clay, and glass products					Metal products, other than iron and steel		
	Group index	Cement	Brick	Pottery	Glass	**Group index**	Stamped ware	Brass
1923								
January	**80.5**	----------	70.6	73.2	88.8	**95.4**	113.2	89.4
February	**81.3**	----------	69.6	78.0	89.6	**100.5**	116.4	95.2
March	**86.5**	----------	79.9	78.5	91.9	**107.5**	125.5	101.5
April	**93.5**	94.7	93.3	84.3	96.6	**111.2**	123.7	107.0
May	**98.6**	98.8	103.9	85.8	98.6	**111.1**	122.3	107.3
June	**99.3**	101.3	106.1	85.0	98.1	**108.1**	117.7	104.9
July	**93.6**	103.8	104.5	78.9	86.2	**103.2**	106.6	102.1
August	**97.0**	107.2	106.7	89.1	88.1	**97.6**	98.8	97.0
September	**97.3**	108.9	106.1	90.1	88.3	**94.9**	94.5	95.1
October	**100.0**	109.3	105.6	94.3	94.2	**95.3**	97.5	94.6
November	**99.1**	108.1	100.1	95.2	96.4	**95.3**	96.3	95.1
December	**96.2**	105.6	94.2	96.9	94.4	**98.2**	98.7	97.9
Average	**93.5**	104.2	95.1	85.8	92.6	**101.5**	109.3	98.9
1924								
January	**90.8**	100.3	86.6	95.5	89.4	**96.5**	95.6	96.8
February	**95.3**	104.4	87.5	101.2	96.9	**104.2**	111.7	101.7
March	**98.9**	106.8	93.3	104.3	99.1	**106.9**	116.8	103.6
April	**102.0**	110.0	102.9	104.1	97.5	**102.1**	110.1	99.5
May	**101.7**	109.6	108.7	102.2	92.6	**96.2**	97.3	95.8
June	**99.6**	114.5	108.6	96.7	87.9	**88.0**	85.9	88.7
July	**88.4**	108.5	102.1	71.5	76.1	**79.4**	77.9	79.9
August	**92.2**	111.0	102.9	92.8	76.5	**81.2**	78.6	82.1
September	**91.7**	110.6	97.9	94.0	79.3	**84.9**	80.5	86.4
October	**95.1**	109.2	100.0	95.2	86.1	**87.9**	84.4	89.0
November	**92.9**	106.5	96.5	86.0	87.6	**91.2**	87.3	92.5
December	**94.3**	103.5	94.9	97.8	89.3	**97.0**	91.9	98.6
Average	**95.2**	107.9	98.5	95.1	88.2	**93.0**	93.2	92.9

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	**Stone, clay, and glass products**—Continued					**Metal products, other than iron and steel**—Contd.		
	Group index	Cement	Brick	Pottery	Glass	**Group index**	Stamped ware	Brass
1925								
January	**86.5**	88.0	82.7	92.5	86.9	**96.4**	87.0	99.6
February	**92.1**	93.5	86.0	101.5	93.4	**100.0**	96.3	100.7
March	**95.8**	98.3	93.5	102.2	94.3	**101.4**	103.3	100.8
April	**98.6**	102.8	101.3	100.3	94.2	**96.3**	100.3	95.0
May	**100.5**	107.0	107.4	99.5	92.5	**99.4**	98.5	99.7
June	**99.6**	109.9	107.5	94.9	91.0	**98.5**	98.1	98.5
July	**93.1**	109.4	105.5	67.2	86.4	**95.5**	88.0	98.0
August	**99.1**	113.3	105.9	96.9	89.1	**99.8**	96.7	100.8
September	**97.2**	112.0	100.8	96.2	89.4	**94.0**	94.9	93.7
October	**102.5**	110.7	101.5	103.0	100.5	**100.7**	110.9	97.3
November	**102.3**	110.5	99.1	100.2	102.8	**103.9**	113.0	100.8
December	**99.9**	103.2	97.5	100.9	100.3	**107.3**	115.0	104.7
Average	**97.3**	104.9	99.1	96.3	93.4	**99.4**	100.2	99.1
1926								
January	**91.8**	86.8	88.0	93.0	96.4	**102.8**	104.8	102.2
February	**94.7**	88.4	87.9	102.0	100.0	**105.6**	112.4	103.3
March	**97.6**	91.3	91.0	103.3	103.1	**108.5**	115.4	106.2
April	**98.7**	94.9	94.3	104.7	101.5	**105.2**	110.0	103.6
May	**103.5**	102.3	106.8	102.5	101.2	**101.4**	98.9	102.2
June	**105.6**	108.1	110.8	101.3	101.9	**99.0**	97.2	99.6
July	**97.7**	104.1	107.0	86.3	91.8	**93.3**	88.1	95.0
August	**103.9**	111.9	111.0	100.2	96.3	**95.4**	92.2	96.5
September	**101.6**	107.3	105.4	98.3	97.4	**95.0**	93.4	95.5
October	**104.5**	107.2	104.1	104.5	103.9	**99.5**	101.0	98.9
November	**102.3**	102.8	99.5	100.9	105.0	**97.2**	94.5	98.0
December	**98.5**	95.3	93.6	103.5	101.8	**97.1**	91.5	98.9
Average	**100.0**	100.0	100.0	100.0	100.0	**100.0**	100.0	100.0
1927								
January	**86.3**	83.8	82.4	89.5	89.3	**93.3**	83.7	96.4
February	**92.3**	84.9	85.3	105.4	96.0	**96.6**	94.4	97.4
March	**96.6**	91.7	92.3	106.8	98.1	**99.4**	99.7	99.2
April	**99.4**	98.8	99.0	103.2	98.4	**92.7**	94.8	92.0
May	**101.4**	106.0	106.7	95.5	97.4	**96.5**	93.9	97.4
June	**99.2**	104.2	105.3	90.4	95.5	**92.9**	90.9	93.6
July	**91.1**	101.6	101.6	69.7	86.1	**88.2**	85.7	89.0
August	**94.6**	103.2	100.4	88.5	89.1	**89.6**	89.7	89.6
September	**93.4**	101.6	95.6	89.5	90.1	**87.3**	86.1	87.7
October	**94.5**	100.1	91.5	95.3	94.9	**88.0**	90.4	87.2
November	**92.7**	94.8	87.9	95.9	94.7	**86.4**	90.5	85.1
December	**89.0**	87.0	81.6	100.6	91.7	**88.4**	86.8	89.0
Average	**94.2**	96.5	94.1	94.2	93.4	**91.6**	90.6	92.0
1928								
January	**81.8**	83.1	72.3	93.7	84.9	**85.0**	76.7	87.7
February	**84.2**	78.8	72.5	102.2	89.4	**91.1**	91.8	90.8
March	**87.1**	81.0	76.7	102.0	92.5	**92.1**	93.9	91.4
April	**89.9**	88.1	81.6	96.5	95.2	**92.8**	93.8	92.4
May	**92.9**	92.5	87.9	95.9	96.0	**94.8**	94.3	95.0
June	**92.8**	93.3	89.1	91.7	96.0	**93.7**	90.3	94.9
July	**87.8**	95.4	88.0	76.5	89.2	**90.3**	82.8	92.7
August	**93.7**	96.3	89.8	91.8	96.9	**96.6**	90.3	98.8
September	**91.8**	92.0	86.9	90.4	96.6	**98.2**	88.7	101.3
October	**93.6**	92.0	85.9	94.4	100.3	**104.6**	93.4	108.3
November	**90.6**	85.4	82.5	92.5	98.5	**106.2**	94.0	110.2
December	**88.4**	81.1	80.0	93.3	96.3	**108.2**	94.8	112.7
Average	**89.6**	88.3	82.8	93.4	94.3	**96.1**	90.4	98.0

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	Tobacco products			Vehicles for land transportation				
	Group index	Chewing and smoking	Cigars and cigarettes	**Group index**	Automobiles	Carriages	Car building and repairing, electric	Car building and repairing, steam
1923								
January	**118.9**	104.3	120.9	**93.2**	69.5	104.0	----------	112.7
February	**114.0**	97.6	116.2	**99.5**	84.0	110.1	----------	112.1
March	**118.0**	93.6	121.3	**106.9**	91.7	112.0	----------	119.3
April	**112.8**	95.6	115.1	**109.1**	96.5	125.1	----------	119.0
May	**111.4**	100.6	112.9	**112.1**	98.3	127.5	----------	123.2
June	**114.5**	100.7	116.3	**111.6**	93.2	122.2	104.8	127.4
July	**110.1**	104.3	110.9	**108.1**	90.8	108.3	105.7	122.9
August	**99.4**	96.1	99.9	**110.7**	93.3	107.7	110.1	125.4
September	**110.6**	98.5	112.2	**107.5**	90.6	99.6	109.8	122.0
October	**118.6**	106.7	120.2	**115.3**	100.9	93.5	113.1	128.2
November	**118.6**	102.4	120.7	**113.3**	100.8	92.8	115.0	124.3
December	**121.3**	100.8	124.1	**105.5**	94.4	97.3	112.3	114.6
Average	**114.0**	100.1	115.9	**107.7**	92.0	108.3	110.1	120.9
1924								
January	**113.5**	106.6	114.4	**94.0**	84.6	92.2	101.8	101.3
February	**112.4**	114.3	112.2	**104.7**	105.8	105.1	99.2	104.2
March	**111.7**	111.0	111.8	**104.0**	104.2	109.8	99.4	104.0
April	**102.5**	98.6	103.0	**104.2**	100.8	110.2	97.8	107.4
May	**105.2**	95.4	106.5	**98.1**	89.5	104.0	97.5	105.2
June	**108.8**	96.0	110.4	**90.9**	73.9	90.0	97.5	105.1
July	**105.9**	92.7	107.6	**83.3**	67.5	82.8	92.3	96.0
August	**105.7**	96.8	106.8	**87.3**	72.7	81.8	96.8	99.3
September	**110.1**	103.3	111.0	**87.9**	75.5	90.5	95.5	97.8
October	**100.2**	101.1	100.1	**93.5**	78.9	92.5	97.1	105.7
November	**114.4**	94.4	117.0	**90.3**	75.3	88.8	98.7	102.5
December	**116.9**	103.9	118.5	**92.8**	77.4	92.1	99.9	105.4
Average	**108.9**	101.2	109.9	**94.3**	83.8	95.0	97.8	102.8
1925								
January	**109.2**	104.4	109.8	**85.0**	67.5	84.0	96.4	99.2
February	**101.8**	106.4	101.2	**99.5**	89.2	94.6	99.9	108.2
March	**103.1**	98.4	103.7	**103.0**	96.6	104.3	103.5	108.5
April	**86.8**	92.1	86.0	**104.3**	105.5	108.1	102.1	103.3
May	**105.8**	97.4	107.0	**104.3**	110.7	99.8	101.9	99.3
June	**105.2**	98.1	106.1	**99.8**	102.2	93.4	100.9	97.9
July	**103.6**	97.7	104.4	**97.2**	101.4	87.2	98.6	94.0
August	**104.8**	99.1	105.6	**96.9**	98.7	97.6	97.4	95.3
September	**104.8**	99.0	105.6	**98.0**	105.0	105.9	95.7	91.9
October	**112.9**	99.9	114.6	**107.2**	120.2	115.1	100.0	96.6
November	**114.7**	92.2	117.7	**108.8**	120.9	106.5	105.1	99.0
December	**115.4**	95.4	118.1	**104.4**	110.5	107.7	104.8	99.3
Average	**105.7**	98.3	106.7	**100.7**	102.4	100.4	100.5	99.4
1926								
January	**100.0**	95.2	100.6	**92.7**	91.9	96.5	97.9	93.0
February	**97.9**	109.9	96.3	**105.2**	112.3	104.1	101.9	99.5
March	**102.7**	107.2	102.1	**108.0**	115.4	102.3	101.7	102.3
April	**95.7**	101.3	94.9	**107.1**	111.8	103.4	102.3	103.6
May	**95.0**	98.8	94.4	**104.3**	106.3	101.3	101.5	103.0
June	**101.0**	101.8	100.9	**102.0**	99.8	98.4	100.6	104.2
July	**97.1**	101.5	96.5	**95.2**	92.4	103.8	97.5	97.1
August	**96.2**	97.7	95.9	**102.0**	103.1	113.8	99.4	101.0
September	**101.6**	99.2	101.9	**98.4**	100.6	112.0	97.2	96.3
October	**105.9**	101.7	106.5	**101.5**	102.1	101.5	97.9	101.2
November	**104.8**	91.3	106.6	**94.7**	88.7	84.4	99.7	99.8
December	**102.4**	94.7	103.4	**88.7**	75.3	78.7	102.0	99.5
Average	**100.0**	100.0	100.0	**100.0**	100.0	100.0	100.0	100.0

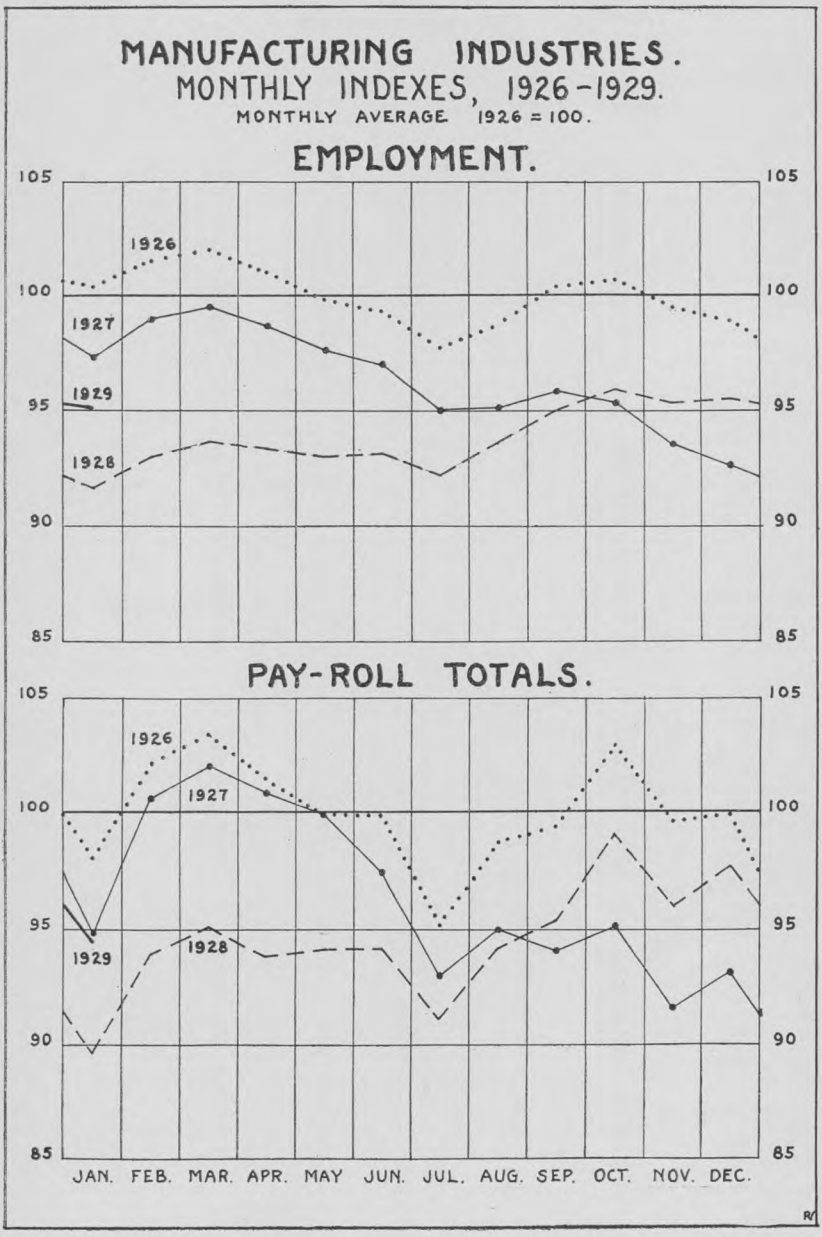
TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	**Tobacco products**—Contd.			**Vehicles for land transportation**—Continued				
	Group index	Chewing and smoking	Cigars and cigarettes	**Group index**	Automobiles	Carriages	Car building and repairing, electric	Car building and repairing, steam
1927								
January	**88.5**	102.6	86.6	**79.3**	63.5	71.9	98.7	91.7
February	**91.9**	105.2	90.0	**95.7**	94.7	83.4	99.8	96.7
March	**93.6**	100.1	92.7	**98.4**	103.6	86.3	101.9	94.2
April	**90.1**	91.4	89.9	**100.3**	106.5	87.5	101.2	95.4
May	**96.5**	94.5	96.8	**101.5**	107.2	87.1	102.0	97.2
June	**100.1**	99.0	100.2	**92.5**	88.7	82.7	102.5	95.3
July	**98.9**	96.5	99.2	**87.7**	84.5	79.7	99.6	89.8
August	**92.1**	95.4	91.7	**92.5**	92.1	85.4	101.7	92.5
September	**104.2**	93.2	105.7	**87.9**	86.9	88.0	100.8	88.0
October	**105.2**	102.3	105.6	**90.7**	90.2	88.3	100.4	90.6
November	**104.1**	94.6	105.3	**85.1**	79.4	81.6	101.4	89.1
December	**100.2**	97.3	100.6	**87.1**	86.3	81.3	102.8	86.9
Average	**97.1**	97.7	97.0	**91.6**	90.3	83.6	101.1	92.3
1928								
January	**90.2**	101.6	88.6	**83.6**	85.8	67.0	99.4	81.4
February	**90.4**	104.7	88.4	**95.2**	108.0	77.6	97.9	84.8
March	**91.4**	96.3	90.7	**99.1**	114.1	78.9	101.2	87.1
April	**85.1**	91.2	84.2	**100.4**	116.0	79.7	99.8	88.0
May	**88.9**	90.7	88.6	**102.2**	120.8	74.1	99.3	87.4
June	**94.9**	95.3	94.8	**99.8**	114.4	82.3	96.9	88.1
July	**89.7**	87.0	90.0	**96.0**	112.1	82.4	94.7	83.0
August	**93.8**	91.8	94.1	**101.8**	124.8	87.5	94.5	83.4
September	**98.2**	93.6	98.7	**101.4**	125.5	95.7	91.3	82.0
October	**100.6**	95.6	101.3	**106.1**	130.5	90.0	94.5	86.9
November	**99.3**	88.7	100.7	**97.5**	111.4	86.7	93.4	86.5
December	**99.5**	93.2	100.3	**96.4**	109.3	83.4	92.0	86.2
Average	**93.5**	94.1	93.4	**98.3**	114.4	82.1	96.2	85.4

Year and month	**Miscellaneous industries**						
	Group index	Agricultural implements	Electrical machinery	Pianos	Rubber shoes	Automobile tires	Shipbuilding
1923							
January	**90.9**	81.2	81.9	83.0	----------	93.2	95.7
February	**93.8**	93.5	85.0	87.7	----------	101.5	95.3
March	**103.0**	101.0	91.0	92.2	----------	107.1	107.7
April	**106.0**	102.1	94.8	94.9	107.1	110.6	110.8
May	**110.1**	102.9	98.9	93.8	111.8	107.3	118.1
June	**108.0**	95.0	100.4	94.1	115.1	100.6	116.4
July	**97.3**	86.8	98.5	88.7	104.0	81.2	103.8
August	**89.5**	84.0	99.6	90.1	97.5	72.0	91.1
September	**93.3**	80.3	99.6	97.6	106.3	69.2	99.5
October	**92.9**	80.3	102.8	104.6	108.7	68.0	97.1
November	**98.4**	83.4	105.0	105.1	107.9	70.8	106.0
December	**94.4**	86.8	106.5	106.8	106.3	76.6	94.5
Average	**98.1**	89.8	97.0	94.9	107.2	88.7	103.0
1924							
January	**94.3**	88.8	104.5	98.5	96.7	80.5	94.7
February	**98.8**	91.7	104.8	100.5	86.1	86.4	101.9
March	**97.4**	92.3	105.1	99.4	81.0	87.4	98.6
April	**97.0**	84.9	103.9	95.2	76.8	88.2	99.6
May	**93.2**	78.6	98.6	85.0	77.4	87.7	96.1
June	**84.5**	66.7	94.3	81.2	74.4	81.4	84.2
July	**81.9**	57.2	85.7	80.4	70.4	78.0	85.9
August	**80.7**	61.0	85.1	89.5	47.4	86.2	80.9
September	**82.9**	62.1	86.9	97.7	55.9	97.5	79.7
October	**82.2**	67.5	89.6	103.3	60.2	98.2	75.5
November	**85.8**	71.5	87.2	113.2	94.4	92.0	83.1
December	**88.7**	80.6	90.9	114.9	98.4	93.1	85.4
Average	**89.0**	75.2	94.7	96.6	76.6	88.1	88.8

TABLE 9.—MONTHLY INDEXES OF **PAY-ROLL TOTALS** IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1928, INCLUSIVE, AND YEARLY AVERAGES—Continued

Year and month	**Group index**	Miscellaneous industries—Continued					
		Agricultural implements	Electrical machinery	Pianos	Rubber shoes	Automobile tires	Shipbuilding
1925							
January	**90.2**	79.4	90.2	99.3	101.8	90.8	90.3
February	**94.3**	87.9	91.9	98.9	103.6	96.8	94.9
March	**96.3**	92.1	91.6	100.9	100.2	99.4	97.2
April	**95.2**	92.8	89.8	93.7	97.0	101.6	96.0
May	**97.3**	90.8	91.3	94.9	96.6	107.3	97.7
June	**91.1**	86.4	88.4	94.8	95.3	104.6	88.0
July	**89.5**	82.3	86.9	81.6	91.3	107.1	86.1
August	**91.4**	88.5	86.6	75.2	87.8	108.4	89.4
September	**88.9**	85.5	88.8	97.7	88.9	103.2	84.1
October	**91.5**	95.6	95.9	107.2	96.9	94.5	86.6
November	**91.3**	100.9	100.9	113.8	102.8	92.3	83.1
December	**97.1**	106.8	103.8	115.9	110.4	99.2	90.1
Average	**92.8**	90.8	92.2	97.8	97.7	100.4	90.3
1926							
January	**98.5**	107.8	100.0	98.1	112.2	100.5	95.2
February	**100.1**	110.9	101.4	99.3	103.2	106.2	95.9
March	**101.0**	109.4	101.7	100.2	107.9	102.3	98.7
April	**101.0**	108.4	98.8	99.9	107.9	102.4	100.2
May	**98.3**	103.9	97.8	97.2	104.6	98.0	97.7
June	**98.4**	100.4	100.1	95.4	95.9	97.0	98.1
July	**95.2**	91.9	95.0	85.1	74.3	98.7	96.4
August	**97.6**	96.5	98.4	95.7	88.3	99.9	97.4
September	**97.4**	88.5	97.2	100.9	93.9	107.8	95.5
October	**103.3**	92.8	105.0	109.8	98.9	103.0	104.0
November	**101.0**	92.4	102.4	110.6	101.8	92.0	104.0
December	**107.7**	97.1	102.2	108.1	110.9	92.2	116.9
Average	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0
1927							
January	**105.2**	93.4	98.1	93.0	110.3	91.5	115.3
February	**107.2**	100.7	97.1	88.9	107.2	98.9	116.6
March	**109.3**	98.3	97.4	87.6	104.5	100.6	121.0
April	**111.2**	96.8	97.2	82.9	104.5	107.1	123.1
May	**107.3**	95.3	97.2	83.6	107.8	109.8	114.2
June	**102.9**	90.8	98.6	81.6	104.4	106.0	106.8
July	**97.6**	83.6	90.8	75.0	96.7	100.7	103.1
August	**94.8**	88.9	94.8	84.6	97.9	100.5	94.1
September	**91.5**	81.4	91.5	91.1	109.6	96.7	90.1
October	**94.7**	88.3	97.4	94.9	112.6	92.0	94.3
November	**90.7**	89.5	93.1	93.1	117.5	83.0	90.7
December	**97.9**	98.8	95.2	92.3	119.8	91.4	100.4
Average	**100.9**	92.2	95.7	87.4	107.7	98.2	105.8
1928							
January	**93.3**	102.9	90.7	71.4	116.2	95.9	92.3
February	**90.3**	108.8	90.6	72.2	108.9	104.8	82.5
March	**90.4**	113.8	92.3	74.0	98.5	106.0	81.4
April	**92.1**	112.7	91.0	73.6	101.2	103.6	86.2
May	**89.5**	112.9	93.0	72.2	98.0	100.2	81.5
June	**92.0**	113.3	95.7	70.9	91.4	105.4	83.7
July	**89.2**	108.0	92.3	63.8	93.9	107.4	80.0
August	**89.4**	110.3	96.2	72.0	90.4	111.8	76.4
September	**91.8**	105.0	98.3	76.3	100.9	116.0	78.9
October	**93.3**	114.2	103.4	79.7	102.1	111.7	79.7
November	**91.9**	116.0	101.6	83.1	104.3	102.1	80.2
December	**100.1**	123.1	106.1	82.4	106.3	103.5	93.4
Average	**91.9**	111.8	95.9	74.3	101.0	105.7	83.0



Proportion of Time Worked and Force Employed in Selected Manufacturing Industries in January, 1929

REPORTS as to time worked and force employed in January, 1929, were made by 9,666 establishments in the 54 separate industries. Employees in 80 per cent of these establishments were working full time and employees in 18 per cent were working part time, while 1 per cent were idle; 32 per cent of the establishments had a full normal force of employees and 67 per cent were operating with reduced forces.

The establishments in operation had an average of 91 per cent of a full normal force of employees who were working an average of 97 per cent of full time.

TABLE 10.—PROPORTION OF TIME WORKED AND FORCE EMPLOYED IN SELECTED MANUFACTURING INDUSTRIES IN JANUARY, 1929

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	**1,418**	(1)	**85**	**15**	**97**	**33**	**67**	**88**
Slaughtering and meat packing	155	------	92	8	100	57	43	98
Confectionery	251	1	71	28	95	12	87	73
Ice cream	207	(1)	91	9	99	5	95	63
Flour	271	------	72	28	93	41	59	92
Baking	523	(1)	93	7	99	42	57	92
Sugar refining, cane	11	------	73	27	91	9	91	84
Textiles and their products	**1,745**	**1**	**84**	**15**	**97**	**37**	**62**	**89**
Cotton goods	416	1	88	12	98	39	60	88
Hosiery and knit goods	265	2	81	18	97	42	56	91
Silk goods	263	------	90	10	98	43	57	92
Woolen and worsted goods	174	1	83	17	96	32	67	85
Carpets and rugs	21	------	86	14	96	43	57	98
Dyeing and finishing	91	------	63	37	94	37	63	91
Clothing, men's	232	3	81	16	96	24	73	84
Shirts and collars	95	1	77	22	93	35	64	90
Clothing, women's	142	1	85	14	98	38	61	92
Millinery and lace goods	46	------	91	9	99	24	76	85
Iron and steel and their products	**1,593**	(1)	**76**	**24**	**97**	**33**	**67**	**88**
Iron and steel	159	2	75	23	95	35	64	88
Cast-iron pipe	34	------	71	29	93	18	82	72
Structural ironwork	153	------	84	16	98	33	67	88
Foundry and machine-shop products	872	------	75	25	97	31	69	87
Hardware	49	------	76	24	97	18	82	87
Machine tools	126	------	89	11	101	60	40	114
Steam fittings and steam and hot-water heating apparatus	101	------	72	28	95	28	72	80
Stoves	99	4	60	36	93	23	73	82
Lumber, and its products	**997**	**2**	**72**	**26**	**95**	**25**	**73**	**82**
Lumber, sawmills	420	4	73	23	94	23	73	80
Lumber, millwork	228	------	63	37	93	18	82	75
Furniture	349	1	78	21	97	32	68	89
Leather, and its products	**330**	**1**	**86**	**14**	**98**	**32**	**68**	**87**
Leather	119	1	90	9	99	25	74	81
Boots and shoes	211	(1)	83	16	97	36	64	88
Paper and printing	**798**	------	**89**	**11**	**99**	**45**	**55**	**96**
Paper and pulp	169	------	89	11	98	34	66	92
Paper boxes	156	------	70	30	96	24	76	83
Printing, book and job	280	------	95	5	100	46	54	100
Printing, newspapers	193	------	95	5	100	70	30	103

[1] Less than one-half of 1 per cent.

TABLE 10.—PROPORTION OF TIME WORKED AND FORCE EMPLOYED IN SELECTED MANUFACTURING INDUSTRIES IN JANUARY, 1929—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Chemicals and allied products	**287**	(1)	**82**	**17**	**98**	**17**	**82**	**79**
Chemicals	111	------	87	13	98	35	65	95
Fertilizers	138	1	73	26	98	3	96	54
Petroleum refining	38	------	100	------	100	18	82	79
Stone, clay, and glass products	**699**	**9**	**73**	**18**	**96**	**22**	**70**	**82**
Cement	92	------	87	13	98	16	84	73
Brick, tile and terra cotta	397	14	65	21	95	16	70	77
Pottery	107	5	72	23	96	41	54	92
Glass	103	1	93	6	99	27	72	88
Metal products, other than iron and steel	**181**	------	**81**	**19**	**98**	**39**	**61**	**92**
Stamped and enameled ware	58	------	88	12	98	41	59	85
Brass, bronze, and copper products	123	------	77	23	97	37	63	96
Tobacco products	**236**	**11**	**61**	**28**	**94**	**29**	**61**	**88**
Chewing and smoking tobacco and snuff	27	------	74	26	97	44	56	90
Cigars and cigarettes	209	12	59	29	94	27	61	88
Vehicles for land transportation	**1,021**	(1)	**85**	**15**	**99**	**27**	**73**	**105**
Automobiles	185	------	89	11	99	47	53	119
Carriages and wagons	49	2	65	33	94	16	82	66
Car building and repairing, electric-railroad	297	------	86	14	99	29	71	87
Car building and repairing, steam-railroad	490	------	85	15	98	18	82	79
Miscellaneous industries	**361**	**1**	**81**	**19**	**98**	**40**	**59**	**95**
Agricultural implements	67	------	78	22	98	40	60	103
Electrical machinery, apparatus, and supplies	136	------	87	13	99	49	51	96
Pianos and organs	57	------	68	32	93	28	72	83
Rubber boots and shoes	12	------	75	25	97	25	75	92
Automobile tires	38	5	71	24	96	43	53	103
Shipbuilding	51	------	92	8	100	31	69	78
Total	**9,666**	**1**	**80**	**18**	**97**	**32**	**67**	**91**

[1] Less than one-half of 1 per cent.

2. Employment in Coal Mining in January, 1929

EMPLOYMENT in coal mining—anthracite and bituminous coal combined—*increased* 0.1 per cent in January, 1929, as compared with December, 1928, while pay-roll totals *decreased* 5.1 per cent.

The 949 mines for which reports were received had 216,220 employees in December with pay-roll totals in one week of $5,710,564.

Anthracite

EMPLOYMENT in anthracite mines alone was 1.5 per cent lower in January, 1929, than in December, 1928, and pay-roll totals were 10.7 per cent lower.

The considerable decrease in pay-roll totals in January was largely due to the part-time work reported by a number of collieries.

Returns were received from 91 collieries having 67,220 employees in January and pay-roll totals in one week of $1,977,808; the same mines reported for December 68,232 employees and pay-roll totals of $2,215,231 in one week. All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division.

Bituminous Coal

EMPLOYMENT in bituminous coal mines *increased* 0.9 per cent in January, 1929, as compared with December, 1928, while pay-roll totals *decreased* 1.8 per cent.

The end of the disagreement over a new wage scale in one region of the Mountain geographic division, which was noted in the report for December, is shown in the increase in pay-roll totals in that division; reports from two States in the East North Central division showed that several mines, which were idle in December, had resumed work in January; a number of mines in the West North Central division reported more employees and steadier operating time in January. The remaining 5 divisions, in which bituminous coal mines are represented, reported a considerable amount of irregular operating time.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **BITUMINOUS COAL** MINES DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Geographic division [1]	Mines	Number on pay roll		Percent of change	Amount of pay roll		Percent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
New England							
Middle Atlantic	245	47,883	47,200	−1.4	$1,279,743	$1,214,464	−5.1
East North Central	130	22,834	25,281	+10.7	674,016	692,535	+2.7
West North Central	47	4,509	4,642	+2.9	115,286	123,275	+6.9
South Atlantic	208	31,500	31,096	−1.3	789,007	747,696	−5.2
East South Central	155	30,943	30,487	−1.5	646,998	634,428	−1.9
West South Central	25	1,830	1,876	+2.5	50,742	50,079	−1.3
Mountain	40	6,735	6,952	+3.2	196,908	225,868	+14.7
Pacific	8	1,485	1,466	−1.3	47,062	44,411	−5.6
All divisions	**858**	**147,719**	**149,000**	**+0.9**	**3,799,762**	**3,732,756**	**−1.8**

[1] See footnotes 3 to 11, p. 179.

3. Employment in Metalliferous Mining in January, 1929

EMPLOYMENT in metalliferous mining in January, 1929, was 0.3 per cent greater than in December, 1928, while pay-roll totals were 4 per cent lower, as shown by returns from 290 establishments having 46,754 employees with pay-roll totals of $1,339,641.

The large decreases in both items in both the Pacific and the West North Central divisions were due mainly to a considerable shutting-down of mines for the winter season, while in the East North Central division, with an increase in employment, there was a considerable amount of broken operating time during the period reported. The South Central States took on additional employees, but in the *East* South Central division broken operating time was reported.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **METALLIFEROUS** MINES DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Geographic division [1]	Mines	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
New England							
Middle Atlantic							
East North Central	24	7,592	7,768	+2.3	$201,340	$170,235	−15.4
West North Central	34	5,696	5,293	−7.1	176,583	150,569	−14.7
South Atlantic							
East South Central	10	2,827	3,034	+7.3	57,804	55,956	−3.2
West South Central	62	4,453	4,782	+7.4	114,211	120,674	+5.7
Mountain	137	23,768	23,833	+0.3	774,649	776,376	+0.2
Pacific	23	2,255	2,044	−9.4	70,207	65,831	−6.2
All divisions	**290**	**46,591**	**46,754**	**+0.3**	**1,394,794**	**1,339,641**	**−4.0**

[1] See footnotes 3 to 11, p. 179.

4. Employment in Public Utilities in January, 1929

EMPLOYMENT in public utilities decreased 2.1 per cent in January, 1929, as compared with December, 1928, and pay-roll totals decreased 0.8 per cent, as shown by returns from 6,404 establishments having in January 483,948 employees, with pay-roll totals in one week of $14,162,259.

The only increases in employment or in amount of pay roll were, in the South Atlantic division, in both items, and in the East South Central division, in pay-roll totals alone. In both these localities the winter season does not necessarily restrict out-of-door construction, while the decreases in the remaining divisions were largely due to severe weather conditions.

The establishments reporting include electric railway, electric power and light, gas, water, telephone, and telegraph companies.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **PUBLIC UTILITIES** ESTABLISHMENTS DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
New England	294	32,552	31,045	−4.6	$1,076,398	$1,043,891	−3.0
Middle Atlantic	956	115,969	113,492	−2.1	3,544,524	3,522,657	−0.6
East North Central	1,392	158,845	155,572	−2.1	4,690,547	4,625,166	−1.4
West North Central	1,021	49,944	48,703	−2.5	1,329,172	1,310,842	−1.4
South Atlantic	772	50,550	50,791	+0.5	1,348,058	1,401,557	+4.0
East South Central	658	19,356	19,169	−1.0	435,723	440,850	+1.2
West South Central	425	20,102	19,650	−2.2	515,310	507,945	−1.4
Mountain	534	15,621	15,024	−3.8	390,822	379,772	−2.8
Pacific	352	31,280	30,502	−2.5	946,216	929,579	−1.8
All divisions	**6,404**	**494,219**	**483,948**	**−2.1**	**14,276,770**	**14,162,259**	**−0.8**

[1] See footnotes 3 to 11, p. 179.

5. Employment in Wholesale and Retail Trade in January, 1929

EMPLOYMENT in 2,913 establishments—wholesale and retail trade combined—decreased 17.5 per cent in January, 1929, as compared with December, 1928, and pay-roll totals decreased 12 per cent. These establishments in January had 179,236 employees, with total pay rolls in one week of $4,439,879.

The establishments reporting are so carefully selected, from every State and from nearly every class of wholesale and retail trade, as to be reasonably representative of general conditions in each geographic division and, consequently, in the United States as a whole.

Wholesale Trade

EMPLOYMENT in wholesale trade decreased 2.4 per cent in January, 1929, as compared with December, 1928, and pay-roll totals decreased 1.6 per cent, as shown by returns from 1,146 establishments having in January 33,888 employees and pay-roll totals of $997,576.

These decreases were largely of a seasonal character, the three small increases being negligible.

The details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **WHOLESALE TRADE** ESTABLISHMENTS DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Geographic division [1]	Establishments	Number on pay roll		Percent of change	Amount of pay roll		Percent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
New England	68	1,639	1,636	−0.2	$47,589	$46,433	−2.4
Middle Atlantic	169	6,506	6,288	−3.4	198,269	191,895	−3.2
East North Central	179	6,693	6,621	−1.1	195,326	193,449	−1.0
West North Central	119	6,786	6,563	−3.3	185,841	181,945	−2.1
South Atlantic	101	2,626	2,584	−1.6	74,288	74,305	+ [2]
East South Central	229	1,949	1,918	−1.6	56,254	55,688	−1.0
West South Central	73	3,081	2,854	−7.4	83,480	81,639	−2.2
Mountain	35	827	835	+1.0	28,718	27,729	−3.4
Pacific	173	4,630	4,589	−0.9	143,836	144,493	+0.5
All divisions	**1,146**	**34,737**	**33,888**	**−2.4**	**1,013,601**	**997,576**	**−1.6**

[1] See footnotes 3 to 11, p. 179. [2] Less than one-tenth of 1 per cent.

Retail Trade

EMPLOYMENT in retail trade decreased 20.4 per cent in January, 1929, as compared with December and pay-roll totals decreased 14.7 per cent, as shown by reports from 1,767 establishments having in January 145,348 employees with pay-roll totals of $3,442,303.

These are natural decreases following the large temporary employment conditions of December.

Details for each geographic division are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **RETAIL TRADE** ESTABLISHMENTS DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Geographic division [1]	Establishments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
New England	23	11,412	8,999	−21.1	$249,042	$211,144	−15.2
Middle Atlantic	143	41,451	30,841	−25.6	932,592	754,951	−19.0
East North Central	191	52,725	41,843	−20.6	1,290,719	1,114,999	−13.6
West North Central	67	10,696	10,660	−0.3	216,781	229,750	+6.0
South Atlantic	508	17,631	13,649	−22.6	341,175	276,527	−18.9
East South Central	152	5,122	4,087	−20.2	94,214	82,845	−12.1
West South Central	41	7,093	5,753	−18.9	120,908	102,566	−15.2
Mountain	18	2,017	1,492	−26.0	32,810	25,613	−21.9
Pacific	624	34,369	28,024	−18.5	755,667	643,908	−14.8
All divisions	**1,767**	**182,516**	**145,348**	**−20.4**	**4,033,908**	**3,442,303**	**−14.7**

[1] See footnotes 3 to 11, p. 179.

6. Employment in Hotels in January, 1929

EMPLOYMENT in hotels was 1.3 per cent *greater* in January, 1929, than in December, 1928, and pay-roll totals were 0.2 per cent *higher*, as shown by reports from 1,041 hotels having in January 111,943 employees with pay-roll totals in one week of $1,924,973.

The increase of 13.7 per cent in employment in the South Atlantic geographic division, and the smaller increases in the Pacific and the West South Central divisions, due to the height of the season for southern resort hotels, were sufficient not only to overcome the decreases in the remaining six divisions but to result in a net increase for the country as a whole.

Per capita earnings obtained by dividing the total number of employees into the total amount of pay roll should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only with no regard to the value of board or room furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only, for one, two, or three meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **HOTELS** DURING **ONE WEEK** EACH IN DECEMBER, 1928, AND JANUARY, 1929

Geographic division [1]	Hotels	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		December, 1928	January, 1929		December, 1928	January, 1929	
New England	73	7,143	7,128	−0.2	$121,093	$120,722	−0.3
Middle Atlantic	186	37,083	36,578	−1.4	692,404	682,018	−1.5
East North Central	185	21,890	21,765	−0.6	384,588	377,245	−1.9
West North Central	140	10,534	10,507	−..3	157,626	157,136	−0.3
South Atlantic	122	10,251	11,651	+13.7	159,809	173,812	+8.8
East South Central	37	3,851	3,828	−0.6	52,083	50,520	−3.0
West South Central	47	4,701	4,780	+1.7	65,197	66,756	+2.4
Mountain	44	2,666	2,577	−3.3	45,396	43,482	−4.2
Pacific	207	12,425	13,129	+5.7	243,169	253,282	+4.2
All divisions	**1,041**	**110,544**	**111,943**	**+1.3**	**1,921,365**	**1,924,973**	**+0.2**

[1] See footnotes 3 to 11, p. 179.

Employment on Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to December, 1928, on Class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO DECEMBER, 1928

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928
January	98.3	96.9	95.6	95.8	95.5	89.3
February	98.6	97.0	95.4	96.0	95.3	89.0
March	100.5	97.4	95.2	96.7	95.8	89.9
April	102.0	98.9	96.6	98.9	97.4	91.7
May	105.0	99.2	97.8	100.2	99.4	94.5
June	107.1	98.0	98.6	101.6	100.9	95.9
July	108.2	98.1	99.4	102.9	101.0	95.6
August	109.4	99.0	99.7	102.7	99.5	95.7
September	107.8	99.7	99.9	102.8	99.1	95.3
October	107.3	100.8	100.7	103.4	98.9	95.3
November	105.2	99.0	99.1	101.2	95.7	92.9
December	99.4	96.0	97.1	98.2	91.9	89.7
Average	104.1	98.3	97.9	100.0	97.5	92.9

Table 2 shows the total number of employees on the 15th day each of December, 1927, and November and December, 1928, and pay-roll totals for the entire month of each month considered, by principal occupational groups and various important occupations.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted from the totals.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES—DECEMBER, 1927, AND NOVEMBER AND DECEMBER, 1928

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	December, 1927	November, 1928	December, 1928	December, 1927	November, 1928	December, 1928
Professional, clerical, and general	**275,361**	**270,693**	**268,972**	**$39,605,470**	**$39,015,113**	**$38,909,010**
Clerks	158,632	154,975	153,455	21,645,341	21,152,629	21,021,276
Stenographers and typists	24,914	24,673	24,621	3,207,228	3,177,774	3,170,174
Maintenance of way and structures	**358,153**	**393,552**	**350,412**	**33,667,019**	**35,919,554**	**31,940,795**
Laborers, extra gang and work train	48,752	57,615	45,563	3,596,744	4,210,502	3,200,959
Laborers, track and roadway section	180,058	202,393	177,235	12,987,233	14,150,537	12,232,334
Maintenance of equipment and stores	**474,711**	**459,415**	**456,344**	**61,803,788**	**60,859,219**	**59,795,225**
Carmen	101,140	100,880	99,530	14,733,986	15,092,082	14,649,997
Machinists	57,701	55,153	54,896	8,953,477	8,748,538	8,622,410
Skilled trades helpers	104,281	101,175	100,432	11,445,419	11,398,392	11,140,188
Laborers (shops, engine houses, power plants, and stores)	40,054	37,626	37,369	3,895,493	3,560,880	3,583,277
Common laborers (shops, engine houses, power plants, and stores)	53,617	52,449	52,338	4,252,780	4,211,027	4,122,197
Transportation, other than train, engine, and yard	**199,707**	**197,899**	**194,953**	**25,199,984**	**24,664,494**	**24,642,133**
Station agents	30,182	29,663	29,541	4,838,971	4,677,226	4,701,504
Telegraphers, telephoners, and towermen	23,912	23,235	23,066	3,762,122	3,554,390	3,629,389
Truckers (stations, warehouses, and platforms)	35,329	35,773	34,432	3,315,330	3,397,179	3,229,515
Crossing and bridge flagmen and gatemen	21,539	20,852	20,860	1,664,516	1,604,085	1,596,472
Transportation (yardmasters, switch tenders, and hostlers)	**22,725**	**21,861**	**21,834**	**4,462,203**	**4,301,398**	**4,343,190**
Transportation, train and engine	**312,699**	**320,188**	**312,523**	**62,938,399**	**65,619,791**	**63,468,253**
Road conductors	35,238	35,990	35,202	8,390,996	8,573,257	8,361,525
Road brakemen and flagmen	70,617	71,648	69,753	12,125,488	12,529,318	12,008,755
Yard brakemen and yard helpers	52,357	54,120	52,782	9,324,802	9,867,022	9,488,557
Road engineers and motormen	42,021	42,794	41,660	11,218,273	11,743,211	11,314,661
Road firemen and helpers	43,272	43,506	42,659	8,419,264	8,666,869	8,359,485
Total, all employees	**1,643,356**	**1,663,608**	**1,605,038**	**227,676,863**	**230,379,569**	**223,098,606**

Changes in Employment and Pay Rolls in Various States

THE following data as to changes in employment and pay rolls have been compiled from reports received from the various State labor offices:

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES

Monthly period

State, and industry group	Per cent of change, November to December, 1928	
	Employment	Pay roll
Illinois		
Stone, clay, and glass products	−1.8	−4.4
Metals, machinery, and conveyances	+.9	−1.8
Wood products	−.6	−3.1
Furs and leather goods	+3.2	+7.1
Chemicals, oils, paints, etc	−.1	−1.2
Printing and paper goods	+1.1	+2.6
Textiles	−3.4	−5.6
Clothing and millinery	+5.3	+23.4
Food, beverages, and tobacco	+1.0	+3.2
All manufacturing industries	+.9	+.5
Trade, wholesale and retail	+10.7	+7.4
Services	−.1	−.9
Public utilities	−.4	−4.4
Coal mining	−1.3	+1.6
Building and contracting	−6.7	−10.8
All industries	+.9	−.8
	December, 1928, to January, 1929	
Iowa		
Food and kindred products	−2.8	
Textiles	−11.0	
Iron and steel works	+1.9	
Lumber products	−4.6	
Leather products	−15.8	
Paper products, printing, and publishing	−3.8	
Patent medicines, chemicals, and compounds	−1.1	
Stone and clay products	−6.0	
Tobacco and cigars	−1.1	
Railway car shops	+.3	
Various industries	−1.7	
All industries	−2.4	
Maryland		
Food products	−9.0	−6.3
Textiles	−1.7	−4.0
Iron and steel and their products	+.7	−5.3
Lumber and its products	−3.9	−15.9
Leather and its products	−.5	+4.1
Rubber tires	+.8	−29.4
Paper and printing	−2.8	−5.1
Chemicals and allied products	+.5	+1.2
Stone, clay, and glass products	−12.3	−20.4
Metal products, other than iron and steel	−4.1	−17.2
Tobacco products	−15.9	−24.3
Machinery (not including transportation equipment)	+.6	−.6
Musical instruments	0.0	−9.3
Transportation equipment	+12.0	+8.8
Car building and repairing	−1.0	−7.2
Miscellaneous	−5.5	−11.7
All industries	−2.3	−7.6

State, and industry group	Per cent of change, November to December, 1928	
	Employment	Pay roll
New Jersey		
Food and kindred products	−0.6	+1.5
Textiles and their products	+.3	+1.1
Iron and steel and their products	+5.1	+7.7
Lumber and its products	+.0	+2.7
Leather and its products	−2.2	−2.4
Tobacco products	−1.9	−1.3
Paper and printing	−.2	+3.9
Chemicals and allied products	+1.2	−.8
Stone, clay, and glass products	−1.8	+1.4
Metal products other than iron and steel	−.2	+3.0
Vehicles for land transportation	+1.7	+4.3
Miscellaneous	−.9	+1.9
All industries	+1.1	+2.9
New York		
Stone, clay, and glass	−1.6	−1.3
Metals and machinery	−.3	+1.4
Wood manufactures	−2.0	−1.8
Furs, leather, and rubber goods	−1.9	+3.4
Chemicals, oils, paints, etc	−.4	+1.2
Paper	−.6	−2.6
Printing and paper goods	−.2	+1.4
Textiles	+.8	−.2
Clothing and millinery	+.5	+4.3
Food and tobacco	−3.6	−2.8
Water, light, and power	−1.6	−1.4
All industries	−.6	+1.1
	December, 1928, to January, 1929	
Oklahoma		
Cottonseed-oil mills	−1.5	−10.3
Food production:		
Bakeries	−1.7	−3.6
Confections	−17.4	−6.8
Creameries and dairies	−23.2	−14.0
Flour mills	−5.7	−8.6
Ice and ice cream	−11.0	−9.2
Meat and poultry	−9.8	−6.7
Lead and zinc:		
Mines and mills	+9.7	+2.7
Smelters	+.9	−3.3
Metals and machinery:		
Auto repairs, etc	+8.2	+23.0
Machine shops and foundries	−1.9	−2.4
Tank construction and erection	−12.2	−10.9
Oil industry:		
Producing and gasoline manufacture	−4.1	−1.8
Refineries	+3.6	+4.8
Printing: Job work	−7.6	+30.9
Public utilities:		
Steam railway shops	−.0	−.2
Street railways	−2.2	+.1
Water, light, and power	+.8	+.6

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Monthly period—Continued

State, and industry group	Per cent of change, December, 1928, to January, 1929	
	Employment	Pay roll
Oklahoma—Continued		
Stone, clay, and glass:		
Brick and tile	−8.8	−17.5
Cement and plaster	−3.0	−8.1
Crushed stone	+2.3	−12.5
Glass manufacture	−10.4	−16.0
Textiles and cleaning:		
Textile manufacture	+2.8	−13.5
Laundries, etc	+5.9	+3.7
Woodworking:		
Sawmills	+1.6	+27.1
Millwork, etc	−7.3	−12.3
All industries	−.8	+.1

	Index numbers (1923–1925=100)	
	December, 1928	January, 1929
Pennsylvania	Employment	
Metal products	86.5	88.0
Transportation equipment	65.7	71.3
Textile products	98.8	96.4
Foods and tobacco	95.7	92.1
Stone, clay, and glass products	81.3	82.5
Lumber products	77.4	73.7
Chemical products	98.1	97.7
Leather and rubber products	95.4	95.8
Paper and printing	92.7	91.3
All industries	88.2	88.7
	Pay roll	
Metal products	93.0	93.3
Transportation equipment	66.8	69.6
Textile products	107.9	97.8
Foods and tobacco	99.2	93.1
Stone, clay, and glass products	81.3	75.9
Lumber products	83.5	71.9
Chemical products	105.1	100.0
Leather and rubber products	97.6	97.9
Paper and printing	105.9	105.2
All industries	93.0	90.4

State, and industry group	Per cent of change, November to December, 1928	
	Employment	Pay roll
Wisconsin		
Manual		
Logging	+1.2	+7.1
Mining	−3.7	+8.4
Stone crushing and quarrying	+1.7	−7.9
Manufacturing:		
Stone and allied industries	−5.0	−12.5
Metal	−2.5	−10.4
Wood	+3.8	−4.2
Rubber	−2.3	−2.2
Leather	+2.9	+8.4
Paper	−2.4	−6.8
Textiles	−.6	−2.4
Foods	−4.5	−4.4
Light and power	+.4	−12.3
Printing and publishing	−1.2	+2.9
Laundering, cleaning, and dyeing	0.0	−1.5
Chemicals (including soap, glue, and explosives)	−6.5	−6.8
All manufacturing	−.9	−6.3
Construction:		
Building	−.5	−11.7
Highway	−36.9	−46.1
Railroad	−18.8	−20.6
Marine dredging, sewer digging	−5.1	−15.8
Communication:		
Steam railways	−5.4	−14.3
Electric railways	−.3	+.2
Express, telephone, and telegraph	−1.9	−5.4
Wholesale trade	−10.4	−12.4
Hotels and restaurants	−.2	----------
Nonmanual		
Manufacturing, mines, and quarries	+.2	+.9
Construction	−1.0	−.6
Communication	−1.9	−3.3
Wholesale trade	−2.6	−1.9
Retail trade—sales force only	+24.5	+16.1
Miscellaneous professional services	+1.2	+1.5
Hotels and restaurants	−2.0	----------

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period

State, and industry group	Per cent of change, December, 1927, to December, 1928	
	Employment	Pay roll
California		
Stone, clay, and glass products	−3.1	−4.7
Metals, machinery, and conveyances	+10.9	+13.3
Wood manufactures	−4.9	−7.6
Leather and rubber goods	+41.5	+31.2
Chemicals, oils, paints, etc	+28.4	+35.3
Printing and paper goods	+5.5	+4.5
Textiles	−2.3	+6.4
Clothing, millinery, and laundering	−.5	−1.2
Foods, beverages, and tobacco	+7.4	+6.1
Water, light, and power	−13.1	−11.8
Miscellaneous	−16.7	−28.3
All industries	+6.8	+8.5
New York		
Stone, clay, and glass	+.7	+3.8
Metals and machinery	+5.3	+8.9
Wood manufactures	−6.8	−5.8
Furs, leather, and rubber goods	+.4	+3.4
Chemicals, oils, paints, etc	−1.1	+.4
Paper	−.6	−4.7
Printing and paper goods	−.6	+1.0
Textiles	−1.1	−3.0
Clothing and millinery	−2.6	−3.6
Food and tobacco	+1.8	+3.2
Water, light, and power	−9.7	−11.4
All industries	+1.1	+2.9
	January, 1928, to January, 1929	
Oklahoma		
Cottonseed-oil mills	+36.9	−32.0
Food production:		
Bakeries	+27.2	+7.1
Confections	−7.1	−1.3
Creameries and dairies	−12.5	−5.6
Flour mills	+9.9	+5.8
Ice and ice cream	+89.8	+64.5
Meat and poultry	+3.4	+1.8
Lead and zinc:		
Mines and mills	−12.4	−7.6
Smelters	+7.3	+21.7
Metals and machinery:		
Auto repairs, etc	+281.2	+301.0
Machine shops and foundries	−12.1	−10.0
Tank construction and erection	+60.7	+40.0
Oil industry:		
Producing and gasoline manufacture	+23.6	+21.5
Refineries	+21.7	+20.3
Printing: Job work	+45.0	+60.5

State, and industry group	Per cent of change, January, 1928, to January, 1929	
	Employment	Pay roll
Oklahoma—Continued		
Public utilities:		
Steam-railway shops	−9.8	−1.9
Street railways	+15.1	+14.9
Water, light, and power	+245.2	+287.7
Stone, clay, and glass:		
Brick and tile	+43.9	+33.6
Cement and plaster	+22.4	+9.1
Crushed stone	−12.0	+4.2
Glass manufacture	−6.0	−5.7
Textiles and cleaning:		
Textile manufacture	+33.6	+33.0
Laundries, etc	+72.2	+75.5
Woodworking:		
Sawmills	+291.2	+364.0
Millwork, etc	+5.1	+12.1
All industries	+27.3	+29.0
	Index numbers (1923–1925=100)	
	January, 1928	January, 1929
	Employment	
Pennsylvania		
Metal products	79.9	88.0
Transportation equipment	80.7	71.3
Textile products	102.3	96.4
Foods and tobacco	89.9	92.1
Stone, clay, and glass products	76.7	82.5
Lumber products	71.2	73.7
Chemical products	94.9	97.7
Leather and rubber products	100.8	95.8
Paper and printing	98.3	91.3
All industries	86.5	88.7
	Pay roll	
Metal products	78.1	93.3
Transportation equipment	81.5	69.6
Textile products	107.1	97.8
Foods and tobacco	88.4	93.1
Stone, clay, and glass products	64.1	75.9
Lumber products	71.1	71.9
Chemical products	97.0	100.0
Leather and rubber products	104.6	97.9
Paper and printing	107.6	105.2
All industries	85.8	90.4

PER CENT OF CHANGES IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—Continued

Yearly period—Continued

State, and industry group	Per cent of change, December, 1927, to December, 1928	
	Employment	Pay roll
Wisconsin		
Manual		
Logging	+27.9	−4.0
Mining	−39.2	−37.4
Stone crushing and quarrying	+8.8	+10.3
Manufacturing:		
Stone and allied industries	−6.4	+.3
Metal	+12.1	+16.9
Wood	+9.0	+2.3
Rubber	−2.7	−7.5
Leather	−1.8	−2.7
Paper	−1.1	−1.7
Textiles	−14.9	−18.0
Foods	+1.1	+4.5
Light and power	+10.8	+10.5
Printing and publishing	+6.6	+2.0
Laundering, cleaning, and dyeing	+4.0	−1.2
Chemical (including soap, glue, and explosives)	−22.3	−17.9
All manufacturing	+4.6	+5.3
Wisconsin—Continued		
Manual—Continued		
Construction:		
Building	+3.9	−0.7
Highway	+4.4	−3.0
Railroad	+15.4	+9.9
Marine dredging, sewer digging	−46.9	−36.7
Communication:		
Steam railways	−7.7	−5.4
Electric railways	−17.8	−13.2
Express, telephone, and telegraph	+4.3	+2.3
Wholesale trade	0.0	−4.1
Hotels and restaurants	+4.7	
Nonmanual		
Manufacturing, mines, and quarries	−.2	+1.7
Construction	−6.0	−9.1
Communication	+7.4	+6.9
Wholesale trade	+8.6	+14.6
Retail trade—sales force only	+1.6	−5.2
Miscellaneous professional services	+6.1	+7.6
Hotels and restaurants	−12.5	

Unemployment of Organized Building-Trades Workers in Massachusetts

THE number of building-trades workers unemployed in Massachusetts from all causes on December 3, 1928, formed 23.7 per cent of the 51,789 members of 315 labor unions which reported to the Massachusetts Department of Labor and Industries for that date. Lack of work or materials caused the greatest amount of unemployment (21.6 per cent), as it had on all of the other reporting dates back to April 1, 1927, the date on which the Massachusetts department began publishing monthly figures on this subject. On December 3, 1928, sickness, accident, or old age was the next contributing cause (1.9 per cent), unfavorable weather accounting for only 0.2 per cent and strikes and lockouts for less than one-tenth of 1 per cent. Hod carriers and building laborers had the highest percentage of unemployment (32.6 per cent) on December 3. The lowest percentages were reported for electrical workers (10.2 per cent), sheet-metal workers (10.7 per cent), and plumbers, gasfitters, and steamfitters (11.2 per cent).

The following tables show the percentage of unemployment among organized building-trades workers in Massachusetts, by cause and by occupation, from April 1, 1927, to December 3, 1928. The figures have been taken from press releases of the Massachusetts Department of Labor and Industries:

TABLE 1.—PER CENT OF ORGANIZED BUILDING-TRADES WORKERS UNEMPLOYED IN MASSACHUSETTS ON SPECIFIED DATES, BY CAUSE

Date	Cause of unemployment					
	Lack of work or materials	Strike or lockout	Sickness, accident, or old age	Unfavorable weather	Other reasons	All causes
1927						
April 1	24.7	0.1	1.7	0.3	0.6	27.4
May 2	17.8	.1	1.8	.1	(1)	19.9
June 1	15.6	.9	1.7	.3	(1)	18.4
July 1	15.3	.3	1.4	.2	(1)	17.2
Aug. 1	12.4	.1	1.9	.2	(1)	14.7
Sept. 1	12.8	.1	1.7	.6	(1)	15.3
Oct. 3	11.4	.3	1.7	.1	(1)	13.5
Nov. 1	12.0	.1	1.5	.1	(1)	13.7
Dec. 1	16.2	(1)	2.0	.6	.3	19.1
1928						
Jan. 3	20.8	.8	2.1	3.4	.2	27.3
Feb. 1	27.4	.1	1.7	.2	(1)	29.4
Mar. 1	28.9	.2	1.7	3.4	(1)	34.1
Apr. 2	26.9	.2	1.7	.1	(1)	28.9
May 1	22.2	.2	1.4	.1	.2	24.1
June 1	16.9	4.0	1.6	.3	.1	22.9
July 2	12.8	.1	1.4	.2	----------	14.6
Aug. 1	11.3	.2	1.5	.1	.1	13.2
Sept. 4	14.1	.1	1.6	(1)	----------	15.8
Oct. 1	15.3	(1)	1.8	.1	(1)	17.2
Nov. 1	17.8	.1	1.9	.1	.2	20.1
Dec. 3	21.6	(1)	1.9	.2	(1)	23.7

[1] Less than one-tenth of 1 per cent.

TABLE 2.—PER CENT OF ORGANIZED BUILDING-TRADES WORKERS UNEMPLOYED IN MASSACHUSETTS ON SPECIFIED DATES, BY OCCUPATION

Date	Bricklayers, masons, and plasterers	Carpenters	Electrical workers	Hod carriers and building laborers	Lathers	Painters, decorators, and paperhangers	Plumbers, gas fitters, and steam fitters	Sheet-metal workers	Other occupations	All occupations
1927										
Apr. 1	30.2	27.7	16.1	30.5	22.0	23.7	31.5	18.3	26.5	27.4
May 2	15.8	16.8	11.4	31.7	19.4	17.7	26.9	11.6	19.7	19.9
June 1	16.6	15.4	12.5	28.1	13.8	16.9	27.8	16.9	14.5	18.4
July 1	12.2	13.5	12.5	27.7	10.5	24.4	21.3	19.6	13.0	17.2
Aug. 1	10.8	15.1	15.4	16.8	8.6	13.2	15.2	19.5	14.0	14.7
Sept. 1	11.6	17.3	13.0	19.1	11.8	12.3	10.8	5.2	13.0	15.3
Oct. 3	10.0	12.2	9.0	19.9	6.3	20.9	6.0	4.2	13.7	13.5
Nov. 1	9.5	12.7	6.8	20.9	7.8	21.9	5.9	4.1	11.3	13.7
Dec. 1	15.4	15.7	10.8	35.3	16.9	30.7	11.0	6.2	5.7	19.1
1928										
Jan. 3	23.1	25.8	15.7	37.6	24.4	42.4	17.1	15.9	17.1	27.2
Feb. 1	31.8	27.4	20.3	33.5	27.6	46.9	21.6	12.3	20.0	29.4
Mar. 1	35.0	31.6	22.5	38.1	26.6	48.6	30.7	12.7	28.1	34.1
Apr. 2	29.4	24.4	24.5	34.9	24.7	36.4	37.5	16.5	20.4	28.9
May 1	17.9	20.8	17.9	38.5	17.7	23.0	30.6	15.3	17.3	24.1
June 1	17.1	20.0	12.7	35.1	14.3	17.7	29.0	10.2	30.9	22.9
July 2	9.2	17.1	7.0	8.3	11.9	21.4	23.8	8.7	8.6	14.6
Aug. 1	11.0	16.8	5.0	10.9	13.1	14.1	16.3	5.5	3.3	13.2
Sept. 4	11.9	16.8	9.8	20.7	15.8	18.0	13.1	10.1	7.2	15.8
Oct. 1	14.1	16.8	6.1	30.2	18.4	17.4	8.1	7.8	10.0	17.2
Nov. 1	16.8	17.6	8.9	37.7	18.8	20.9	8.3	7.3	16.0	20.1
Dec. 3	23.0	22.8	10.2	32.6	18.6	27.6	11.2	10.7	28.3	23.7

Work of the Canadian Employment Service

THE OPERATION of Canada's State and provincial machinery for the placement of men and women in jobs is described in detail in the American Federationist of February, 1929. Mr. James Simpson, who wrote the article here reviewed, is the vice president of the Trades and Labor Congress and chairman of the Employment Service Council of Canada.

Free Public Employment Bureaus

BEFORE 1907 the Dominion gave little attention to Federal service for the employment of workers. The situation in that year, however, led to the enactment of legislation by the Province of Ontario for the setting up of free public employment offices. Three years afterwards Quebec passed a law along similar lines.

The serious conditions in 1913–14 stressed the gravity of the unemployment problem and at that time many of the more important Canadian municipalities created and for some years continued to operate free employment bureaus. In May, 1918, the employment offices coordination act was enacted by the Federal Government and since that date auxiliary legislation has been passed by eight Provinces. Out of the administration of these laws the Canadian Employment Service has developed and now operates through bureaus in 64 centers, all the Provinces cooperating except Prince Edward Island. With the multiplication of these free public employment bureaus, the number of commercialized offices has correspondingly declined. British Columbia, Alberta, Saskatchewan, Manitoba, and Nova Scotia have closed down these agencies. Ontario and Quebec continue to license and regulate such offices but in the former there are only 14 licensed bureaus and in the latter only 11. While there is no law concerning commercial employment agencies in the Province of New Brunswick, the Employment Service of Canada has practically eliminated the private agency as a competitor.

Difficulties in Coordination

UNDER a government like that of Canada the successful operation of employment services is considerably more difficult than in States with centralized authority. The Dominion has in addition to its Federal Government 9 provincial governments whose legislative powers are set forth in the British North America Act. "To invite cooperation among the different Provinces through the Federal authority means the subordination of provincial pride to the national good." The success of the Canadian Employment Service is, therefore, Mr. Simpson holds, "a distinct achievement."

Employment Offices Coordination Act

PROVINCIAL and Federal cooperation has been effected through the employment offices coordination act, which authorizes the Dominion Minister of Labor—

(*a*) To aid and encourage the organization and coordination of employment offices and to promote uniformity of methods among them;

(*b*) To establish one or more clearing houses for the interchange of information between employment offices concerning the transfer of labor and other matters;
(*c*) To compile and distribute information received from employment offices and other sources regarding prevailing conditions of employment.

In 1927–28 $150,000 of the Dominion appropriations were available for subventions to the various Provinces. This money, when allocated to the different Provinces in proportion to their expenditure on the administration and operation of employment bureaus, reimburses them for about one-third of their gross expenditures. A notable provision of the cooperating Federal and provincial agreements is that for special employment work in the interest of veterans of the World War, partially disabled through their war service.

All employment service bureaus offer facilities for both men and women seeking work in any kind of occupation and for employers in applying for any sort of help. It is neither practicable nor advisable to separate the several functions of the bureaus at all centers, but when the volume of work calls for it and when the population to be served is large enough to warrant such action separate divisions are operated for men and women, skilled and unskilled, farm, factory, and domestic service, etc. In western Canada, especially in British Columbia, where seasonal laborers are regularly hired in great numbers, it is customary to operate temporary employment offices. To coordinate the activities of the various local bureaus and to facilitate the transfer of labor from one district to another, eight clearing houses have been established throughout the Dominion. There are approximately 275 in the personnel of the employment service.

Placements

IN THE fiscal year ending March 31, 1928, there were 556,754 applications registered at the public employment bureaus. During the same period these offices were notified of 456,569 opportunities for employment—340,649 for men and 115,920 for women. Placements numbered 418,306—322,108 of men and 96,198 of women.

Based on reports from local trade-unions, monthly figures are computed showing the percentage of the membership unemployed on the last day of the month, unemployment being defined as "involuntary idleness due to economic causes." Usually more than 1,600 local unions, including approximately 170,000 members, send in reports. These returns cover about 63 per cent of the organized workers in the Dominion.

Facilities Afforded

THE bureaus of the Employment Service afford facilities not only at the respective points of industrial activity at which these offices are located, but also to considerable numbers of workers in surrounding districts. For example, of the 418,306 placements in the fiscal year 1927–28, 217,246 were made outside of the centers in which the bureaus are located.

Since 1919 a concession which involves a reduced fare has been granted by the railways to "bona fide applicants at the employment service who may desire to travel to distant employment for which no workers are available locally."

Employment Service Council

IN 1919 the Employment Service Council was set up in accordance with "orders in council passed in pursuance of the employment offices coordination act." This body, advisory to the Minister of Labor concerning the administration of the act, is composed of representatives of the Federal Government and 8 provincial governments, and also representatives of employers, organized labor, returned soldiers, railways, and the agricultural community. With one exception the council has convened every year since its establishment. At its conference in 1928 the following matters were taken up: Immigration as affecting the Canadian employment service; the placement of the handicapped; the problem of harvest labor; the procedure of employment bureaus; the mobility of labor in relation to unemployment; and the private fee-charging employment offices.

As the immigration problem is so closely allied with that of employment, the Trades and Labor Congress of Canada is now urging that an advisory council be established to aid the Government in regulating immigration, with a view to the nation's capacity to absorb such addition to its population.

Advantages to Organized Labor

THE Canadian Employment Service has been of great benefit to organized labor, enabling it to check up conditions having a significant bearing upon the labor supply available for certain employing groups. Many complaints are made in regard to employers inducing great numbers of immigrants to come from Europe to take jobs which could be filled by the unemployed already in the Dominion. The employment service, in cooperation with the immigration department, is able to find out quickly the supply of labor available for various occupations, and a number of employers were not allowed to bring in alien groups until they had made use of the available labor surplus in Canada.

The Employment Service is also endeavoring to carry on surveys, especially in the agricultural sections, in order "to ascertain the capacities of certain areas to absorb more immigrants or more of the unemployed of other parts of the country." This survey system is being broadened and if logically carried out will, Mr. Simpson thinks, result in enabling the Government to estimate more accurately the available labor supply for the various industries before inviting additional immigrants to Canada.

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices [1] received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food January 15 and December 15, 1928, and January 15, 1929, as well as the percentage changes in the year and in the month. For example, the retail price per dozen of strictly fresh eggs was 55.9 cents on January 15, 1928; 58.4 cents on December 15, 1928; and 50.6 cents on January 15, 1929. These figures show decreases of 9 per cent in the year and 13 per cent in the month.

The cost of various articles of food combined shows a decrease of 0.3 per cent January 15, 1929, as compared with January 15, 1928, and a decrease of 0.8 per cent January 15, 1929, as compared with December 15, 1928.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1929, COMPARED WITH DECEMBER 15, 1928, AND JANUARY 15, 1928

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Jan. 15, 1929, compared with—	
		Jan. 15, 1928	Dec. 15, 1928	Jan. 15, 1929	Jan. 15, 1928	Dec. 15, 1928
		Cents	*Cents*	*Cents*		
Sirloin steak	Pound	44.4	48.2	48.4	+9	+0.4
Round steak	do	38.6	42.7	42.6	+10	−0.2
Rib roast	do	32.7	35.7	35.8	+9	+0.3
Chuck roast	do	25.4	29.1	29.0	+14	−0.3
Plate beef	do	17.2	20.4	20.6	+20	+1
Pork chops	do	31.3	31.3	32.3	+3	+3
Bacon, sliced	do	44.6	43.3	43.0	−4	−1
Ham, sliced	do	51.7	53.4	53.8	+4	+1
Lamb, leg of	do	37.4	37.6	39.9	+7	+6
Hens	do	36.8	37.9	39.2	+7	+3
Salmon, canned	do	35.3	31.9	31.9	−10	0
Milk, fresh	Quart	14.3	14.3	14.3	0	0
Milk, evaporated	16-oz. can	11.5	11.4	11.4	−1	0
Butter	Pound	57.8	59.3	57.7	0.2	−3
Oleomargarine (all butter substitutes)	do	27.6	27.5	27.6	0	+0.4
Cheese	do	39.2	38.5	38.4	−2	−0.3
Lard	do	18.9	18.7	18.5	−2	−1
Vegetable lard substitute	do	25.0	24.8	24.7	−1	−0.4
Eggs, strictly fresh	Dozen	55.9	58.4	50.6	−9	−13
Eggs, storage	do	44.7	43.7	40.2	−10	−8

[1] In addition to monthly retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1929, COMPARED WITH DECEMBER 15, 1928, AND JANUARY 15, 1928—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Jan. 15, 1929, compared with—	
		Jan. 15, 1928	Dec. 15, 1928	Jan. 15, 1929	Jan. 15, 1928	Dec. 15, 1928
		Cents	*Cents*	*Cents*		
Bread	Pound	9.2	9.0	9.0	−2	0
Flour	do	5.3	5.1	5.1	−4	0
Corn meal	do	5.2	5.3	5.3	+2	0
Rolled oats	do	9.0	8.9	8.9	−1	0
Corn flakes	8-oz. package	9.7	9.5	9.5	−2	0
Wheat cereal	28-oz. package	25.6	25.5	25.5	−0.4	0
Macaroni	Pound	20.0	19.7	19.7	−2	0
Rice	do	10.2	9.9	9.8	−4	−1
Beans, navy	do	9.5	12.8	13.2	+39	+3
Potatoes	do	3.0	2.2	2.3	−23	+5
Onions	do	5.1	7.1	7.6	+49	+7
Cabbage	do	4.2	4.7	5.8	+38	+23
Beans, baked	No. 2 can	11.4	11.7	11.7	+3	0
Corn, canned	do	15.8	15.9	16.0	+1	+1
Peas, canned	do	16.8	16.7	16.8	0	+1
Tomatoes, canned	do	11.7	12.0	12.4	+6	+3
Sugar	Pound	7.1	6.7	6.7	−6	0
Tea	do	77.4	77.3	77.6	+0.3	+0.4
Coffee	do	48.5	49.7	49.5	+2	−0.4
Prunes	do	13.6	14.1	14.2	+4	+1
Raisins	do	13.7	11.8	11.7	−15	−1
Bananas	Dozen	34.6	33.5	33.9	−2	+1
Oranges	do	51.0	47.6	46.5	−9	−2
Weighted food index					−0.3	−0.8

Table 2 shows for the United States average retail prices of specified food articles on January 15, 1913, and on January 15 of each year from 1923 to 1929, together with percentage changes in January of each of these specified years, compared with January, 1913. For example, the retail price per pound of rice was 8.6 cents in January, 1913; 9.5 cents in January, 1923; 9.8 cents in January, 1924; 10.7 cents in Janaury, 1925; 11.6 cents in January, 1926; 11 cents in January, 1927; 10.2 cents in January, 1928; and 9.8 cents in January, 1929.

As compared with January, 1913, these figures show increases of 10 per cent in January, 1923; 14 per cent in Janaury, 1924; 24 per cent in January, 1925; 35 per cent in January, 1926; 28 per cent in January, 1927; 19 per cent in January, 1928; and 14 per cent in January, 1929.

The cost of the various articles of food combined showed an increase of 57.3 per cent in January, 1929, as compared with January, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE JANUARY 15, OF CERTAIN SPECIFIED YEARS COMPARED WITH JANUARY 15, 1929

[Percentages of five-tenths of 1 per cent and over are given as whole numbers]

Article and unit	Average retail price on Jan. 15—								Per cent of increase on Jan. 15 of each specified year compared with Jan. 15, 1913						
	1913	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.							
Sirloin steak, pound	23.8	37.2	39.1	38.7	40.8	40.8	44.4	48.4	56	64	63	71	71	87	103
Round steak, do	20.5	31.6	33.3	32.8	35.0	35.3	38.6	42.6	54	62	60	71	72	88	108
Rib roast, do	18.8	27.5	28.6	28.5	30.0	30.3	32.7	35.8	46	52	52	60	61	74	90
Chuck roast, do	14.9	19.6	20.7	20.5	22.1	22.7	25.4	29.0	32	39	38	48	52	70	95
Plate beef, do	11.1	12.9	13.3	13.3	14.5	15.0	17.2	20.6	16	20	20	31	35	55	86
Pork chops, do	18.7	29.3	27.4	30.7	36.5	36.6	31.3	32.3	57	47	64	95	96	67	73
Bacon, sliced, do	25.4	39.8	37.2	40.3	48.2	48.9	44.6	43.0	57	46	59	90	93	76	69
Ham, sliced, do	25.1	45.1	44.7	47.6	53.3	56.8	51.7	53.8	80	78	90	112	126	106	114
Lamb, leg of, do	18.0	36.3	35.9	38.8	39.1	37.4	37.4	39.9	102	99	116	117	108	108	122
Hens, do	20.2	34.5	34.5	35.8	38.6	38.5	36.8	39.2	71	71	77	91	91	82	94
Salmon, canned, red, pound		31.3	31.2	31.7	37.3	33.5	35.3	31.9							
Milk, fresh, quart	8.9	13.7	14.2	13.9	14.2	14.1	14.3	14.3	54	60	56	60	58	61	61
Milk, evaporated, 16-oz. can		12.1	12.2	11.1	11.6	11.4	11.5	11.4							
Butter, pound	40.9	59.1	61.3	52.3	55.4	58.4	57.8	57.7	44	50	28	35	43	41	41
Oleomargarine (all butter substitutes), pound		27.8	29.7	30.1	31.3	29.2	27.6	27.6							
Cheese, do	22.2	37.3	37.4	35.9	37.6	37.6	39.2	38.4	68	68	62	69	69	77	73
Lard, do	15.4	17.4	18.7	22.8	22.3	20.0	18.9	18.5	13	21	48	45	30	23	20
Vegetable lard substitute, pound		22.3	24.3	25.3	25.6	25.2	25.0	24.7							
Eggs, strictly fresh, dozen	37.3	55.7	54.6	70.5	53.9	55.9	55.9	50.6	49	46	89	45	50	50	36
Eggs, storage, do	25.7	40.0	38.6	53.7	42.2	45.0	44.7	40.3	56	50	109	64	75	74	57
Bread, pound	5.6	8.7	8.7	9.2	9.4	9.4	9.2	9.0	55	55	64	68	68	64	61
Flour, do	3.3	4.9	4.5	6.0	6.2	5.6	5.3	5.1	48	36	82	88	70	61	55
Corn meal, do	3.0	4.0	4.4	5.4	5.2	5.1	5.2	5.3	33	47	80	73	70	73	77
Rolled oats, do		8.8	8.8	9.0	9.1	9.1	9.0	8.9							
Corn flakes, 8-oz. package		9.7	9.7	10.9	11.0	10.9	9.7	9.5							
Wheat cereal, 28-oz. package		25.0	24.3	24.5	25.3	25.5	25.6	25.5							
Macaroni, pound		19.8	19.6	20.0	20.3	20.1	20.0	19.7							
Rice, do	8.6	9.5	9.8	10.7	11.6	11.0	10.2	9.8	10	14	24	35	28	19	14
Beans, navy, do		10.9	10.1	10.2	9.8	9.2	9.5	13.2							
Potatoes, do	1.6	2.1	2.8	2.5	5.8	4.0	3.0	2.3	31	75	56	263	150	88	44
Onions, do		5.1	6.1	5.9	5.9	5.5	5.1	7.6							
Cabbage, do		4.0	4.9	4.6	5.6	4.7	4.2	5.8							
Beans baked, No. 2 can		13.1	12.9	12.5	12.3	11.7	11.4	11.7							
Corn, canned, do		15.3	15.7	17.5	16.8	16.1	15.8	16.0							
Peas, canned, do		17.5	17.9	18.5	17.8	17.2	16.8	16.8							
Tomatoes, canned, No. 2 can		12.7	12.9	13.8	12.6	12.3	11.7	12.4							
Sugar, granulated, pound	5.8	8.3	10.2	8.1	6.7	7.5	7.1	6.7	43	76	40	16	29	22	16
Tea, do	54.3	68.7	71.0	74.2	76.1	77.5	77.4	77.6	27	31	37	40	43	43	43
Coffee, do	29.9	37.0	38.2	51.6	51.3	50.2	48.5	49.5	24	28	73	72	68	62	66
Prunes, do		20.0	17.9	17.4	17.2	16.0	13.6	14.2							
Raisins, do		18.9	15.9	14.6	14.5	14.4	13.7	11.7							
Bananas, dozen		37.1	38.8	33.2	35.8	34.5	34.6	33.9							
Oranges, do		46.8	40.0	44.8	46.9	46.9	51.0	46.5							
All articles combined [1]									46.9	51.7	5 7.0	67.2	62.1	57.7	57.3

[1] Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years from 1913 to 1928, and by months for 1927, 1928, and 1929. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

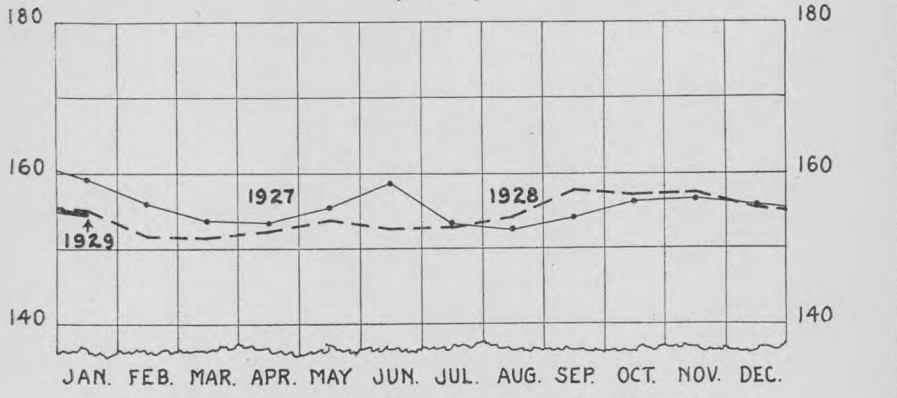
TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO JANUARY, 1929

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year	100.0	100.0	100.0	1927: Average for year—Continued.			
1914: Average for year	106.7	103.4	97.1	August	171.2	171.0	144.5
1915: Average for year	121.6	99.6	96.1	September	170.6	173.0	146.6
1916: Average for year	126.8	108.2	103.2	October	170.5	173.7	149.4
1917: Average for year	186.5	137.0	127.6	November	169.8	169.9	150.2
1918: Average for year	194.3	172.8	153.4	December	168.6	168.1	152.8
1919: Average for year	198.0	184.2	176.6				
1920: Average for year	232.1	185.7	185.1	1928: Average for year	167.2	179.2	150.0
1921: Average for year	179.8	158.1	149.5	January	168.0	168.3	152.2
1922: Average for year	159.3	150.3	135.9	February	168.0	167.8	150.7
1923: Average for year	156.9	149.0	147.6	March	166.8	167.1	150.7
1924: Average for year	160.4	150.2	142.8	April	167.2	170.3	147.8
1925: Average for year	176.2	163.0	147.1	May	168.3	175.4	147.3
1926: Average for year	175.5	171.3	145.5	June	169.8	177.7	146.1
1927: Average for year	170.7	169.9	148.7	July	169.3	184.4	147.1
January	172.8	168.1	151.4	August	168.2	189.5	148.3
February	172.7	167.6	151.8	September	166.7	195.8	151.2
March	172.1	168.5	152.2	October	165.9	188.9	151.1
April	171.7	170.6	150.8	November	165.3	184.9	152.5
May	171.6	170.7	145.3	December	164.2	179.1	153.5
June	170.7	168.3	143.7	1929:			
July	170.6	169.3	143.9	January	164.1	180.9	151.9

TREND OF RETAIL PRICES OF FOOD

[1913=100]



Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1928,[2] and by months for 1928 and January, 1929. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1928 was 188.2, which means that the average money price for the year 1928 was 88.2 per cent higher than the average money price for the year 1913. As compared with

[2] For index numbers of each month, January, 1913, to December, 1926, see Bulletin No. 396, pp. 44 to 61; Bulletin No. 418, pp. 38 to 51; and Bulletin No. 445, pp. 36 to 49.

the relative price, 167.7 in 1927, the figures for 1928 show an increase of 20½ points, but an increase of 12.2 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100 are 155.8 for December, 1928, and 154.6 for January, 1929.

The curve shown in the chart on page 4 pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913, 1920 TO 1928, AND BY MONTHS FOR 1928 AND JANUARY, 1929

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1928: January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4
February	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4
March	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2
April	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9
May	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4
June	186.6	186.5	175.3	172.5	152.9	165.7	160.0	192.2	174.2	157.3	140.7	172.4
July	195.7	196.9	181.8	180.6	157.9	177.6	162.6	198.5	172.3	158.4	141.8	173.3
August	200.8	202.2	184.8	185.0	162.0	190.0	165.9	204.5	172.8	158.4	144.7	173.8
September	203.9	205.4	188.9	190.0	170.2	211.0	168.1	208.2	177.9	159.6	150.4	175.1
October	198.0	200.0	185.9	188.8	171.9	179.0	167.8	206.7	177.9	159.6	150.1	175.6
November	193.3	194.6	183.3	185.6	171.9	170.0	164.8	203.0	178.4	160.7	152.2	174.2
December	189.8	191.5	180.3	181.9	168.6	149.0	160.4	198.5	177.9	160.7	154.8	174.2
1929: January	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles [1]
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1928: January	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6
July	116.5	120.6	164.3	169.7	176.7	114.9	135.3	132.7	142.3	165.1	152.8
August	118.4	130.4	164.3	163.6	176.7	113.8	129.4	129.1	142.3	165.8	154.2
September	122.2	146.1	162.5	160.6	176.7	114.9	129.4	127.3	142.3	166.1	157.8
October	123.4	157.4	162.5	157.6	176.7	113.8	129.4	125.5	142.5	166.4	156.8
November	120.9	171.9	162.5	154.5	176.7	112.6	129.4	123.6	142.3	166.8	157.3
December	118.4	169.3	160.7	154.5	176.7	113.8	129.4	121.8	142.1	166.8	155.8
1929: January	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.7	166.1	154.6

[1] 22 articles in 1913–1920; 43 articles in 1921–1928.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929

[Exact comparisons of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak---pound	42.1	48.1	48.3	42.3	45.1	45.1	42.5	49.4	49.6	[1] 72.9	[1] 74.7	[1] 73.1	54.5	57.5	55.5
Round steak----do	38.3	43.4	43.3	39.3	41.2	41.9	36.8	42.1	41.9	56.1	60.3	58.3	47.5	52.2	50.8
Rib roast-------do	32.6	35.3	35.7	33.2	34.6	34.6	30.7	33.9	34.2	42.4	43.1	43.1	41.2	42.5	41.7
Chuck roast-----do	25.6	29.7	28.6	24.8	27.7	28.2	23.9	27.7	28.1	31.7	33.6	33.6	31.8	36.1	34.5
Plate beef-------do	15.6	19.6	19.7	17.3	20.9	20.5	15.3	18.2	18.7	21.8	22.9	23.0	13.0	16.5	17.2
Pork chops------do	31.1	32.5	33.0	28.6	26.9	29.0	31.4	30.8	31.3	31.8	32.2	33.5	33.2	32.1	33.8
Bacon, sliced ---do	44.2	40.9	40.5	39.7	37.8	37.0	44.0	41.3	40.8	43.2	42.0	42.0	49.0	48.3	48.4
Ham, sliced-----do	52.1	56.3	55.3	52.0	54.9	55.5	51.3	53.5	52.4	56.4	57.4	60.5	55.4	57.0	55.4
Lamb, leg of----do	38.3	39.7	39.4	37.3	35.7	37.6	39.8	41.0	41.8	37.5	38.1	40.2	36.7	37.7	40.8
Hens-----------do	36.4	36.3	36.5	38.5	39.8	40.7	33.2	33.8	35.3	39.5	40.1	40.8	39.5	40.4	41.8
Salmon, canned, red ----------pound	34.6	34.8	35.2	32.9	28.9	29.0	36.8	34.1	33.1	34.8	30.9	30.9	32.9	31.0	30.3
Milk, fresh-----quart	18.0	16.5	16.5	14.0	14.0	14.0	18.7	18.7	18.7	16.0	15.8	15.5	16.0	16.0	16.0
Milk, evaporated ----------16-oz. can	13.5	14.0	13.6	11.4	10.9	11.0	12.3	12.2	12.4	12.0	11.9	11.9	11.6	11.5	11.6
Butter-------pound	57.8	59.5	59.5	62.9	61.9	61.6	58.4	60.4	60.1	58.7	60.2	59.4	57.4	58.7	58.4
Oleomargarine (all butter substitutes) ----------pound	26.9	28.4	29.4	27.3	28.1	28.8	32.2	31.8	31.5	28.2	29.3	30.1	25.8	25.2	25.5
Cheese----------do	38.0	37.4	37.4	38.3	36.8	37.1	39.3	37.7	37.6	40.8	40.6	40.6	42.8	43.8	43.6
Lard-----------do	18.7	18.9	18.6	17.1	16.4	16.4	18.5	18.1	18.4	18.9	18.5	18.1	18.2	17.9	17.7
Vegetable lard substitute--------pound	21.9	22.9	22.1	22.8	22.9	23.0	20.5	19.7	20.6	25.3	25.3	25.3	25.5	25.2	25.1
Eggs, strictly fresh ----------dozen	56.7	55.8	51.7	56.6	59.0	52.0	58.7	56.0	50.9	69.8	73.8	64.7	72.3	78.9	64.7
Eggs, storage----do	46.5	45.7	37.3	43.4	40.2	37.6	45.3	44.0	41.8	50.6	46.8	49.7	48.7	47.0	43.9
Bread----------pound	10.8	10.8	10.8	9.6	8.5	8.5	10.1	10.0	9.9	8.6	8.6	8.5	8.8	8.8	8.8
Flour----------do	6.3	6.6	6.6	5.0	4.7	4.7	6.5	6.5	6.5	5.8	5.3	5.3	5.5	5.1	5.1
Corn meal------do	4.0	4.4	4.4	4.1	4.2	4.2	4.1	4.1	4.1	6.5	7.0	7.0	7.3	7.0	7.3
Rolled oats-----do	9.9	9.7	9.9	8.1	8.0	8.2	10.0	9.8	10.1	9.0	9.0	8.9	8.3	8.4	8.4
Corn flakes ------8-oz. package	9.7	9.8	9.8	9.1	8.6	8.6	10.1	9.9	9.9	9.8	9.3	9.4	9.6	9.4	9.4
Wheat cereal ------28-oz. package	26.6	26.5	27.0	24.4	24.2	24.0	27.4	27.2	27.1	24.9	25.0	25.2	24.7	24.2	24.2
Macaroni-----pound	21.3	21.8	21.5	19.1	19.0	19 0	18.4	18.0	17.9	21.8	21.0	21.3	22.4	22.1	22.4
Rice-----------do	9.0	10.0	9.7	9.5	8.8	9.1	10.1	9.0	9.2	11.9	10.8	10.5	10.9	10.6	11.0
Beans, navy----do	10.3	15.1	14.8	8.9	12.4	12.7	10.3	13.3	14.3	10.0	12.3	12.6	9.7	12.5	13.0
Potatoes-------do	4.1	3.6	3.5	2.9	1.8	2.1	4.3	3.4	3.7	2.9	2.0	2.1	3.0	1.9	1.9
Onions----------do	6.9	8.9	9.3	5.0	7.1	7.6	6.7	8.0	8.4	5.4	7.8	7.8	5.2	7.3	7.2
Cabbage--------do	5.3	5.6	6.6	3.6	4.4	6.0	5.3	5.5	6.0	5.2	5.2	6.0	5.2	5.2	6.1
Beans, baked ----------No. 2 can	11.0	11.5	11.5	10.9	10.8	10.8	11.2	11.7	11.7	12.6	12.7	12.5	11.5	11.6	11.9
Corn, canned---do	17.5	18.8	18.6	14.8	16.3	16.5	16.7	16.2	16.6	17.4	17.3	18.1	19.1	18.9	18.9
Peas, canned----do	18.9	19.7	18.5	14.7	15.0	15.2	19.8	19.2	18.9	19.9	19.7	19.9	21.0	20.2	20.2
Tomatoes, canned ----------No. 2 can	10.3	11.8	12.5	10.2	10.7	11.0	10.4	11.2	11.4	11.8	13.0	13.0	13.4	13.6	13.7
Sugar----------pound	7.4	7.4	7.4	6.5	5.7	5.7	7.4	7.0	7.0	7.2	6.7	6.7	6.9	6.5	6.6
Tea-----------do	105.9	108.2	105.5	72.5	73.4	72.8	98.5	97.6	97.4	72.5	72.5	76.8	63.2	61.0	60.2
Coffee----------do	48.9	52.8	53.0	44.2	45.0	45.7	50.7	51.9	51.3	52.5	54.0	53.8	47.2	47.7	47.9
Prunes----------do	13.7	15.9	15.5	11.2	11.7	12.1	16.2	16.6	16.3	13.6	13.7	14.3	14.5	14.6	14.9
Raisins---------do	15.4	13.6	13.3	12.7	10.4	10.6	15.0	13.0	13.1	12.7	11.2	10.8	14.1	12.5	12.2
Bananas-------dozen	28.1	28.6	27.9	25.1	23.5	23.7	38.2	36.8	37.8	48.0	44.2	45.8	38.3	33.3	35.0
Oranges---------do	41.8	34.4	32.6	49.4	41.8	41.3	47.4	39.9	35.5	54.5	51.8	51.6	60.1	56.6	49.9

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	44.3	46.6	46.7	33.2	35.4	35.7	33.0	36.2	36.9	48.2	54.5	52.5	41.1	44.7	45.2
Round steak, do	37.7	39.9	40.3	30.6	33.6	33.6	30.0	35.0	35.0	38.8	44.2	43.2	37.1	41.1	41.7
Rib roast, do	33.3	35.0	35.3	28.7	30.1	30.8	27.3	29.2	30.0	37.3	41.5	39.7	33.3	36.7	37.0
Chuck roast, do	26.8	30.0	30.2	21.3	24.4	24.7	20.2	24.8	24.5	28.6	34.3	33.1	24.3	27.8	28.1
Plate beef, do	16.7	19.1	19.4	14.4	17.1	17.6	15.0	18.9	18.6	17.3	20.7	20.5	18.4	21.4	22.2
Pork chops, do	33.0	31.8	34.5	31.8	31.8	30.9	31.0	33.7	32.2	28.8	30.8	31.1	26.8	27.4	28.7
Bacon, sliced, do	39.8	39.6	39.6	52.9	49.2	48.8	37.7	38.1	37.2	49.0	47.7	46.7	38.5	38.7	37.7
Ham, sliced, do	48.6	52.1	52.9	56.3	52.9	53.8	46.1	47.9	46.7	52.5	54.2	52.7	50.6	53.3	52.9
Lamb, leg of, do	33.3	33.6	37.1	35.7	36.8	37.0	38.8	41.0	42.0	37.4	37.7	41.2	37.5	38.9	41.4
Hens, do	39.1	39.7	41.0	34.4	32.1	33.4	35.8	37.0	37.4	37.4	39.1	41.2	38.2	38.5	42.7
Salmon, canned, red, pound	34.5	30.9	30.4	32.4	31.6	32.4	34.2	29.2	28.8	37.0	33.8	33.3	36.2	31.1	30.2
Milk, fresh, quart	13.0	14.0	14.0	14.0	14.0	14.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0	14.0	14.0
Milk, evaporated, 16-oz. can	11.4	11.1	11.2	11.1	11.2	11.2	11.9	11.8	11.8	11.4	11.1	11.1	11.2	11.3	11.3
Butter, pound	58.6	60.7	58.1	55.5	56.4	54.5	54.9	56.9	57.4	56.0	58.3	56.0	58.9	61.4	59.2
Oleomargarine (all butter substitutes), pound	27.7	27.7	27.3	----	----	----	29.2	29.0	29.0	27.0	26.4	26.2	28.3	28.9	28.7
Cheese, do	39.3	39.4	39.2	36.8	38.2	37.5	37.4	34.9	35.2	43.4	43.1	42.4	40.1	39.5	39.2
Lard, do	18.0	17.9	17.6	22.8	22.7	21.9	20.1	18.7	19.1	19.5	19.0	18.5	16.5	17.6	16.8
Vegetable lard substiture, pound	25.8	25.4	24.8	30.6	30.3	30.7	21.6	21.4	21.1	26.7	25.8	25.8	26.2	25.6	25.3
Eggs, strictly fresh, dozen	55.6	58.4	53.0	55.3	60.5	54.0	54.4	54.6	51.2	59.4	58.9	53.8	57.7	53.4	48.4
Eggs, storage, do	43.6	44.4	42.0	38.6	44.4	40.9	40.6	40.5	38.1	47.6	46.6	40.2	43.8	43.4	37.5
Bread, pound	8.7	8.4	8.3	9.8	9.8	9.8	10.9	11.0	11.0	9.6	9.9	9.9	8.6	8.6	8.6
Flour, do	4.8	4.6	4.6	5.3	4.9	4.7	6.8	6.6	6.5	4.9	4.5	4.5	5.5	5.3	5.3
Corn meal, do	5.1	5.0	5.2	6.2	6.3	6.4	3.9	3.9	3.9	6.7	6.9	6.9	4.4	4.5	4.5
Rolled oats, do	8.8	8.7	8.7	7.8	7.6	8.2	9.5	9.3	9.3	8.6	8.3	8.2	8.8	9.0	9.0
Corn flakes, 8-oz. package	9.4	9.2	9.2	10.5	10.3	10.2	9.9	10.1	10.0	9.5	9.2	9.2	9.6	9.6	9.6
Wheat cereal, 28-oz. package	24.8	24.9	24.9	28.5	28.5	27.9	25.7	25.6	25.8	25.7	25.3	24.7	25.1	24.9	24.9
Macaroni, pound	21.4	21.2	21.4	19.0	19.9	19.6	18.5	18.5	18.5	19.1	18.5	18.6	18.6	18.5	18.5
Rice, do	10.0	9.4	9.6	10.7	11.3	10.7	7.2	6.7	6.5	10.6	10.6	10.5	9.4	9.4	9.6
Beans, navy, do	9.3	12.6	13.0	10.1	12.2	12.7	10.1	14.5	14.1	9.7	12.8	13.1	8.3	12.9	13.3
Potatoes, do	2.8	1.8	1.8	1.7	1.5	1.6	3.3	2.5	2.6	3.0	2.1	2.3	3.1	2.3	2.5
Onions, do	5.6	7.6	8.3	4.8	6.1	6.8	5.9	8.3	8.8	5.4	7.2	7.7	5.1	6.9	7.5
Cabbage, do	3.2	4.1	5.3	6.2	4.5	7.2	4.1	5.3	5.7	5.1	4.9	6.3	3.9	4.8	6.1
Beans, baked, No. 2 can	9.9	10.5	10.3	13.5	13.8	13.9	9.8	10.6	10.6	13.0	12.5	12.6	10.4	11.1	11.4
Corn, canned, do	15.6	15.6	16.2	14.6	14.8	14.3	14.9	14.4	15.0	16.1	15.8	16.1	15.3	15.5	15.5
Peas, canned, do	15.7	15.5	16.1	14.1	13.8	14.2	16.2	16.2	16.2	16.5	16.6	16.9	17.1	16.6	16.4
Tomatoes, canned, No. 2 can	12.8	12.5	13.3	12.8	12.8	12.4	9.8	10.2	10.4	13.8	13.7	14.1	11.9	12.6	12.9
Sugar, pound	6.8	6.4	6.4	8.7	8.2	8.0	6.7	6.4	6.4	6.9	6.5	6.5	7.3	7.2	7.0
Tea, do	66.6	68.1	68.6	81.6	82.6	82.6	80.7	81.5	85.3	69.9	69.3	70.8	80.1	80.0	80.0
Coffee, do	46.3	47.5	47.5	54.2	55.5	55.1	43.8	46.7	46.8	48.9	49.7	47.4	44.0	46.7	46.3
Prunes, do	13.2	13.9	13.7	14.2	14.5	13.9	10.8	12.3	11.8	15.4	15.8	16.1	13.3	14.3	14.4
Raisins, do	12.9	11.2	11.6	14.6	12.9	13.2	12.9	9.9	9.9	14.4	12.3	11.6	14.2	12.2	11.8
Bananas, dozen	42.9	41.0	41.6	[2] 13.8	[2] 13.4	[2] 13.8	23.2	27.5	26.5	40.4	37.8	38.3	41.1	40.6	38.3
Oranges, do	57.1	52.4	55.2	54.0	50.7	49.7	32.5	27.8	25.7	56.6	51.6	48.8	46.0	41.8	41.2

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak...pound..	42.6	44.3	44.7	42.8	46.7	46.5	38.6	44.1	44.0	36.4	39.3	39.4	45.2	50.1	50.5
Round steak....do....	36.0	39.6	39.9	37.8	42.3	42.0	34.5	41.2	41.5	32.7	35.5	35.3	37.4	42.0	41.7
Rib roast.....do....	30.2	33.2	33.6	31.8	36.3	36.6	29.3	36.8	37.3	26.9	30.2	29.8	33.5	36.8	38.3
Chuck roast....do....	26.4	30.0	30.0	26.8	32.0	30.8	24.8	29.8	30.0	21.4	25.7	25.4	26.1	29.8	30.1
Plate beef.....do....	16.3	19.5	20.1	17.9	22.2	22.3	19.5	23.1	23.5	13.6	16.5	17.0	17.0	19.3	19.9
Pork chops.....do....	30.6	29.3	30.8	30.5	28.9	29.8	33.6	35.9	33.5	29.0	30.9	29.8	31.5	31.7	34.1
Bacon, sliced....do....	43.2	42.0	41.0	45.6	43.2	43.9	46.2	47.1	45.3	44.1	41.9	41.2	45.7	44.0	43.5
Ham, sliced.....do....	51.9	54.2	55.1	51.7	53.3	52.5	53.2	56.4	57.0	52.6	52.4	53.8	54.6	58.3	58.4
Lamb, leg of....do....	35.8	36.3	38.3	43.0	43.4	45.0	44.3	45.0	44.4	35.1	34.5	36.2	37.9	38.3	41.6
Hens.....do....	39.4	38.9	40.3	37.0	38.3	40.0	32.4	33.8	32.9	29.6	31.8	32.3	39.5	40.3	43.2
Salmon, canned, red ...pound..	34.9	31.2	31.5	37.3	32.3	33.8	38.9	34.2	34.7	37.6	31.6	30.9	36.4	30.0	30.6
Milk, fresh....quart..	13.7	13.7	13.7	12.0	12.0	12.0	13.0	13.0	13.0	12.0	12.0	12.0	14.0	14.0	14.0
Milk, evaporated ...16-oz. can..	11.4	11.2	11.3	11.7	11.5	11.4	13.7	13.5	13.4	10.6	10.7	10.7	11.4	11.2	11.1
Butter.....pound..	60.1	61.9	58.6	57.1	59.4	57.8	58.8	60.2	58.1	53.6	54.3	53.1	58.3	59.9	57.5
Oleomargarine (all butter substitutes) ...pound..	28.4	28.8	28.7	27.5	27.4	27.4	29.2	28.7	28.8	24.5	24.8	24.7	26.7	26.4	26.3
Cheese.....do....	39.9	40.3	40.2	38.5	36.7	37.5	39.4	38.4	38.5	39.7	39.8	39.0	41.0	39.4	39.5
Lard.....do....	20.5	19.5	19.9	16.2	16.2	15.7	23.1	20.8	21.3	19.0	19.0	18.7	18.7	18.3	18.0
Vegetable lard substitute.....pound..	26.8	26.3	26.5	26.3	27.8	26.6	24.8	23.5	23.8	22.2	21.6	21.0	27.0	26.2	26.4
Eggs, strictly fresh ...dozen..	60.5	59.9	52.9	55.3	54.7	46.5	55.4	59.2	44.8	53.0	58.6	43.6	59.3	60.2	54.8
Eggs, storage....do....	42.8	43.9	38.7	41.0	41.0	36.0	-----	42.0	-----	43.6	44.3	33.5	43.7	42.1	40.6
Bread.....pound..	7.7	7.8	7.8	7.3	7.8	7.8	9.4	9.3	9.2	8.3	7.7	7.6	8.1	8.1	8.1
Flour.....do....	5.4	5.1	5.1	4.9	4.9	4.9	5.5	5.4	5.3	4.4	3.9	3.8	5.1	4.6	4.7
Corn meal.....do....	5.3	5.6	5.5	4.1	4.2	4.3	4.5	4.6	4.4	4.5	4.5	4.5	6.0	6.0	6.1
Rolled oats.....do....	9.3	9.0	9.1	9.5	9.1	9.1	10.6	10.1	9.8	7.4	7.6	7.5	9.5	9.1	9.2
Corn flakes .....8-oz. package..	10.1	9.9	9.8	10.1	10.0	10.0	10.6	10.2	10.2	9.6	9.6	9.7	9.8	9.3	9.7
Wheat cereal .....28-oz. package..	25.8	25.4	25.9	26.1	26.6	26.6	27.8	27.8	27.6	24.4	24.5	24.5	26.0	25.8	26.1
Macaroni.....pound..	21.4	20.8	20.8	19.4	19.8	19.8	22.0	21.5	21.4	19.6	19.7	19.4	21.9	20.9	20.6
Rice.....do....	10.6	9.6	10.2	11.7	11.4	11.6	12.3	11.9	11.7	9.2	9.0	9.0	11.5	11.1	11.4
Beans, navy.....do....	8.8	12.5	13.3	8.8	13.1	13.6	11.4	13.3	14.7	9.7	12.2	12.3	8.8	12.6	13.4
Potatoes.....do....	3.1	2.2	2.1	2.7	2.0	2.1	4.6	4.3	4.1	2.1	1.8	1.9	2.5	1.5	1.6
Onions.....do....	4.5	7.0	7.4	4.7	7.6	7.8	6.9	7.1	7.8	4.0	5.4	5.8	4.3	6.6	7.3
Cabbage.....do....	3.6	5.2	5.5	3.9	5.2	5.9	5.4	5.2	6.3	3.8	3.6	4.2	3.6	3.7	6.0
Beans, baked .....No. 2 can..	12.9	12.2	12.0	11.7	12.1	11.4	12.4	12.8	12.8	11.2	11.1	11.7	11.5	12.0	11.8
Corn, canned....do....	17.5	16.5	16.7	14.8	13.9	13.9	18.8	18.5	18.3	14.2	14.0	14.1	15.6	15.8	15.7
Peas, canned....do....	18.0	17.2	17.4	14.8	14.8	14.8	21.6	22.0	22.0	15.4	14.9	14.8	16.5	16.4	15.6
Tomatoes, canned .....No. 2 can..	13.7	13.3	13.6	12.6	12.8	12.8	12.7	12.3	12.8	11.8	11.7	11.6	12.4	12.7	12.8
Sugar.....pound..	7.6	7.2	7.3	7.7	7.3	7.5	8.0	7.5	7.3	7.6	7.4	7.3	7.3	7.0	7.1
Tea.....do....	78.7	80.9	80.2	87.9	86.1	84.5	107.1	104.8	104.8	69.9	69.8	69.8	73.9	74.3	72.2
Coffee.....do....	50.8	51.5	51.4	48.0	48.6	49.2	57.7	59.4	59.2	49.5	49.7	50.1	47.9	48.8	47.9
Prunes.....do....	14.0	14.0	14.0	15.4	16.2	16.9	17.0	16.9	17.7	14.3	14.8	15.0	13.8	14.8	15.5
Raisins.....do....	13.5	11.7	11.8	13.9	10.8	10.9	15.5	13.8	13.4	13.7	10.9	10.8	13.8	11.7	11.9
Bananas.....dozen..	[2] 11.1	[2] 10.0	[2] 10.2	39.2	40.6	40.6	36.3	33.3	35.0	[2] 11.0	[2] 10.8	[2] 10.7	36.9	34.0	37.0
Oranges.....do....	54.3	50.2	54.9	51.4	55.1	52.0	50.8	53.2	50.8	51.7	50.4	47.9	54.3	53.8	52.6

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak..pound..	[3] 67.9	[3] 70.3	[3] 69.8	36.8	37.5	40.0	42.3	46.3	46.4	35.4	38.6	38.5	40.5	45.8	46.2
Round steak....do....	52.4	56.4	54.6	36.0	37.3	39.1	40.0	43.8	45.5	30.8	34.6	33.8	35.4	40.5	41.1
Rib roast.....do....	35.9	38.5	37.5	28.7	29.7	31.2	31.1	34.2	34.8	27.3	30.3	30.3	28.5	32.8	33.5
Chuck roast....do....	27.3	30.3	29.4	23.8	24.2	25.8	26.9	30.3	30.8	21.2	24.5	22.9	22.3	26.5	27.0
Plate beef.....do....	16.0	18.0	18.7	20.0	21.5	23.2	17.0	21.8	20.9	13.1	15.5	15.5	16.2	19.9	20.6
Pork chops.....do....	30.6	30.5	32.5	33.0	29.9	31.8	29.2	29.5	31.8	30.1	30.2	29.8	27.1	26.5	29.6
Bacon, sliced....do....	42.5	40.9	40.0	44.2	40.6	39.8	40.4	41.3	42.1	39.3	37.3	36.4	44.8	40.8	41.8
Ham, sliced.....do....	51.1	52.3	52.6	48.2	46.6	50.0	50.4	52.9	55.0	45.8	48.2	47.5	48.9	50.2	51.2
Lamb, leg of....do....	40.5	40.4	42.7	33.3	34.2	33.3	39.0	40.0	44.0	37.6	40.8	40.0	35.4	33.5	35.0
Hens.....do....	43.5	43.7	44.8	33.2	36.3	39.4	38.4	42.2	42.2	34.2	35.0	35.3	32.5	33.1	36.1
Salmon, canned, red ..pound..	36.3	34.0	33.8	33.9	30.9	30.4	35.3	33.2	32.6	35.8	31.9	31.5	36.5	34.8	35.0
Milk, fresh.....quart..	15.0	14.7	15.0	15.6	15.4	15.4	12.0	13.0	13.0	20.3	20.3	20.3	13.0	13.0	13.0
Milk, evaporated ..16-oz. can..	12.9	12.5	12.7	11.7	11.3	11.3	10.7	10.6	10.5	11.8	11.7	11.6	11.5	11.5	11.4
Butter.....pound..	56.4	58.1	58.3	56.0	59.1	58.2	56.9	59.8	58.0	57.5	57.9	58.1	56.1	57.6	56.5
Oleomargarine (all butter substitutes) ..pound..	26.9	27.5	27.8	26.5	24.6	25.4	29.3	28.6	28.5	30.3	29.6	28.7	25.5	24.6	25.4
Cheese.....do....	41.8	41.6	42.1	36.1	34.0	34.0	40.0	42.3	42.5	37.5	34.9	34.9	39.7	37.5	37.1
Lard.....do....	18.2	17.7	17.6	20.3	19.5	20.8	16.4	16.3	16.0	20.1	19.2	19.8	18.3	18.2	18.5
Vegetable lard substitute.....pound..	26.6	26.6	26.7	16.4	16.6	16.2	27.0	27.2	26.8	21.2	21.7	21.3	27.0	26.4	25.7
Eggs, strictly fresh ..dozen..	68.8	79.2	64.8	54.7	50.6	38.7	54.7	56.1	48.0	57.3	59.0	50.3	50.7	51.1	48.1
Eggs, storage.....do....	49.3	51.3	45.8	43.3	42.1	33.8	41.3	39.0	36.5	48.0	44.8	43.3	38.9	41.1	38.4
Bread.....pound..	8.9	9.0	8.9	8.7	8.0	8.1	8.0	7.9	7.9	10.1	10.1	10.0	9.7	9.5	9.5
Flour.....do....	5.7	5.5	5.5	5.2	4.9	4.9	5.4	5.2	5.1	6.5	6.1	6.1	4.9	4.7	4.8
Corn meal.....do....	6.9	7.4	7.5	4.2	4.3	3.9	4.0	4.1	3.8	4.2	4.3	4.3	5.5	5.3	5.3
Rolled oats.....do....	9.5	9.5	9.6	8.8	8.5	8.5	8.7	8.3	8.7	9.5	9.4	9.2	8.9	8.9	9.2
Corn flakes ..8-oz. package..	10.0	9.9	9.9	8.9	8.9	9.0	9.4	9.0	9.1	9.9	9.7	9.6	9.8	9.6	9.7
Wheat cereal ..28-oz. package..	25.3	25.0	25.0	25.5	25.9	25.6	26.4	25.7	25.2	24.8	24.7	25.2	26.9	27.1	26.4
Macaroni.....pound..	23.5	22.9	23.7	17.9	18.7	18.5	18.8	19.1	19.0	19.1	19.0	18.3	20.2	19.9	20.0
Rice.....do....	11.3	11.2	10.9	7.5	7.3	7.1	10.4	11.0	11.1	8.1	7.6	7.5	9.5	9.0	9.2
Beans, navy.....do....	9.8	12.8	13.2	9.8	12.3	13.3	8.9	13.0	13.7	9.9	13.1	13.7	9.7	13.5	14.4
Potatoes.....do....	3.1	1.8	1.9	4.2	3.5	3.8	2.7	1.8	2.0	3.9	2.7	2.9	2.6	1.8	2.1
Onions.....do....	5.3	7.7	8.4	5.1	7.3	7.7	5.3	7.3	8.0	6.2	8.1	8.8	6.0	7.8	8.7
Cabbage.....do....	6.3	5.9	7.2	5.0	5.3	5.3	4.1	4.6	5.7	4.1	4.9	4.8	3.9	4.8	7.1
Beans, baked ..No. 2 can..	11.9	12.4	12.3	10.5	10.8	11.1	9.7	11.2	11.1	10.4	10.6	10.7	11.8	12.5	12.4
Corn, canned....do....	17.3	16.7	16.8	13.7	14.2	14.4	13.7	14.0	15.2	18.3	18.7	16.8	14.0	14.7	14.9
Peas, canned....do....	19.0	19.0	19.4	13.9	14.8	15.7	14.2	14.5	15.8	16.6	17.4	17.1	14.9	15.2	15.6
Tomatoes, canned ..No. 2 can..	12.8	13.3	13.3	9.7	10.2	10.5	12.2	13.0	13.5	9.9	11.0	11.1	11.2	11.4	12.5
Sugar.....pound..	7.2	6.8	6.8	6.9	6.7	6.7	7.3	7.2	7.3	7.5	6.9	6.8	7.5	7.2	7.0
Tea.....do....	59.5	58.2	58.2	83.6	84.8	85.2	88.3	83.9	90.0	98.9	93.4	94.9	92.9	92.1	92.8
Coffee.....do....	49.8	50.6	49.6	42.0	44.4	44.8	47.8	47.5	48.2	47.7	48.5	47.2	51.1	52.1	52.4
Prunes.....do....	14.4	13.9	13.5	13.0	13.2	13.4	14.6	16.2	17.1	15.3	15.2	14.3	13.8	14.4	14.4
Raisins.....do....	13.5	12.2	12.1	12.9	10.6	10.7	14.2	13.0	13.5	15.0	12.6	12.3	14.5	12.4	12.6
Bananas.....dozen..	[2] 10.2	[2] 9.8	[2] 10.0	26.3	26.4	25.4	31.7	30.0	31.3	26.4	34.0	30.0	[2] 11.2	[2] 10.9	[2] 11.1
Oranges.....do....	51.7	47.8	45.4	40.5	43.9	41.5	49.4	47.0	48.6	32.6	20.0	17.8	53.5	51.1	48.5

[2] Per pound.

[3] The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak--pound--	38.1	42.9	44.0	41.3	45.5	45.6	39.7	42.9	43.3	[1] 59.7	[1] 62.4	[1] 64.2	40.0	47.6	46.3
Round steak----do----	35.0	39.5	39.4	34.1	38.3	38.6	36.2	37.5	37.5	46.5	53.2	52.5	35.7	43.8	42.2
Rib roast------do----	30.7	34.3	34.3	32.5	35.5	35.1	29.3	30.8	31.8	30.1	33.8	34.3	28.8	35.1	33.7
Chuck roast----do----	23.3	28.6	28.8	24.0	27.8	28.0	23.3	25.3	26.9	25.4	29.5	29.7	23.1	28.6	27.6
Plate beef------do----	18.8	21.4	22.1	17.2	21.0	21.0	19.5	21.9	22.4	18.2	24.4	21.9	19.8	21.8	21.3
Pork chops-----do----	28.6	31.4	31.6	39.3	38.7	41.2	26.1	28.0	28.3	28.8	30.5	31.8	25.9	28.4	29.3
Bacon, sliced----do----	43.5	42.1	42.1	53.3	50.1	49.7	44.5	44.2	43.3	37.4	36.9	36.7	36.3	35.8	36.5
Ham, sliced-----do----	49.7	51.5	50.9	66.6	67.6	67.2	49.2	48.8	49.6	42.2	45.5	45.2	48.2	52.1	51.9
Lamb, leg of----do----	37.0	37.6	38.6	37.3	37.6	37.7	36.7	37.0	37.6	35.7	37.7	40.2	36.3	36.7	37.3
Hens-----do----	29.8	31.1	31.9	43.8	46.8	46.2	36.3	36.8	39.0	41.8	42.3	42.9	30.9	33.2	34.2
Salmon, canned, red ----------pound--	35.2	32.8	33.0	34.1	30.2	30.4	34.5	30.5	30.1	34.9	30.2	29.9	32.9	32.9	35.9
Milk, fresh----quart--	15.0	15.0	15.0	15.0	15.0	15.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
Milk, evaporated ----------16-oz. can--	12.0	11.6	11.9	10.0	10.0	10.0	11.8	11.8	11.8	12.9	12.6	12.6	11.7	11.5	11.6
Butter--------pound--	55.9	56.8	57.7	56.4	60.0	54.2	58.3	61.0	59.8	59.2	60.5	59.6	57.7	58.5	58.5
Oleomargarine (all butter substitutes) ----------pound--	28.0	26.6	28.1	25.8	25.6	25.3	27.0	27.8	27.9	24.0	28.6	28.6	24.3	24.4	26.0
Cheese---------do----	39.6	37.0	37.0	38.5	38.5	38.4	40.1	36.8	37.5	39.2	38.8	38.6	38.3	36.1	35.6
Lard-----------do----	21.7	20.0	20.0	20.9	20.6	20 4	16.7	17.7	17.2	18.1	17.8	17.8	15.4	16.2	16.7
Vegetable lard substitute---------pound--	20.7	20.8	20.7	23.5	24.2	24.8	27.2	26.4	26.4	26.3	26.5	26.1	21.8	21.7	21.2
Eggs, strictly fresh ----------dozen--	56.2	53.4	45.9	43.3	53.6	49.2	54.9	58.8	46.3	59.4	69.1	57.4	49.6	51.8	44.9
Eggs, storage----do----	49.0	42.3	41.8	41.0	45 3	-----	-----	41.5	42.0	47.9	50.2	46.0	42.8	40.5	35.8
Bread---------pound--	9.3	9.4	9.7	8.7	8.6	8.6	9.1	9.2	9.2	8.6	8.7	8.5	9.4	9.4	9.4
Flour----------do----	6.0	6.1	6.1	5.1	4.9	4.8	6.1	6.1	6.1	5.5	5.0	4.9	5.9	6.0	6.0
Corn meal------do----	3.9	4.0	4.3	5.6	5.8	5.8	3.9	4.1	4.1	5.2	5.2	5.3	3.6	3.9	3.9
Rolled oats-----do----	10.4	10.6	10.4	9.9	9.9	9.9	8.3	8.7	8.7	9.1	8.6	8.6	9.0	8.9	9.1
Corn flakes ------8-oz. package--	10.6	9.8	9.8	9.4	9.4	9.4	9.7	9.4	9.4	9.7	9.0	9.0	9.8	9.8	9.7
Wheat cereal -----28-oz. package--	27.6	27.0	27.3	24.9	25.0	25.0	26.7	26.6	26.6	25.9	25.4	25.4	25.6	25.8	25.8
Macaroni-----pound--	20.6	20.2	20.1	18.3	18.1	17.8	18.9	18.5	18.8	23.7	23.2	23.2	19.7	19.5	19.6
Rice-----------do----	7.9	8.3	8.0	10.0	9.9	10.0	10.8	10.4	10.5	9.4	8.9	8.5	8.6	8.2	8.4
Beans, navy----do----	9.6	13.3	13.4	9.4	12.3	12.7	8.4	12.9	13.0	9.2	12.5	12.6	9.6	13.0	13.3
Potatoes--------do----	3.5	2.8	3.0	2.8	2.6	2.5	3.1	2.1	2.2	2.7	1.7	1.8	3.3	3.0	2.9
Onions---------do----	5.9	7.6	8.6	5.1	6.6	7.1	5.7	7.2	8.5	5.0	7.0	8.0	5.3	6.9	7.4
Cabbage--------do----	4.6	5.4	6.4	4.6	5.5	5.5	4.9	4.8	6.4	3.3	4.8	5.5	3.9	4.3	5.7
Beans, baked ----------No. 2 can--	10.2	11.5	11.8	10.7	11.3	11.3	10.2	11.2	11.3	13.3	13.6	13.4	11.0	11.3	11.6
Corn, canned---do----	16.6	16.3	15.3	16.1	16.3	16.3	15.3	15.3	15.3	16.4	16.2	16.5	14.6	14.6	14.7
Peas, canned---do----	17.5	18.2	18.2	16.8	17.0	16.6	15.2	15.3	15.4	18.2	17.8	17.6	15.7	15.0	15.4
Tomatoes, canned ----------No. 2 can--	10.0	10.6	11.5	[4] 14.5	[4] 15.0	[4] 14.8	10.6	11.0	11.6	12.1	12.1	12.4	9.7	9.9	10.6
Sugar--------pound--	7.7	7.4	7.3	6.8	6.4	6.3	7.4	7.5	7.3	7.3	6.8	6.9	6.9	6.8	6.8
Tea-----------do----	106.3	105.7	104.9	72.6	74.9	74.9	92.7	93.8	94.2	64.5	65.8	64.5	97.2	96.6	96.0
Coffee---------do----	52.0	54.6	54.1	52.3	54.0	53.9	49.2	51.6	50.2	50.1	50.9	50.8	48.9	48.9	48.9
Prunes---------do----	15.3	16.3	15.5	12.4	13.5	13.1	14.3	15.8	15.7	12.7	13.1	13.1	14.3	14.0	14.2
Raisins--------do----	15.1	14.0	14.0	11.5	10.5	10.4	13.8	11.7	11.7	13.4	10.8	10.9	14.1	12.5	12.8
Bananas------dozen--	[2] 9.5	[2] 9.4	[2] 9.1	[2] 9.2	[2] 8.8	[2] 8.9	[2] 10.0	[2] 10.1	[2] 10.0	[2] 9.5	[2] 9.5	[2] 9.9	[2] 9.1	[2] 9.4	[2] 9.3
Oranges--------do----	49.4	48.9	52.1	48.8	48.5	45.3	39.6	36.9	33.8	51.4	50.1	47.8	43.6	35.4	31.2

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak---pound	40.8	44.4	44.5	36.8	40.9	43.4	36.5	42.2	42.5	49.5	52.7	51.7	58.6	62.5	62.3
Round steak----do	36.1	40.0	40.3	32.7	37.1	38.2	36.0	40.3	40.4	47.2	50.1	48.8	46.2	53.8	52.4
Rib roast-------do	30.6	32.4	33.1	29.0	33.0	32.5	29.5	32.2	33.8	38.7	40.3	39.3	39.2	41.5	41.5
Chuck roast-----do	26.7	29.8	30.9	24.5	28.8	28.1	25.0	26.1	26.3	29.6	31.8	31.5	28.8	34.5	34.4
Plate beef------do	16.3	19.7	20.5	15.5	18.4	19.6	18.3	21.9	21.5	17.6	19.9	19.3	16.6	18.0	19.2
Pork chops------do	27.9	28.4	29.7	31.3	31.5	32.1	36.5	29.4	32.5	31.7	33.4	32.2	30.6	32.5	32.9
Bacon, sliced----do	45.9	43.7	43.6	46.2	46.4	46.1	44.4	40.4	41.5	43.4	43.3	42.4	44.8	45.4	45.5
Ham, sliced-----do	47.0	48.1	48.8	48.3	51.8	53.8	50.0	50.0	48.9	52.3	55.6	55.3	56.7	58.4	60.0
Lamb, leg of----do	37.3	38.1	41.4	33.7	33.5	37.2	40.8	42.0	43.8	37.0	37.8	40.3	37.7	38.0	39.8
Hens-----------do	32.8	34.0	38.1	35.0	35.4	36.8	34.4	33.0	35.0	36.2	38.4	40.3	40.6	41.6	41.3
Salmon, canned, red, ----------pound	35.3	32.3	36.3	36.7	35.4	34.2	35.1	30.6	29.4	33.6	29.7	30.0	34.6	33.5	33.2
Milk, fresh-----quart	11.0	11.0	11.0	12.0	12.0	12.0	18.0	18.0	18.0	16.0	16.0	16.0	16.0	16.0	16.0
Milk, evaporated, ----------16-oz. can	11.4	11.1	11.2	11.8	11.6	11.6	11.5	11.4	11.3	11.1	11.0	11.0	12.1	11.9	12.0
Butter--------pound	55.1	57.9	54.9	54.3	57.3	54.4	58.4	58.5	57.8	61.2	61.7	59.3	56.2	58.8	59.0
Oleomargarine (all butter substitutes) ----------pound	27.0	26.7	26.7	25.8	26.4	26.1	28.6	29.5	28.9	30.5	30.0	30.0	29.1	29.0	29.1
Cheese----------do	37.3	37.7	37.5	36.3	37.4	37.7	38.5	36.1	35.0	40.7	40.3	41.3	40.3	41.6	41.7
Lard-----------do	19.2	19.0	18.8	18.5	19.3	19.4	19.6	18.8	18.6	19.4	18.9	18.1	18.9	18.6	18.8
Vegetable lard substitute--------pound	26.4	26.3	26.2	27.3	26.7	26.3	21.1	20.1	20.1	25.5	25.5	25.5	26.2	25.9	25.9
Eggs, strictly fresh ----------dozen	52.0	54.3	46.3	46.6	47.7	41.0	50.3	52.4	45.5	65.6	65.8	60.1	71.1	79.5	66.7
Eggs, storage----do	39.9	39.6	36.9	38.0	37.4	32.0	46.2	44.5	43.0	47.5	43.4	45.0	51.3	50.2	46.0
Bread----------pound	8.8	8.7	8.7	8.9	8.9	8.9	10.1	10.1	10.1	9.1	9.1	9.1	9.2	8.8	8.8
Flour----------do	4.8	4.4	4.4	5.0	4.6	4.5	6.1	6.0	6.0	5.1	4.8	4.7	5.3	5.1	5.0
Corn meal------do	5.9	5.9	6.2	5.7	5.7	5.5	4.1	4.0	3.9	6.8	6.7	6.7	7.0	6.7	6.9
Rolled oats-----do	8.3	8.2	7.9	7.9	7.7	7.9	8.6	8.5	8.5	8.2	8.1	8.7	9.1	9.3	9.2
Corn flakes ------8-oz. package	9.3	9.2	9.2	10.0	9.4	9.7	9.5	9.4	9.3	9.2	8.8	8.8	10.1	10.0	10.0
Wheat cereal ------28-oz. package	24.7	24.6	24.4	25.5	25.4	25.4	24.4	25.0	24.2	24.7	25.2	26.2	24.5	24.5	24.4
Macaroni------pound	18.0	17.7	17.5	18.2	17.7	17.7	20.9	21.3	21.3	21.4	21.5	21.5	21.8	22.0	22.2
Rice-----------do	10.4	10.2	9.8	10.2	9.5	9.9	9.3	8.1	7.8	9.8	9.1	8.2	10.5	10.2	10.3
Beans, navy-----do	8.9	13.3	13.5	9.9	13.3	13.8	9.4	12.2	12.5	9.9	13.0	13.2	9.6	12.0	12.2
Potatoes--------do	2.4	1.6	1.7	2.2	1.4	1.5	3.8	3.1	2.9	3.3	2.3	2.5	3.2	2.1	2.1
Onions----------do	4.6	7.1	7.7	4.3	7.1	8.3	5.1	6.5	6.9	5.1	7.7	8.0	5.5	7.3	8.0
Cabbage--------do	3.6	4.2	6.4	3.1	3.6	4.7	4.7	4.4	4.1	4.5	5.3	6.3	4.3	5.3	5.8
Beans, baked ----------No. 2 can	11.0	11.6	11.6	12.1	11.8	12.0	10.3	10.5	10.5	10.1	10.8	10.8	11.6	11.9	11.9
Corn, canned----do	15.9	16.2	16.1	14.2	14.8	15.4	15.9	14.4	14.9	15.2	16.5	16.4	17.8	18.1	18.4
Peas, canned----do	16.0	15.7	16.0	14.6	15.2	16.1	15.8	15.9	15.2	17.8	17.5	17.1	19.2	21.1	21.1
Tomatoes, canned ----------No. 2 can	13.4	13.6	13.3	12.9	12.9	13.1	9.8	9.8	10.5	10.3	11.0	11.1	12.8	13.4	14.1
Sugar---------pound	6.8	6.5	6.4	7.2	6.7	6.8	7.1	6.4	6.5	6.7	6.4	6.4	7.0	6.6	6.6
Tea------------do	71.7	69.3	68.6	59.0	67.5	69.4	79.4	80.8	80.8	58.8	58.9	57.3	59.6	60.7	60.3
Coffee----------do	43.4	45.4	45.6	50.9	53.7	53.1	48.2	48.8	48.3	48.5	49.4	49.8	51.5	51.6	51.6
Prunes----------do	13.2	14.2	14.5	14.4	14.5	14.9	12.4	12.5	12.7	12.8	13.2	14.0	14.0	14.3	14.4
Raisins---------do	14.1	12.5	12.3	14.3	12.1	12.2	13.4	10.3	10.3	14.3	11.1	11.2	13.7	12.6	12.4
Bananas-------dozen	[2] 9.8	[2] 9.9	[2] 9.8	[2] 11.7	[2] 11.1	[2] 11.6	24.4	25.0	22.5	38.0	38.8	37.5	33.2	33.6	33.7
Oranges---------do	53.2	55.5	52.9	56.0	47.4	47.2	46.0	35.6	35.7	54.0	46.0	49.1	53.5	55.8	53.0

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Nebr.			Peoria, Ill.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak...pound...	37.2	42.4	42.5	49.8	52.5	52.6	42.3	46.8	47.1	38.4	45.3	44.4	35.5	38.9	38.1
Round steak...do...	32.9	38.2	38.0	46.9	50.0	49.5	36.2	40.9	40.9	36.7	41.6	41.6	34.2	37.7	37.8
Rib roast...do...	31.3	35.7	35.4	42.3	44.1	43.7	33.9	38.4	40.4	26.5	31.9	31.7	25.0	29.5	30.2
Chuck roast...do...	22.3	25.6	25.6	28.2	30.6	31.0	25.0	27.8	29.3	22.9	28.1	28.1	22.6	26.3	27.3
Plate beef...do...	19.0	22.9	22.6	23.2	25.7	25.0	17.7	20.3	21.4	14.5	19.0	18.9	15.3	18.7	19.5
Pork chops...do...	31.3	30.8	32.5	35.1	36.1	35.9	29.8	30.6	30.3	28.8	29.3	29.7	28.0	28.0	27.9
Bacon, sliced...do...	42.9	44.3	41.6	45.2	45.0	44.6	41.7	41.4	40.7	46.6	45.2	43.5	45.4	42.9	43.8
Ham, sliced...do...	48.7	48.5	52.0	55.2	57.5	57.2	45.3	46.3	43.5	48.4	51.8	52.4	49.6	49.2	48.8
Lamb, leg of...do...	38.0	37.7	39.4	35.1	35.8	39.2	40.0	40.0	40.0	36.7	35.3	36.9	38.3	37.6	42.0
Hens...do...	36.8	36.7	38.9	38.2	39.1	40.0	37.7	37.5	38.4	30.8	31.6	33.7	32.2	34.5	35.8
Salmon, canned, red ...pound...	36.5	35.9	35.6	34.2	30.6	31.1	37.1	33.7	33.9	36.3	34.0	34.0	35.7	33.4	34.2
Milk fresh...quart...	14.0	14.0	14.0	16.0	16.0	16.0	18.0	18.0	18.0	11.3	11.3	11.3	13.0	13.0	13.0
Milk, evaporated ...16-oz. can...	11.2	11.0	11.0	11.2	10.8	10.9	11.5	11.4	11.5	11.8	11.4	11.7	11.4	11.1	11.3
Butter...pound...	58.8	59.9	59.7	60.1	60.6	58.3	60.1	61.2	60.9	54.2	54.8	54.9	54.6	55.9	53.4
Oleomargarine (all butter substitutes) ...pound...	29.1	28.5	28.6	27.0	28.6	28.8	25.0	26.7	26.9	25.9	26.9	26.5	28.6	27.0	27.3
Cheese...do...	40.4	38.9	38.7	40.5	40.5	40.7	36.9	35.3	35.2	39.2	36.3	35.4	39.2	36.2	36.8
Lard...do...	19.3	18.6	18.7	19.8	19.7	19.2	18.5	18.6	18.5	19.4	19.8	19.7	18.5	18.5	18.2
Vegetable lard substitute...pound...	19.9	19.4	20.1	25.8	25.7	25.8	23.2	21.6	21.5	25.9	25.4	25.6	27.7	27.6	27.6
Eggs, strictly fresh ...dozen...	54.0	50.4	46.6	66.6	70.6	61.7	54.1	60.3	48.2	46.2	47.4	41.7	52.9	57.0	46.9
Eggs, storage...do...	43.8	39.2	37.0	48.1	43.7	41.7	46.8	45.4	34.0	38.7	39.3	33.4	43.0	42.0	37.9
Bread...pound...	8.7	8.8	8.8	9.1	8.6	8.7	9.9	9.9	9.9	9.7	9.7	9.7	10.0	10.0	10.0
Flour...do...	6.6	6.6	6.7	5.3	4.9	4.9	5.5	5.4	5.3	4.3	4.2	4.2	5.0	4.7	4.6
Corn meal...do...	4.1	4.2	4.1	6.7	6.7	6.7	4.6	4.8	4.7	4.7	4.6	4.8	4.8	4.9	4.9
Rolled oats...do...	8.9	8.6	8.6	8.6	8.7	8.6	8.6	8.7	8.8	10.1	10.2	10.0	9.0	8.6	8.6
Corn flakes ...8-oz. package...	9.7	9.4	9.5	9.2	9.0	9.0	9.7	9.7	9.7	9.8	10.1	10.0	9.7	9.6	9.6
Wheat cereal ...28-oz. package...	24.9	24.9	25.1	23.9	24.6	24.4	24.8	25.3	25.5	28.4	27.6	27.6	26.3	25.7	25.7
Macaroni...pound...	10.8	10.9	10.8	20.9	20.7	20.7	19.0	19.1	19.1	21.2	20.8	20.7	18.6	18.4	18.4
Rice...do...	9.4	8.7	8.5	10.2	9.9	9.9	11.3	10.7	10.8	10.5	10.9	10.3	10.9	10.1	9.5
Beans, navy...do...	9.2	11.9	12.7	10.3	13.3	14.3	8.8	12.4	13.0	9.8	13.4	13.4	9.0	12.8	13.8
Potatoes...do...	3.7	3.3	3.0	3.6	2.5	2.6	3.8	2.5	2.7	2.4	1.6	1.8	2.4	1.7	1.9
Onions...do...	4.6	6.4	6.7	5.1	7.1	7.4	5.3	7.5	7.3	5.6	7.0	7.7	5.3	7.4	8.2
Cabbage...do...	5.4	5.0	5.1	4.0	4.9	5.0	4.3	5.0	4.9	3.7	4.4	5.7	3.4	4.7	6.3
Beans, baked ...No. 2 can...	11.1	10.8	11.0	10.9	11.4	11.6	9.9	10.7	10.6	12.9	13.3	13.0	11.1	10.6	10.6
Corn, canned...do...	14.7	15.6	15.3	14.5	14.8	15.1	14.8	15.1	15.1	16.2	15.6	16.1	15.3	14.6	14.6
Peas, canned...do...	17.8	16.1	17.6	15.2	15.3	15.7	17.8	17.4	17.5	15.8	15.5	15.5	17.3	17.4	17.4
Tomatoes, canned ...No. 2 can...	10.9	11.0	11.3	11.1	11.5	11.9	9.7	10.2	10.9	13.4	13.4	13.5	12.8	12.3	12.3
Sugar...pound...	6.6	6.1	6.1	6.3	6.0	6.1	6.7	6.7	6.7	7.1	6.9	7.1	7.8	7.2	7.5
Tea...do...	80.7	80.9	83.8	66.7	67.1	67.3	94.5	94.7	94.7	77.7	77.0	78.7	67.0	66.3	66.1
Coffee...do...	35.2	34.9	35.1	47.0	45.4	45.4	49.4	51.0	50.9	53.7	53.6	53.6	45.8	49.4	49.3
Prunes...do...	14.2	13.8	13.8	12.6	13.5	13.2	13.9	14.0	13.7	13.9	14.8	14.8	15.9	15.4	16.6
Raisins...do...	12.9	10.0	10.1	13.1	11.8	11.6	13.6	11.5	11.4	14.7	13.0	13.3	13.8	12.2	12.8
Bananas...dozen...	16.4	17.5	17.0	40.2	38.7	39.4	34.5	29.2	33.2	[2]12.0	[2]11.4	[2]12.3	[2]10.5	[2]9.8	[2]10.6
Oranges...do...	51.3	49.4	43.6	60.3	56.8	58.5	51.2	46.2	48.0	47.1	48.7	42.5	49.6	51.7	45.8

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	[1] 60.0	[1] 62.4	[1] 62.2	49.8	53.5	54.7	[1] 66.1	[1] 67.8	[1] 69.8	34.5	36.0	36.5
Round steak, do	46.3	49.0	48.9	41.3	46.0	45.6	49.4	51.2	53.3	32.4	34.1	34.3
Rib roast, do	39.3	41.7	41.4	36.8	39.7	40.8	32.9	35.6	36.5	29.1	29.6	29.4
Chuck roast, do	29.8	34.5	33.8	28.3	32.7	31.9	23.4	26.4	28.2	23.8	25.0	25.7
Plate beef, do	17.4	20.1	19.5	16.6	20.7	20.2	19.5	25.3	25.2	18.2	19.0	20.3
Pork chops, do	33.7	35.4	34.5	31.9	31.0	33.3	31.2	31.1	32.9	35.0	34.3	35.1
Bacon, sliced, do	42.9	42.0	41.7	48.6	47.1	47.6	42.5	40.6	40.2	52.8	50.3	50.0
Ham, sliced, do	52.8	56.8	57.0	57.1	61.6	59.2	49.1	52.8	52.6	55.6	52.8	53.4
Lamb, leg of, do	39.0	41.7	42.8	39.7	39.3	42.6	35.4	37.5	41.0	35.8	37.0	37.8
Hens, do	40.7	41.9	41.9	44.5	46.1	48.0	40.7	41.9	42.0	34.3	35.1	36.5
Salmon, canned, red, do	34.0	29.3	29.0	34.1	30.5	29.5	35.8	29.5	29.8	36.1	31.6	33.2
Milk, fresh, quart	13.0	13.0	13.0	14.8	15.0	15.0	15.0	15.0	15.0	12.0	12.0	12.0
Milk, evaporated, 16-oz. can	11.8	11.5	11.6	11.0	11.0	11.2	12.6	12.3	12.4	10.5	10.1	10.1
Butter, pound	62.5	62.8	61.5	60.7	61.7	59.1	59.1	60.8	60.5	57.2	58.6	55.3
Oleomargarine (all butter substitutes), pound	28.9	29.0	29.1	29.2	28.7	28.0	26.7	26.9	26.9	25.2	26.1	26.4
Cheese, do	42.3	42.1	42.2	42.0	41.3	41.8	39.1	40.1	39.5	38.5	38.5	38.2
Lard, do	17.9	18.4	17.7	18.8	18.6	19.1	18.1	18.2	17.8	20.4	19.7	19.9
Vegetable lard substitute, do	25.2	25.2	25.0	27.6	27.8	27.1	26.1	26.0	25.8	28.7	28.4	27.2
Eggs, strictly fresh, dozen	63.8	64.6	57.1	61.4	63.3	54.4	58.1	66.9	58.2	45.8	49.4	42.6
Eggs, storage, do	46.0	44.1	42.8	44.1	44.5	38.7	47.0	49.9	45.1	-----	43.0	-----
Bread, pound	9.4	8.4	8.3	8.5	9.0	8.9	10.1	9.4	9.2	9.2	9.3	9.3
Flour, do	4.9	4.7	4.6	5.0	4.7	4.6	5.3	5.0	5.0	4.8	4.7	4.7
Corn meal, do	5.2	5.2	5.3	6.0	5.9	6.0	5.1	5.3	5.4	6.1	5.8	5.9
Rolled oats, do	8.6	8.3	8.3	9.1	9.1	9.1	7.7	7.9	7.7	10.7	10.4	10.3
Corn flakes, 8-oz. package	9.4	8.8	8.8	10.1	9.8	9.8	9.8	9.6	9.6	9.6	9.6	9.6
Wheat cereal, 28-oz. package	25.3	24.6	24.6	25.2	24.7	24.8	25.9	25.8	25.8	27.1	26.8	26.8
Macaroni, pound	20.9	20.3	20.2	23.0	22.6	22.6	23.9	23.5	23.4	18.3	18.5	18.5
Rice, do	10.9	10.4	10.3	11.2	11.3	11.0	11.9	11.0	11.4	9.9	10.0	10.0
Beans, navy, do	9.1	12.2	13.0	9.0	12.7	13.5	10.1	12.3	13.0	9.6	12.7	13.0
Potatoes, do	3.6	2.3	2.3	3.0	2.3	2.2	2.7	1.8	1.8	2.3	2.2	2.1
Onions, do	4.5	6.9	7.3	5.4	7.5	7.9	4.9	7.5	7.9	5.0	5.7	6.6
Cabbage, do	3.2	5.4	5.7	4.3	5.1	5.9	2.5	3.6	4.6	4.6	4.8	5.8
Beans, baked, No. 2 can	10.6	11.4	11.4	12.7	13.0	13.3	15.0	15.0	15.2	11.7	12.2	12.5
Corn, canned, do	14.7	15.5	15.3	16.4	16.5	16.3	14.6	14.2	14.3	18.6	17.9	18.0
Peas, canned, do	15.3	16.1	15.8	17.2	17.2	16.7	17.8	17.8	17.8	18.6	17.0	17.5
Tomatoes, canned, do	11.3	12.0	12.1	11.6	12.4	13.1	12.3	11.7	12.2	[4] 16.8	[4] 15.6	[4] 14.8
Sugar, pound	6.6	6.1	6.1	7.3	7.0	7.1	7.2	6.8	6.7	7.1	6.7	6.7
Tea, do	68.0	69.0	70.5	82.4	80.9	81.7	62.2	62.4	61.5	80.3	78.0	77.8
Coffee, do	42.9	43.9	43.7	47.8	49.2	50.2	50.9	52.8	52.8	52.6	53.2	53.4
Prunes, do	12.8	12.0	12.8	13.8	14.5	14.5	11.7	12.2	12.2	10.8	13.4	13.6
Raisins, do	13.3	11.0	10.6	13.8	12.0	11.8	13.0	11.0	10.9	12.9	11.2	11.1
Bananas, dozen	30.6	30.3	31.4	41.2	41.9	41.1	[2] 11.7	[2] 11.0	[2] 11.5	[2] 12.6	[2] 10.9	[2] 11.1
Oranges, do	48.3	44.2	40.5	49.9	49.6	46.1	57.8	47.8	46.0	49.5	45.8	42.4

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.
[2] Per pound.
[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Providence, R. I.			Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	[1] 77.2	[1] 80.4	[1] 79.2	43.3	47.9	46.7	45.0	46.0	45.5	39.2	45.0	45.0
Round steak, do	51.5	56.9	57.0	38.7	42.1	42.1	37.5	39.6	39.0	38.3	43.6	43.1
Rib roast, do	41.4	44.5	44.2	34.1	35.7	34.8	33.0	34.1	35.5	32.4	35.9	36.3
Chuck roast, do	32.2	35.7	35.1	24.8	28.5	26.6	27.9	30.5	30.2	23.8	28.8	28.4
Plate beef, do	20.8	24.7	25.0	17.6	22.1	21.0	16.0	19.4	19.2	17.0	20.5	21.1
Pork chops, do	32.1	35.0	34.6	31.5	30.9	30.9	33.7	31.5	32.2	26.6	26.0	28.6
Bacon, sliced, do	41.4	40.7	40.8	41.6	38.5	39.9	40.2	38.7	37.4	41.7	39.6	39.7
Ham, sliced, do	54.2	55.3	54.3	45.0	45.5	45.1	51.6	51.2	52.0	49.5	51.5	53.3
Lamb, leg of, do	37.9	39.0	42.6	43.7	43.6	44.0	37.3	37.1	39.7	35.2	36.5	39.4
Hens, do	40.3	41.9	42.1	36.2	36.4	38.4	39.6	40.5	40.9	33.1	35.7	37.5
Salmon, canned, red, do	33.4	30.6	30.5	35.3	33.0	33.0	36.7	32.3	31.6	35.8	32.4	32.6
Milk, fresh, quart	15.7	15.7	15.7	14.0	14.0	14.0	13.5	13.5	13.5	13.0	13.0	13.0
Milk, evaporated, 16-oz. can	12.1	11.8	11.8	12.4	12.3	12.4	11.3	11.5	11.3	10.8	10.8	10.9
Butter, pound	55.4	57.6	57.9	61.3	63.3	62.6	56.6	59.1	58.4	59.5	62.1	60.0
Oleomargarine (all butter substitutes), pound	25.6	26.5	26.6	30.7	30.0	29.9	28.6	28.8	28.6	27.2	27.2	26.6
Cheese, do	38.6	38.6	39.0	37.8	36.9	36.6	40.1	39.9	39.8	38.9	37.8	37.8
Lard, do	18.2	18.0	17.7	18.6	18.3	18.6	17.9	17.7	17.1	15.2	15.2	14.8
Vegetable lard substitute, do	26.3	26.3	26.2	25.7	25.6	25.1	26.1	26.0	25.6	25.2	25.4	25.5
Eggs, strictly fresh, dozen	64.1	69.6	61.4	52.3	56.0	45.4	56.5	64.8	54.0	53.8	52.0	46.6
Eggs, storage, do	45.1	44.6	40.8	42.5	43.7	36.7	43.6	47.5	39.0	39.4	39.7	33.8
Bread, pound	9.0	9.1	9.0	9.1	8.8	8.5	9.1	9.0	8.7	9.8	9.4	9.4
Flour, do	5.5	5.2	5.1	5.3	5.2	5.2	5.1	5.0	5.0	5.1	4.8	4.8
Corn meal, do	5.1	5.0	5.1	4.7	4.9	4.9	6.2	6.2	5.9	4.2	4.4	4.5
Rolled oats, do	9.0	8.9	9.0	8.6	8.7	8.7	9.4	9.4	9.4	8.2	8.1	8.1
Corn flakes, 8-oz. package	9.6	9.6	9.5	9.7	9.6	9.6	9.5	9.2	9.2	9.0	9.1	9.0
Wheat cereal, 28-oz. package	24.7	24.8	24.8	26.2	26.0	26.0	25.5	25.7	25.6	24.8	24.7	24.6
Macaroni, pound	22.9	22.8	22.8	20.9	20.2	20.0	21.1	20.5	19.9	19.7	19.9	20.0
Rice, do	10.1	9.8	10.0	11.6	11.0	11.0	9.8	9.2	9.0	9.8	10.0	10.1
Beans, navy, do	9.7	13.0	12.8	9.5	13.5	13.9	9.2	12.8	13.3	9.0	12.4	12.9
Potatoes, do	2.8	1.8	1.9	3.5	2.5	2.7	2.5	1.5	1.5	3.0	2.4	2.5
Onions, do	4.8	7.0	7.6	5.6	7.7	8.0	4.5	6.6	6.3	5.1	7.0	7.4
Cabbage, do	4.5	5.1	6.7	4.2	4.7	6.5	1.7	3.4	4.5	3.6	4.4	5.1
Beans, baked, No. 2 can	10.6	11.3	11.4	10.1	11.0	11.1	10.2	10.6	10.7	10.1	10.4	10.4
Corn, canned, do	17.2	17.1	17.2	15.1	15.4	15.2	16.2	16.4	16.5	15.7	15.3	15.5
Peas, canned, do	18.5	18.4	17.9	17.6	17.9	17.4	17.9	17.2	17.4	15.3	14.8	14.9
Tomatoes, canned, do	13.0	12.9	13.5	10.6	10.9	11.3	14.5	14.8	14.6	11.0	11.1	11.5
Sugar, pound	6.9	6.4	6.4	7.0	6.7	6.7	6.4	6.2	6.2	7.0	6.7	6.8
Tea, do	60.4	60.6	59.8	90.6	91.9	90.6	69.0	71.6	70.9	74.3	78.6	77.5
Coffee, do	49.9	52.4	51.3	45.7	47.6	47.9	46.0	49.1	48.2	46.2	47.6	46.8
Prunes, do	12.5	13.7	13.5	14.3	14.7	15.1	12.9	14.2	13.6	14.5	15.2	15.1
Raisins, do	13.5	12.6	12.5	13.1	11.4	11.2	13.8	12.5	13.6	13.4	11.4	11.3
Bananas, dozen	31.4	31.9	32.1	39.0	36.5	37.5	39.2	36.7	35.0	33.3	32.5	31.4
Oranges, do	59.7	54.8	54.4	47.5	40.4	37.9	55.0	52.0	54.7	48.8	48.5	52.3

[1] The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	St. Paul, Minn.			Salt Lake City, Utah			San Francisco, Calif.			Savannah, Ga.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	38.1	40.4	40.7	33.4	38.1	37.5	37.3	41.1	41.2	35.0	40.5	40.0
Round steak, do	33.7	36.4	35.8	31.9	37.5	37.1	34.4	40.1	39.8	28.6	34.5	33.6
Rib roast, do	31.7	33.1	33.7	26.4	29.8	28.6	33.9	36.7	37.1	26.8	30.9	31.4
Chuck roast, do	25.8	27.1	27.5	21.7	26.2	25.5	23.7	27.1	27.0	18.7	22.9	23.3
Plate beef, do	15.3	17.5	18.0	15.5	19.3	19.1	19.1	22.0	22.0	15.8	18.8	18.5
Pork chops, do	27.6	27.1	30.2	32.1	33.8	34.6	39.3	39.4	38.5	30.0	27.7	27.5
Bacon, sliced, do	43.9	42.5	42.0	46.5	45.0	43.3	56.6	55.9	55.0	40.6	38.5	37.0
Ham, sliced, do	45.8	46.4	47.9	53.8	55.9	54.6	61.1	62.8	62.2	43.3	44.6	42.8
Lamb, leg of, do	32.6	29.8	35.9	34.5	36.7	37.2	39.9	39.0	42.5	37.5	37.5	38.3
Hens, do	33.4	32.1	35.2	30.5	35.2	35.0	43.2	43.7	44.5	31.4	33.1	32.2
Salmon, canned, red, do	38.9	35.3	34.6	34.9	33.2	33.8	32.9	28.4	28.0	36.3	33.0	33.0
Milk, fresh, quart	12.0	12.0	12.0	10.0	10.0	10.0	14.0	14.0	14.0	17.0	17.5	17.5
Milk, evaporated, 16-oz. can	12.0	11.9	11.8	10.5	10.2	10.2	9.9	10.0	10.0	11.5	11.2	11.4
Butter, pound	53.1	56.6	52.6	53.4	54.6	51.2	57.4	59.9	55.7	59.2	60.0	59.7
Oleomargarine (all butter substitutes), pound	24.6	24.4	25.1	27.3	25.0	25.0	25.5	25.3	25.0	31.5	30.5	30.5
Cheese, do	38.9	36.8	36.8	31.3	31.3	30.5	39.8	39.9	39.1	38.5	35.4	35.3
Lard, do	18.3	19.1	19.0	21.2	20.5	20.3	23.1	22.6	22.4	18.4	18.1	19.3
Vegetable lard substitute, do	28.5	28.1	27.0	29.3	29.3	29.6	27.8	27.5	27.4	17.5	16.9	16.8
Eggs, strictly fresh, dozen	47.3	46.4	40.5	43.5	51.3	45.9	44.9	49.7	45.5	53.6	56.2	42.8
Eggs, storage, do	39.8	38.1	31.8	40.0	43.0	-----	-----	42.5	-----	44.2	41.9	38.5
Bread, pound	9.3	9.3	9.3	9.8	9.6	9.7	9.5	9.1	9.3	10.7	10.7	10.7
Flour, do	5.1	4.7	4.7	4.1	3.6	3.6	5.6	5.3	5.2	6.6	6.5	6.4
Corn meal, do	5.3	5.1	5.3	5.5	5.9	5.7	6.2	7.2	7.1	3.8	3.5	3.7
Rolled oats, do	10.1	10.1	10.1	8.6	8.6	8.7	9.9	10.1	9.9	8.7	8.3	8.4
Corn flakes, 8-oz. package	10.1	10.1	9.8	10.9	10.2	10.1	10.0	9.7	9.7	9.6	9.8	9.7
Wheat cereal, 28-oz. package	26.5	26.3	26.2	25.9	25.1	25.1	25.3	25.2	25.4	24.8	24.4	24.4
Macaroni, pound	18.5	18.2	18.3	20.2	19.7	19.0	15.9	16.3	16.3	18.1	18.2	17.8
Rice, do	10.7	10.9	10.4	8.8	8.7	8.8	10.5	9.6	9.3	9.5	8.7	8.9
Beans, navy, do	9.5	13.7	13.8	8.8	11.3	11.9	9.6	11.6	11.9	9.8	13.9	13.5
Potatoes, do	2.0	1.2	1.4	1.8	1.6	1.5	2.9	2.7	2.8	3.6	3.0	2.8
Onions, do	4.1	6.9	7.9	3.1	4.7	5.2	4.5	5.7	6.1	6.3	7.5	7.8
Cabbage, do	3.5	4.0	4.0	3.0	3.4	5.3	-----	-----	-----	5.3	5.2	5.5
Beans, baked, No. 2 can	13.4	13.9	14.0	12.7	12.6	12.5	12.7	13.0	12.4	11.9	11.4	11.0
Corn, canned, do	14.6	14.9	15.0	14.4	14.4	14.2	18.0	17.6	17.0	15.0	15.1	15.6
Peas, canned, do	15.0	14.9	15.2	15.8	15.0	15.1	18.2	18.2	18.2	16.6	16.0	17.0
Tomatoes, canned, do	13.7	14.2	14.5	[4] 13.8	[4] 13.7	[4] 13.4	[4] 14.9	[4] 14.7	[4] 15.2	9.8	10.0	10.7
Sugar, pound	7.2	7.1	7.1	8.0	7.2	7.0	6.8	6.4	6.3	7.0	6.5	6.4
Tea, do	66.0	67.0	71.3	84.2	85.4	85.4	71.4	71.3	71.8	83.1	75.3	80.9
Coffee, do	52.2	52.8	52.8	54.5	54.3	54.7	52.5	54.4	53.5	45.7	47.3	46.9
Prunes, do	14.0	14.5	13.9	12.6	13.2	13.1	11.8	11.6	11.4	13.1	13.3	12.4
Raisins, do	14.9	13.8	13.5	12.9	12.1	11.6	12.1	10.3	10.4	13.7	11.8	11.8
Bananas, dozen	[3] 12.0	[3] 10.9	[3] 11.6	[3] 12.7	[3] 12.7	[3] 12.8	30.0	29.7	30.9	30.0	28.5	30.5
Oranges, do	60.9	53.9	58.5	49.9	45.6	43.4	52.9	52.2	51.7	41.3	30.5	29.7

[3] Per pound.

[4] No. 2½ can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

Article	Scranton, Pa.			Seattle, Wash.			Springfield, Ill.			Washington, D. C.		
	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929	1928		Jan. 15, 1929
	Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15		Jan. 15	Dec. 15	
	Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak, pound	55.2	62.5	61.9	38.6	41.8	41.5	37.5	40.9	42.7	49.2	53.7	55.1
Round steak, do	46.2	52.1	51.8	35.7	37.9	38.3	36.7	40.0	42.7	43.0	48.2	48.3
Rib roast, do	39.2	44.5	43.2	31.6	33.8	34.3	25.0	30.9	31.2	35.7	39.2	39.1
Chuck roast, do	31.2	36.2	35.2	25.7	27.1	26.9	23.3	27.4	28.5	26.6	31.3	31.6
Plate beef, do	15.3	19.8	20.7	19.7	21.5	21.3	16.4	20.4	20.9	15.9	21.0	20.5
Pork chops, do	34.5	33.6	34.5	38.4	35.1	36.0	26.7	25.5	27.9	32.8	31.6	33.5
Bacon, sliced, do	46.5	47.3	47.4	56.2	54.8	55.1	43.8	41.4	42.3	42.1	40.4	39.7
Ham, sliced, do	54.5	58.2	58.8	59.6	60.0	59.5	48.8	48.6	49.5	55.8	57.7	58.0
Lamb, leg of, do	42.3	43.4	45.3	36.7	37.2	37.9	36.7	37.9	41.0	38.9	38.9	42.9
Hens, do	43.5	43.8	45.4	32.9	36.1	36.6	34.5	34.7	35.0	40.1	41.6	41.9
Salmon, canned, red, do	36.2	33.6	33.1	35.5	33.2	32.5	35.4	33.8	33.1	34.0	30.1	29.5
Milk, fresh, quart	13.0	13.0	13.0	12.0	12.0	12.0	14.4	14.4	14.4	15.0	15.0	15.0
Milk, evaporated, 16-oz. can	11.9	11.9	11.9	10.5	10.3	10.4	12.0	12.0	12.0	12.0	11.8	11.8
Butter, pound	57.6	59.9	59.9	56.8	56.4	55.6	57.0	58.6	56.4	61.0	61.7	60.5
Oleomargarine (all butter substitutes), pound	27.8	27.3	27.3	25.7	25.4	24.9	28.5	27.8	28.5	27.4	26.9	26.9
Cheese, do	37.6	39.3	39.2	36.7	35.5	35.4	38.9	36.8	37.1	41.2	41.1	41.3
Lard, do	19.3	19.7	19.8	21.2	19.9	20.1	18.2	18.4	17.8	17.0	17.0	16.6
Vegetable lard substitute, do	26.1	25.8	25.8	27.2	26.9	27.2	27.5	27.8	28.0	23.7	24.2	24.5
Eggs, strictly fresh, dozen	64.0	70.4	58.8	42.9	47.7	42.9	55.9	54.5	46.9	59.5	63.4	54.9
Eggs, storage, do	44.0	52.0	42.3	37.5	41.0	37.5	43.7	42.8	38.0	48.3	46.6	39.0
Bread, pound	10.6	9.9	9.9	9.7	9.6	9.6	10.3	10.1	10.1	9.0	8.9	8.9
Flour, do	5.8	5.4	5.4	4.8	4.7	4.7	5.2	4.7	4.6	5.6	5.4	5.2
Corn meal, do	7.5	7.6	7.8	5.5	5.8	5.8	4.8	4.8	4.8	5.1	5.2	5.0
Rolled oats, do	9.8	9.8	9.8	8.6	8.7	9.2	9.6	9.9	9.6	9.3	9.1	8.9
Corn flakes, 8-oz. package	10.1	9.9	9.9	10.0	9.8	9.8	10.1	9.7	9.4	9.6	9.3	9.3
Wheat cereal, 28-oz. package	25.5	25.4	25.6	26.6	26.6	26.7	27.9	28.8	27.4	25.0	24.9	24.0
Macaroni, pound	23.1	22.3	23.3	18.1	17.8	17.8	19.2	19.0	19.0	22.7	22.0	21.8
Rice, do	10.4	10.2	10.4	10.9	10.3	10.3	10.6	10.2	10.1	11.2	11.2	10.8
Beans, navy, do	10.6	12.3	12.5	10.4	12.6	13.3	9.4	12.9	13.8	9.2	12.8	13.0
Potatoes, do	3.0	1.8	1.7	1.9	1.8	2.1	2.6	1.8	2.1	3.5	2.4	2.4
Onions, do	4.8	6.5	6.6	4.3	5.9	6.7	4.8	7.6	8.4	4.7	7.6	7.8
Cabbage, do	3.5	4.5	5.7	4.6	5.2	6.6	3.5	4.5	5.5	5.3	5.5	6.0
Beans, baked, No. 2 can	11.2	11.9	12.0	11.6	11.0	11.8	10.3	11.2	11.6	10.2	10.8	10.8
Corn, canned, do	16.9	16.8	16.7	18.0	18.0	17.5	15.0	14.9	14.9	16.1	15.6	15.3
Peas, canned, do	17.3	17.9	18.0	19.3	18.1	18.0	16.1	15.7	15.8	15.1	14.9	14.5
Tomatoes, canned, do	12.4	12.7	12.9	[4] 15.8	[4] 15.9	[4] 15.5	13.7	14.0	13.9	10.8	10.5	11.0
Sugar, pound	7.0	6.8	6.6	7.0	6.6	6.6	7.7	7.3	7.2	6.7	6.2	6.3
Tea, do	71.6	68.1	67.6	76.4	77.1	78.9	82.7	83.1	82.3	95.9	95.2	89.9
Coffee, do	49.9	50.7	50.6	50.2	52.1	51.8	51.4	51.6	51.7	45.7	47.3	47.0
Prunes, do	15.2	14.3	14.4	11.7	13.1	13.6	13.9	14.2	13.6	14.9	15.4	15.4
Raisins, do	13.8	11.9	12.3	13.2	10.8	11.1	14.2	11.6	11.6	13.8	12.4	12.9
Bananas, dozen	32.3	30.4	31.2	[2] 12.6	[2] 10.9	[2] 11.5	[2] 9.3	[2] 9.4	[2] 9.7	36.1	31.8	34.2
Oranges, do	57.5	59.9	60.9	49.0	44.6	43.0	53.5	53.8	48.9	50.6	40.4	43.9

[2] Per pound.

[4] No. 2½ can.

Comparison of Retail Food Costs in 51 Cities

TABLE 6 shows for 39 cities the percentage of increase or decrease in the retail cost of food [3] in January, 1929, compared with the average cost in the year 1913, in January, 1928, and December, 1928. For 12 other cities comparisons are given for the 1-year and the

[3] For list of articles see note 1, p. 229.

1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[4]

TABLE 6.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN JANUARY, 1929, COMPARED WITH THE COST IN DECEMBER, 1928, JANUARY, 1928, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase, January, 1929, compared with 1913	Percentage decrease, January, 1929, compared with—		City	Percentage increase, January, 1929, compared with 1913	Percentage decrease, January, 1929, compared with—	
		January, 1928	December, 1928			January, 1928	December, 1928
Atlanta	61.3	[1] 1.7	0.8	Minneapolis	54.1	[1] 1.1	0.1
Baltimore	57.8	1.8	[1] .3	Mobile		1.8	1.0
Birmingham	61.0	[1] .1	.2	Newark	49.5	1.1	1.0
Boston	55.3	1.5	1.3	New Haven	56.1	.3	1.6
Bridgeport		1.8	2.1	New Orleans	54.9	[1] .3	.5
Buffalo	59.2	[1] .2	.5	New York	57.9	2.0	1.2
Butte		[1] .3	1.0	Norfolk		.3	1.6
Charleston, S. C	57.2	[1] 1.2	.5	Omaha	48.7	[1] 1.3	.1
Chicago	64.9	.3	1.0	Peoria		[1] .5	.5
Cincinnati	58.6	[1] .6	0	Philadelphia	55.9	3.3	1.6
Cleveland	50.8	1.2	.8	Pittsburgh	58.7	[1] .4	1.6
Columbus		[1] 1.0	.8	Portland, Me		.4	.8
Dallas	55.9	.6	2.7	Portland, Oreg	41.1	.6	1.5
Denver	38.2	1.8	3.1	Providence	56.0	[1] .4	1.1
Detroit	61.2	[1] .1	[1] .4	Richmond	59.7	1.2	1.7
Fall River	54.2	1.1	1.5	Rochester		1.2	2.3
Houston		1.6	0	St. Louis	58.1	[1] .5	.2
Indianapolis	53.1	[1] 2.1	[1] .3	St. Paul		.4	[1] .1
Jacksonville	42.8	2.2	1.8	Salt Lake City	33.3	[1] 1.1	2.0
Kansas City	52.8	[1] 1.9	[1] 1.8	San Francisco	52.3	[1] .9	1.4
Little Rock	51.5	[1] 2.1	[1] .4	Savannah		1.9	2.6
Los Angeles	44.6	[1] 2.0	2.1	Scranton	61.6	1.2	1.6
Louisville	54.2	[1] .4	1.4	Seattle	46.7	[1] 1.4	[1] .1
Manchester	52.5	[1] .4	1.8	Springfield, Ill		0	[1] .4
Memphis	50.2	[1] 2.8	.9	Washington	62.0	.5	1.2
Milwaukee	56.0	[1] .6	.2				

[1] Increase.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of December 99.7 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 46 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Fall River, Houston, Indianapolis, Kansas City, Little Rock, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Philadelphia, Pittsburgh, Portland, Me., Providence, Richmond, St. Louis, St. Paul, Salt Lake City, San Francisco, Savannah, Scranton, Seattle, Springfield, Ill., and Washington, D. C.

[4] The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1927, p. 26.

Retail Prices of Coal in the United States [a]

THE following table shows the average retail prices of coal on January 15 and December 15, 1928, and January 15, 1929, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929

City, and kind of coal	1928		1929
	Jan. 15	Dec. 15	Jan. 15
United States:			
Pennsylvania anthracite—			
Stove—			
Average price	$15.44	$15.40	$15.38
Index (1913=100)	199.8	199.3	199.1
Chesnut—			
Average price	$15.08	$15.07	$15.06
Index (1913=100)	190.6	190.4	190.3
Bituminous—			
Average price	$9.30	$9.11	$9.09
Index (1913=100)	171.1	167.6	167.2
Atlanta, Ga.:			
Bituminous, prepared sizes	$7.93	$8.00	$7.97
Baltimore, Md.:			
Pennsylvania anthracite—			
Stove	[1] 16.00	[1] 16.00	[1] 16.00
Chestnut	[1] 15.25	[1] 15.50	[1] 15.50
Bituminous, run of mine, high volatile	8.07	8.00	8.00
Birmingham, Ala.:			
Bituminous, prepared sizes	7.72	7.68	7.66
Boston, Mass.:			
Pennsylvania anthracite—			
Stove	16.25	16.25	16.25
Chestnut	16.00	16.00	16.00
Bridgeport, Conn.:			
Pennsylvania anthracite—			
Stove	14.88	15.50	15.00
Chestnut	14.88	15.50	15.00
Buffalo, N. Y.:			
Pennsylvania anthracite—			
Stove	14.01	14.02	14.02
Chestnut	13.61	13.53	13.53
Butte, Mont.:			
Bituminous, prepared sizes	10.89	10.91	10.93
Charleston, S. C.:			
Bituminous, prepared sizes	11.00	9.67	9.67
Chicago, Ill.:			
Pennsylvania anthracite—			
Stove	16.95	16.90	16.80
Chestnut	16.46	16.45	16.45
Bituminous—			
Prepared sizes—			
High volatile	8.66	8.45	8.20
Low volatile	11.85	11.85	11.85
Run of mine—			
Low volatile	8.25	8.25	8.25
Cincinnati, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	6.50	5.57	5.54
Low volatile	7.81	7.47	7.79
Cleveland, Ohio:			
Pennsylvania anthracite—			
Stove	$15.20	$15.35	$15.38
Chestnut	14.80	14.97	14.97
Bituminous—			
Prepared sizes—			
High volatile	7.79	7.26	7.43
Low volatile	9.81	10.03	10.03
Columbus, Ohio:			
Bituminous—			
Prepared sizes—			
High volatile	6.88	5.82	6.09
Low volatile	8.38	8.13	8.56
Dallas, Tex.:			
Arkansas anthracite—			
Egg	15.75	15.75	15.50
Bituminous, prepared sizes	12.70	13.08	13.17
Denver, Colo.:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	16.00	16.00	16.00
Stove, 3 and 5 mixed	16.00	16.00	16.00
Bituminous, prepared sizes	10.50	10.57	10.52
Detroit, Mich.:			
Pennsylvania anthracite—			
Stove	16.00	16.00	16.00
Chestnut	15.50	15.50	15.50
Bituminous—			
Prepared sizes—			
High volatile	8.54	8.31	8.33
Low volatile	10.22	10.38	10.33
Run of mine—			
Low volatile	7.83	8.00	8.00
Fall River, Mass.:			
Pennsylvania anthracite—			
Stove	16.75	16.50	16.50
Chestnut	16.25	16.25	16.25
Houston, Tex.:			
Bituminous, prepared sizes	12.80	13.20	13.20
Indianapolis, Ind.:			
Bituminous—			
Prepared sizes—			
High volatile	6.54	6.37	6.28
Low volatile	9.04	9.11	9.04
Run of mine—			
Low volatile	7.38	7.00	7.00
Jacksonville, Fla.:			
Bituminous, prepared sizes	14.00	12.00	12.00
Kansas City, Mo.:			
Arkansas anthracite—			
Furnace	14.10	12.60	12.60
Stove No. 4	15.33	14.33	14.33
Bituminous, prepared sizes	7.50	7.28	7.33

[1] Per ton of 2,240 pounds.

[a] Prices of coal were formerly secured semiannually and published in the March and September issue of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND DECEMBER 15, 1928, AND JANUARY 15, 1929—Continued

City, and kind of coal	1928		1929
	Jan. 15	Dec. 15	Jan. 15
Little Rock, Ark.:			
Arkansas anthracite—			
Egg	$13.50	$13.50	$13.50
Bituminous, prepared sizes	10.60	10.25	10.25
Los Angeles, Calif.:			
Bituminous, prepared sizes	16.50	16.25	16.25
Louisville, Ky.:			
Bituminous, prepared sizes—			
High volatile	7.13	7.16	7.16
Low volatile	9.40	9.75	9.75
Manchester, N. H.:			
Pennsylvania anthracite—			
Stove	17.50	17.25	17.25
Chestnut	17.25	17.00	17.00
Memphis, Tenn.:			
Bituminous, prepared sizes	8.33	7.46	7.37
Milwaukee, Wis.:			
Pennsylvania anthracite—			
Stove	16.65	16.30	16.30
Chestnut	16.20	15.90	15.90
Bituminous, prepared sizes—			
High volatile	8.00	7.80	7.80
Low volatile	11.12	11.08	11.08
Minneapolis, Minn.:			
Pennsylvania anthracite—			
Stove	18.15	18.28	18.28
Chestnut	17.70	17.90	17.90
Bituminous, prepared sizes—			
High volatile	10.96	10.93	10.90
Low volatile	13.75	13.50	13.50
Mobile, Ala.:			
Bituminous, prepared sizes	9.54	9.77	9.57
Newark, N. J.:			
Pennsylvania anthracite—			
Stove	14.00	14.00	14.00
Chestnut	13.50	13.50	13.50
New Haven, Conn.:			
Pennsylvania anthracite—			
Stove	15.10	14.90	14.90
Chestnut	15.10	14.90	14.90
New Orleans, La.:			
Bituminous, prepared sizes	11.29	11.21	11.29
New York, N. Y.:			
Pennsylvania anthracite—			
Stove	14.75	14.79	14.79
Chestnut	14.42	14.29	14.33
Norfolk, Va.:			
Pennsylvania anthracite—			
Stove	15.00	15.00	15.00
Chestnut	15.00	15.00	15.00
Bituminous—			
Prepared sizes—			
High volatile	7.81	7.88	7.88
Low volatile	10.50	10.50	10.50
Run of mine—			
Low volatile	7.00	7.00	7.00
Omaha, Nebr.:			
Bituminous, prepared sizes	10.26	9.56	9.50
Peoria, Ill.:			
Bituminous, prepared sizes	7.10	6.91	6.90
Philadelphia, Pa.:			
Pennsylvania anthracite—			
Stove	[1] 14.93	[1] 14.67	[1] 14.67
Chestnut	[1] 14.43	[1] 14.11	[1] 14.11
Pittsburgh, Pa.:			
Pennsylvania anthracite—			
Chestnut	14.88	15.00	15.00
Bituminous, prepared sizes	5.65	5.25	5.25
Portland, Me.:			
Pennsylvania anthracite—			
Stove	$16.80	$16.80	$16.80
Chestnut	16.80	16.80	16.80
Portland, Oreg.:			
Bituminous, prepared sizes	13.32	13.40	13.07
Providence, R. I.:			
Pennsylvania anthracite—			
Stove	[2] 16.25	[2] 16.00	[2] 16.00
Chestnut	[2] 16.00	[2] 16.00	[2] 16.00
Richmond, Va.:			
Pennsylvania anthracite—			
Stove	15.50	15.00	15.00
Chestnut	15.50	15.00	15.00
Bituminous—			
Prepared sizes—			
High volatile	9.00	8.38	8.38
Low volatile	10.29	9.78	9.83
Run of mine—			
Low volatile	8.00	7.50	7.50
Rochester, N. Y.:			
Pennsylvania anthracite—			
Stove	14.60	14.75	14.75
Chestnut	14.15	14.25	14.25
St. Louis, Mo.:			
Pennsylvania anthracite—			
Stove	16.90	16.75	16.75
Chestnut	16.45	16.45	16.45
Bituminous, prepared sizes	7.02	6.25	6.40
St. Paul, Minn.:			
Pennsylvania anthracite—			
Stove	18.15	18.30	18.30
Chestnut	17.70	17.90	17.90
Bituminous, prepared sizes—			
High volatile	10.71	10.70	10.68
Low volatile	13.75	13.50	13.50
Salt Lake City, Utah:			
Colorado anthracite—			
Furnace, 1 and 2 mixed	18.00	18.00	18.00
Stove, 3 and 5 mixed	18.00	18.00	18.00
Bituminous, prepared sizes	8.34	7.93	7.86
San Francisco, Calif.:			
New Mexico anthracite—			
Cerillos egg	26.50	26.00	26.00
Colorado anthracite—			
Egg	25.75	25.50	25.50
Bituminous, prepared sizes	17.25	16.75	16.75
Savannah, Ga.:			
Bituminous, prepared sizes	[3] 11.13	[3] 10.62	[3] 10.53
Scranton, Pa.:			
Pennsylvania anthracite—			
Stove	10.75	10.53	10.53
Chestnut	10.50	10.33	10.33
Seattle, Wash.:			
Bituminous, prepared sizes	10.18	10.48	10.48
Springfield, Ill.:			
Bituminous, prepared sizes	4.44	4.24	4.24
Washington, D. C.:			
Pennsylvania anthracite—			
Stove	[1] 15.51	[1] 15.63	[1] 15.63
Chestnut	[1] 15.01	[1] 15.13	[1] 15.13
Bituminous—			
Prepared sizes—			
High volatile	[1] 8.75	[1] 9.25	[1] 8.75
Low volatile	[1] 11.00	[1] 11.42	[1] 11.42
Run of mine—			
Mixed	[1] 7.88	[1] 7.63	[1] 7.63

[1] Per ton of 2,240 pounds.

[2] The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

[3] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

Index Numbers of Wholesale Prices in January, 1929

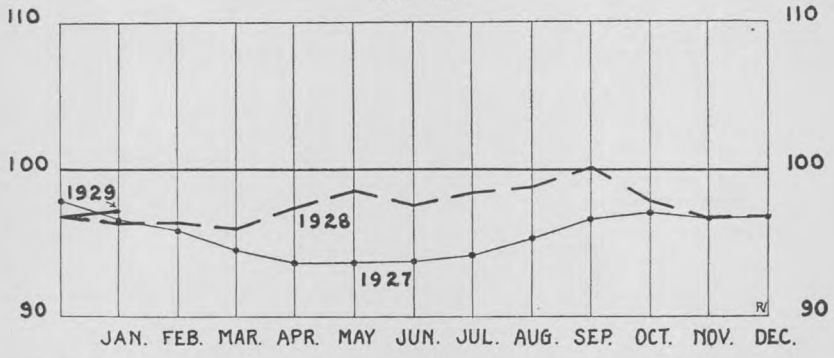
A SLIGHT upward tendency of wholesale prices from December, 1928, to January, 1929, is shown by information collected in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, computed on prices in the year 1926 as the base and including 550 commodities or price series, stands at 97.2 for January compared with 96.7 for December, an increase of one-half of 1 per cent. Compared with January, 1928, with an index number of 96.3, an increase of nearly 1 per cent is shown.

Farm products led in price increases over the preceding month, due mainly to advances in grains, hogs, sheep and lambs, poultry, and potatoes. Beef cattle, cotton, and eggs, on the other hand, were cheaper than in December. The increase in the group as a whole was over 2 per cent.

Among foods price declines in butter, cheese, fresh beef, bacon, hams, bananas, lemons, and sugar were offset by increases in fresh

TREND OF WHOLESALE PRICES

[1926=100]



pork, lamb, mutton, veal, dressed poultry, coffee, flour, lard, oranges, and corn meal. The net increase for the group as a whole was three-fourths of 1 per cent.

In the group of hides and leather products there was a pronounced drop in prices of hides and skins. Leather advanced slightly while boots and shoes and other leather products exhibited a downward tendency.

Cotton goods were stationary in price in the two months, silk and rayon receded slightly, and woolen and worsted goods and other textile products advanced. Anthracite and bituminous coal and coke showed practically no change in average prices but petroleum products declined to some extent.

Small advances were recorded for the groups of metals and metal products, house-furnishing goods, and miscellaneous commodities, while slight declines took place among building materials and chemicals and drugs.

Raw materials as a whole averaged higher in January than in the month before, while negligible advances were shown for semimanufactured articles, and finished products, also for nonagricultural commodities as a group.

Of the 550 commodities or price series for which comparable information for December and January was collected, increases were shown in 129 instances and decreases in 133 instances. In 288 instances no change in price was reported.

Comparing prices in January with those of a year ago, as measured by changes in the index numbers, it is seen that building materials and metals and metal products were considerably higher, while fuel and lighting materials and foods were somewhat higher. Small decreases between the two periods took place among farm products, textile products, chemicals and drugs, and house-furnishing goods, and a considerable decrease among hides and leather products and articles classed as miscellaneous.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES (1926=100.0)

Groups and subgroups	January, 1928	December, 1928	January, 1929	Purchasing power of the dollar, January, 1929
All commodities	96.3	96.7	97.2	102.9
Farm products	106.1	103.6	105.9	94.4
Grains	104.7	94.3	98.3	101.7
Livestock and poultry	100.2	99.1	102.1	97.9
Other farm products	110.7	110.0	111.3	89.8
Foods	98.5	98.0	98.8	101.2
Butter, cheese, and milk	108.6	110.0	109.0	91.7
Meats	91.6	102.3	105.7	94.6
Other foods	99.0	90.8	90.7	110.3
Hides and leather products	121.0	115.7	113.6	88.0
Hides and skins	151.4	131.0	124.1	80.6
Leather	123.8	119.3	120.5	83.0
Boots and shoes	108.4	108.4	106.7	93.7
Other leather products	108.4	108.4	107.6	92.9
Textile products	96.7	96.1	96.4	103.7
Cotton goods	102.3	101.3	101.3	98.7
Silk and rayon	83.7	83.7	83.2	120.2
Woolen and worsted goods	99.0	100.0	101.1	98.9
Other textile products	90.4	84.9	85.3	117.2
Fuel and lighting	80.8	83.5	82.5	121.2
Anthracite coal	94.8	91.2	91.1	109.8
Bituminous coal	94.9	93.2	93.0	107.5
Coke	86.0	84.5	84.5	118.3
Manufactured gas	95.9	93.3	[1]	
Petroleum products	65.6	73.9	71.9	139.1
Metals and metal products	98.1	102.9	103.6	96.5
Iron and steel	93.9	96.6	96.7	103.4
Nonferrous metals	91.7	98.0	100.7	99.3
Agricultural implements	98.8	98.8	98.8	101.2
Automobiles	104.3	111.2	111.6	89.6
Other metal products	98.2	96.9	98.4	101.6
Building materials	90.8	96.8	96.6	103.5
Lumber	88.5	93.6	92.9	107.6
Brick	92.4	93.6	92.9	107.6
Cement	96.5	94.6	94.6	105.7
Structural steel	91.9	97.0	97.0	103.1
Paint materials	88.0	87.7	86.7	115.3
Other building materials	92.7	107.0	107.8	92.8
Chemicals and drugs	96.3	96.1	95.9	104.3
Chemicals	102.4	102.4	102.1	97.9
Drugs and pharmaceuticals	72.6	70.8	71.0	140.8
Fertilizer materials	94.8	94.1	94.6	105.7
Fertilizers	97.0	97.8	97.1	103.0
House-furnishing goods	98.6	96.4	96.6	103.5
Furniture	98.2	95.3	95.1	105.2
Furnishings	98.8	97.1	97.6	102.5
Miscellaneous	89.0	80.1	80.5	124.2
Cattle feed	133.1	137.0	134.8	74.2
Paper and pulp	90.9	88.6	87.8	113.9
Rubber	82.2	37.0	40.8	245.1
Automobile tires	69.7	58.1	58.1	172.1
Other miscellaneous	98.8	99.7	100.9	99.1
Raw materials	100.2	97.4	98.7	101.3
Semimanufactured articles	97.7	97.2	97.3	102.8
Finished products	93.9	96.4	96.5	103.6
Nonagricultural commodities	93.7	94.8	94.9	105.4

[1] Data not yet available.

Wholesale Prices in the United States and in Foreign Countries, 1923 to December, 1928

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country	United States	Canada	Belgium	Bulgaria	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics (revised)	Dominion Bureau of Statistics	Ministry of Industry and Labor	Director General of Statistics	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1913	April, 1914	1913	July, 1914	1913	1913	1913	1913	1913
Commodities	550	[1] 238	128	38	69	118	135	45	400	100
Year and month										
1923	100.6	153.0	497	2525	977	----	----	419	----	[2] 503.9
1924	98.1	155.2	573	2823	997	----	144	488	137.3	[2] 497.4
1925	103.5	160.3	558	----	1008	210	147	550	141.8	[2] 612.0
1926	100.0	156.2	744	----	954	163	142	703	134.4	[2] 618.2
1927	95.4	151.6	----	----	979	----	145	617	137.6	[2] 466.7
1923										
January	102.2	151.4	434	2657	991	----	----	387	----	516.1
April	104.0	156.9	480	2757	1012	----	----	415	----	525.7
July	98.6	153.5	504	2408	949	----	----	407	----	503.9
October	99.6	153.1	515	2263	960	----	----	421	----	499.6
1924										
January	99.8	156.9	580	2711	974	----	----	494	----	504.4
April	97.6	151.1	555	2798	1008	----	----	450	----	510.3
July	95.9	153.9	566	2737	953	----	----	481	----	497.4
October	98.6	157.0	555	2988	999	----	----	497	----	522.0
1925										
January	103.5	165.5	559	3275	1045	243	----	514	----	568.2
February	104.5	164.7	551	3309	1048	240	----	515	----	571.1
March	104.8	161.6	546	3272	1034	236	----	514	----	571.2
April	102.4	156.5	538	3244	1020	230	----	513	----	571.1
May	102.1	158.8	537	3177	1006	227	----	520	----	571.2
June	103.4	158.6	552	3225	998	223	----	543	----	590.9
July	104.6	158.1	559	3041	1009	212	----	557	----	612.0
August	104.2	158.9	567	2870	993	197	----	557	----	630.6
September	103.7	156.2	577	2834	996	186	----	556	----	621.5
October	103.6	156.0	575	2823	989	179	----	572	----	617.1
November	104.5	161.2	569	2822	977	176	----	605	----	612.3
December	103.4	163.5	565	2913	977	176	----	633	----	613.8

[1] 236 commodities since April, 1924.

[2] July.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	United States	Canada	Belgium	Bulgaria	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics (revised)	Dominion Bureau of Statistics	Ministry of Industry and Labor	Director General of Statistics	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1913	April, 1914	1913	July, 1914	1913	1913	1913	1913	1913
Commodities	550	238	128	38	69	118	135	45	400	100
Year and month—Con.										
1926										
January	103.6	163.8	560	2901	966	172	143	634	135.8	608.0
February	102.1	162.0	556	2899	950	165	142	636	134.3	603.5
March	100.4	160.0	583	2844	938	158	141	632	133.1	592.3
April	100.1	160.2	621	2774	923	157	141	650	132.7	590.0
May	100.5	156.8	692	2938	928	158	140	688	132.3	595.0
June	100.5	155.6	761	2842	926	157	141	738	131.9	604.9
July	99.5	155.9	876	2838	948	158	141	836	133.1	618.2
August	99.0	154.0	836	2759	963	162	143	769	134.0	632.5
September	99.7	152.5	859	2723	973	162	143	787	134.9	622.0
October	99.4	151.3	856	2716	972	178	143	751	136.2	596.7
November	98.4	151.4	865	2739	978	170	143	684	137.1	594.2
December	97.9	151.5	860	2718	978	158	144	627	137.1	573.6
1927										
January	96.6	150.9	856	2706	979	157	144	622	135.9	558.2
February	95.9	150.3	854	2688	975	156	144	632	135.6	555.8
March	94.5	149.1	858	2649	976	153	143	641	135.0	544.7
April	93.7	148.9	846	2592	979	152	143	636	134.8	521.3
May	93.7	152.1	848	2751	988	152	142	628	137.1	496.2
June	93.8	153.5	851	2823	990	152	144	622	137.9	473.4
July	94.1	152.4	845	2775	992	152	144	621	137.6	466.7
August	95.2	152.7	850	2745	983	153	147	618	137.9	465.4
September	96.5	151.3	837	2736	975	153	148	600	139.7	465.4
October	97.0	152.6	839	2747	966	154	148	587	139.8	467.5
November	96.7	152.2	838	2707	967	154	149	594	140.1	466.0
December	96.8	151.8	841	2739	975	154	148	604	139.6	462.9
1928										
January	96.3	151.3	851	2782	982	153	144	607	138.7	463.5
February	96.4	150.8	848	2826	985	152	143	609	137.9	461.3
March	96.0	152.8	848	2839	978	153	144	623	138.5	463.9
April	97.4	153.2	847	2891	984	154	145	624	139.5	464.4
May	98.6	152.9	844	2906	987	155	143	632	141.2	464.9
June	97.6	150.2	844	2866	986	155	145	626	141.3	461.7
July	98.3	149.6	841	2911	979	155	145	624	141.6	453.1
August	98.9	149.1	831	2790	996	154	147	617	141.5	456.2
September	100.1	149.7	830	2805	986	151	146	620	139.9	457.8
October	97.8	150.2	835	2844	971	150	146	617	140.1	463.3
November	96.7	148.6	847	----------	957	151	145	626	140.3	465.6
December	96.7	146.7	855	----------	955	151	144	624	139.9	----------

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	Bureau of Markets, Treasury Department, Shanghai	Labor Office Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	[3] 48	174	74	160	78	150	92	180	187	56	[4] 117	42
Year and month—Con.												
1923	151	232	172	163	.....	158.9	170	158	127	199	156.4	181
1924	156	267	183	162	.....	166.2	165	165	129	206	153.9	182
1925	155	253	188	161	.....	159.1	162	161	128	202	159.4	163
1926	145	198	181	149	145	148.1	161	155	123	179	164.1	149
1927	148	167	173	146	142	141.4	.....	147	124	170	170.4	147
1923												
January	157	223	170	163	.....	157.0	163	.....	131	184	152.7	181
April	156	229	174	168	.....	162.0	167	.....	126	196	157.7	180
July	145	231	170	162	.....	156.5	180	.....	124	192	155.4	178
October	148	235	171	161	.....	158.1	171	.....	125	212	156.1	181
1924												
January	156	251	178	161	.....	165.4	174	.....	131	211	155.8	188
April	154	263	184	161	.....	164.7	166	.....	126	207	153.7	184
July	151	265	182	157	.....	162.6	163	.....	125	195	151.5	184
October	161	273	186	167	.....	170.0	163	.....	133	213	152.8	181
1925												
January	160	279	191	169	.....	171.1	163	166	130	214	159.9	173
February	158	281	192	169	.....	168.9	162	162	.....	210	159.2	173
March	155	279	193	168	.....	166.3	160	162	.....	204	160.3	171
April	151	273	190	163	.....	161.9	158	162	130	202	159.3	165
May	151	262	191	162	.....	158.6	159	162	.....	199	157.8	164
June	158	260	187	161	.....	157.2	162	162	.....	200	157.3	160
July	155	254	188	161	.....	156.9	162	161	127	198	162.8	158
August	155	249	184	159	.....	156.2	162	161	.....	200	160.3	160
September	155	237	185	157	.....	155.1	162	160	.....	201	160.2	157
October	154	223	187	154	.....	153.9	163	162	124	200	159.0	158
November	154	220	186	155	.....	152.7	165	161	.....	198	158.4	160
December	155	220	187	156	.....	152.1	160	160	.....	194	158.1	154
1926												
January	153	214	186	153	153	151.3	161	159	124	192	164.0	154
February	149	211	186	152	147	148.8	160	159	.....	188	163.0	151
March	145	205	183	149	146	144.4	163	157	.....	184	164.4	150
April	143	199	179	150	145	143.6	168	156	120	181	162.8	151
May	143	197	179	151	143	144.9	167	156	.....	177	169.7	151
June	144	194	177	150	143	146.4	163	155	.....	177	155.8	150
July	141	192	178	148	145	148.7	162	156	122	179	156.9	149
August	139	193	180	147	142	149.1	162	154	.....	177	160.5	148
September	140	193	178	146	142	150.9	158	153	.....	176	164.2	149
October	143	198	179	148	144	152.1	154	153	127	174	171.1	147
November	147	199	185	148	142	152.4	155	151	.....	171	174.4	146
December	147	184	186	150	142	146.1	155	153	.....	170	172.0	146

[3] 52 commodities in 1920; 53 commodities from August, 1920 to December, 1921. [4] 147 items.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	Bureau of Markets, Treasury Department, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	174	74	160	78	150	92	180	187	56	117	42
Year and month—Con.												
1927												
January	145	174	184	146	141	143.6	154	151	128	170	172.8	146
February	146	172	180	146	141	142.6	153	147	-------	171	172.0	148
March	144	167	179	145	141	140.6	150	147	-------	171	174.7	146
April	143	164	177	143	140	139.8	151	147	126	170	173.1	145
May	145	162	172	145	141	141.1	152	145	-------	171	171.3	146
June	149	166	171	146	140	141.8	155	146	-------	172	169.3	147
July	151	165	168	146	140	141.1	161	146	120	170	171.0	147
August	149	167	168	146	146	140.9	165	146	-------	167	170.8	148
September	150	167	169	148	144	142.1	170	146	-------	169	171.8	148
October	150	165	169	147	145	141.4	173	146	122	170	168.7	146
November	151	166	168	148	147	141.1	166	147	-------	168	165.8	144
December	151	166	159	148	146	140.4	162	148	-------	168	163.5	143
1928												
January	153	164	166	148	145	141.1	163	150	123	169	163.1	141
February	150	163	166	147	144	140.3	160	147	-------	169	164.3	142
March	152	164	165	149	145	140.8	160	149	-------	169	163.4	140
April	153	162	166	151	146	142.9	162	147	121	170	163.1	142
May	152	162	164	152	145	143.6	159	148	-------	171	164.5	145
June	153	161	164	151	145	142.6	158	148	-------	169	160.0	149
July	148	162	164	150	144	141.1	157	148	119	168	159.2	147
August	144	162	166	149	144	139.3	154	147	-------	170	157.2	146
September	145	158	168	146	144	137.6	153	148	-------	174	156.2	148
October	146	157	174	145	145	137.9	152	149	120	174	158.8	150
November	148	157	176	145	145	137.9	-------	150	-------	173	159.2	149
December	148	157	-------	145	-------	138.3	-------	-------	-------	174	159.9	-------

COST OF LIVING

Family Budgets of Burmese Wage Earners

IN 1927 and 1928 an investigation into the standards and cost of living of the working classes of Rangoon was made, in which 4,309 budgets were collected. According to the published report [1] of the Labor Statistics Bureau on this inquiry, the majority of the married Indian laborers who come to Burma leave their families in India. Consequently, the Indian budgets are for the most part single persons' budgets. A few budgets were also collected for Tamil and Telugu families. From the Burmese workers, however, only family budgets were secured and the present article is based upon that part of the report dealing with these budgets, of which there were 992. The 1921 census gives the number of Burmese in Rangoon as 102,925, out of a population of 341,962.

The occupational distribution of the 992 wage earners whose family budgets were secured is given below:

	Number
Skilled factory workers	195
Unskilled factory workers (other than contract coolies)	51
Compositors (outside factories)	136
Carpenters (private)	119
Cart drivers	99
Motor mechanics and drivers (outside factories)	80
Sandal and umbrella makers	100
Miscellaneous	212
Total	992

The one general restriction as to the type of family to be budgeted was that it should have no lodgers or boarders. As the number of Burmese families which had boarders or lodgers was small it was thought that this restriction would not substantially affect the representative character of the sample.

Although in the greater number of the budgets the data were based on estimates made by the workers, in some cases the information was secured from actual records. Younger brothers and sisters, nephews, nieces, and other relatives of the parents, who had not completed their fourteenth year were regarded as children. In a supplementary Burmese study husbands were classified separately from adult sons and a discrimination was made between wives and adult daughters, but in the main Burmese inquiry, here summarized, all adult males were grouped together and all adult females were also put in one class. The investigators called at the homes of the families one or more times within a month and filled in the schedules from estimates given by the workers.

The family budgets were classified according to income per unit. The Lusk coefficients based on food requirements were used to measure the size of the

[1] India (Burma). Labor Statistics Bureau. Report of an Inquiry into the Standard and Cost of Living of the Working Classes in Rangoon. Rangoon, 1928.

family. In this scale an adult male is taken as unity, a woman as 0.83, a child 10 but under 14 as 0.83, a child 6 but under 10 as 0.70, and a child under 6 as 0.50. The income per unit was obtained by dividing the income of the family by the size as expressed in these units.

Composition of the Families

THE number of persons to the average family is 3.71 and the number of units 3.01. In this connection the author of the report suggests that "it is probable that these figures are on the small side," as—

> It was very difficult to obtain a sample which was representative in this respect. There was a natural bias on the part of some of the investigators to collect budgets from families of small size as they were less troublesome. This had to be guarded against and many of the budgets of the outside investigators were canceled for this reason.

TABLE 1.—COMPOSITION OF AVERAGE FAMILY

Sex and age of members	Average number of persons per family	
	Earners	Nonearners
Men, 18 and over	1.04	0.09
Women, 18 and over	.42	.76
Men, 14 and under 18	.03	.05
Women, 14 and under 18	.02	.08
Children, 10 and under 14	.02	.23
Children, 6 and under 10	.01	.28
Children under 6		.68
Total	1.54	2.17

A more detailed table shows that the average family in the lowest income group consisted of 5.35 persons and in the highest income group of 2.23, the larger number being chiefly accounted for by the greater number of family members under 18 years of age. For example, 100 families in the highest income group had 104 men and 100 women 18 years of age and over and only 19 persons under 18 years of age, while in the lowest income group there were 285 persons under 18 in 100 families and 117 men and 133 women 18 years of age or over.

As indicated in Table 1, in every 100 families of all incomes there were 154 earners and 217 nonearners. Another table, which classifies the families according to the number of wage earners, shows that over one-half of the families had only one wage earner, over one-third had 2, and less than one-tenth had 3 or more.

Average Income and Expenditures

THE average monthly income for the 992 families was 58Rs. 8a. 3p. ($21.36). Males over 14 years of age earned 89.8 per cent of this income; females over 14 earned 9.8 per cent; and children under 14 earned 0.4 per cent.[2]

The average monthly earnings of an earning man were $17.55, of a woman, $4.72 and of a child $3.33.

[2] Conversions into United States currency made by the United States Bureau of Labor Statistics on the basis of rupee=36.5 cents; anna=2.28 cents; and pie=0.19 cent.

Following is a record of the average monthly expenditures of the 992 families:

	Average cost	Per cent of total
Food	$10. 91	52. 8
Clothing	2. 19	10. 6
House rent	2. 88	13. 9
Fuel and lighting	1. 07	5. 2
Household requisites	. 54	2. 6
Miscellaneous	3. 10	15. 0
Total	$20. 69	100. 0

Comparing average monthly income with average monthly expenditures an average balance of 67 cents, or 3.1 per cent of the income, is shown.

Expenditures for Food

THE average monthly expenditure for food per family for families of all incomes was $10.91, the amounts for the principal items being as follows: $3.30 for rice; $2.13 for fish; $1.23 for meat; $0.83 for sesamum oil; $0.88 for vegetables and fruit; $0.31 for salt, spices, and condiments; $1.93 for food bought and consumed away from home.

Daily Consumption of Food

THE total number of calories consumed per unit per day for families for all incomes was 2,592, the number for the lowest income group being 2,292 and for the highest income group, 3,168. The foods used are shown in Table 2.

TABLE 2.—GROSS CALORIES CONSUMED PER DAY PER UNIT BY BURMESE FAMILIES OF ALL INCOMES

Commodity	Calories		Commodity	Calories	
	Number	Per cent		Number	Per cent
Rice	1,845	71. 2	Sugar and molasses	62	2. 4
Wheat flour	47	1. 8	Sesamum oil	268	10. 4
Pulse	71	2. 7	Fruit and vegetables	92	3. 6
Fish	73	2. 8			
Meat	109	4. 2	Total	2, 592	100. 0
Milk	25	. 9			

Of 2,592 gross calories consumed per day per unit by the Burmese families of all incomes, 287 were protein, 1,870 were carbohydrates, and 435 were fat. Another analysis showed that the proportion of gross calories of animal origin consumed per day per unit increased from 6.2 per cent in families with the lowest income per unit to 10.5 per cent in families with the highest income per unit, while the proportion of such calories for all incomes was 8.5 per cent[3] and the proportion of calories from protein only 11.1 per cent.

Families in the lowest income class secured 9,149 calories for each rupee spent and those in the highest class only 6,794. The number for all families is 7,825, which is smaller than the number obtained by the Indian races. This may be partly due to the larger percentage of expenditure on meat and fish, which are

[3] In this connection the author points out that a comparison of these figures with the findings of western budget inquiries is interesting. For example, the Swedish family budget investigation of 1923 showed that approximately "40 per cent of the calories consumed by working-class families were of animal origin."

expensive foods from a caloric point of view, but is also due to the greater percentage expenditure on food consumed away from home, which gave only 5,969 calories for every rupee.

Expenditures for Clothing

THE average monthly expenditures for clothing per man, per woman, and per child were, respectively, 87 cents, 64 cents, and 25 cents. It was found that the men and the women in the highest income group spent approximately twice the amount of money on clothing as those in the lowest income group. For all incomes combined a woman's expenditure for clothing was 74 per cent of that of a man's.

Men and women in practically all these Burmese families wear cotton clothing. Silk is too expensive for some of the families. The men in about a third of the families wear shoes and practically all the men and women wear shoes or sandals.

A special study of the budgets of certain families including a husband, wife, and a child within given age limits, indicated that the younger boys had more spent on them for clothes than the younger girls. The clothing of the grown-up daughters, however, cost more than that of the grown-up sons, and in both cases the expenditure was higher than that for the mother's clothes but less than that for the father's. Apparently the Burmese men "like to dress themselves up in fine clothes just as much as, if not more than, the women."

Rents

ALTHOUGH the average monthly rent paid per family was $2.88, the expenditure for this item varies greatly among Burmese working-class families. Some of them live in very poor quarters and pay less than a rupee (36.5 cents) a month while the rentals of other families are 20 rupees ($7.30) or more.

Sometimes wage earners are forced to live in a locality where rents are very high in order that they may be near their work and not have to make heavy expenditures for transportation.

For the purpose of reducing their expenses, Burmese families frequently share a room together. Although there is some overcrowding among the families included in this study, "it is not to be compared with the overcrowding which exists in the registered lodging houses occupied by the Indian laborers." Approximately 9 per cent of the families occupied their own houses, approximately 15 per cent lived in free quarters which the employers provided, and the remaining 76 per cent lived in rented dwellings.

Fuel and Light

THE amount paid out for fuel and light constituted approximately 5 per cent of the expenditure in all income groups. Firewood and kerosene oil were the principal items. Very few working-class families use electric light.

Household Equipment

ONLY 2½ per cent of the average total expenditure of these families was for household requisites. The most usual articles purchased were thin blankets, cotton pillows, furniture, and cooking pots, but the amounts spent on such equipment were very meager.

Only one family in 16 uses cots or charpoys and about 2 in 5, mattresses. Sheets are usually made of longcloth and are used in a little more than half the families. Mosquito nets are made of longcloth or mull; netting is very rarely used, partly because it is too expensive and partly because a thicker material is often preferred. Nets are used in a little more than half the families.

Miscellaneous Expenditures

THE principal expenditure for miscellaneous items was for tobacco, the average expenditure per month per family being 88 cents. In some families liquor was taken, but as the investigators were unable to get them to acknowledge it, this item was not included in the budgets. The greater number of the families bought betel, the average monthly expenditure for it per family being 27 cents. Almost all the families used hair oil.

The figure for interest on debts is not reliable as it was very difficult to get accurate information. It includes the difference between the credit and cash prices paid for commodities. Burmese families do not mind much being in debt; in fact, many of them prefer to pay credit rather than cash prices (involving payment of higher prices) even when they have the ready money to pay cash.

The average monthly expenditure on medicine per family was only 4 cents, and 29 cents per family actually making such expenditures. The great majority of the large industrial establishments furnish medicines gratis and there are also other dispensaries from which free medical supplies may be secured.

For only about 12 per cent of the families was any expenditure for education recorded. It would seem that in various other families the expenditures for such purpose was so negligible that it was not stated separately.

Somewhat less than one-third of the families had to pay for transportation to and from their work places, the average monthly expenditure per family in this connection was 33 cents, and $1.09 per family actually having such expense.

IMMIGRATION AND EMIGRATION

Statistics of Immigration for December, 1928

By J. J. Kunna, Chief Statistician United States Bureau of Immigration

THE statistics for December, 1928, show 28,570 aliens admitted to the United States, the immigrants or newcomers for permanent residence in this country numbering 18,357 and the nonimmigrants 10,213. This is the smallest number of admissions for this period of the year since December, 1919. The outward movement of aliens in December, 1928, included 8,264 emigrants and 20,002 nonemigrants, a total of 28,266, the largest for any month since December, 1927, when 30,503 aliens left the country. Arrivals during the half-year from July to December last were the highest in September, during which month 55,714 aliens entered the country.

During the six months ended December 31, 1928, a total of 258,190 aliens were admitted, 192,209 coming in at the seaports and 65,981 at the land-border stations. Of the seaport admissions, 159,327, or 82 per cent, landed at New York, 5,512 at Canadian Atlantic ports, 5,393 at Boston, 3,624 at Key West, 4,777 at San Francisco, 2,053 at New Orleans, and 1,401 at Seattle. Over 94 per cent of the arrivals by water were inspected at these ports. Of the arrivals by land, 39,697 came in over the northern border, principally via Detroit, Montreal, Niagara Falls, Buffalo, Vancouver, and Vanceboro. Admissions at Mexican border land ports numbered 26,284, El Paso, Nogales, Laredo, Eagle Pass, and Brownsville, in the order named, being the principal ports of entry for aliens from Mexico.

The bulk of the New York arrivals came from Europe, 142,255, or 89.3 per cent, of the aliens admitted at that port giving European countries as their place of birth, while 2,944 were born in Asia, 498 in Africa, 1,065 in Australia and the Pacific islands, 2,461 in Canada, and 946 in Newfoundland, 2,237 in the British West Indies, 1,864 in Cuba, and 369 in the other West Indies, 844 in Mexico, 972 in Central America, and 2,872 in South America. Over 70 per cent, or 27,814 of the aliens entering via the northern land border were Canadian born; 10,882 were born in European countries, principally Great Britain, Ireland, Germany, and the Scandinavian countries; and 231 in the other countries. Of the aliens admitted via the southern land boundary, 25,045, or 95 per cent, were born in Mexico; 595 were natives of Europe and 644 of China and the other countries.

The three principal classes of admission under the immigration act of 1924 included 71,569 immigrants charged to the quota, 60,973 residents of the United States returning from a temporary sojourn abroad, and 56,448 natives of nonquota countries, mainly Canada and Mexico. These three classes comprised nearly three-fourths of the 258,190 aliens admitted during the six months ended December 31, 1928. Of the remaining one-fourth, 32,921 came in under the act as temporary visitors for business or pleasure; 12,833 were passing through the country on their way elsewhere; 16,608 were husbands, wives, or unmarried children of American citizens; 3,350 were Govern-

ment officials, their families, attendants, servants, and employees; 1,426 were students; 879 were aliens admitted to carry on trade under existing treaty; 298 were wives and unmarried children of natives of nonquota countries; 769 were ministers and professors and their wives and unmarried children; 81 were women who were citizens of the United States; 20 were Spanish subjects admitted into Porto Rico; and 15 were American Indians born in Canada. The returning residents and wives and children of citizens were the only classes with over 5,000 admissions that showed an increase during the six months from July to December last as compared with the corresponding period of the previous year. Over 80 per cent of the returning residents and 94 per cent of the wives and children of American citizens admitted from July to December, 1928, were born in Europe; 70 per cent of the latter class gave Italy, Poland, or Greece, as their country of birth.

During the half year from July to December, 1928, the newcomers entering at all ports for a permanent stay in this country exceeded the visitors, 147,707 of the aliens admitted in this period being classed as immigrants and 110,483 as nonimmigrants. The opposite was true for the seaport admissions, 104,305 being nonimmigrants and 87,904 immigrants. This was due to the large number of alien residents of the United States who returned from a visit to their native land, the vast majority of whom landed at the port of New York.

Europe continues to furnish over half of the immigration to the United States, sending 78,748 immigrants during the six months from July to December last. Germany leads the list as usual, contributing 21,758 or twice the number of immigrants coming from any other European country. Great Britain was next in the list, sending 10,299 immigrants, and Italy was third with 9,466, followed closely by the Irish Free State with 9,357; while Denmark, Norway, and Sweden combined sent 7,779 immigrants, Poland 4,625, Czechoslovakia 2,390, and France, 2,381. These sources contributed 86.4 per cent of the European immigration to this country during the said six months. In the same period Canada supplied 34,993 immigrant aliens and Mexico 25,020. The above figures show a decrease in immigration from Europe, as well as from Canada and Mexico, compared with the corresponding six months of a year ago.

The outstanding races among the immigrant aliens admitted from July to December last were the German (26,510), Mexican (24,422), Irish (16,262), English (16,148) Scotch (11,504), Italian (10,081), Scandinavian (8,943), French (8,819), Hebrew (6,174), and Polish (2,161). The other races or peoples numbered less than 2,000 each. The principal class of admissions under the immigration act of 1924 for the German, Irish, Hebrew, Polish, Scandinavian, and Scotch included immigrants charged to the quota, while the majority of the English, French, and Mexicans entered the country as natives of nonquota countries. Over two-thirds of the Italian immigrants entering under the act were wives and unmarried children of American citizens.

The women outnumbered the men among the immigrant aliens admitted during the half year from July to December last, 73,363 being males and 74,344 females. The largest number of immigrants were from 22 to 29 years old, 43,634 being in this age group, while

35,603 ranged in age from 16 to 21 years, 19,373 from 30 to 37 years, 8,673 from 38 to 44 years, and 13,407 were over 44 years old. Children under 16 years of age numbered 27,017. Over one-half of these immigrants settled in the North Atlantic States, 43,133 going to New York, 18,319 to the New England States, 8,224 to Pennsylvania, and 8,176 to New Jersey. States in the North Central Division, mainly Michigan and Illinois, received 33,219 of the new arrivals, while 17,604 were destined to the South Central States, 16,329 to the Western States, 2,396 to the South Atlantic States, and 307 to Alaska and the outlying possessions. The major portion of the wage earners among these immigrants were unskilled workers, 15,530 giving their occupation as that of servant, 14,887 as common laborer, and 10,202 as farm laborers. The skilled workers numbered 24,367, the professional class 5,182, and the mercantile and miscellaneous classes 10,000. There were 67,539 immigrants, mainly women and children, listed as having no occupation.

During the six months from July to December, 1928, a total of 5,651 undesirable aliens were deported from the United States under warrant proceedings. While nearly half of these deportees entered the country without proper documents (surreptitious entries) the bureau rid the country of 664 criminals, 365 insane or mentally deficient, and 175 immoral persons. Europe, with 2,087, received the largest number of these deportees, while 1,938 were sent to Mexico, 1,086 to Canada, and the remaining 540 to the other countries. The peak month for deportations during the half year was August, when 1,186 aliens were returned to the countries whence they came, and December, with 1,054, was the next highest month.

A total of 9,105 aliens (6,480 males and 2,625 females) seeking admission to the United States were rejected during the six months. Of this number 8,166 were debarred at the Canadian and Mexican land borders, 446 at New York, and 493 at the other seaports. At New York, the principal port of landing for aliens arriving from overseas, less than 3 out of every 1,000 applicants were denied admission. At both the land and sea ports the vast majority of the aliens rejected were without proper immigration visas.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1 TO DECEMBER 31, 1928

Period	Inward					Aliens debarred from entering [1]	Outward					Aliens deported after landing [2]
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens departed	Total	
	Immigrant	Non-immigrant	Total				Emigrant	Non-emigrant	Total			
1928												
July	20,682	15,976	36,658	32,974	69,632	1,286	7,804	20,249	28,053	68,463	96,516	768
August	24,629	18,620	43,249	63,191	106,440	1,412	6,488	15,960	22,448	50,323	72,771	1,180
September	29,317	26,397	55,714	80,233	135,947	1,364	8,093	17,231	25,324	42,105	67,429	915
October	29,917	24,797	54,714	49,831	104,545	1,798	7,479	16,693	24,172	34,643	58,815	807
November	24,805	14,480	39,285	23,198	62,483	1,694	6,549	14,611	21,160	22,380	43,540	927
December	18,357	10,213	28,570	18,911	47,481	1,551	8,264	20,002	28,266	25,173	53,439	1,054
Total	147,707	110,483	258,190	268,338	526,528	9,105	44,677	104,746	149,423	243,087	392,510	5,651

[1] These aliens are not included among arrivals, as they were not permitted to enter the United States.
[2] These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

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Compiled by LAURA A. THOMPSON, LIBRARIAN, U. S. DEPARTMENT OF LABOR

In Australia and New Zealand old-age pensions, as originally enacted into law and as at present in operation, are on a noncontributory basis, although in both countries there have been recent recommendations looking towards a change to a contributory plan. The first law to be passed was that of New Zealand, which in 1898 provided for an annual pension of £18 to persons 65 years of age and over who had had 25 years' continuous residence in the country and who met certain personal requirements. The law as amended in subsequent years now forms part of the consolidated pensions act, 1926. Under its provisions old-age pensions may be paid to males at 65 years of age and to females at 60 years or over except in cases where the applicant is a parent of two or more dependent children under 15 years when the pension may begin 5 years earlier. Aliens, Maoris, and Asiatics are excluded. The residence requirement of 25 years permits a certain amount of absence from the country and makes special provision for seamen. The yearly income of the applicant, if single, must not exceed £97 10s. ($474.48) and, if married, £143 ($695.91) and the net value of accumulated property, other than the house in which he resides, must be under £460 ($2,238.59). The maximum pension of £45 10s. ($221.42) is reducible by £1 ($4.87) for every complete £1 of income in excess of £52 ($253.06), for every complete £10 of accumulated property and for every year by which the age of the applicant is less than 65 years. Since 1910 New Zealand has had also a voluntary system of old-age insurance in the National Provident Fund which receives a government subsidy.

In Australia, although the Federal constitution specifically mentions "invalid and old-age pensions" among the laws which may be passed by the Parliament, the first old-age pensions established were those by the States of Victoria (1901), New South Wales (1901), and Queensland (1908). The Commonwealth invalidity and old-age pensions act, 1908, superseded these State laws and applies to the entire Commonwealth, the total expense of the pensions being paid out of Federal funds. As subsequently amended, the law provides for the payment of pensions to males of 65 years of age (60 if totally incapacitated) and to females of 60 years of age who do not own property in excess of £400 ($1,946.60) and who have resided continuously in Australia for at least 20 years. The amount of the pension is left to be fixed "at such rate as, having regard to all the circumstances of the case, the commissioner who determines the pension claim deems reasonable and sufficient" but may not exceed £52 ($253.06) per annum nor be at a rate to make the pensioner's income, together with the pension, exceed £84 10s. ($411.22) per annum.

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Old-age pensions in New Zealand, pp. 32–37.

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See also his earlier work "Facing Old Age," New York, 1922, pp. 332–335.

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Old-age pensions (New Zealand and Germany) . . . memorandum on the old-age pensions scheme in force in New Zealand and the scheme of insurance against invalidity and old age in force in the German Empire . . . London, 1908. 7 pp. (Parliament, 1908. H. of C. Repts. and Papers 159.)

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Includes (pp. 325–330) brief account of the history of the New Zealand act and an analysis of its provisions.

LE ROSSIGNOL, J. E. and STEWART, W. D.
State Socialism in New Zealand. New York, Crowell, 1910. 311 pp.

Old-age pensions, pp. 179–196.

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Social Welfare in New Zealand. New York, Sturgis & Walton, 1913. 287 pp.

Old-age pensions, pp. 99–105.

OLD-AGE PENSIONS; A COLLECTION OF SHORT PAPERS. London, Macmillan Co., 1903. 247 pp.

"Old-age pensions in New Zealand," by W. S. Aldis, pp. 232–239; "Old-age pensions in New Zealand," by W. A. Bailward, pp. 240–247.

MASSACHUSETTS. *Commission on Old-age Pensions, Annuities and Insurance.* Report, January 1910. Boston, 1910. 409 pp.

Old-age systems: New Zealand, pp. 106–108.
See also Report on old-age pensions, November, 1925, pp. 241, 242.

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The Story of New Zealand; A history of New Zealand from the earliest times to the present, with special reference to the political, industrial and social development . . . Philadelphia, C. F. Taylor, 1904. 836 pp.

The chapter on old-age pensions (pp. 442–466) contains a summary of the discussions in Parliament during the passage of the act, an analysis of its provisions and a brief account of its early operation. *See also* Appendix, pp. 790–798, for an analysis of various old-age pension schemes.

PENNSYLVANIA. *Old-age Pensions Commission.*
Report of the Pennsylvania Commission on Old-age Pensions, January, 1927. Harrisburg, Pa., 1927. 253 pp.

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See also Report of Old-age Pensions Commission, 1919, pp. 269, 270.

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State experiments in Australia and New Zealand. London, Richards, 1902.

The chapter on old-age pensions in New Zealand (v. 2, pp. 243–281) gives the parliamentary history of the act and an account of its early operation including criticisms.

ROGERS, FREDERICK.
Old-age pensions: Are they desirable and practicable? Pro—Frederick Rogers, Con—Frederick Miller. London, Isbister & Co., 1903. 226 pp.

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Old-age pensions in New Zealand.
New Century Review, March, 1900, v. 7, pp. 194–198.

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Old-age pensions in New Zealand.
Harpers Weekly, Aug. 5, 1899, v. 43, p. 781.

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National Review, February, 1899, v. 32, pp. 818–825.

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Monthly Labor Review, December, 1921, v. 13, pp. 1179–1193.

Pensions and superannuation funds, pp. 1190–1193.

PUBLICATIONS RELATING TO LABOR

Official—United States

CONNECTICUT.—Board of Compensation Commissioners. *Ninth report, covering years 1927–1928. Hartford, 1928. 30 pp.* (*Public document No. 58.*)

A statement from this report is quoted in this issue.

ILLINOIS.—Department of Labor. *Tenth annual report, July 1, 1926, to June 30, 1927; statistics of industrial accidents and building statistics, January 1, 1926, to December 31, 1926. Springfield, 1928. 129 pp.*

That portion of the report dealing with industrial accidents is noted in this issue.

MASSACHUSETTS.—Department of Labor and Industries. *Twenty-seventh annual directory of labor organizations in Massachusetts, 1928* (*labor bulletin No. 154*). *Boston, 1928. 79 pp.*

—— Special Commission on the Necessaries of Life. *Report, January, 1928. Boston, 1928. 132 pp.; diagrams.*

NEBRASKA.—Compensation Survey Commission. *Report. Lincoln, 1928. 24 pp.*

Report of commission authorized by the forty-fourth session of the Nebraska Legislature to make a study of the State compensation law. Certain of the commission's findings and recommendations are given in this issue of the Labor Review.

NORTH DAKOTA.—Workmen's Compensation Bureau. *Ninth annual report, for the fiscal year ending June 30, 1928. Bismarck,* [*1928*]. *26 pp.*

A statement of the assets and liabilities and receipts and disbursements of the State compensation fund, taken from this report, is given in this issue of the Review.

PENNSYLVANIA.—Department of Labor and Industry. *Special bulletin No. 24: Employment fluctuations in Pennsylvania, 1921 to 1927, by J. Frederic Dewhurst. Harrisburg, 1928. 192 pp.; charts.*

—— —— *Special bulletin No. 25: The Department of Labor and Industry—its organization and operation. Harrisburg, 1928. 56 pp.*

—— —— *Special bulletin No. 26: Migratory child workers and school attendance. Harrisburg, 1928. 20 pp.*

Reviewed in this issue.

—— Department of Mines. *Report. Part 1—Anthracite, 1923–1926. Harrisburg, 1927. 104 and 110 pp. Part II—Bituminous, 1923–26. Harrisburg, 1927. 779 pp. 2 vols.*

These volumes include data on fatal accidents in anthracite and bituminous coal mines, number of employees classified by occupation, and production. The data on fatal accidents include figures on disasters in which five or more persons were killed in anthracite mines from 1847 to 1926, and in bituminous coal mines, from 1884 to 1926, by date, mine, and cause of accident.

SOUTH DAKOTA.—Industrial department. *Eleventh annual report, for the twelve months ending June 30, 1928. Pierre, 1928. 52 pp.*

Data showing the number of injuries occurring to specified classes of workers, taken from this report, are given in this issue of the Labor Review.

WEST VIRGINIA.—Workmen's Compensation Commissioner. *Official preliminary report covering the fiscal year * * * ending June 30, 1928. Charleston, 1928. 20 pp.*

A statement of the financial condition of the State workmen's compensation fund, taken from this report, is given in this issue of the Labor Review.

WISCONSIN.—Board of Control. *Old age pensions in Wisconsin, 1927. Madison, 1928. 13 pp.*

Certain of the more important findings of this study are given in this issue.

UNITED STATES.—Civil Service Commission. *Forty-fifth annual report, for the fiscal year ended June 30, 1928. Washington, 1928. 134 pp.*

On June 30, 1928, there were 568,715 employees in the entire executive civil service, of whom 61,388 were employed in the District of Columbia. During the year there was an increase of 9,577 in the total number of employees in the service, the postal service accounting for 2,195 of the increase. The latter service had 54.67 per cent of the total number employed. Employees retired on account of age numbered 1,738, as compared with 1,904 in the preceding fiscal year.

—— Department of Commerce. Bureau of Fisheries. *Document No. 1043: Scallop industry of North Carolina, by James S. Gutsell. Washington, 1928. 25 pp. (Appendix V to the report of the U. S. Commissioner of Fisheries for 1928.)*

Data on prices and earnings taken from this pamphlet are given in this issue.

—— Department of Labor. Bureau of Labor Statistics. *Bul. No. 467: Minimum wage legislation in various countries, by Rudolf Broda. Washington, 1928. 125 pp.*

Reviewed in this issue.

—— —— *Bulletin No. 483: Conditions in the shoe industry in Haverhill, Mass., 1928. Washington, 1929. 107 pp.; charts.*

This report was summarized in the Labor Review for February, 1929 (pp. 1–20).

—— —— Children's Bureau. *Publication No. 185: Child labor in New Jersey—Part 2: Children engaged in industrial home work. Washington, 1928. 62 pp.*

Reviewed in this issue.

—— —— Women's Bureau. *Bulletin No. 65: The effects of labor legislation on the employment opportunities of women. Washington, 1928. xx, 495 pp.; charts.*

A summary of the findings of this investigation and the conclusions reached by the Women's Bureau was published in the Labor Review for November, 1928 (pp. 41–52).

—— Government Printing Office. *Annual report of the Public Printer, 1928. Washington, [1929?]. 128 pp.*

Data on wage rates in the Government Printing Office, taken from this report, are published in this issue.

—— Interstate Commerce Commission. Bureau of Statistics. *Forty-first annual report on the statistics of railways in the United States, for the year ended December 31, 1927, including also selected data relating to other common carriers subject to the interstate commerce act for the year 1927. Washington, 1928. cx, 274 pp.*

Includes the customary tables on employees and their compensation.

—— Treasury Department. Public Health Service. *Annual report of the Surgeon General for the fiscal year 1928. Washington, 1928. 346 pp.*

The work of the division of industrial hygiene and sanitation during the past year included the continuation of various studies which had been started earlier, such as the hazards from tetraethyl lead, the health hazards of dusty trades, and the loss of light due to smoke in New York City. Other studies include investigation of the carbon monoxide gas hazard from automobiles, streets, and shops; benzol poisoning among chemical laboratory workers; lead poisoning in the manufacture of storage batteries; and ventilation and illumination studies. Summaries of most of the studies which have been published have appeared in different issues of the Labor Review.

UNITED STATES—Treasury Department. Public Health Service. *Public Health Bulletin No. 177: Efficiencies of painters' respirators filtering lead paint, benzol, and vitreous enamel sprays. Washington, 1928. 27 pp.; diagrams, illus.*

Tests were made of the efficiencies of 12 different types of respirators in protecting spray painters from the different materials used in the paints. It was found that respirators with cotton, paper, or fabric filters remove 90 or more per cent of the lead from air carrying paint mist but these respirators do not restrain any of the solvent vapors. The addition of a canister or cartridge of activated charcoal removes all solvent vapors until the charcoal becomes saturated, when fresh filters must be substituted. The respirators were somewhat less efficient against the silica-dust sprays but they restrained from 24 to 50 per cent of the dust from the air passing through them.

Official—Foreign Countries

AUSTRALIA.—Bureau of Census and Statistics. Tasmania Branch. *Statistics of the State of Tasmania for the year 1926–27. [Hobart?], 1928. [Various paging.]*

Includes data on production, number of farm workers, number and compensation of workers in different manufacturing industries, and friendly societies.

AUSTRIA.—Gewerbe-Inspektorat. *Die Amtstätigkeit der Gewerbe-Inspektorate im Jahre 1927. Vienna, 1928. lxxiv, 178 pp., illus.*

Annual report of the Austrian factory inspection department for the year, 1927.

BULGARIA.—Direction Générale de la Statistique. *Statistique des coopératives sans le Royaume de Bulgarie en 1924. Sofia, 1928. xiii, 156 pp.*

Data on kinds of cooperative societies and composition of membership, and detailed information as to the balance sheet, including capital, deposits, resources and liabilities, profit and loss, etc., for the year 1924.

CANADA (QUEBEC).—Department of Public Works and Labor. *General report for the year ending June 30, 1928. Quebec, 1928. 140 pp., illus.*

In the section under the heading "Reasonable wages" the deputy minister of labor reports that contractors know that it is advantageous to them to pay the wages prevailing on work for the provincial government and that no complaints regarding wages were received during the year reviewed.

FINLAND.—Socialministeriet. *Olycksfallen i arbetet, år 1925. Helsingfors, 1928. 94 pp. (Arbetsstatistik A, 22.)*

Report on accidents to workers in Finland and compensation therefor in 1925.

GREAT BRITAIN.—Mines Department. Safety in Mines Research Board. *Paper No. 42: Firedamp explosions—the projection of flame, Part II, by M. J. Burgess. London, 1928. 8 pp., illus.*

This paper relates to the projection of the flame of an explosion beyond the original confines of the explosive mixture.

——— ——— ——— *Paper No. 45: The support of underground workings in the coal fields of the South Midlands and the South of England. London, 1928. 86 pp.; diagrams, illus.*

——— ——— ——— *Paper No. 46: The ignition of firedamp by the heat of impact of rocks, by M. J. Burgess and R. V. Wheeler. London, 1928. 25 pp., illus.*

A study of the ignition of firedamp in coal mines by the heat generated by the impact of rocks occasioned by a fall of roof. It was found that ignition is most liable to occur when a large mass of rock falls some distance and glides along the sharp edge of another piece or when a mass of falling roof causes the gliding of two surfaces against each other under great pressure.

INDIA.—Department of Commercial Intelligence and Statistics. *Statistical abstract for British India with statistics, where available, relating to certain Indian States, from 1917–18 to 1926–27. Calcutta, 1928. 721 pp.*

Includes retail and wholesale prices and statistics of cooperative societies and of railway accidents.

—— (BURMA).—Labor Statistics Bureau. *Report of an inquiry into the standard and cost of living of the working classes in Rangoon. Rangoon, 1928. 221 pp.; charts.*

That part of the report which deals with the family budgets of Burmese wage earners is reviewed in this issue.

INTERNATIONAL LABOR OFFICE.—*Bibliography of the International Labor Organization. Geneva, 1928. 35 pp.*

—— *Forced labor—report and draft questionnaire. (Item III on the agenda, International Labor Conference, twelfth session, Geneva, 1929, first discussion.) Geneva, 1929. 320 pp.*

—— *Studies and reports, series O (migration), No. 3: Migration laws and treaties. Vol. II.—Immigration laws and regulations. Geneva, 1928. 486 pp.*

NETHERLANDS EAST-INDIES.—Departement van Landbouw, Nijverheid en Handel. Centraal Kantoor voor de Statistiek. *Statistical abstract for the Netherlands East-Indies, 1927. Weltevreden, 1928. xxx, 474 pp. (In Dutch and in English.)*

Includes data on production, wholesale and retail prices, and wages.

POLAND.—Office Central de Statistique. *Annuaire statistique de la République Polonaise, 1928. Warsaw, 1928. 606 pp.; maps.*

Includes statistics on emigration, the mining industry, manufacturing, prices, the labor market, wages and salaries, industrial disputes, social insurance, and cooperative societies.

SPAIN.—Ministerio de Trabajo, Comercio e Industria. Dirección General de Trabajo y Acción Social. *Estadística de los accidentes del trabajo ocurridos en el año 1926. Madrid, 1928. 100 pp.; maps, charts.*

This report presents the number of industrial accidents in Spain in 1922, 1923, 1924, and 1926 and contains tables showing the Provinces in which they occurred and the sex and age of those injured as well as the severity of the accidents. Tables taken from this report are given in this issue.

SWEDEN.—Socialdepartementet. Riksförsäkringsanstalten. [*Berättelse*], *år 1927. Stockholm, 1928. 29 pp.*

This report, on the operations of the State insurance office for 1927, gives data regarding industrial accident insurance and other forms of State insurance.

Unofficial

AMALGAMATED CLOTHING WORKERS OF AMERICA. *Agreement between clothing manufacturers of New York and Amalgamated Clothing Workers of America establishing an unemployment insurance fund. New York, 1928. 9 pp.*

The terms of this agreement were summarized in the Labor Review, September, 1928 (pp. 96, 97).

BEZANSON, ANNE. *Earnings and working opportunity in the upholstery weavers' trade in 25 plants in Philadelphia: An experiment in cooperative research. Philadelphia, University of Pennsylvania Press, 1928. xix, 131 pp.; charts.*

BOURNVILLE WORKS [BOURNVILLE, ENGLAND]. Publication Department. *Bournville housing: A description of the housing schemes of the Bournville Village Trust and Cadbury Bros. (Ltd.). Bournville, 1928, 56 pp.; map, plans.*

BOUVIER, JEANNE. *La lingerie et les lingères. Paris, Gaston Doin et Cie, 1928. 392 pp.*

This volume belongs to a series dealing with the social history of different trades in France. It contains a historical summary of the development of the lingerie

industry and an account of the organization of workers in the different occupations, of wages and hours of labor, and the effect of the competition of prisons and convents on this class of work.

CARVER, ARTHUR H. *Personnel and labor problems in the packing industry. Chicago, University of Chicago Press, 1928. 226 pp.*

This study deals with various management problems such as employment methods, control of labor turnover, financial incentive plans, care of employees' health, etc., with particular relation to these special problems in the packing industry.

CASUALTY ACTUARIAL SOCIETY. *Proceedings, May 25, 1928. Vol. XIV, Part II. New York, 75 Fulton St., 1928. 274 pp.*

This volume of the proceedings of the Casualty Actuarial Society contains addresses relative to insurance problems connected with workmen's compensation and one by I. M. Rubinow on the value of unemployment insurance in dealing with the unemployment situation.

CONSUMERS' LEAGUE OF CINCINNATI. *Employment agencies in Cincinnati, by Frances R. Whitney. Cincinnati, December, 1928. 79 pp.*

Among the recommendations made by the Consumers' League of Cincinnati, based on the evidence secured in this survey, are: The greatest possible development of the free State-city employment service, and the legal restriction of the number of private employment offices by providing that no additional agencies be licensed without proof that existing offices are not meeting the requirements of the community.

EPSTEIN, ABRAHAM. *The challenge of the aged. New York, The Vanguard Press, 1928. 435 pp.*

A survey of the whole question of old-age dependency, of the present methods of caring for it, and of the arguments for and against a change in those methods. An important feature is a summary of old-age pension systems in other countries.

FLEISCHMAN, DORIS E. *An outline of careers for women. New York, Doubleday, Doran & Co. (Inc.), 1928. 514 pp.*

A series of chapters covering various businesses and professions, each written by a specialist in that particular line, outlining for each the opportunities for success, the advantages and disadvantages, honorary and monetary rewards, and its intrinsic difficulties as well as the special difficulties it presents to women.

FORD, HENRY. *My philosophy of industry. (An authorized interview by Fay Leone Faurote.) New York, Coward-McCann (Inc.), 1929. 107 pp.*

GLAY, EMILE, ET CHAMPEAU, HENRY. *L'Instituteur. Paris, Gaston Doin et Cie, 1928. 538 pp.*

A historical account of the development of the teaching profession, and of legislation affecting schools and educational methods.

GONNARD, RENÉ. *Essai sur l'histoire de l'émigration. Paris, Librairie Valois, 1928. 368 pp.*

This brief review of the history of emigration from antiquity to the present time is confined almost exclusively to the white race.

HATHWAY, MARION. *The young cripple and his job. Chicago, University of Chicago Press, 1928. 130 pp. (Social Service Monograph No. 4, published in conjunction with the Social Service Review.)*

A critical examination of the facilities in Chicago for the vocational training and placement of crippled children. The author also gives a brief account of certain experiments in a more extended use of existing services.

HILLER, E. T. *The strike: A study in collective action. Chicago, University of Chicago Press, 1928. 304 pp.*

L'INSTITUT INTERNATIONAL DE STATISTIQUE. *Compte rendu de la XVII[ème] session au Caire du 29 Décembre, 1927, au 5 Janvier, 1928. Cairo, Imprimerie Nationale, 1928. 2 vols.*

The proceedings of the seventeenth session of the International Statistical Institute, held at Cairo, December 29, 1927, to January 5, 1928. The sessions of the conference dealt with statistical methods, vital and social statistics as related to race, and economic statistics.

INTERNATIONAL TYPOGRAPHICAL UNION, FACTS CONCERNING THE. *Indianapolis, [1928?]. 22 pp., illus.*

Data on earnings of members of the union, taken from this pamphlet, are given in this issue.

KOUNG, SHIEN-MING. *Comment remédier à la situation tragique des travailleurs Chinois: Une assurance sociale appropriée à la Chine. Louvain, Em. Desbarax, 1927. 254 pp. (Collection de l'École des sciences politiques et sociales de l'Université de Louvain.)*

In Part I of the volume the author discusses the social situation of workers in China, both under the old and the modern régime. In Part II he proposes the organization of a social insurance system especially adapted to that country.

MOUVET, E. *Orientation professionnelle des jeunes gens et jeunes filles. Mons, Librairie Leich, 1928. 238 pp.*

A study of the occupational guidance of young persons. There is a description of the characteristics, both physical and mental, which make for success in the principal occupations in a variety of industries and also a list of conditions which disqualify a worker for a particular occupation.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *A picture of world economic conditions. New York, 247 Park Avenue, 1928. 119 pp.*

NATIONAL RAILWAYS OF MEXICO. *Nineteenth report, for the fiscal period from July 1, 1926, to December 31, 1927. [Mexico City, 1928.] 144 pp.; map.*

Wages of Mexican railway workers in 1926 and 1927, taken from this report, are given in this issue.

PRINCETON UNIVERSITY. Industrial Relations Section. *Rules and financial provisions of industrial pension plans. Princeton, N. J., 1928. 38 pp. [Mimeographed.]*

RUSSELL SAGE FOUNDATION. *Directory of training courses for recreation leaders, compiled by Marguerita P. Williams and Lee F. Hanmer. New York, 1928. 59 pp.*

This directory was compiled at the request of the National Conference on Outdoor Recreation in order to ascertain the opportunities available for the training of both professional and volunteer workers in the field of public recreation. The list includes more than two hundred educational institutions and recreation agencies throughout the United States which offer courses varying from short intensive training courses to complete college or professional school courses.

TAYLOR, PAUL S. *Mexican labor in the United States Imperial Valley. Berkeley, University of California Press, 1928. 94 pp. (University of California publications in economics, vol. 6, No. 1.)*

Reviewed in this issue.

TRADES AND LABOR CONGRESS OF CANADA. *Report of the proceedings of the forty-fourth annual convention, held at the city of Toronto, Ont., September 10 to 14 (inclusive), 1928. [Ottawa, 1928?] 212 pp.*

A brief account of this meeting was given in the December, 1928, issue of the Labor Review.

TWIGG, H. J. *The economic advance of British cooperation, 1913 to 1926. Manchester, The Cooperative Union (Ltd.), 1928. 96 pp.; diagram.*

Certain data from this analysis are given in this issue.