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Contents.

MONTHLY LABOR REVIEW

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Accident Frequency Rates in the Iron and Steel Industry, by Causes, 1913 to 1920.

By Lucian W. Chaney.

FOR some years past the Bureau of Labor Statistics has been able to secure for the iron and steel industry a very considerable body of accident data classified by accident causes. These data, brought down to the end of 1920, are presented herewith.

Table 1 shows the variations in the frequency rates for accidents from the several causes from year to year, 1913 to 1920. Table 2 presents the frequency rates for the whole period, arranged according to production groups. Table 3 shows the variations in the rates for the several production groups, by years, during the 8-year period.

The notable feature of Table 1 is the consistent decline which is shown in all the rates during the period. The year 1916 shows a very general rise, but it does not reach the level of 1913. The following percentages of decline from 1913 to 1920 illustrate these changes: All accident causes, 60 per cent; "machinery," 55 per cent, of which "working machines" has 62 per cent and "cranes and hoisting apparatus" 44 per cent; "vehicles," 52 per cent; "hot substances," 56 per cent; "handling," 61 per cent; and miscellaneous causes, 72 per cent. The constancy of these results is impressive.

Table 2 illustrates the characteristic hazards in the production of the different materials. For example, "hot substances" has the highest rate (5.1) in the group of miscellaneous steel products; "cranes" (6.6), and "handling" (25.8) reach a peak in fabrication; "handling trucks" (2.1)is conspicuously high in the wire mills; a notably low rate for all the causes prevails in tube mills.

In Table 3 the group of miscellaneous steel products is divided into two groups, in which conditions have been somewhat different. In Group A efforts at accident reduction did not get under way as soon as in Group B. As a result they started this eight-year period with frequency rates of 70.9 and 41.3, respectively. From that point to 1920 the decline for Group A has been 50 per cent and for Group B 55 per cent. Something as to the nature of these declines may be learned by noting that for "machinery" Group A shows a decline of 46 per cent and Group B of 41 per cent, while in "handling" Group A shows a decline of 50 per cent and Group B of 59 per cent. That is, Group A has been somewhat more successful in its efforts to lessen the more serious forms of injury, while Group B has had greater success as to those minor injuries whose control depends on the care and skill of the men.

"Fabrication" has the highest rates of any production group in nearly all of the causes. The most notable decline is in "handling," from 51.2 in 1913 to 14.2 in 1920 (72 per cent).

The group Sheet mills records a remarkable decline in "miscellaneous causes," from 16.7 to 1.7 (90 per cent).

"Wire products" has the most striking general decline of any of the production groups. The drop for all causes is from 59.3 to 12 (80 per cent). "Handling," with a change from 29.9 to 4.6 (85 per cent), is the most noteworthy.

"Tubes" shows both a low rate throughout and a decline from 27.2 to 8.9 (67 per cent).

In general, this compilation agrees with those previously made in indicating that the influence of accident prevention effort, as thus far developed, is felt, as far as frequency is concerned, with practical uniformity in all of the principal cause groups. When the matter is studied from the standpoint of severity a quite different aspect of the matter is found to exist. In any large volume of data the controlling factor in the frequency rates is the number of minor injuries. This may be true to such an extent as completely to obscure the real and important considerations. It should therefore be kept in mind constantly that a presentation by frequency gives but a partial view, which may actually be misleading.[1]

TABLE 1.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR ACCIDENT CAUSES IN THE IRON AND STEEL INDUSTRY, 1913 TO 1920, BY YEARS.

Accident cause.	1913	1914	1915	1916	1917	1918	1919	1920
Machinery	7.3	5.0	4.9	5.4	4.5	4.0	3.3	3.3
Working machines	3.9	2.7	2.6	2.6	2.0	1.8	1.4	1.5
Caught in	2.5	1.8	1.6	1.7	1.3	1.2	.9	1.0
Breakage	.1	.1	.1	.1	.1	.1	.1	.1
Moving material in	1.2	.7	.8	.8	.7	.5	.4	.4
Cranes, etc	3.4	2.3	2.4	2.8	2.5	2.2	1.9	1.9
Overhead	2.8	1.9	2.1	2.4	2.1	1.9	1.6	1.5
Locomotive	.3	.1	.2	.2	.2	.2	.2	.2
Other hoisting apparatus	.4	.2	.1	.1	.1	.1	.1	.2
Vehicles	2.3	1.7	1.6	1.7	1.7	1.3	1.2	1.1
Hot substances	5.4	3.6	3.7	4.5	3.6	3.0	2.8	2.4
Electricity	.5	.4	.2	.4	.3	.3	.2	.3
Hot metal	3.5	2.1	2.3	3.0	2.4	2.1	2.0	1.8
Hot water, etc	1.3	1.1	1.2	1.2	.8	.6	.6	.4
Falls of person	4.5	4.1	3.5	3.7	3.3	2.8	2.8	2.5
From ladders	.3	.1	.1	.2	.2	.1	.1	.1
From scaffolds	.2	.2	.2	.2	.3	.2	.2	.2
Into openings	.2	.1	.1	.2	.2	.1	.1	.1
Due to insecure footing	3.8	3.7	3.1	3.1	2.7	2.3	2.3	2.1
Falling material not otherwise specified	1.2	.7	.7	.6	.4	.3	.4	.2
Handling	26.7	19.4	20.6	21.5	15.7	12.8	11.7	10.4
Object dropped in handling	11.2	7.2	7.6	8.4	6.1	5.5	5.0	4.4
Caught between object handled and some other object	3.4	2.6	2.6	3.1	2.1	1.8	1.7	1.3
Trucks	1.9	1.0	1.4	1.4	1.2	.9	.7	.6
Lifting	2.5	2.3	2.5	2.5	2.0	1.4	1.4	1.1
Flying particles from tools	.2	.2	.1	.1	.1	.1	.1	.1
Sharp points and edges	3.8	3.4	3.9	3.1	2.2	1.5	1.3	1.5
Tools	3.7	2.6	2.6	2.9	2.0	1.7	1.4	1.4
Miscellaneous	10.9	7.7	6.7	6.7	5.2	4.6	4.1	3.1
Asphyxiating gas	.2	.2	.1	.1	.1	.1	.2	.1
Flying objects not striking eye	.8	.6	.6	.5	.4	.5	.3	.3
Flying objects striking eye	2.9	2.1	1.7	1.9	1.5	1.6	1.3	1.1
Heat	.9	.8	.4	.4	.1	.2	.1	.1
Other	6.0	4.0	3.8	3.8	3.0	2.2	2.2	1.5
Grand total	58.3	42.0	41.7	44.2	34.4	28.9	26.2	23.1
Number of workers	*147,052*	*112,027*	*127,268*	*173,793*	*185,210*	*177,163*	*165,724*	*175,435*

[1] It is not practicable to show severity rates in this connection, but a full discussion of this subject will appear in a bulletin on "Causes and prevention of accidents in the iron and steel industry," which will be published by this bureau in the near future.

TABLE 2.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR SPECIFIED PRODUCTION GROUPS, 1913 TO 1920, BY ACCIDENT CAUSES.

Accident cause.	Miscellaneous steel products.	Fabrication.	Sheets.	Wire products.	Tubes.	Total.
Machinery	5.0	10.2	3.0	4.9	2.5	4.6
Working machines	1.9	3.6	1.7	3.9	1.3	2.2
Caught in	1.1	3.1	1.4	2.4	.8	1.5
Breakage	.1	.1	.1	.1	.1	.1
Moving material in	.7	.4	.2	1.4	.4	.7
Cranes, etc	3.1	6.6	1.3	1.0	1.2	2.4
Overhead	2.6	5.9	1.3	.6	.9	2.0
Locomotive	.3	.2	(1)	.2	.2	.2
Other hoisting apparatus	.2	.5	(1)	.2	.1	.2
Vehicles	2.5	.9	.4	.8	.6	1.6
Hot substances	5.1	1.6	2.5	2.6	1.2	3.6
Electricity	.5	.2	.1	.1	.1	.3
Hot metal	3.8	1.1	.8	1.3	.9	2.4
Hot water, etc	.8	.2	1.6	1.2	.2	.9
Falls of persons	3.9	5.1	3.5	2.7	1.2	3.3
From ladders	.2	.3	.1	.2	.1	.2
From scaffolds	.3	.7	.1	.1	.1	.2
Into openings	.2	.1	.1	.1	.1	.2
Due to insecure footing	3.2	4.1	3.2	2.3	.9	2.8
Falling material not otherwise specified	.7	.9	.2	.6	.2	.5
Handling	18.8	25.8	18.4	16.9	5.2	17.0
Object dropped in handling	9.0	10.8	5.0	4.2	2.6	6.8
Caught between object handled and some other object	2.9	6.1	1.2	1.5	.7	2.3
Trucks	.8	1.2	1.6	2.1	.5	1.1
Lifting	2.1	1.6	1.5	3.1	.4	1.9
Flying particles from tools	.1	.4	.1	.1	(1)	.1
Sharp points and edges	1.4	1.3	6.5	4.2	.3	2.5
Tools	2.5	4.4	2.6	1.8	.7	2.2
Miscellaneous	6.5	8.1	6.9	6.1	1.6	5.9
Asphyxiating gas	.3	(1)	(1)	(1)	(1)	.2
Flying objects not striking eye	.7	1.0	.2	.3	.2	.5
Flying objects striking eye	2.3	3.7	1.3	1.0	.4	1.7
Heat	.4	.2	.6	.2	.1	.3
Other	2.9	3.2	4.8	4.6	.9	3.2
Grand total	42.6	52.7	34.9	34.6	12.5	36.5
Number of workers	*613,609*	*72,102*	*175,419*	*228,585*	*173,613*	*1,263,328*

[1] Less than 0.05.

TABLE 3.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR SPECIFIED PRODUCTION GROUPS, 1913 TO 1920, BY YEARS AND ACCIDENT CAUSES.

MISCELLANEOUS STEEL PRODUCTS—GROUP A.

Accident cause.	1913	1914	1915	1916	1917	1918	1919	1920
Machinery	6.9	5.4	6.0	7.7	5.8	4.5	3.6	3.7
Working machines	2.9	2.3	2.1	2.7	1.9	1.7	1.2	1.4
Caught in	1.7	1.4	1.0	1.6	1.0	1.0	.8	.7
Breakage	.1	.1	.1	.1	.1	.1	(1)	.1
Moving material in	1.1	.8	1.0	1.0	.8	.6	.4	.6
Cranes, etc	4.0	3.1	3.9	5.0	3.9	2.8	2.3	2.3
Overhead	2.9	2.6	3.5	4.4	3.4	2.5	2.2	1.9
Locomotive	.7	.2	.2	.3	.3	.2	.1	.2
Other hoisting apparatus	.4	.3	.2	.2	.2	.1	.1	.2
Vehicles	5.0	3.7	2.9	3.6	4.1	2.6	2.2	2.1
Hot substances	7.9	4.6	6.0	8.4	6.7	5.2	5.0	4.6
Electricity	.8	.6	.5	.8	.8	.5	.4	.4
Hot metal	5.5	2.9	4.3	6.3	5.3	4.1	4.0	3.7
Hot water, etc	1.6	1.1	1.3	1.3	.7	.6	.6	.5
Falls of person	6.0	4.9	4.4	5.7	4.6	4.0	4.1	3.5
From ladders	.3	.....	.2	.3	.1	.2	.2	.1
From scaffolds	.4	.3	.2	.3	.3	.2	.3	.2
Into openings	.5	.2	.2	.3	.2	.2	.2	.1
Due to insecure footing	4.9	4.4	3.8	4.8	4.0	3.4	3.4	3.1
Falling material not otherwise specified	2.1	.9	.7	.9	.7	.4	.8	.5
Handling	31.0	22.4	26.0	32.3	23.7	19.8	18.9	15.8
Object dropped in handling	16.0	10.1	12.4	15.5	11.0	9.4	8.5	7.7
Caught between object handled and some other object	4.0	3.3	3.4	4.1	3.3	2.9	3.3	2.3
Trucks	1.2	.7	1.1	1.4	1.2	.8	.7	.6
Lifting	3.0	2.7	3.1	3.8	3.0	2.5	2.5	2.0
Flying particles from tools	.2	.2	.2	.1	.2	.1	.1	(1)

[1] Less than 0.05.

TABLE 3.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR SPECIFIED PRODUCTION GROUPS, 1913 TO 1920, BY YEARS AND ACCIDENT CAUSES—Continued.

MISCELLANEOUS STEEL PRODUCTS—GROUP A—Concluded.

Accident cause.	1913	1914	1915	1916	1917	1918	1919	1920
Handling—Concluded.								
Sharp points and edges	2.7	2.1	2.1	2.8	1.9	1.7	1.6	1.2
Tools	3.9	3.3	3.7	4.6	3.1	2.4	2.2	2.0
Miscellaneous	12.0	10.1	8.0	8.9	5.7	5.4	5.1	5.2
Asphyxiating gas	.6	.4	.3	.3	.2	.2	.3	.2
Flying objects not striking eye	1.0	1.3	.9	.8	.6	.5	.4	.6
Flying objects striking eye	3.5	3.2	2.2	2.9	1.9	1.2	1.4	1.6
Heat	1.2	.9	.7	.7	.4	.5	.3	.3
Other	5.7	4.3	3.9	4.2	2.6	3.0	2.7	2.6
Grand total	70.9	50.7	51.9	67.6	51.3	42.0	39.7	35.5
Number of workers	*46,858*	*35,501*	*40,927*	*47,827*	*51,271*	*49,258*	*50,381*	*50,014*

MISCELLANEOUS STEEL PRODUCTS—GROUP B.

Machinery	5.8	3.9	3.3	4.6	3.5	4.7	4.0	3.4
Working machines	2.3	1.4	1.4	1.9	1.1	1.8	1.2	1.2
Caught in	1.5	1.0	.9	1.2	.7	1.0	.8	.7
Breakage	.1	(1)	.1	.1	.1	.2	.1	.1
Moving material in	.7	.4	.4	.6	.3	.6	.4	.4
Cranes, etc	3.5	2.5	1.9	2.7	2.4	2.9	2.8	2.2
Overhead	3.1	2.3	1.5	2.4	2.1	2.7	2.4	1.9
Locomotive	.2	.1	.3	.2	.2	.1	.2	.2
Other hoisting apparatus	.2	.1	.1	.1	.1	.1	.2	.2
Vehicles	1.6	1.3	.9	1.0	1.1	1.3	.9	.7
Hot substances	5.5	4.4	2.8	4.0	2.9	3.6	2.9	1.9
Electricity	.5	.5	.2	.3	.3	.5	.3	.4
Hot metal	4.0	3.2	2.0	3.1	2.2	2.8	2.2	1.3
Hot water, etc	1.0	.7	.6	.6	.4	.3	.4	.2
Falls of person	2.3	3.3	2.3	2.4	2.5	2.6	2.2	2.1
From ladders	.3	.2	.1	.1	.2	.1	.1	.1
From scaffolds	.1	.3	.2	.3	.3	.2	.3	.1
Into openings	.2	.2	.1	.1	.2	.2	.1	.1
Due to insecure footing	1.7	2.6	1.9	1.9	1.8	2.1	1.7	1.8
Falling material not otherwise specified	.6	.2	.3	.2	.1	.6	.5	.1
Handling	17.0	12.3	9.4	11.1	6.8	9.3	6.9	6.9
Object dropped in handling	8.4	6.6	5.0	6.3	3.9	4.6	4.0	3.9
Caught between object handled and some other object	3.3	2.0	1.5	1.8	.9	1.8	.8	1.1
Trucks	.5	.4	.4	.5	.3	.4	.2	.3
Lifting	1.3	.9	.7	.7	.6	.8	.7	.6
Flying particles from tools	(1)	.1	.1	.1	.1	.1	(1)	.1
Sharp points and edges	1.3	.5	.5	.4	.2	.4	.3	.2
Tools	2.2	1.8	1.2	1.3	.8	1.2	.8	.8
Miscellaneous	8.2	4.8	4.4	4.9	3.4	9.2	5.6	3.5
Asphyxiating gas	.2	.3	.2	.1	.3	.4	.4	.3
Flying objects not striking eye	.3	.3	.5	.8	.4	1.1	.4	.4
Flying objects striking eye	2.4	2.1	2.3	2.2	1.7	5.8	3.8	1.8
Heat	.5	.5	.....	(1)	.....	.1	.....	(1)
Other	4.8	1.6	1.4	1.8	1.0	1.8	1.0	1.0
Grand total	41.3	27.6	23.0	28.2	20.5	31.4	23.2	18.6
Number of workers	*22,726*	*14,914*	*17,567*	*25,216*	*29,067*	*27,635*	*22,538*	*25,740*

FABRICATION.

Machinery	17.5	8.8	9.5	8.4	10.4	9.0	6.8	10.4
Working machines	5.5	3.1	3.5	3.6	3.9	3.2	2.5	3.5
Caught in	4.7	3.1	3.5	3.5	3.3	2.4	1.8	2.3
Breakage	.2	.....	(1)	.1	.2	.2	.1	.1
Moving material in	.6	.....	.....	(1)	.4	.6	.7	1.0
Cranes, etc	12.0	5.7	5.9	4.8	6.6	5.8	4.3	6.9
Overhead	10.4	5.2	5.7	4.7	5.9	5.3	3.7	5.7
Locomotive	.2	.1	.1	.1	.5	.3	.4	.1
Other hoisting apparatus	1.4	.4	.1	(1)	.2	.2	.3	1.2
Vehicles	1.4	.6	1.6	2.0	.7	.4	.5	.5
Hot substances	2.8	1.3	2.0	1.5	1.1	1.4	1.2	1.1
Electricity	.5	.4	.3	.3	.1	.1	.1	.1
Hot metal	2.0	.8	1.5	1.0	.8	1.1	.9	1.0

[1] Less than 0.05

TABLE 3.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE FOR SPECIFIED PRODUCTION GROUPS, 1913 TO 1920, BY YEARS AND ACCIDENT CAUSES—Continued.

FABRICATION—Concluded.

Accident cause.	1913	1914	1915	1916	1917	1918	1919	1920
Hot substances—Concluded.								
Hot water, etc	0.3	0.1	0.2	0.2	0.2	0.2	0.2	(1)
Falls of person	7.6	7.3	5.8	5.2	5.2	3.7	3.4	3.8
From ladders	.4	.2	.1	.1	.4	.2	.2	.3
From scaffolds	.4	.5	.5	.5	1.1	.6	.5	1.1
Into openings	.2	(1)	.....	.3	.1	(1)	.2	(1)
Due to insecure footing	6.6	6.6	5.2	4.3	3.6	2.9	2.5	2.3
Falling material not otherwise specified	2.3	1.8	1.7	1.4	.3	.4	.1	(1)
Handling	51.2	30.3	26.5	27.1	23.8	18.5	15.7	14.2
Object dropped in handling	19.9	11.3	11.1	12.8	9.8	8.2	7.1	6.2
Caught between object handled and some other object	11.2	8.1	7.5	6.6	6.8	3.6	3.1	2.3
Trucks	2.4	.9	1.0	1.8	1.7	1.1	.7	.8
Lifting	2.2	1.6	1.4	2.1	2.0	1.7	1.4	1.5
Flying particles from tools	.8	.8	.4	.2	.2	.4	.5	.4
Sharp points and edges	3.4	1.8	1.1	.6	.6	.8	2.3	.7
Tools	11.3	5.8	4.0	3.0	2.7	2.7	2.3	2.4
Miscellaneous	17.5	8.0	6.9	6.6	10.2	4.6	5.1	5.2
Asphyxiating gas	(1)	.....	.....	.....	.1	.....	.....	(1)
Flying objects not striking eye	3.3	1.2	.4	.4	.8	.9	.5	.3
Flying objects striking eye	7.8	3.7	3.6	3.6	3.5	1.6	2.6	3.5
Heat	.3	.2	.1	.3	.1	.1	(1)	(1)
Other	6.1	2.9	2.8	2.3	5.7	2.0	1.9	1.3
Grand total	100.3	59.0	53.5	52.1	51.3	38.2	32.8	35.3
Number of workers	*9,667*	*7,478*	*6,920*	*9,421*	*10,112*	*10,786*	*8,557*	*9,161*

SHEETS.

Machinery	6.2	4.0	2.8	2.9	2.8	2.3	2.1	1.8
Working machines	3.7	2.7	1.5	1.7	1.4	1.2	1.0	.8
Caught in	2.6	2.5	1.4	1.6	1.3	1.1	.9	.7
Breakage	.2	.2	.1	.....	.....	.1	.2	(1)
Moving material in	.9	(1)	(1)	.1	.1	.....	(1)	(1)
Cranes, etc	2.5	1.4	1.3	1.2	1.4	1.1	1.0	1.0
Overhead	2.4	1.4	1.3	1.2	1.3	1.1	1.0	1.0
Locomotive	.....	.....	.....	.....	(1)	.....	(1)	(1)
Other hoisting apparatus	.1	.....	(1)	.....	.1	.....	(1)	(1)
Vehicles	.6	.8	.9	.8	.3	.1	.1	.1
Hot substances	4.6	3.3	2.5	2.5	2.6	1.9	1.6	1.8
Electricity	.1	.1	.1	.1	(1)	.1	.1	.1
Hot metal	1.6	1.5	.9	.9	.5	.4	.3	1.1
Hot water, etc	2.9	1.7	1.5	1.5	2.1	1.4	1.2	.7
Falls of person	5.7	4.8	3.0	2.8	3.6	3.3	3.1	2.5
From ladders	.2	.1	.1	.1	.1	.1	.2	(1)
From scaffolds	.1	.1	.....	(1)	(1)	(1)	.1	.1
Into openings	.1	.1	.1	.2	.2	.1	.1	.1
Due to insecure footing	5.3	4.5	2.9	2.5	3.3	3.1	2.8	2.4
Falling material not otherwise specified	.4	.8	.5	.4	.....	.....	.1	.....
Handling	27.4	24.1	22.6	19.8	17.2	12.7	13.4	14.9
Object dropped in handling	10.7	6.4	4.9	4.7	3.9	3.6	4.0	3.6
Caught between object handled and some other object	.8	2.1	1.9	1.9	.5	.8	.5	1.3
Trucks	3.7	1.3	1.6	1.6	1.7	1.0	1.3	.8
Lifting	1.8	2.1	1.5	1.6	2.0	1.1	1.1	.9
Flying particles from tools	.1	.1	.1	.1	.1	(1)	(1)	(1)
Sharp points and edges	5.5	8.7	9.8	7.4	6.4	4.6	4.4	6.7
Tools	4.8	3.4	2.8	2.5	2.5	1.6	2.6	1.6
Miscellaneous	16.7	9.1	7.2	5.5	7.4	5.6	5.4	1.7
Asphyxiating gas	.....	.....	.....	.....	.1	.....	(1)	(1)
Flying objects not striking eye	.8	.2	.1	(1)	.1	.1	.1	(1)
Flying objects striking eye	2.9	1.6	1.1	1.0	1.7	1.0	.6	.7
Heat	2.7	2.2	.8	.6	.....	.....	(1)	.....
Other	10.2	5.1	5.2	3.9	5.5	4.5	4.6	.9
Grand total	61.6	47.2	37.3	34.0	33.9	25.9	23.8	22.8
Number of workers	*18,637*	*15,046*	*18,658*	*24,727*	*26,325*	*22,812*	*23,867*	*25,357*

[1] Less than 0.05.

TABLE 3.—ACCIDENT FREQUENCY RATES (PER 1,000,000 HOURS' EXPOSURE) FOR SPECIFIED PRODUCTION GROUPS, 1913 TO 1920, BY YEARS AND ACCIDENT CAUSES—Concluded.

WIRE PRODUCTS.

Accident cause.	1913	1914	1915	1916	1917	1918	1919	1920
Machinery	9.0	6.4	6.4	5.4	4.4	3.2	2.4	2.6
Working machines	7.7	5.3	5.3	4.3	3.5	2.3	1.7	1.9
Caught in	5.0	3.2	3.4	2.3	1.6	1.5	1.2	1.3
Breakage	.2	.2	.2	.1	.1	.1	(1)	(1)
Moving material in	2.5	1.9	1.7	1.9	1.8	.7	.5	.5
Cranes, etc	1.3	1.1	1.1	1.1	.9	.9	.6	.7
Overhead	.8	.7	.6	.7	.6	.5	.4	.4
Locomotive	.1	.2	.3	.1	.2	.2	.1	.2
Other hoisting apparatus	.4	.2	.2	.3	.1	.2	.2	.2
Vehicles	1.2	.6	1.1	.7	.5	.8	.5	.7
Hot substances	4.2	3.7	3.7	3.6	2.1	1.7	1.2	1.0
Electricity	.2	.3	.1	.2	.2	.1	.1	.1
Hot metal	2.6	1.8	1.5	1.2	.9	1.1	.8	.7
Hot water, etc	1.4	1.6	2.1	2.2	1.0	.5	.3	.2
Falls of person	4.1	3.8	4.0	3.5	2.4	1.8	1.2	1.2
From ladders	.3	.2	.1	.1	.2	.1	.1	.1
From scaffolds	.2	.2	.2	.1	.1	.2	(1)	.1
Into openings	.1	(1)	.1	.2	.1	(1)	.1	(1)
Due to insecure footing	3.5	3.4	3.6	3.1	2.0	1.5	1.0	.9
Falling material not otherwise specified	1.2	.5	1.1	.7	.6	.2	.1	.2
Handling	29.9	21.9	26.2	24.2	15.9	8.9	5.0	4.6
Object dropped in handling	7.5	5.5	6.0	5.2	4.0	2.7	1.4	1.5
Caught between object handled and some other object	2.8	1.9	2.3	2.6	1.5	.4	.3	.3
Trucks	3.7	2.3	3.0	2.7	2.0	1.3	.7	.7
Lifting	4.5	3.8	5.0	4.8	3.0	1.5	1.3	1.0
Flying particles from tools	.2	(1)	.1	.1	.1	.....	(1)	(1)
Sharp points and edges	8.7	6.2	7.5	5.8	3.6	1.1	.7	.5
Tools	2.5	2.1	2.3	3.0	1.7	1.9	.5	.6
Miscellaneous	9.6	8.6	9.0	9.8	6.4	2.1	2.2	1.7
Asphyxiating gas	.1	(1)	.1	.....	(1)	(1)	.1	(1)
Flying objects not striking eye	.5	.7	.6	.1	.3	.5	.2	.2
Flying objects striking eye	1.7	1.2	1.4	1.6	1.1	.5	.4	.2
Heat	.4	.3	.2	.3	.1	.1	(1)	(1)
Other	6.9	6.4	6.7	7.8	4.9	1.0	1.5	1.2
Grand total	59.3	46.2	52.4	48.2	32.5	18.8	12.5	12.0
Number of workers	*26,890*	*23,550*	*26,912*	*32,324*	*32,932*	*28,854*	*26,658*	*30,525*

TUBES.

Machinery	4.3	1.9	2.3	2.5	2.2	2.2	2.7	2.0
Working machines	2.3	.8	1.2	1.4	1.2	1.1	1.4	1.2
Caught in	1.3	.5	.7	.9	.8	.6	.9	.9
Breakage	.1	.1	.1	.1	.1	.1	.2	.1
Moving material in	.9	.2	.4	.4	.3	.4	.4	.3
Cranes, etc	2.0	1.1	1.1	1.1	1.0	1.1	1.3	.8
Overhead	1.7	.9	.8	.8	.8	.8	.8	.5
Locomotive	.2	(1)	.2	.2	.2	.3	.4	.2
Other hoisting apparatus	.1	.2	.1	.1	(1)	(1)	.1	.1
Vehicles	.7	.4	.4	.4	.7	.7	.7	.6
Hot substances	2.8	1.4	1.2	1.1	1.1	.7	.8	.9
Electricity	.3	(1)	.....	(1)	(1)	(1)	(1)	.1
Hot metal	2.2	1.0	.8	.9	1.0	.5	.6	.6
Hot water, etc	.3	.4	.3	.2	.1	.2	.1	.2
Falls of person	1.6	1.5	1.0	1.2	1.0	1.0	1.1	1.0
From ladders	.2	.1	.1	(1)	.1	.1	.1	.1
From scaffolds	.1	.1	.1	.1	.1	.1	.1	(1)
Into openings	.1	.1	(1)	.....	.....	.1	.1	.1
Due to insecure footing	1.2	1.2	.8	1.1	.8	.7	.8	.9
Falling material not otherwise specified	.4	.2	.1	.1	.4	.1	.1	.1
Handling	12.4	5.4	4.6	5.4	3.7	3.8	3.1	3.4
Object dropped in handling	5.3	2.8	2.6	3.0	1.8	2.3	1.6	1.9
Caught between object handled and some other object	1.6	.6	.6	.7	.4	.5	.4	.4
Trucks	1.1	.4	.3	.5	.3	.4	.3	.3
Lifting	1.1	.7	.2	.3	.3	.2	.3	.2
Flying particles from tools	(1)	(1)	(1)	(1)	.1	(1)	.1	(1)
Sharp points and edges	1.3	.4	.3	.3	.2	.1	.2	(1)
Tools	2.0	.5	.6	.6	.6	.3	.3	.5
Miscellaneous	5.0	2.0	1.1	1.6	1.1	.6	.7	.9
Asphyxiating gas	.1	(1)	(1)	(1)	.1	(1)	(1)	(1)
Flying objects not striking eye	.2	.3	.2	.2	.2	.1	.1	.1
Flying objects striking eye	1.6	.6	.2	.4	.2	.1	(1)	.1
Heat	.1	.5	.1	(1)	.....	(1)	(1)	.....
Other	3.0	.6	.6	1.0	.7	.4	.5	.6
Grand total	27.2	12.5	10.8	12.4	10.2	9.1	9.3	8.9
Number of workers	*22,334*	*15,538*	*16,284*	*29,931*	*24,464*	*24,708*	*21,707*	*24,647*

[1] Less than 0.05.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS.

Engineers' Report on Industrial Waste.

Review by MARGARET GADSBY.

IT IS evident when prices of finished products are so high that the consumer can not buy, and prices of raw materials are so low that the producer can not afford to produce, something must be amiss. What is it? Partisans of all points of view have brought forth arguments based largely upon convictions and prejudices, in support of their hypotheses, but in one respect there has been accord—fundamental changes must be made in our economic system if industry is to serve all who are dependent on its effective operation, and if the undercurrent of unrest is not to carry us too far out to sea.

Undoubtedly our haphazard method of production is an important factor in the present anomalous situation. As the present business depression passes and demand again outstrips supply, we can not go back to the old random methods if American industry is to make further strides in advance and meet the keen world competition with which it is already faced. But what to do—how to go about rationalizing our industrial system? To the committee on waste of the Federated American Engineering Societies we are indebted for a constructive step toward remedial action. Sporadic attempts have been made to measure the efficiency of production methods in individual plants, but until the appointment of the committee on waste no comprehensive attempt had been made to measure the efficiency of industry as a whole.

The committee on waste, it will be remembered, was appointed in January, 1921, by Herbert Hoover, then president of the Federated American Engineering Societies. The appointment of this committee of 18 engineers was authorized by the American Engineering Council, the executive body of the Federated Engineering Societies. Only the summary of the committee's report has been issued, outlining the causes of industrial waste, evaluating the responsibility therefor, and suggesting methods for its elimination. The completed study will include also the engineers' field reports covering the industries included in the survey, and seven reports of a statistical character, each dealing with some aspect of industrial waste or its elimination on an extensive or nation-wide basis. Six important industries are included in the study, the operation of which directly affects the daily life of everyone, namely, the building trades, men's ready-made clothing, boot and shoe industry, printing, metal trades, and textile manufacturing. The completed report will be issued in book form some time in September.

The essence of the plan was "to gather quickly such concrete information as might be used to stimulate action and to lay the foundation for other studies. It was believed that a limited yet care-

fully studied volume of findings obtained through a rapid intensive study would not impair the value of the facts disclosed or the validity of the recommendations based upon them. So within less than five months the committee completed an assay or analysis of waste in six typical branches of industry, and presented a summary of its findings to the American Engineering Council."

The committee was not motivated by desire to place blame for the wastes revealed in its surveys upon any individual, group, or class. "The wastes revealed are the result of methods, tactics, practices, and relationships of long standing in industry, and the committee has merely desired to indicate the main opportunities for eliminating waste and to show whose opportunity it may be to adopt proper measures for such elimination."

The committee's conception of industrial waste has been "that part of the material, time, and human effort expended in production represented by the difference between the average attainments on one hand and performance actually attained on the other, as revealed by the detailed reports."

A staff of 50 engineers was employed. Each engineer who made a field investigation was thoroughly acquainted with the industry he studied. Every part of his completed report was submitted to engineers or others having particular knowledge or specific experience, with the request for constructive criticisms and suggestions. The deductions drawn from the facts revealed by the survey, therefore, represent the expert knowledge of the investigator and the composite experience and knowledge of about 80 engineers and their associates.

No claim is made to completeness. Finding it impossible to make a comprehensive study of the 288,376 establishments composing American industry, the committee selected a group of representative plants in each particular branch of the six industries chosen for the surveys. The result of the study is likened not to a finished machine, but to the first pencil drawings of the design of a new machine.

A total of 125 plants was investigated, 73 in the building industry, 9 plants engaged in the manufacture of men's ready-made clothing, 8 engaged in the manufacture of boots and shoes, 6 printing establishments, 16 plants in the metal trades, and 13 in textile manufacturing were studied. Additional information was furnished by 94 plants.

Causes of Waste.

THE committee attributes waste in industry to four causes, namely:

1. Low production, caused by faulty management of material, plant, equipment, and men.
2. Interrupted production, resulting from idle men, idle materials, idle plants, idle equipment.
3. Restricted production intentionally caused by owners, management, or labor.
4. Lost production caused by ill health, physical defects, and industrial accidents.

The committee discusses in detail the waste attributable to these four causes.

Low Production.

Low production the committee attributes to eight factors.

(1) To faulty material control, i. e., the lack of economy in the use of raw materials, haphazard methods of planning delivery of supplies, resulting in delays for want of materials, and the speculative purchasing of raw materials, etc.

(2) To faulty design control, resulting in a lack of standardization of the product. For example, in the building industry standardization of the thickness of certain walls might mean a saving of some $600 in the cost of the average house. The standardization of newspaper columns to one size would make possible an annual saving of three to five million dollars on composition and plates alone.

(3) To faulty production control, i. e., lack of effective planning of flow of material to operators.

It is found that at least 10 hours per week per man is thrown away on energy-wasting and time-wasting work resulting from lack of shop methods, while an additional two or three hours per man per week are wasted in unnecessary work.

Fixing the value of annual output in the men's ready-made clothing industry at $600,000,000, it should be relatively easy to save three-quarters of a million dollars a day, an increase of 40 per cent in effectiveness.

(4) To lack of cost control. The majority of plants studied lacked a knowledge of costs and have no cost control, therefore having no adequate method of judging fairly and accurately when improvements are needed and when waste is occurring.

(5) To lack of research. Need for more intensive research activity is apparent in every industry.

(6) To faulty labor control.

With perhaps two or three exceptions, shoe shops have no departments maintaining modern personnel relations with the employees. Thus the worker has no unbiased means of approach to his employer, and the employer lacks the means for treating with his own employees. Among the plants studied, only a few have effective employment methods. Fewer keep a record and make an analysis of the reason why men quit. Men are usually discharged or quit work without any executive knowing the reason why. No steps are taken to correct the conditions that bring about so many expensive separations from the working force.

A high labor turnover is a rough index of one of the common wastes resulting from inadequate labor management. No facts are available to show the extent of labor turnover as an unavoidable element in industrial waste. The accessible data are not comparable for no common method of computation and analysis has been followed. However, this is an important factor of labor waste because of its magnitude and because of the expense involved in training new workers to take the place of those who leave.

In the shoe industry the cost of training an inexperienced man for cutting upper leather in a well-managed shop is $576; for a semiexperienced man, $450; and to install an experienced man in a different shop costs $50. For the average shop these figures are unquestionably low.

The average labor turnover for the year 1920 in the metal trades plants covered (wherever records were kept, which was the case in less than half of the plants), was was 160 per cent—figured in most cases as the ratio between the number of "separations" and the average number of employees on the pay roll. The highest turnover was 366 per cent.

The building trades have given little consideration to the subject of labor turnover. In construction work it is particularly difficult to estimate the extent, because the actual percentage of turnover constantly varies as the building progresses and the number of men is increased and later decreased. Men quit for such reasons as the type of work they are to perform, the risk involved in the particular work, and unfair treatment by foremen. They are discharged for lack of work, incompetence, laziness, causing

trouble, or sometimes because there are better men available. The labor turnover and service records of typical contractors show large losses.

Employment managers are rarely employed even upon the largest jobs, and "hiring and firing" is at the will of the foreman or superintendent.

Another fault in labor control is improper or inadequate rate setting. In negotiations and controversies between employer and operator in the shoe industry, what stands out is the lack of knowledge of facts which can be used as a basis for setting rates.

In a shoe factory, for example, with the adoption of a new style new rates have to be set. The operatives through their agent make a guess at the time demanded and therefore the proper rate to set. The manufacturer makes a similar guess. His estimate is usually lower than that of the operators. A compromise is made, based not on facts but on the argumentative ability of the two parties. If the rate is set too high, it means unequal payments to the workers or else cutting rates later on. This policy is responsible for much of the friction in the shoe industry.

(7) To ineffective workmanship.

Still another loss resulting in low production arises from inefficient workmanship. For much of this management is responsible through failure to provide opportunities for education or special training. Management can not, however, do more than provide these facilities, and experience has shown that it is difficult to interest workmen in training courses which are designed to increase effectiveness. Further, much ineffective workmanship arises from lack of interest in work or lack of pride in good workmanship. The field reports give no evaluation of spoilage, which is one of the measures of this form of waste.

(8) To faulty sales policies, i. e., the cancellation of orders, and the return of unsold goods.

Interrupted Production.

This cause of waste has three phases—idle men, idle material, and idle plant and equipment. The committee's discussion of waste due to idle men is here reproduced:

(1) *Minimum unemployment.*—The amount of idleness or unemployment in industry can only be evaluated through rough estimates. There is no national machinery for collecting the facts.

But in the best years, even the phenominal years of 1917 and 1918 at the climax of war-time industrial activities, when plants were working to capacity and when unemployment reached its lowest point in 20 years, there was a margin of unemployment amounting to more than a million men. This margin is fairly permanent; seemingly one or more wage earners out of every forty are always out of work.

This unemployment means for the worker a loss in wages, for industry increased overhead due to idle equipment and idle materials, and for the public a lessened purchasing power, with all its attendant evils.

(2) *Unemployment caused by industrial depressions.*—During periods of industrial and business depressions, unemployment reaches its greatest amount. Such depressions appear more or less regularly at 7 or 10 year periods and each brings its increase of unemployment and wastage of the productive capacity of industry.

In January, 1921, a nation-wide survey of employment made by the United States Employment Service of the Department of Labor showed that there were 6,070,648 workers then employed in industry as compared with 9,402,000 in January of 1920, a decrease of 3,331,352 or approximately 35.5 per cent. This survey covered 35 States and 182 industrial cities and centers and may be considered as fairly reflecting conditions at that time.

(3) *Intermittent unemployment.*—In addition to minimum and climacteric unemployment, many essential industries show a high unemployment or idleness once a year or oftener. Practically all industries are in a sense seasonal.

To present a few examples: The clothing worker is idle about 31 per cent of the year; the average shoemaker spends only 65 per cent of his time at work; the building trades workman is employed only about 190 days in the year or approximately 63 per cent of his time; the textile industry seemingly has regular intervals of slack time; during the past 30 years bituminous coal miners were idle an average of 93 possible working days per year.

During the exceptional year of 1919 in the paper box industry 4,311 employees in 77 establishments averaged 90 per cent of full time; in the women's clothing industry 6,772 women workers employed in 157 establishments averaged 91 per cent; in the confectionery industry 12,152 workers in 101 establishments averaged 87 per cent; and in the overall industry 6,546 workers in 129 establishments averaged 87 per cent of full time. In the brick, chemical, and glass industries the percentage of full time worked was 85, 84, and 87, respectively. In most years the percentage of lost days is much larger.

Not only does intermittent unemployment reduce the productive capacity of the industry in which it exists, but it brings other wastes. One consequence is a concrete but fallacious industrial philosophy, the "make work" or "lump of work" theory. This is the belief that there is only so much work to be done, and that the sensible course of action is to retard production to make employment last throughout the year, or to uphold prices.

(4) *Unemployment due to labor disturbances.*—Another form of unemployment comes from open conflict between management and labor. Here it should be said that in the past, at least, the amount of waste from the general run of strikes and lockouts through loss of wages and curtailment of production has been less than is popularly supposed. That these disturbances do produce unemployment is true, but in the industries studied they do not of themselves appear to constitute a major source of reduced production. The ramifications of such strikes with their attendant and indirect losses the committee has been unable to trace.

Such labor disturbances are either strikes or lockouts. As it is difficult to distinguish between them, and the industrial effects are practically the same, it has seemed best in this summary to deal only with strikes.

More than one-half of all the strikes that occurred between 1881 and 1905 [1] and more than one-half of the employees thrown out of work were in highly irregular or distinctly seasonal occupations.

Since most strikes occur in seasonal employments, it can be deduced that output is not necessarily penalized, for it is often possible to make up the losses incurred by strikes through increased production at other times.

More coal was mined in 1910 than in 1911, although the former year witnessed many protracted strikes involving large numbers of employees. The year 1912, with 47 per cent of the entire labor force out on strike and with an average loss per man of 40 days, showed an increased output of coal per man per day and per year, and 6 days more employment than in 1911, which was relatively strikeless.

The total production was also more. Low production in 1914 and 1915 was due to general business depression caused by the World War rather than to strikes.

In New York State in 1916 two days were lost per capita per year of those classed as gainfully employed because of strikes. This was a loss only one-fifth as serious as average time lost through illness. In the same State in 1918 about 32 per cent of the time lost from strikes and lockouts was in the building and clothing industries.

In addition to the direct loss of time, however, there is a loss incurred through retarded production previous to and immediately following strikes.

Wages and hours have always been the chief cause of strikes. There has been a marked falling off in the relative number of strikes for this cause in recent years as compared with 1898–1905.

Jurisdictional disputes—that is, strikes by the members of one trade against the performance of work which they regard as belonging to their craft by members of some other craft or trade—are relatively unimportant. The Bureau of Labor Statistics reports there were 19 such strikes in 1916, 21 in 1917, 16 in 1918, and 15 in 1919. However, there are disputes constantly arising which, while they do not lead to formal strikes, work demoralization and are a fertile source of inefficient use of labor.

In the building trades jurisdictional quarrels represent one-quarter of the total number of strikes.

Restricted Production.

Production is restricted, the report states, by owners and management and by labor. An example of restriction by owners and management is taken from the building trades, in which contractors, builders, and supply dealers have restricted production by maintaining high prices, by collusion in bidding, and unfair practices. At

[1] There are complete statistics for these years. Since 1906 no official investigation has been made.

times there has been collusion between employers and labor, tending to raise prices unduly.

The workers, the committee says, restrict output by individual and collective action. Individual output is restricted in two ways. "On the one hand, when workers are scarce the less conscientious workers become independent and slacken speed, whereas when workers are plentiful they work with greater diligence and care for fear of unemployment. On the other hand, the dread of unemployment is so pronounced that employees engaged in seasonal enterprises frequently restrict production in order to make employment last longer; some workers, moreover, through consideration of their fellow employees, limit production to provide work for them, a practice which ultimately results in an economic loss."

Important restrictions of output by employees can only result from collective action. In the building trades, for instance, some painters' unions do not permit of the use of a brush wider than 4½ inches for oil paint, although for certain classes of work a wider brush is more economical. Plumbers' and steamfitters' unions prohibit the use of bicycles and vehicles of all sorts during working hours. Members of those unions in some sections of the country demand that all pipe up to 2 inches shall be cut and threaded on the job.

Restriction of output results from certain trade-union rules. Many unions oppose production standards. The restriction of the number of apprentices is common and in some cases seems to be extreme and unfair. The rules of the building trades also object to many labor-saving devices.

Unions are charged with restricting the use of machinery. Such restrictions, says the committee, in so far as they prohibit the use of the best and most efficient machines, constitute limitations of output. Union rules requiring that members of one craft union shall not encroach upon another "result in large waste and little benefits."

Numerous illustrations are cited of restriction of output through division of labor. Carpenters' helpers, for example, "are prohibited from using carpenters' tools, requiring carpenters to do such work as stripping forms from concrete. Experience shows that helpers can do this more economically and as well." "Brick masons insist on washing down and pointing brickwork when laborers can do it more economically." "Structural steel workers under certain rules must bring the steel from the unloading point to the building site, thus doing laborers' work at high cost."

Lost Production.

Loss of production, the engineers say, is due first of all to sickness. "The 42,000,000 men and women gainfully employed probably lose on an average more than eight days each annually from illness disabilities, a total of 350,000,000 days. * * * It has been estimated that the [annual] economic loss from preventable disease and death is $1,800,000,000 among those classed as gainfully employed." * * * "There is experiential basis for the statement that this loss could be materially reduced and leave an economic balance in the working population alone over and above the cost of prevention of at least $1,000,000,000 a year."

Loss of production in 1919 due to accidents is estimated to be 296,000,000 days and about $853,000,000 in wages alone. The total

direct cost of industrial accidents, including medical aid and insurance overhead, is estimated at not less than $1,014,000,000. These figures do not include expenses incurred by workmen and not paid by the employer or insurance company; overhead cost of personal-accident insurance carried by workmen; cost of training new men to take the place of those injured; and employment and welfare department expense in keeping track of injured workmen and their families. The addition of these items would bring the total well over a billion dollars per year. This calculation takes no account of the indirect loss of production due to the stoppage or slowing up of work when an accident occurs.

Experience indicates and authorities agree, that 75 per cent of these losses could be avoided, with a saving in direct clearly ascertained losses alone of a quarter of a billion dollars per year to employers and half a billion to employees.

An official of a large insurance company believes that by proper safety measures, the waste due to accident in the building industry can be reduced 75 to 80 per cent in two to five years of earnest effort, and that construction labor cost can be cut 3 per cent by these measures. Another official estimates, from actual accomplishment in safety measures, that a total of more than 12,000,000 days a year could be saved in industry by the application of safety methods.

Responsibility for Waste.

SINCE the management is directly responsible for productive results in industry, it is management which has the greatest opportunity and hence responsibility for eliminating waste. The committee places more than 50 per cent of the responsibility for waste at the door of management. To labor, whose responsibility "is no less real, though smaller in degree," the committee charges less than 25 per cent of the responsibility. Opportunity and responsibility chargeable to outside contacts, the committee found, can not be so clearly evaluated. By responsibility the committee does not mean moral responsibility as ordinarily understood, but only that responsibility which arises from the undeniable fact that a given cause of waste can be removed only by a particular agency. This assessment of responsibility on the part of the committee is therefore an assessment of possible future performance, not of necessity, a fixing of responsibility for past mistakes. "We measure responsibility not by the thing done but by the opportunities which people have had of knowing better or worse."

The relative responsibilities averaged from all plants have been evaluated by the committee as follows:

RELATIVE RESPONSIBILITY FOR WASTE.

Industry.	Responsibility charged against—						Total (points).
	Management.		Labor.		Outside contacts (the public, trade relationships, etc.).		
	Points.	Per cent.	Points.	Per cent.	Points.	Per cent.	
Men's clothing manufacturing	48.33	75	10.50	18	4.95	9	63.78
Building industry	34.30	65	11.30	21	7.40	14	53.00
Printing	36.36	63	16.25	28	5.00	9	57.61
Boot and shoe manufacturing	30.25	73	4.85	11	5.83	16	40.93
Metal trades	23.23	81	2.55	9	2.88	10	28.66
Textile manufacturing	24.70	50	4.70	10	19.80	40	49.20

The committee found that the average efficiency of management is much below the standards set by certain plants in which notable success has been achieved. The variation between the number of points assessed as waste in the best plant studied and the number of points charged against the average of all plants is noted in the following table:

VARIATION IN WASTE BETWEEN BEST AND AVERAGE PLANT.

Industry.	Points charged against—		Ratio of best to average.
	Best plant studied.	Average of all plants studied.	
Men's clothing	26.73	63.78	1 : 2
Building	30.15	53.00	1 : 1½
Printing	30.50	57.61	1 : 2
Boot and shoe manufacturing	12.50	40.83	1 : 3
Metal trades	6.00	28.66	1 : 4½
Textile manufacturing	28.00	49.20	1 : 1½

Recommendations for the Elimination of Waste.

FINALLY, the committee has formulated a constructive program for the elimination of waste in industry. "The policies recommended are such as are already in successful use in the industries and plants investigated." Responsibility and opportunity for waste elimination are delegated to seven major groups, namely, management, labor, owners, the public, trade associations, the Government, and the engineers.

To the management the engineers suggest, first of all, the improvement of organization and executive control. "Managerial control, when properly planned, extends its influence into every activity of an industrial organization and plant, reaching materials, design, equipment, personnel, production, costs, and sales policies and coordinating these factors to common objective."

To management, also, industry must look for proper production control and the elimination of waste by shortening the time of production. Material and work in process must be planned in advance by methods which will insure their timely delivery to the machine or operation where they are needed.

Other responsibilities of management include the balancing of productive capacity and demand, necessitating a careful study of normal demand; the elimination of cancellations and the curtailment of returns; the development of purchasing schedules and the careful control of material purchased but not yet received; the correlation of production schedules with sales policies, i. e., a carefully formulated sales policy determined from an intensive study of markets, thus stabilizing production; adequate inspection control and the elimination of spoiled and defective work; maintenance of plant and equipment in good working condition; uniform cost accounting; the standardization of equipment, of materials and of product, and the establishment of performance standards which shall be the basis of a just measurement of the individual worker's performance and ad-

justment of his wage rate to his capacity; the use of systematic measures in the prevention of accidents; consistent and intensive industrial research; and intelligent personnel direction.

The committee places with management the responsibility for the adoption of methods of wage payment, "equitable and just in their basis, insuring a proper relationship between effort put forth and results achieved by all who participate in the enterprise." In this connection the committee emphasizes two important facts: (1) Special wage methods are almost wholly futile in the absence of standardization and system in the work; (2) production standards and proper control of work will, without any special wage method, accomplish a large part of the desired result.

Owners, too, have a definite responsibility for eliminating waste in industry, by assisting in stabilizing production.

The public's responsibility is large. Only by public support can a campaign to increase productivity succeed. The public is in a degree responsible for seasonal fluctuations because of the eagerness with which it adopts style changes. Failure on the part of the public to distribute demand causes considerable waste. Public and semipublic agencies may assist in the elimination of waste by the furtherance of public health and accident prevention. Collective purchasing agencies may assist by educating the public in better methods of buying.

Labor has a definite responsibility for increasing production. Of this responsibility the committee says:

> The need for facts instead of opinions stands out everywhere in the assay of waste from intentional restrictions of output. All concerned need to remember that science is an ally and not an enemy, and that no policy can be soundly based which ignores economic principles.
>
> Ignorance of these principles lies at the root of most of labor's restriction of output. The engineers who made the field assays unite in pointing out that this attitude is beginning to change. The change should be aggressively led, not allowed to drift. Labor organizations have an opportunity to-day which may not soon occur again to draft for themselves a new bill of rights and responsibilities. Unions are now great organizations, with such funds and personnel at their disposal as would have seemed fantastic even a quarter of a century ago. Their influence permeates the whole of American industry, unionized or not. No service which they can render can be socially more valuable than that of studying the needs of the industries in which they earn a livelihood, and allying themselves with the technicians who serve with them to increase production, which will inure to the ultimate benefit of all.
>
> *For standardization of work.*—Labor should cooperate to prepare for and even demand the determination of and use of performance standards.
>
> This recommendation made by the engineer reporting on the printing industry applies to labor in many other industries as well: The unions rightly insist on reasonable hours and the best pay obtainable, but to discharge a responsibility in eliminating waste they should lend themselves to the greatest flexibility in the utilization and economy of the services of their members. It is to the worker's interest rather than to his detriment that his services should not only be efficient but definitely recorded and evaluated.
>
> *For changing rules regarding restrictions.*—Labor should change its rules regarding restriction of output, unreasonable jurisdictional classifications and wasteful methods of work, thereby removing some sources of waste.
>
> Certain restrictions probably have seemed necessary to labor as a basis for trading with employers. This report is concerned with restrictions only in their relation to waste. It recommends a revision in the light of the strength and standing of organized labor to-day. The trading basis is not sufficient justification for union rules.
>
> *For improving health and reducing accidents.*—Labor is responsible no less than management for improving the health of the workers and for preventing accidents in industry. Unions have accomplished much in protecting their members through educational work in health and safety, but there is still much to be done, in cooperation with management and community organizations.

Periodical physical examinations and medical advice have resulted in a number of instances in substantial improvement in the health and well-being of workmen. In many cases, however, there exists a strong prejudice against such examinations. As a result of this unfortunate attitude many workers live in subnormal health when their condition is easily remediable.

For improving industrial relations.—Inasmuch as the organization of personnel relationships in industry can only be accomplished through the cooperation of both employer and employee, labor should assist in such work of organization and in maintaining and utilizing the structure developed. Among the most important causes of industrial discontentment are those connected with waste in industry, intermittent employment, fear of unemployment, lack of scientific and accepted methods of determining wages and hours, inequalities of opportunity, ill health and industrial accidents as well as those caused by backward management and restrictions of output.

The committee recommends that trade associations be formed in those industries lacking comprehensive organizations. The duty of such associations lies largely in the field of standardization.

Government assistance is suggested (1) through the establishment of a national industrial information service—"the great need for complete information with regard to current production and consumption and stocks of every important commodity, is obvious to all serious students of industry"; (2) through the establishment of a body of principles for the adjustment of labor disputes—legislative action on the recommendations of the President's Second Industrial Conference (1919) is recommended; (3) through the inauguration of a national public health policy; (4) through a national program for industrial rehabilitation; (5) through a nation-wide program of industrial standardization in cooperation with industry; (6) through a revision of Federal laws which interfere with stabilization of industry. In this connection the committee says:

The largest area of waste lies in the periods of slack production and unemployment, due to the ebb and flow of economic tides between booms and slumps. Studies of industries as a whole show that we usually expand our equipment at the periods of maximum demand for products instead of doing our plant expansion during periods of slack consumption. While it can not be expected that all industry could be so stabilized as to do its capital construction in slack periods, there are some industries which could be led in this direction by cooperation with the Government and cooperation among themselves. This applies particularly to railways, telephones, telegraphs, power concerns, and other public utilities, and to expenditures upon our municipal, State, and national public works.

As a striking example, in a seasonal industry such as coal mining, no adequate solution regarding stabilization can be found except through organized cooperation of operators, labor, railroads, and large consumers. Under existing laws as to combinations, such cooperation can not be carried out. Therefore, we believe that Federal legislation is necessary permitting such cooperation under competent Government authority.

Conclusion.

IT IS impossible in brief space to outline adequately this summary of the report of the committee on elimination of waste, the first work undertaken by the Federated American Engineering Societies, in rendering public service. In the committee's own words:

It discloses losses and waste due to the restraint and dissipation of the creative power of those who work in industry. It lays the foundation for knowledge of the destructive influences which have too much controlled in the past. From this knowledge will grow the conviction that mental and moral forces must be added in a much larger degree to the physical resources now employed if industry is to serve all who are dependent upon its continuous and effective operation.

The committee realizes that before there can be a material reduction in the sum total of waste in industry much earnest, painstaking work must be done. The solu-

tion of such a problem is not one of hours or days but of years. Fundamental changes in our economic, financial, managerial, and operating concepts and practices will be required. There will be need of both cooperative and individual effort. As regards groups, each must frankly face its own responsibility and meet its own duties. Each individual plant executive or worker must discover his own opportunities and then accept responsibility for performance.

Increase of Labor Unrest in Canton, China.

THE vice consul in charge at Canton China, reported to the State Department under date of June 7, 1921, a growth of labor agitation in that city. A strike of mechanics threatening the Canton-Hankow Railway, the Canton-Samshui Railway, the Electric Supply Co., and many similar organizations was then pending. The mechanics demanded increased pay, reduction in hours, improved living quarters, and better sanitation. "The mechanics' union appears to be fairly well organized and of considerable strength." Some concessions have been made to the demands of the workers, who, however, are reported as being "still unsatisfied."

Recent mention has been made in the Canton newspapers of threatened strikes of textile workers, tinsmiths, and printers. The press is also emphasizing a very marked general labor unrest.

Joint Councils in the Railway Industry in Great Britain.[1]

UNDER the terms of an agreement made May 3, 1921, between the railway companies and the three trade-unions organizing railway men, a joint committee consisting of two representatives of each of the railway unions and six representatives of the general managers' committee and the railway clearing house have drawn up a provisional scheme for the establishment of joint councils, on "Whitley" lines, for the various railways or groups of railways in Great Britain. The scheme is not yet final and agreed upon, but it is not anticipated that any serious amendment will be made.

The scheme provides for the establishment of "local departmental committees," "sectional railway councils," and "railway councils," composed of equal numbers of representatives of the railway employees and of the railway companies concerned, and having the right to refer matters upon which they can not agree to the next higher body. The central wages board and the national wages board are also reconstituted, and put permanently at the head of the new railway conciliation machinery.

The local departmental committees will "be established at any station or depot at which the number of regular employees in a department exceeds 100." The objects of the committees are to provide a recognized means of communication between the employees and the local officials of the companies, and also to give the employees a wider interest in the conditions under which their work is performed. The committees will consider, inter alia, hours of attendance, holiday arrangements, and suggestions for improvements in railway methods and organization, subject to the proviso that they shall not encroach upon the powers or decisions of any of the bodies referred to below.

Sectional railway councils, to the number of not more than five, will be established on each railway or group of railways. Each council will consider general departmental subjects affecting certain defined groups of grades, every such group being allotted a fixed number of representatives on the council.

[1] See British Labor Gazette, July, 1921, p. 338.

For each railway or group of railways a railway council will be established. These councils and the sectional railway councils will deal with the local application of national agreements relating to salaries, hours of duty, etc., apart from subjects to be submitted directly to the central and national wages boards, as well as with certain matters of railway administration.

The central wages board will be composed of eight representatives of the companies and eight representatives of the employees, four of whom will be nominated by the National Union of Railwaymen, two by the Associated Society of Locomotive Engineers and Firemen, and two by the Railway Clerks' Association. The functions of the board will be to deal with subjects relating to salaries, wages, hours of duty, and conditions of service of the classes of employees included within the scheme, or any question relating to these subjects referred to them by the sectional railway councils or railway councils.

The national wages board will be composed of six representatives of the railway companies, six representatives of the employees, and four representatives of the users of railways, with an independent chairman appointed by the Government. One of the representatives of the users of the railways will be nominated by the parliamentary committee of the Trade-Union Congress, one by the Cooperative Union, one by the Associated Chambers of Commerce, and one by the Federation of British Industries.

The national wages board will deal with subjects relating to rates of pay, hours of duty, and conditions of service referred to them by the central wages board, when that board has failed to agree. No withdrawal of labor shall take place, nor shall there be any attempt on the part of any section of the employees to hamper the proper working of the railways on account of any unsettled matter falling within the purview of the central wages board before the expiration of one month after such matter has been referred by that board to the national wages board, and the latter must, within 28 days of any matter being referred to them, publish the result of their investigations and consideration.

The scheme covers the staff in the grades agreed as being within the old conciliation scheme, and, among others, station masters, goods, and other agents, supervisory staff, and dock and tugboat staff. Shopmen are not included.

Labor Conditions in Holland, June, 1921.

THE American consul at Rotterdam has reported that the number of workers in the coal mines in Holland fell from 26,500 in January, 1921, to 25,300 in June, 1921. There were over 2,000 workers in the lignite field in July-September, 1920; in June, 1921, there were only 99. From May, 1920, to May, 1921, the number employed in the Rotterdam Harbor was reduced from 11,400 to 9,000 and in the Amsterdam Harbor from 7,200 to 5,000.

The number of members of central trade-union organizations decreased since the middle of 1920, the decrease being less for the Roman Catholic, the Christian National and General Netherland Trade-Unions than for the Netherland Trade-Unions League and the National Labor Secretariat. The latter decreased steadily, from 262,000 (April 1, 1920) to 218,600 (April 1, 1921) and from 50,000 to 35,600; for the two denominational unions the figures were highest in October, 1920, viz., 158,200 and 76,800, respectively, as compared with 155,600 and 75,600 in April, 1921; the number of members of the General Netherland Trade-Unions League increased steadily up to January 1, 1921, when it totaled 52,000, and has since decreased by 400.

Wages for underground mine workers decreased after the last three months of 1920 from 8.22 florins ($3.30 par) per shift to 7.96 florins ($3.20 par). Building trade wages in Amsterdam have been on the increase, the hourly wages in April, 1921, reaching 1.54 florins (61.9 cents par), 1.26 florins (50.7 cents par), and 1.47½ florins (59.3 cents par) as against 1.17 florins (47 cents par), 0.94½ florin (38 cents par), and 1.18½ florins (47.6 cents par) in May, 1920.

According to the labor insurance figures, the accidents per working day in May, 1911, were 300 as compared with 368 in October, 1920.

Old-age pensions in accordance with the invalidity act and the transition clauses of the old-age pensions act are naturally on the decrease, viz., from 109,600 and 202,000 in May, 1920, to 107,700 and 196,500 in June, 1921. The number of widows' and orphans' pensions increased rapidly, reaching the 2,000 figure on June 1.

Unrest Among Government Employees in Italy.[1]

THE present acute unrest among Government employees in Italy is due solely to the inadequacy of salaries, which makes it impossible for civil servants to cope with the steadily increasing cost of living without lowering their standard of living. Discussions with a view to improving the economic situation of civil servants were already under way in the spring of 1919, and a threat of strike in April, 1919, induced the Government to grant to all civil servants without distinction a temporary bonus of 1,200 lire ($231.60 par). The relief afforded by this temporary bonus was, however, of very short duration as prices of all necessaries of life continued to increase and the cost of living rose to new heights. Thus, in January, 1920, the employees in the postal, telegraph, and telephone services and those in the operating departments of the State railroads submitted to the Government new demands for large wage increases. When these demands were not granted in full each of these two classes of employees declared a strike[2] which, although of short duration, caused the public great inconvenience. The two strikes were called off on the assurance of the Government that the demands of the employees would be given fair consideration. A decree which came into force on June 15, 1920, granted to all employees salary increases in the form of new cost-of-living bonuses.

The progressive rise in prices during the subsequent year soon caused the cost-of-living bonuses granted by the Government to become inadequate, and in May of the present year the discontent among civil servants assumed an acute character. They demanded the immediate granting of a monthly cost-of-living bonus of 200 lire ($38.60, par) to all civil servants without distinction of rank, retroactive to March 1, 1921. The Government demurred to granting the same bonus to statutory officials and nonstatutory employees alike and also to making the grant retroactive for all employees, proposing to bring the bonus into relation to the salaries in such a manner that the higher salaried employees would receive a smaller bonus than the low-salaried employees, the range of the bonus to be between 80 and 200 lire ($15.24 and $38.60, par). Purely financial reasons caused the Government to insist on such limitations, for the unconditional granting of the bonus in the form requested by the civil servants, i. e., the monthly payment of 200 lire to nearly 500,000 Government employees, would have entailed an annual disbursement of 900,000,000 lire ($173,700,000, par).[3]

[1] Compiled from various consular reports to the Department of State and from an article in the Reichs-Arbeitsblatt, No. 19, Berlin, July 15, 1921.
[2] See MONTHLY LABOR REVIEW, May, 1920. Strikes of Italian Government employees, pp. 204–215.
[3] Idea Nazionale. Rome, June 3, 1921.

When the protracted negotiations between the representatives of the civil servants and the Government led to no satisfactory result they were abruptly broken off and the employees of all public administrations with the exception of the postal and telegraph exployees resolved to initiate a "white strike" (*sciopero bianco*). The postal and telegraph employees decided to use obstructionism as a means for enforcing their wage demands.

The "white strike" consisted in loafing on the job, i. e., all employees were regularly at their desks during office hours but performed no work. The obstructionism of the postal and telegraph employees, on the other hand, consisted in insisting with the greatest pedantry on the observance to the letter of the smallest detail of all regulations. The employees weighed all letters, and if they found even the smallest fraction of a gram overweight the letter was returned to the sender. Registered letters and insured packages were subjected to the minutest scrutiny, and if the smallest infraction of the postal rules was detected the letter or package was rejected. Only two deliveries of mail were made in the largest cities. By these and similar measures the public was inconvenienced in a very serious manner. As concerns the "white strike," high officials made common cause with the lowest salaried employees, but the extent of the strike varied greatly in the different Government departments and bureaus, some of them not being affected at all. In the ministry of the interior, for instance, the service continued under nearly normal conditions. The "white strike" was most intensive in the ministry of finance, the treasury, and in the auditing bureau, all of which were finally closed by the Government.

The only class of civil servants which did not take part actively in the "white strike" was that of the railway employees, their demands having been granted in full by the Government shortly before the declaration of the strike. They adopted, however, a resolution expressing sympathy with the strike of the civil servants. The National Federation of High School Teachers declared a one-day strike on May 20 to show their solidarity with the civil servants.

At the beginning of the strike it seemed as if the political allegiance of the strikers played no part in the movement. Later on it became evident, however, that socialistic elements were the prime movers of the strike and also tried to make political capital of it, while other parties, such as the clerical People's Party and the Reform Party were in favor of a peaceful settlement of the demands of the Government employees. The Fascisti, a new nationalist party, expressed their sympathy with the civil servants, but resolved that the higher interests of the nation prevented their participation in the strike.

When the strike and obstructionism had been in force for several weeks the Government decided to have recourse to punitive measures. The leaders of the two movements were discharged in pursuance of article 43 of the civil service law, and 4,915 employees who had taken a prominent but not so intensive part as the leaders were indefinitely suspended without pay.[4] The terrorizing in the central telegraph office of employees willing to work was stopped by the closing of this office and its occupation by troops. Only such employees were

[4] Corriere della sera. Milan, June 9, 1921.

admitted to this office as obligated themselves in writing to the faithful performance of their duties.

Perceiving that it could not force the Government into acceding to its demands, the strike committee on June 12 called off the strike, issuing a declaration that the Government alone was to blame for the movement and expressing the expectation that the Parliament would solve the problem and reinstate all discharged and suspended employees.

Thus the movement has temporarily come to an end. It is expected that a bill soon to be discussed by Parliament will definitively regulate the economic situation of the civil servants. This bill will fix the total amount to be disbursed annually for the salaries, cost-of-living bonuses, and other allowances of all civil servants and within what limits the salaries are to be newly regulated, increased, and apportioned. The present expenditure for salaries, about 5,300,000,000 lire ($1,022,900,000 par) shall, however, not be exceeded, and the proposed increases in salaries are to be met by a reduction in the personnel of the greatly overmanned Government departments and by their reorganization with a view to economy and greater efficiency. It is reported that the Italian Government is greatly interested in the proposed reclassification and reorganization of the civil service in the United States. The bill provides that the expenditure for salaries of civil servants for the fiscal year 1920–21 shall not be increased until the end of the fiscal year 1930–31, and that the superfluous personnel shall be pensioned. The bill was approved by the cabinet council on June 8 and is expected to be enacted by Parliament within the current year. In the meanwhile the Government employees will be granted a temporary bonus varying in accordance with their salaries.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.[1]

Table 1 shows for the United States retail prices of food on July 15, 1920, and on June 15, and July 15, 1921, as well as the percentage changes in the year and in the month. For example, the price of strictly fresh eggs was 57.3 cents per dozen on July 15, 1920; 35 cents per dozen on June 15, 1921; and 42 cents per dozen on July 15, 1921. These figures show a decrease of 27 per cent in the year, but an increase of 20 per cent in the month.

The cost of the various articles of food,[2] combined, showed a decrease of 32 per cent in July, 1921, as compared with July, 1920, but an increase of 2.7 per cent in July, 1921, as compared with June, 1921.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, JULY 15, 1921, COMPARED WITH JUNE 15, 1921, AND JULY 15, 1920.

[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 (−) July 15, 1921, compared with—	
		July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.
		Cents.	*Cents.*	*Cents.*		
Sirloin steak	Pound	48.6	40.0	40.2	−17	+ 1
Round steak	do	45.0	35.6	35.8	−20	+ 1
Rib roast	do	35.9	29.8	29.3	−18	− 2
Chuck roast	do	28.5	21.6	20.7	−27	− 4
Plate beef	do	19.1	14.1	13.2	−31	− 6
Pork chops	do	43.7	34.1	34.3	−22	+ 1
Bacon	do	54.7	42.9	43.2	−21	+ 1
Ham	do	59.8	48.9	51.0	−15	+ 4
Lamb, leg of	do	41.1	35.0	35.2	−14	+ 1
Hens	do	45.0	38.6	38.8	−14	+ 1
Salmon, canned	do	38.7	35.8	35.2	− 9	− 2
Milk, fresh	Quart	16.7	14.2	14.0	−16	− 1
Milk, evaporated	15-16 oz. can	15.4	13.8	13.5	−12	− 2

[1] In addition to monthly retail prices of food and coal, the bureau secures prices of gas and dry goods from each of 51 cities. Gas has heretofore been published in the June issue, but appears this year in the July issue. Dry goods appears regularly in the April, July, October, and December issues of the MONTHLY LABOR REVIEW.

[2] The following 22 articles, weighted according to the consumption of the average family, have been used from January, 1913, to December, 1920: 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, tea. The remainder of the 43 articles shown in Tables 1 and 2 have been included in the weighted aggregates for each month, beginning with January, 1921.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, JULY 15, 1921, COMPARED WITH JUNE 15, 1921, AND JULY 15, 1920—Concluded.

[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 (−) July 15, 1921, compared with—	
		July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.
		Cents.	*Cents.*	*Cents.*		
Butter	Pound	67.9	40.2	46.6	−31	+16
Oleomargarine	do	42.7	29.9	29.1	−32	− 3
Nut margarine	do	36.0	26.8	26.9	−25	+ 0.4
Cheese	do	41.2	29.5	29.5	−28	0
Lard	do	29.0	16.2	16.7	−42	+ 3
Crisco	do	36.4	21.2	21.0	−42	− 1
Eggs, strictly fresh	Dozen	57.3	35.0	42.0	−27	+20
Bread	Pound	11.9	9.8	9.7	−18	− 1
Flour	do	8.7	5.9	5.8	−33	− 2
Corn meal	do	7.0	4.5	4.4	−37	− 2
Rolled oats	do	11.0	9.9	9.9	−10	0
Corn flakes	8-oz. package	14.8	12.3	12.2	−18	− 1
Cream of Wheat	28-oz. package	30.3	29.8	29.7	− 2	− 0.3
Macaroni	Pound	21.4	20.7	20.6	− 4	− 0.4
Rice	do	18.6	8.8	8.7	−53	− 1
Beans, navy	do	11.9	7.9	7.9	−34	0
Potatoes	do	8.9	2.7	3.4	−62	+26
Onions	do	6.7	5.7	5.4	−19	− 5
Cabbage	do	7.5	6.0	5.5	−27	− 8
Beans, baked	No. 2 can	16.9	14.4	14.2	−16	− 1
Corn, canned	do	18.7	15.9	15.8	−16	− 1
Peas, canned	do	19.3	17.6	17.5	− 9	− 1
Tomatoes, canned	do	15.2	11.3	11.4	−25	+ 1
Sugar, granulated	Pound	26.5	7.8	7.1	−73	− 9
Tea	do	74.4	68.3	69.2	− 7	+ 1
Coffee	do	49.3	35.7	35.7	−28	0
Prunes	do	28.4	18.5	18.6	−35	+ 1
Raisins	do	28.2	30.9	30.6	+ 9	− 1
Bananas	Dozen	46.5	41.6	40.8	−12	− 2
Oranges	do	66.8	49.9	51.4	−23	+ 3
All articles combined [1]					−32	+ 2.7

[1] See note 2, p. 22.

Table 2 shows for the United States average retail prices of specified food articles on July 15, 1913 and 1914, and on July 15 of each year from 1917 to 1921, together with the percentage changes in July of each of these specified years compared with July, 1913. For example, the price of potatoes in July, 1913, was 1.9 cents; in July, 1914, 2.6 cents; in July, 1917, 4.2 cents; in July, 1918, 3.9 cents; in July, 1919, 4.8 cents; in July, 1920, 8.9 cents; and in July, 1921, 3.4 cents. As compared with the average price in July, 1913, these figures show the following percentage increases: Thirty-seven per cent in 1914; 121 per cent in 1917; 105 per cent in 1918; 153 per cent in 1919; 368 per cent in 1920; and 79 per cent in 1921.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JULY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH JULY 15, 1913.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail prices July 15—							Per cent of increase (+) or decrease (−) July 15 of each specified year compared with July 15, 1913.					
		1913	1914	1917	1918	1919	1920	1921	1914	1917	1918	1919	1920	1921
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*						
Sirloin steak	Pound	26.4	27.0	32.7	42.1	43.4	48.6	40.2	+ 2	+ 24	+ 59	+ 64	+ 84	+ 52
Round steak	do	23.2	24.4	30.6	40.3	40.7	45.0	35.8	+ 5	+ 32	+ 74	+ 75	+ 94	+ 54
Rib roast	do	20.2	20.9	25.8	33.3	33.5	35.9	29.3	+ 3	+ 28	+ 65	+ 66	+ 78	+ 45
Chuck roast	do	16.4	16.9	21.9	29.1	27.7	28.5	20.7	+ 3	+ 34	+ 77	+ 69	+ 74	+ 26
Plate beef	do	12.2	12.6	16.5	22.4	20.3	19.1	13.2	+ 3	+ 35	+ 84	+ 66	+ 57	+ 8
Pork chops	do	21.7	22.3	31.7	37.9	46.2	43.7	34.3	+ 3	+ 46	+ 75	+113	+101	+ 58
Bacon	do	28.0	27.4	43.0	52.3	58.1	54.7	43.2	− 2	+ 54	+ 87	+108	+ 95	+ 54
Ham	do	28.1	27.8	39.5	48.7	56.7	59.8	51.0	− 1	+ 41	+ 73	+102	+113	+ 81
Lamb, leg of	do	19.7	20.3	29.9	37.3	38.2	41.1	35.2	+ 3	+ 52	+ 89	+ 94	+109	+ 79
Hens	do	21.7	22.0	28.0	38.0	42.0	45.0	38.8	+ 1	+ 29	+ 75	+ 94	+107	+ 79
Salmon (canned)	do	.....	.....	26.6	29.6	32.2	38.7	35.2	.....	.....	.....	.....	.....	.....
Milk, fresh	Quart	8.8	8.9	11.1	13.2	15.0	16.7	14.0	+ 1	+ 26	+ 50	+ 70	+ 90	+ 59
Milk, evaporated	15–16 oz. can.	.....	.....	.....	.....	15.9	15.4	13.5	.....	.....	.....	.....	.....	.....
Butter	Pound	34.8	34.2	45.9	52.6	62.8	67.9	46.6	− 2	+ 32	+ 51	+ 80	+ 95	+ 34
Oleomargarine	do	.....	.....	.....	.....	41.9	42.7	29.1	.....	.....	.....	.....	.....	.....
Nut margarine	do	.....	.....	.....	.....	35.7	36.0	26.9	.....	.....	.....	.....	.....	.....
Cheese	do	21.9	22.7	33.0	33.5	43.0	41.2	29.5	+ 4	+ 51	+ 53	+ 95	+ 88	+ 35
Lard	do	15.9	15.4	27.4	32.5	42.0	29.0	16.7	− 3	+ 72	+104	+164	+ 82	+ 5
Crisco	do	.....	.....	.....	.....	38.9	36.4	21.0	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh	Dozen	29.9	30.2	42.1	49.1	56.6	57.3	42.0	+ 1	+ 41	+ 64	+ 89	+ 92	+ 40
Bread	Pound	5.6	6.2	9.9	10.0	10.0	11.9	9.7	+ 11	+ 77	+ 79	+ 79	+113	+ 73
Flour	do	3.3	3.2	7.3	6.7	7.5	8.7	5.8	− 3	+121	+103	+127	+164	+ 76
Corn meal	do	3.0	3.1	5.9	6.7	6.5	7.0	4.4	+ 3	+ 97	+123	+117	+133	+ 47
Rolled oats	do	.....	.....	.....	.....	8.7	11.0	9.9	.....	.....	.....	.....	.....	.....
Corn flakes	8-oz. pkg.	.....	.....	.....	.....	14.1	14.8	12.2	.....	.....	.....	.....	.....	.....
Cream of Wheat	28-oz. pkg.	.....	.....	.....	.....	25.2	30.3	29.7	.....	.....	.....	.....	.....	.....
Macaroni	Pound	.....	.....	.....	.....	19.4	21.4	20.6	.....	.....	.....	.....	.....	.....
Rice	do	8.7	8.8	10.7	12.9	14.6	18.6	8.7	+ 1	+ 23	+ 48	+ 68	+114	0
Beans, navy	do	.....	.....	19.5	17.3	12.1	11.9	7.9	.....	.....	.....	.....	.....	.....
Potatoes	do	1.9	2.6	4.2	3.9	4.8	8.9	3.4	+ 37	+121	+105	+153	+368	+ 79
Onions	do	.....	.....	5.1	5.3	9.8	6.7	5.4	.....	.....	.....	.....	.....	.....
Cabbage	do	.....	.....	.....	.....	6.2	7.5	5.5	.....	.....	.....	.....	.....	.....
Beans, baked	No. 2 can	.....	.....	.....	.....	17.3	16.9	14.2	.....	.....	.....	.....	.....	.....
Corn, canned	do	.....	.....	.....	.....	19.3	18.7	15.8	.....	.....	.....	.....	.....	.....
Peas, canned	do	.....	.....	.....	.....	19.2	19.3	17.5	.....	.....	.....	.....	.....	.....
Tomatoes, canned	do	.....	.....	.....	.....	16.1	15.2	11.4	.....	.....	.....	.....	.....	.....
Sugar, granulated	Pound	5.5	5.2	9.2	9.2	10.9	26.5	7.1	− 5	+ 67	+ 67	+ 98	+382	+ 29
Tea	do	54.4	54.7	59.9	65.3	70.5	74.4	69.2	+ 1	+ 10	+ 20	+ 30	+ 37	+ 27
Coffee	do	29.8	29.6	30.6	30.1	46.2	49.3	35.7	− 1	+ 3	+ 1	+ 55	+ 65	+ 20
Prunes	do	.....	.....	16.0	16.7	26.5	28.4	18.6	.....	.....	.....	.....	.....	.....
Raisins	do	.....	.....	14.8	15.1	17.3	28.2	30.6	.....	.....	.....	.....	.....	.....
Bananas	Dozen	.....	.....	.....	.....	39.2	46.5	40.8	.....	.....	.....	.....	.....	.....
Oranges	do	.....	.....	.....	.....	53.4	66.8	51.4	.....	.....	.....	.....	.....	.....
All articles combined [1]		.....	.....	.....	.....	.....	.....	.....	+ 3	+ 46	+ 68	+ 91	+120	+ 48

[1] See note 2, page 22.

Table 3 shows the changes in the retail price of each of 22 articles of food [3] as well as the changes in the amounts of these articles that could be purchased for $1, each year, 1913 to 1920, and in July, 1921.

[3] Although monthly prices have been secured on 43 food articles since January, 1919, prices on only 22 of these articles have been secured each month since 1913.

TABLE 3.—AVERAGE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD AND AMOUNT PURCHASABLE FOR $1, IN EACH YEAR, 1913 TO 1920, AND IN JULY, 1921.

Year.	Sirloin steak.		Round steak.		Rib roast.		Chuck roast.		Plate beef.		Pork chops.	
	Average retail price.	Amt. for $1.	Average retail price.	Amt. for $1.	Aver. age. retail price.	Amt. for $1.	Average retail price.	Amt. for $1.	Average retail price.	Amt. for $1.	Average retail price.	Amt. for $1.
	Per lb.	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*
1913	$0.254	3.9	$0.223	4.5	$0.198	5.1	$0.160	6.3	$0.121	8.3	$0.210	4.8
1914	.259	3.9	.236	4.2	.204	4.9	.167	6.0	.126	7.9	.220	4.5
1915	.257	3.9	.230	4.3	.201	5.0	.161	6.2	.121	8.3	.203	4.9
1916	.273	3.7	.245	4.1	.212	4.7	.171	5.8	.128	7.8	.227	4.4
1917	.315	3.2	.290	3.4	.249	4.0	.209	4.8	.157	6.4	.319	3.1
1918	.389	2.6	.369	2.7	.307	3.3	.266	3.8	.206	4.9	.390	2.6
1919	.417	2.4	.389	2.6	.325	3.1	.270	3.7	.202	5.0	.423	2.4
1920	.347	2.3	.395	2.5	.332	3.0	.262	3.8	.183	5.5	.423	2.4
1921: July	.402	2.5	.358	2.8	.293	3.4	.207	4.8	.132	7.6	.343	2.9

Year.	Bacon.		Ham.		Lard.		Hens.		Eggs.		Butter.	
	Per lb.	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per dz.*	*Dozs.*	*Per lb.*	*Lbs.*
1913	$0.270	3.7	$0.269	3.7	$0.158	6.3	$0.213	4.7	$0.345	2.9	$0.383	2.6
1914	.275	3.6	.273	3.7	.156	6.4	.218	4.6	.353	2.8	.362	2.8
1915	.269	3.7	.261	3.8	.148	6.8	.208	4.8	.341	2.9	.358	2.8
1916	.287	3.5	.294	3.4	.175	5.7	.236	4.2	.375	2.7	.394	2.5
1917	.410	2.4	.382	2.6	.276	3.6	.286	3.5	.481	2.1	.487	2.1
1918	.529	1.9	.479	2.1	.333	3.0	.377	2.7	.569	1.8	.577	1.7
1919	.554	1.8	.534	1.9	.369	2.7	.411	2.4	.628	1.6	.678	1.5
1920	.523	1.9	.555	1.8	.295	3.4	.447	2.2	.681	1.5	.701	1.4
1921: July	.432	2.3	.510	2.0	.167	6.0	.388	2.6	.420	2.4	.466	2.1

Year.	Cheese.		Milk.		Bread.		Flour.		Corn meal.		Rice.	
	Per lb.	*Lbs.*	*Per qt.*	*Qts.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*
1913	$0.221	4.5	$0.089	11.2	$0.056	17.9	$0.033	30.3	$0.030	33.3	$0.087	11.5
1914	.229	4.4	.089	11.2	.063	15.9	.034	29.4	.032	31.3	.088	11.4
1915	.232	4.3	.088	11.4	.070	14.3	.042	23.8	.033	30.3	.091	11.0
1916	.258	3.9	.091	11.0	.073	13.7	.044	22.7	.034	29.4	.091	11.0
1917	.332	3.0	.112	9.0	.092	10.9	.070	14.3	.058	17.2	.104	9.6
1918	.359	2.8	.139	7.2	.098	10.2	.067	14.9	.068	14.7	.129	7.8
1919	.426	2.3	.155	6.5	.100	10.0	.072	13.9	.064	15.6	.151	6.6
1920	.416	2.4	.167	6.0	.115	8.7	.081	12.3	.065	15.4	.174	5.7
1921: July	.295	3.4	.140	7.1	.097	10.3	.058	17.2	.044	22.7	.087	11.5

Year.	Potatoes.		Sugar.		Coffee.		Tea.	
	Per lb.	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*	*Per lb.*	*Lbs.*
1913	$0.017	58.8	$0.055	18.2	$0.298	3.4	$0.544	1.8
1914	.018	55.6	.059	16.9	.297	3.4	.546	1.8
1915	.015	66.7	.066	15.2	.300	3.3	.545	1.8
1916	.027	37.0	.080	12.5	.299	3.3	.546	1.8
1917	.043	23.3	.093	10.8	.302	3.3	.582	1.7
1918	.032	31.3	.097	10.3	.305	3.3	.648	1.5
1919	.038	26.3	.113	8.8	.433	2.3	.701	1.4
1920	.063	15.9	.194	5.2	.470	2.1	.733	1.4
1921: July	.034	29.4	.071	14.1	.357	2.8	.692	1.4

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 each of 22 food articles,[4] by years from 1907 to 1920, and by months for 1920 and 1921.[5] 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 rib roast for the year 1920 was 168, which means that the average money price for the year 1920 was 68 per cent higher than the average money price for the year 1913. The relative price of bacon for the year 1919 was 205 and for the year 1920, 194, which figures show a drop of 11 points but a decrease of only 5 per cent in the year.

In the last column of Table 4 are given index numbers showing the changes in the retail cost of all articles of food combined. From January, 1913, to December, 1920, 22 articles have been included in the index, and beginning with January, 1921, 43 articles have been used.[4] For an explanation of the method used in making the link between the cost of the market basket of 22 articles, weighted according to the average family consumption in 1901, and the cost of the market basket based on 43 articles and weighted according to the consumption in 1918, see MONTHLY LABOR REVIEW for March, 1921 (p. 25).

The curve shown in the chart on page 28 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The retail cost of the food articles included in the index has decreased since July, 1920, until the curve is brought down in July, 1921, to slightly below where it was in August, 1917. The chart has been drawn on the logarithmic scale,[6] because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

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[4] See note 2, p. 22.

[5] For index numbers of each month, January, 1913, to December, 1920, see MONTHLY LABOR REVIEW for February, 1921, pp. 19-21.

[6] For a discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts," by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, "The 'ratio' charts" by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pp.

TABLE 4.—INDEX NUMBERS SHOWING CHANGES IN THE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY YEARS, 1907 TO 1920, AND BY MONTHS FOR 1920 AND 1921.

[Average for year 1913=100.]

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	All articles combined.
1907	71	68	76	.....	.....	74	74	76	81	81	84	85	.....	87	.....	95	88	.....	105	105	.....	.....	82
1908	73	71	78	.....	.....	76	77	78	80	83	86	86	.....	90	.....	102	92	.....	111	108	.....	.....	84
1909	77	74	81	.....	.....	83	83	82	90	89	93	90	.....	91	.....	109	94	.....	112	107	.....	.....	89
1910	80	78	85	.....	.....	92	95	91	104	94	98	94	.....	95	.....	108	95	.....	101	109	.....	.....	93
1911	81	79	85	.....	.....	85	91	89	88	91	93	88	.....	96	.....	102	94	.....	130	117	.....	.....	92
1912	91	89	94	.....	.....	91	91	91	94	93	99	98	.....	97	.....	105	102	.....	135	115	.....	.....	98
1913	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1914	102	106	103	104	104	105	102	102	99	102	102	94	104	100	112	104	205	101	108	108	100	100	102
1915	101	103	101	101	100	96	100	97	93	97	99	93	105	99	124	126	198	104	89	120	101	100	101
1916	108	110	107	107	106	108	106	109	111	111	109	103	117	102	130	135	113	105	159	146	100	100	114
1917	124	130	126	131	130	152	152	142	175	134	139	127	150	125	164	211	192	119	253	169	101	107	146
1918	153	165	155	166	170	186	196	178	211	177	165	151	162	156	175	203	227	148	188	176	102	119	168
1919	164	174	164	169	167	201	205	209	134	193	182	177	193	174	179	218	213	174	224	205	145	129	186
1920: Av. for year	**172**	**177**	**168**	**164**	**151**	**201**	**194**	**206**	**187**	**210**	**197**	**183**	**188**	**188**	**205**	**245**	**217**	**200**	**371**	**353**	**158**	**135**	**203**
January	159	166	159	158	152	178	186	187	215	197	240	194	196	187	195	245	220	208	318	324	165	132	201
February	160	167	159	157	152	180	186	188	204	210	199	190	196	188	198	245	217	210	353	342	165	131	200
March	161	168	161	157	150	186	186	190	192	215	161	196	194	187	200	242	217	211	400	340	165	135	200
April	170	179	169	166	157	206	191	199	191	224	153	199	194	183	200	245	217	214	535	367	165	135	211
May	171	179	169	166	155	202	195	206	189	221	153	187	194	182	205	264	223	215	565	462	165	136	215
June	182	191	176	174	157	194	200	215	185	216	155	175	189	182	211	267	230	215	606	485	165	136	219
July	192	202	181	179	158	208	203	222	184	211	166	177	186	188	213	264	233	214	524	432	165	137	219
August	186	196	176	172	154	219	203	223	177	212	184	175	183	191	213	255	230	210	294	416	162	137	207
September	185	193	175	170	152	238	202	225	177	214	206	179	184	193	213	252	227	202	229	333	153	137	203
October	177	188	168	162	147	238	202	222	185	207	234	180	184	194	211	236	213	185	200	253	146	133	198
November	171	178	165	158	146	210	196	212	183	201	250	181	180	194	207	221	197	163	194	235	139	135	193
December	156	160	152	145	136	157	176	186	162	189	268	162	176	189	193	200	183	152	188	191	133	133	178
1921:																							
January	159	163	157	148	140	171	171	180	141	200	229	159	175	183	193	203	173	137	176	176	129	133	172
February	151	153	148	138	129	156	166	179	131	201	139	148	174	173	189	197	167	121	153	162	126	131	158
March	154	157	152	141	130	168	155	181	124	203	121	150	176	171	188	194	160	113	147	176	125	131	156
April	157	160	154	140	127	177	164	183	116	202	99	145	169	167	184	179	153	106	135	176	123	129	152
May	158	160	153	138	124	167	161	181	106	194	97	111	143	162	177	173	150	101	129	153	121	129	145
June	157	160	151	135	117	162	159	182	103	181	101	105	133	160	175	179	150	101	159	142	120	126	144
July	158	161	148	129	109	163	160	190	106	182	122	122	133	157	173	176	147	100	200	129	120	127	148

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TREND IN RETAIL COST OF ALL ARTICLES OF FOOD, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913 TO JULY, 1921.

[Average cost for 1913=100.]

Retail Prices of Food in 51 Cities on Specified Dates.

AVERAGE retail food prices are shown in Table 5 for 39 cities for July 15, 1913, for July 15, 1920, and for June 15 and July 15, 1921. For 12 other cities, prices are shown for the same dates with the exception of July, 1913, as these cities were not scheduled by the bureau until after 1913.

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TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

[The prices shown in this table are computed from reports sent monthly to the bureau by retail dealers

Article.	Unit.	Atlanta, Ga.				Baltimore, Md.				Birmingham, Ala.			
		July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
		1913	1920			1913	1920			1913	1920		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	26.0	43.3	36.5	36.2	24.3	51.4	39.0	39.8	28.1	46.9	39.3	38.9
Round steak	do	21.5	40.4	34.5	33.7	23.0	48.4	35.8	36.3	22.5	43.0	35.0	35.0
Rib roast	do	19.1	32.3	27.7	28.1	20.0	39.4	30.3	29.9	20.6	34.7	28.9	28.9
Chuck roast	do	15.9	26.5	20.5	20.5	16.7	30.5	22.1	20.9	16.8	28.5	22.6	22.5
Plate beef	do	9.4	18.8	12.8	13.1	12.8	20.0	15.0	13.4	10.5	19.3	14.3	14.0
Pork chops	do	24.5	40.9	33.3	33.0	20.0	44.4	31.4	32.3	20.0	40.6	30.8	31.5
Bacon	do	32.0	56.8	42.8	42.8	26.0	47.4	35.7	36.0	35.0	62.0	47.9	48.2
Ham	do	31.0	57.9	46.3	50.3	34.5	63.8	53.2	55.0	31.3	61.4	50.5	52.5
Lamb, leg of	do	20.0	42.8	37.1	35.0	19.0	43.8	36.2	36.5	23.3	45.0	37.3	38.6
Hens	do	20.1	41.7	33.0	31.4	21.8	48.6	41.5	42.7	17.3	38.0	33.9	32.9
Salmon (canned)	do	.....	31.2	19.2	19.3	.....	35.2	31.9	31.0	.....	39.7	38.0	37.1
Milk, fresh	Quart	10.0	25.0	20.0	17.5	8.8	16.0	12.0	12.0	10.3	25.0	20.0	20.0
Milk, evaporated	15–16 oz. can	.....	17.3	15.2	15.0	.....	14.7	13.2	12.9	.....	16.2	15.1	15.0
Butter	Pound	37.1	71.2	42.0	47.7	37.0	71.6	43.9	49.5	39.0	73.2	40.6	47.0
Oleomargarine	do	.....	45.8	34.3	34.3	.....	43.0	27.9	28.3	.....	45.0	33.7	34.5
Nut margarine	do	.....	39.0	28.0	27.5	.....	35.7	25.9	25.5	.....	40.0	29.7	30.3
Cheese	do	25.0	40.2	27.1	27.8	22.0	41.5	29.2	29.8	23.0	40.8	27.7	28.3
Lard	do	15.7	29.1	16.9	18.1	15.0	27.6	14.7	15.4	16.8	29.2	16.5	17.3
Crisco	do	.....	35.4	19.7	19.4	.....	33.3	18.7	18.6	.....	36.8	26.1	24.3
Eggs, strictly fresh	Dozen	22.6	50.0	30.7	36.5	25.9	53.0	32.7	38.5	28.3	52.7	31.4	36.2
Bread	Pound	6.0	12.7	11.1	10.9	5.4	11.4	9.2	9.2	5.4	11.5	9.6	9.5
Flour	do	3.6	8.7	6.2	5.9	3.2	9.1	5.9	5.9	3.8	8.9	6.6	6.5
Corn meal	do	2.6	6.5	3.5	3.6	2.5	6.1	3.6	3.7	2.3	6.1	3.2	3.1
Rolled oats	do	.....	12.2	11.3	11.3	.....	10.1	9 5	9.7	.....	12.2	11.4	11.7
Corn flakes	8 oz. pkg	.....	14.5	13.5	13.1	.....	13.6	11.1	11.1	.....	16.2	13.6	13.4
Cream of Wheat	28-oz. pkg	.....	31.8	31.9	31.4	.....	28.9	27.6	27.6	.....	32.2	31.8	31.4
Macaroni	Pound	.....	22.3	22.0	22.0	.....	20.4	21.0	21.2	.....	22.6	22.3	21.1
Rice	do	8 6	18.5	7.5	7.5	9.0	18.0	9.5	9.1	8.2	18.9	8.3	8.3
Beans, navy	do	.....	13.9	10.0	10.0	.....	11.0	7.8	7.6	.....	14.2	9.0	9.0
Potatoes	do	2.2	10.2	3.9	4.2	1.7	7.8	2.9	2.7	2.1	10.1	4.5	4.4
Onions	do	.....	9.6	6.5	6.0	.....	6.3	6.0	4.8	.....	8.8	7.2	6.5
Cabbage	do	.....	9.1	2.9	4.3	.....	4.7	4.5	4.8	.....	8.5	4.1	6.3
Beans, baked	No. 2 can	.....	16.3	14.0	14.0	.....	15.0	13.0	13.1	.....	18.2	15.9	16.0
Corn, canned	do	.....	20.4	15.8	15.6	.....	18.1	15.5	15.4	.....	19.6	16.9	17.3
Peas, canned	do	.....	20.1	17.8	17.4	.....	18.8	16.2	15.9	.....	21.5	21.2	21.1
Tomatoes, canned	do	.....	14.6	10.1	10.3	.....	14.3	9.8	9.9	.....	15.0	10.1	10.2
Sugar, granulated	Pound	5.8	29.1	7.9	7.3	4.9	25.4	6.9	6.3	5.5	27.9	7.9	7.3
Tea	do	60.0	92.2	91.1	89.8	56.0	70.4	65.9	65.9	61.3	89.5	85.8	84.8
Coffee	do	32.0	52.6	33.0	33.1	24.8	45.3	31.3	31.2	28.8	50.5	36.9	37.1
Prunes	do	.....	29.7	18.9	20.7	.....	26.4	18.1	18.1	.....	30.0	20.8	20.4
Raisins	do	.....	24.9	35.0	34.3	.....	28.5	28.9	28.7	.....	25.9	32.0	33.1
Bananas	Dozen	.....	36.5	30.9	28.2	.....	31.8	30.5	28.0	.....	47.2	42.9	40.8
Oranges	do	.....	67.5	50.0	56.0	.....	70.4	55.4	57.1	.....	62.9	50.3	54.4

[1] The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

OF FOOD FOR 51 CITIES ON CERTAIN SPECIFIED DATES.

As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Boston, Mass.				Bridgeport, Conn.			Buffalo, N. Y.				Butte, Mont.			Charleston, S. C.			
July 15—		June 15, 1921.	July 15, 1921.	July 15. 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
1913	1920						1913	1920						1913	1920		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
[1] 35.8	[1] 71.5	[1] 59.9	[1] 59.8	58.2	44.7	46.3	24.0	46.4	38.1	39.3	39.8	32.1	32.5	21.8	42.5	38.8	38.7
35.8	67.0	53.5	54.4	54.8	40.9	42.2	20.8	42.9	32.8	33.6	36.0	27.2	27.8	20.0	42.3	37.8	37.3
25.6	45.6	35.8	34.2	42.1	33.8	34.7	17.0	35.5	28.7	27.9	31.4	24.9	24.8	20.5	33.7	31.4	30.7
18.7	36.6	24.4	22.4	33.3	23.9	23.6	15.8	29.0	21.0	19.9	25.1	18.7	17.8	15.0	27.8	24.2	24.5
.....	.....	16.1	15.2	15.6	10.7	10.1	11.8	19.3	12.8	11.2	17.7	12.6	12.1	10.6	22.7	17.1	16.5
24.2	48.1	38.4	37.3	42.9	34.3	35.2	22.3	46.5	35.6	36.2	42.4	34.2	34.5	20.0	44.2	38.4	38.6
25.8	50.4	38.5	38.4	60.0	47.4	48.5	25.0	48.9	33.3	33.9	64.0	51.9	53.1	26.3	53.5	42.9	42.3
33.0	69.0	56.0	57.8	69.5	56.2	61.9	28.7	58.3	48.3	50.5	64.0	54.1	55.6	28.3	57.3	47.9	47.6
25.0	46.5	40.2	39.8	44.6	39.0	41.8	17.0	35.6	29.7	29.1	36.5	30.1	30.5	21.7	45.5	38.3	38.8
26.2	52.2	46.3	44.9	48.4	43.6	42.6	22.0	44.1	38.3	38.4	42.8	39.2	36.7	22.2	50.7	42.9	43.7
.....	37.2	36.2	34.7	38.8	39.3	39.1	.....	35.6	34.2	32.5	44.2	42.3	41.4	.....	36.8	34.1	33.9
8.9	17.0	15.3	15.2	16.0	14.0	14.0	8.0	15.0	13.0	13.0	15.6	14.3	14.3	11.7	23.7	20.7	20.0
.....	15.8	14.4	14.1	15.4	14.0	13.8	.....	14.7	12.6	12.4	15.9	13.5	13.2	.....	15.3	12.9	12.8
35.5	68.8	40.0	46.6	67.2	39.6	45.2	33.0	66.2	38.5	47.0	64.8	37.9	41.9	34.0	68.1	39.1	43.9
.....	45.1	30.9	31.6	40.6	29.2	28.0	.....	41.8	29.3	29.3	40.0	32.5	30.0	.....	43.9	30.4	29.3
.....	36.2	27.3	27.4	35.9	28.1	25.3	.....	34.5	26.1	26.2	39.6	29.7	29.6	.....	39.3	29.0	27.7
22.3	41.0	32.0	29.7	42.3	33.1	33.0	20.5	38.8	27.9	28.4	43.1	35.7	35.3	20.0	38.9	24.9	25.7
16.0	28.8	16.2	17.0	27.2	15.1	15.7	14.5	26.9	14.3	15.8	33.6	21.4	20.8	15.0	29.2	18.8	18.5
.....	35.4	21.0	21.2	34.2	20.0	19.4	.....	34.2	19.2	19.3	42.2	25.6	25.6	.....	35.5	20.4	20.4
37.3	80.1	53.4	65.1	72.4	46.6	54.9	28.3	58.9	35.1	43.3	65.0	40.8	48.8	25.8	53.6	31.5	37.1
5.9	11.3	9.9	9.8	12.5	10.8	10.7	5.6	11.3	8.8	8.8	14.4	9.8	9.7	6.2	13.6	11.3	11.1
3.8	9.5	6.7	6.6	8.9	6.0	6.1	3.1	8.5	5.6	5.5	9.2	6.5	6.5	3.7	8.9	6.7	6.5
3.5	7.7	5.9	5.6	9.0	8.2	7.6	2.6	6.6	4.3	4.2	7.5	4.9	4.8	2.4	5.8	3.1	3.0
.....	9.8	8.8	8.9	10.6	10.2	9.9	.....	9.0	8.2	8.1	10.1	8.7	8.6	.....	11.3	11.1	11.0
.....	14.9	12.3	12.1	14.0	11.4	11.5	.....	13.2	10.9	10.8	15.5	14.3	14.2	.....	14.8	12.9	12.7
.....	30.4	29.4	29.5	28.1	28.9	29.0	.....	28.3	27.9	27.8	33.0	34.2	34.2	.....	30.3	30.3	30.3
.....	26.0	24.4	24.8	24.9	25.0	25.0	.....	23.1	22.3	22.4	22.5	21.7	21.7	.....	22.3	20.3	20.1
9.4	19.4	10.4	10.0	18.4	9.8	9.4	9.3	18.3	8.3	8.5	18.9	9.5	9.3	5.5	15.5	6.0	5.8
.....	11.0	7.8	7.6	11.8	8.9	8.8	.....	11.5	7.5	7.8	12.4	9.1	9.0	.....	14.3	10.2	10.1
2.2	8.7	1.6	3.3	8.7	2.5	3.0	2.0	8.0	1.2	3.2	9.4	1.3	3.7	2.2	6.9	2.7	3.0
.....	5.9	7.4	7.2	5.6	5.4	5.7	.....	6.4	5.5	4.8	6.7	3.1	3.4	.....	7.7	5.1	5.0
.....	8.8	7.0	6.5	8.4	6.1	5.1	.....	6.8	5.7	4.3	7.4	6.8	6.0	.....	6.0	2.6	4.0
.....	18.3	16.5	15.9	15.6	13.2	13.0	.....	14.1	11.5	11.7	22.1	20.5	20.0	.....	14.8	12.0	11.9
.....	21.2	19.5	19.0	21.9	20.1	20.0	.....	18.4	15.5	15.9	18.9	17.2	17.2	.....	19.5	14.3	14.4
.....	22.3	20.4	20.4	22.2	20.6	20.5	.....	17.9	15.7	16.3	18.3	17.2	16.5	.....	22.2	19.0	18.8
.....	15.7	11.9	11.9	15.8	11.6	11.8	.....	15.6	11.7	11.4	16.4	13.3	13.8	.....	15.0	10.0	10.0
5.4	25.7	7.5	6.7	27.3	7.5	7.0	5.3	25.4	7.4	6.6	28.6	9.6	9.1	5.0	25.8	7.0	6.4
58.6	69.9	66.5	66.4	68.9	58.1	59.0	45.0	67.0	63.4	63.4	77.4	76.2	76.2	50.0	80.4	75.2	73.8
33.0	53.3	41.4	41.6	47.3	34.9	33.5	29.3	47.3	33.1	33.3	60.6	47.9	46.8	26.3	47.6	32.4	32.4
.....	28.3	18.5	18.5	27.7	18.1	19.1	.....	26.7	18.1	17.7	29.6	18.8	19.2	.....	28.4	17.4	17.7
.....	28.6	30.7	30.0	27.7	31.2	30.7	.....	28.2	29.9	29.9	30.9	32.3	32.5	.....	26.1	31.0	31.3
.....	56.5	50.4	48.9	48.0	39.4	39.8	.....	52.4	48.3	49.6	[2] 16.7	[2] 15.6	[2] 14.8	.....	57.9	43.3	41.9
.....	75.8	54.9	56.5	69.9	53.4	54.7	.....	64.4	54.1	54.7	69.7	41.9	45.6	.....	71.4	48.8	51.4

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Chicago, Ill.				Cincinnati, Ohio.				Cleveland, Ohio.			
		July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
		1913	1920			1913	1920			1913	1920		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	24.2	47.8	37.6	38.4	23.8	41.3	36.4	35.5	26.0	50.4	38.5	38.9
Round steak	do	21.3	40.9	31.3	31.8	21.3	39.0	33.2	32.7	23.0	45.1	32.9	33.0
Rib roast	do	20.2	35.9	30.0	29.5	19.1	33.7	30.0	29.1	20.0	34.1	27.6	26.6
Chuck roast	do	15.9	28.0	20.1	19.1	15.2	25.4	20.0	18.9	17.5	29.5	21.3	19.9
Plate beef	do	11.3	19.0	13.3	11.8	11.6	20.7	15.9	13.4	11.7	18.1	12.9	11.5
Pork chops	do	20.4	42.6	29.8	30.2	20.6	42.4	31.3	32.1	23.2	46.6	32.9	34.0
Bacon	do	32.7	60.1	51.6	52.0	26.7	47.8	36.6	36.7	30.1	56.9	43.3	43.2
Ham	do	32.3	61.3	51.3	51.7	29.7	60.5	51.5	53.0	38.0	65.1	52.5	53.2
Lamb, leg of	do	20.2	41.5	35.1	34.3	15.7	36.7	34.7	32.7	20.7	42.5	33.3	32.6
Hens	do	20.2	42.3	34.6	36.2	23.3	49.3	39.6	38.8	22.0	46.9	37.1	38.7
Salmon (canned)	do		38.8	36.8	35.5		36.9	35.0	35.0		39.0	35.9	34.9
Milk, fresh	Quart	8.0	15.0	14.0	14.0	8.	15.0	13.0	13.0	8.0	15.0	13.0	13.0
Milk, evaporated	15-16 oz. can		14.6	13.1	12.6		14.6	13.6	13.2		16.0	13.2	12.8
Butter	Pound	32.3	62.9	37.2	45.6	34.4	67.2	39.0	46.0	35.2	69.0	41.7	49.9
Oleomargarine	do		38.7	24.9	24.4		39.2	28.4	28.1		44.1	29.0	29.1
Nut margarine	do		33.1	23.5	23.5		34.8	25.8	25.5		35.9	27.3	26.6
Cheese	do	25.0	43.4	34.5	34.6	21.0	42.7	32.8	32.7	23.0	42.1	26.9	26.9
Lard	do	15.1	27.7	15.4	15.6	14.2	25.7	13.4	14.0	16.5	30.2	16.8	17.4
Crisco	do		35.1	20.7	20.5		34.1	19.8	19.8		37.5	20.7	20.9
Eggs, strictly fresh	Dozen	25.3	53.4	33.4	41.8	22.4	52.0	29.0	35.9	29.8	60.2	34.3	43.3
Bread	Pound	6.1	12.4	9.9	9.8	4.8	11.5	9.8	9.4	5.5	11.6	9.1	9.1
Flour	do	2.9	8.3	5.4	5.3	3.3	8.8	6.0	5.9	3.2	8.9	6.0	6.0
Corn meal	do	2.8	7.2	6.0	5.9	2.7	6.3	3.5	3.5	2.7	6.8	4.7	4.8
Rolled oats	do		10.0	9.1	9.1		10.7	10.2	10.2		12.1	9.5	10.2
Corn flakes	8-oz. pkg		14.4	11.3	11.1		14.1	11.6	11.2		16.2	12.7	12.5
Cream of Wheat	28-oz pkg		29.0	28.2	27.9		30.6	29.6	29.7		29.9	28.3	28.5
Macaroni	Pound		19.3	19.2	18.8		19.4	18.9	18.4		23.3	21.0	21.2
Rice	do	8.7	18.0	9.0	8.9	8.8	18.3	8.7	8.6	8.5	19.3	8.2	8.3
Beans, navy	do		11.6	7.6	7.6		10.7	6.4	6.5		11.6	6.8	6.9
Potatoes	do	2.1	9.8	3.0	3.6	2.2	8.2	4.3	4.3	2.0	9.3	2.5	3.6
Onions	do		5.8	5.5	5.0		6.0	6.1	5.5		6.9	5.5	5.4
Cabbage	do		8.1	6.7	6.3		5.3	6.3	5.8		9.3	6.4	5.7
Beans, baked	No. 2 can		16.8	14.6	14.3		15.3	13.1	13.2		16.4	13.4	13.4
Corn, canned	do		17.3	14.7	14.7		17.7	15.2	14.9		20.5	17.8	17.3
Peas, canned	do		17.2	14.9	15.1		17.8	17.2	16.5		21.8	17.8	17.5
Tomatoes, canned	do		15.2	11.7	11.9		15.3	10.9	10.8		15.8	12.3	12.3
Sugar, granulated	Pound	5.1	26.5	7.2	6.4	5.2	26.8	7.7	6.9	5.3	28.7	7.7	6.9
Tea	do	53.3	70.2	65.4	64.2	60.0	75.3	71.0	69.2	50.0	78.2	68.0	67.1
Coffee	do	30.7	45.4	32.9	33.1	25.6	43.3	31.2	30.2	26.5	51.7	36.1	35.9
Prunes	do		29.3	19.5	19.7		30.7	22.0	22.5		29.0	17.1	18.0
Raisins	do		28.2	30.8	29.9		31.8	30.9	25.5		30.1	29.2	29.4
Bananas	Dozen		44.7	39.4	38.9		52.4	42.4	42.8		60.9	49.7	49.7
Oranges	do		66.7	46.4	45.7		64.3	48.9	49.1		68.8	51.4	50.8

[1] The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "rump" steak.

OF FOOD FOR 51 CITIES ON CERTAIN SPECIFIED DATES—Continued.

Columbus, Ohio.			Dallas, Tex.				Denver, Colo.				Detroit, Mich.				Fall River, Mass.			
July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
			1913	1920			1913	1920			1913	1920			1913	1920		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
42.9	36.5	36.8	22.8	40.0	36.6	36.1	25.3	45.2	32.8	34.0	25.0	47.9	38.9	39.8	[1]35.5	[1]74.6	[1]56.2	[1]56.2
40.1	31.8	31.8	20.8	38.4	34.3	34.6	23.2	43.5	29.0	30.1	20.2	42.2	32.2	32.4	28.0	59.6	44.1	44.1
33.0	29.4	28.5	19.7	33.4	29.9	29.6	17.8	32.6	24.2	24.3	19.8	35.8	29.0	28.7	24.0	40.4	28.8	29.2
28.6	23.6	22.8	16.3	29.3	23.9	23.7	16.2	27.1	18.2	18.0	15.0	28.0	21.2	19.9	18.5	32.6	22.3	21.8
20.6	14.5	13.8	13.2	23.2	19.2	19.2	9.6	15.9	11.3	10.5	11.5	19.5	13.3	11.1	.....	.....	15.0	14.0
39.6	29.7	29.5	22.0	41.6	34.5	35.0	20.3	41.7	31.3	30.8	20.6	45.6	33.1	35.4	22.5	43.3	33.3	33.1
52.9	39.5	39.5	38.0	57.0	48.2	50.5	31.0	58.9	46.4	47.7	24.5	55.5	40.3	41.3	26.2	51.6	39.9	40.1
60.0	49.6	52.7	31.3	61.7	52.3	53.8	33.3	63.0	53.5	56.9	28.0	65.3	54.5	56.6	32.7	61.9	50.3	52.4
30.0	38.0	35.5	22.0	45.0	39.0	39.0	17.8	37.7	32.4	32.3	17.6	42.3	35.0	36.0	21.0	40.7	37.5	36.6
38.0	35.2	35.2	17.8	38.6	31.8	30.7	21.4	40.6	37.0	35.6	21.6	47.4	38.2	38.7	25.0	52.5	48.7	47.8
36.6	35.1	33.6	.....	39.4	32.5	31.9	.....	39.6	38.3	38.3	.....	38.9	37.5	36.2	.....	38.9	36.4	34.9
14.0	12.0	12.0	10.0	20.7	15.0	15.0	8.4	13.0	10.8	10.8	7.9	16.0	13.0	13.0	9.0	16.5	13.0	13.0
14.8	14.7	14.5	.....	16.7	15.4	14.7	.....	14.3	12.7	13.9	.....	15.7	13.7	13.4	.....	16.1	15.1	14.9
66.1	39.3	47.7	36.0	65.9	41.1	44.3	36.4	61.9	37.0	43.6	33.7	67.5	38.8	46.8	35.1	66.5	39.7	43.9
41.3	27.5	26.5	.....	37.8	19.0	19.0	.....	43.3	31.9	31.3	.....	44.0	29.1	28.4	.....	42.0	31.8	31.0
34.9	25.3	24.9	.....	38.0	29.0	29.8	.....	36.0	27.5	27.6	.....	34.9	26.8	26.4	.....	36.9	30.0	31.7
39.9	24.9	25.9	20.0	40.1	30.7	30.7	26.1	43.7	30.9	30.8	20.7	41.6	28.1	29.1	23.4	41.6	31.6	31.2
26.3	12.6	12.1	16.8	31.5	21.2	20.8	16.3	31.3	17.9	17.7	16.3	29.9	15.1	16.5	15.2	27.1	14.9	15.1
34.9	21.5	20.8	.....	36.0	19.2	19.5	.....	38.8	21.9	22.0	.....	35.8	20.5	20.1	.....	34.8	21.5	21.5
48.4	25.8	35.0	24.0	47.3	28.4	34.6	27.1	55.0	31.0	39.6	27.0	57.8	36.3	43.5	38.0	76.9	51.9	55.7
11.6	10.4	10.3	5.4	12.0	10.2	10.1	5.4	12.2	10.3	10.3	5.6	11.7	9.4	9.4	6.2	12.0	10.7	10.7
8.5	5.6	5.5	3.3	8.5	5.6	5.2	2.6	7.2	4.5	4.0	3.2	8.9	5.8	5.8	3.4	9.2	6.0	6.2
6.6	3.8	3.7	2.6	7.0	3.9	3.8	2.4	6.1	3.4	3.3	2.8	7.6	5.1	4.8	3.4	8.8	6.7	6.6
11.6	10.5	10.4	.....	12.2	11.7	11.8	.....	10.6	9.6	9.4	.....	11.2	10.4	10.5	.....	11.1	11.1	11.1
14.7	12.2	11.5	.....	13.9	13.4	12.9	.....	15.0	12.7	12.6	.....	14.8	11.5	11.1	.....	15.3	13.7	13.6
30.1	30.4	30.4	.....	32.2	31.7	31.8	.....	30.2	29.5	29.5	.....	29.6	29.9	29.8	.....	28.8	29.9	29.7
21.4	20.5	20.8	.....	22.9	21.6	21.6	.....	20.2	20.0	19.7	.....	21.0	19.7	19.1	.....	26.6	25.4	26.0
18.8	10.1	9.4	9.3	19.9	8.9	8.9	8.6	18.9	8.8	9.0	8.4	19.3	8.2	7.5	10.0	18.9	9.8	9.6
10.7	7.0	6.7	.....	12.0	9.2	9.3	.....	12.9	8.8	8.9	.....	11.1	6.4	6.4	.....	11.6	7.5	7.7
8.7	1.8	3.5	2.2	10.3	4.8	4.5	2.1	9.7	3.1	4.0	1.9	9.2	1.3	3.3	2.2	8.9	1.8	3.1
9.1	7.5	6.4	.....	7.8	6.3	5.9	.....	7.2	4.9	5.6	.....	6.4	5.7	6.3	.....	6.4	6.7	6.2
7.4	7.8	6.9	.....	9.1	5.4	5.5	.....	8.4	7.3	4.9	.....	9.3	7.1	7.9	.....	7.3	6.9	4.3
16.3	14.2	14.2	.....	19.0	16.3	16.4	.....	18.2	16.6	16.3	.....	15.4	12.7	12.2	.....	16.7	14.5	14.2
15.5	13.4	13.7	.....	21.0	18.0	17.7	.....	18.0	15.3	15.1	.....	19.5	15.3	15.7	.....	19.9	16.8	16.2
16.9	15.5	14.9	.....	24.4	22.2	22.2	.....	19.1	17.9	17.3	.....	19.0	17.1	17.0	.....	20.7	18.3	18.5
14.5	11.0	10.6	.....	15.3	12.7	12.9	.....	14.9	11.9	12.2	.....	14.9	11.1	11.3	.....	15.0	12.2	11.4
26.5	7.6	6.8	5.7	28.1	8.7	7.5	5.6	16.0	8.5	7.9	5.3	28.4	7.4	6.5	5.4	26.7	7.8	7.1
88.5	84.2	82.5	66.7	88.9	86.8	87.5	52.8	72.9	71.0	71.4	43.3	67.1	63.2	62.7	44.2	60.3	56.3	56.0
49.1	34.8	34.6	36.7	54.6	38.2	37.7	29.4	50.4	36.0	36.1	29.3	49.7	34.7	35.1	33.0	51.7	40.5	40.6
29.0	17.9	18.6	.....	28.8	21.7	21.9	.....	31.0	19.1	18.9	.....	29.9	19.2	18.3	.....	26.1	17.4	18.0
28.7	30.7	30.3	.....	26.9	33.7	33.9	.....	27.7	32.8	32.5	.....	27.6	28.7	29.3	.....	27.5	29.3	29.2
51.3	42.7	40.5	.....	44.4	35.0	33.6	.....	56.5	47.2	47.4	.....	41.4	37.1	35.5	.....	49.5	38.8	42.5
59.0	47.9	53.0	.....	60.6	48.5	49.5	.....	58.3	48.5	48.6	.....	62.7	48.4	48.1	.....	70.4	51.4	50.2

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Houston, Tex.			Indianapolis, Ind.				Jacksonville, Fla.			
		July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
					1913	1920			1913	1920		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	36.9	33.1	32.9	25.5	45.2	37.2	36.9	26.0	41.4	36.3	36.9
Round steak	do	35.2	32.7	31.4	24.7	44.6	35.8	35.8	22.0	38.5	31.5	32.5
Rib roast	do	29.5	26.9	26.5	18.2	30.9	27.1	26.3	23.3	29.9	27.3	27.5
Chuck roast	do	25.5	22.5	22.4	16.4	28.5	22.2	21.6	14.0	24.1	18.8	19.3
Plate beef	do	21.2	18.0	17.9	12.1	20.2	14.3	13.8	10.3	17.1	11.3	11.3
Pork chops	do	40.7	33.3	34.1	22.0	39.7	31.7	32.9	22.3	40.3	33.7	34.2
Bacon	do	62.4	52.1	53.2	30.7	53.4	41.4	42.2	27.8	53.3	41.8	41.4
Ham	do	55.9	51.5	51.9	32.8	62.8	52.4	55.4	28.7	57.9	48.6	50.0
Lamb, leg of	do	40.0	36.3	34.0	21.7	48.3	34.2	30.0	19.3	36.0	32.5	37.6
Hens	do	40.0	30.0	30.6	21.0	43.0	34.9	35.0	22.8	42.7	36.1	35.2
Salmon (canned)	do	37.4	34.7	34.1	.....	31.8	27.6	26.7	.....	35.9	27.9	28.1
Milk, fresh	Quart	19.7	16.0	16.0	8.0	14.0	12.0	12.0	12.4	25.0	20.0	20.0
Milk, evaporated	15-16-oz. can	15.9	14.1	13.9	.....	16.0	13.8	13.3	.....	15.2	13.8	13.6
Butter	Pound	62.2	39.0	44.9	33.2	67.2	38.2	44.9	38.6	71.3	40.0	46.1
Oleomargarine	do	44.2	33.0	32.8	.....	43.1	28.2	27.8	.....	43.1	28.6	28.6
Nut margarine	do	37.5	28.3	28.6	.....	35.1	26.2	25.8	.....	39.0	29.8	29.3
Cheese	do	38.3	25.3	26.3	21.3	42.3	29.6	29.6	22.5	39.4	25.9	26.0
Lard	do	28.6	18.0	18.6	15.2	27.3	13.0	13.3	15.5	30.3	20.0	19.5
Crisco	do	41.6	21.2	19.7	.....	36.1	21.2	21.0	.....	37.2	20.6	20.5
Eggs, strictly fresh	Dozen	46.7	28.3	34.1	22.2	48.4	25.8	34.5	30.6	56.8	34.3	41.3
Bread	Pound	10.5	8.7	8.7	5.1	11.6	8.6	8.6	6.4	12.7	10.4	10.3
Flour	do	8.8	6.1	6.0	3.2	8.5	5.7	5.6	3.8	9.2	6.6	6.6
Corn meal	do	6.6	4.0	4.1	2.6	6.6	3.4	3.3	3.0	6.5	3.5	3.6
Rolled oats	do	12.0	10.4	10.3	.....	11.7	9.5	9.3	.....	12.4	10.9	10.9
Corn flakes	8-oz. pkg	14.6	12.9	12.4	.....	15.4	12.0	12.0	.....	15.7	12.9	12.5
Cream of Wheat	28-oz. pkg	29.8	29.7	29.5	.....	30.4	31.8	31.5	.....	31.0	30.6	30.1
Macaroni	Pound	20.5	20.4	20.8	.....	21.9	20.4	19.8	.....	22.0	20.6	21.7
Rice	do	16.8	6.6	6.9	9.2	19.7	9.0	9.2	6.6	16.8	7.3	7.5
Beans, navy	do	11.8	8.7	8.6	.....	11.5	6.9	7.2	.....	13.1	9.2	8.9
Potatoes	do	8.9	3.8	4.1	2.2	9.9	1.9	3.7	2.6	8.6	3.6	4.6
Onions	do	6.1	4.9	4.6	.....	8.6	6.6	6.0	.....	8.8	4.6	5.1
Cabbage	do	7.3	4.2	5.4	.....	8.6	7.0	6.4	.....	8.0	4.1	5.6
Beans, baked	No. 2 can	16.6	13.2	12.8	.....	16.6	14.2	13.7	.....	17.0	13.3	13.1
Corn, canned	do	16.5	13.1	12.6	.....	17.1	13.7	14.3	.....	20.3	16.6	16.4
Peas, canned	do	19.3	17.6	17.9	.....	16.7	14.6	14.7	.....	21.1	19.1	19.3
Tomatoes, canned	do	15.1	10.5	10.8	.....	15.5	11.6	11.7	.....	14.9	10.0	10.0
Sugar, granulated	Pound	26.7	7.2	6.8	5.8	28.4	8.2	7.4	5.9	26.0	7.9	7.1
Tea	do	77.5	70.5	71.6	60.0	85.1	81.1	80.8	60.0	90.9	86.7	87.6
Coffee	do	46.2	29.7	29.7	30.0	51.1	38.8	38.8	34.5	55.8	37.2	36.7
Prunes	do	25.8	18.1	18.1	.....	29.4	20.2	20.5	.....	27.3	16.0	17.3
Raisins	do	25.8	32.6	32.2	.....	31.5	33.8	33.1	.....	29.3	33.6	33.8
Bananas	Dozen	40.6	34.7	34.7	.....	38.1	33.0	31.3	.....	45.7	34.3	28.1
Oranges	do	56.1	46.1	47.3	.....	60.3	48.2	50.6	.....	10.0	51.3	67.5

[1] The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

OF FOOD FOR 51 CITIES ON CERTAIN SPECIFIED DATES—Continued.

Kansas City, Mo.				Little Rock, Ark.				Los Angeles, Calif.				Louisville, Ky.				Manchester, N. H.			
July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
1913	1920			1913	1920			1913	1920			1913	1920			1913	1920		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.7	46.5	37.3	37.1	26.7	40.9	36.3	35.0	24.0	38.0	35.0	35.9	23.6	40.7	33.5	33.4	[1]36.2	[1]73.6	[1]55.2	[1]57.1
21.8	41.3	33.4	33.5	20.0	38.9	33.8	31.9	21.0	33.2	30.4	30.0	20.4	39.2	31.5	31.7	29.7	63.8	47.1	49.2
17.8	31.7	26.9	27.2	20.0	33.8	29.8	28.7	19.6	31.4	29.6	29.3	18.3	30.7	26.4	25.5	20.7	39.7	28.1	26.8
14.9	24.1	17.9	17.5	16.7	26.6	22.9	20.6	15.8	22.4	19.5	17.0	15.6	26.9	21.2	20.1	17.2	35.7	23.9	22.2
11.7	17.0	11.7	10.8	13.8	21.3	16.0	14.3	12.3	17.2	15.1	12.7	13.1	22.0	16.2	15.6	.....	.....	18.0	17.2
20.4	39.8	30.6	30.2	23.3	42.5	35.0	33.8	25.4	50.7	38.9	39.0	20.1	40.2	31.1	34.6	20.7	46.4	35.9	34.6
30.6	58.2	50.0	50.0	37.5	57.9	49.6	48.9	34.0	64.8	54.2	54.4	29.4	52.8	37.4	39.8	24.0	50.4	36.6	36.8
28.8	60.6	51.2	53.1	30.0	63.2	52.7	54.2	36.7	68.2	59.5	61.7	30.0	59.5	47.3	50.2	29.2	62.6	45.8	49.0
18.5	35.5	31.8	32.1	20.8	43.0	36.6	36.4	18.8	34.7	30.8	31.4	18.3	38.8	34.0	30.0	21.8	42.6	36.7	38.3
17.8	38.2	30.7	32.3	20.0	36.5	30.3	30.3	26.4	44.0	41.1	39.8	23.3	40.0	31.4	31.1	24.3	54.2	50.1	49.4
....	37.4	33.5	33.1	....	36.8	41.2	39.9	....	49.0	44.2	43.7	....	32.0	28.6	27.9	.....	40.7	35.6	35.0
8.7	16.0	14.3	14.7	10.0	20.0	15.0	15.0	10.0	18.0	16.0	14.3	8.8	16.0	11.0	11.0	8.0	16.0	15.0	15.0
....	15.6	14.4	14.3	....	16.1	15.0	14.7	....	13.7	11.9	11.6	....	15.9	14.3	13.9	.....	17.2	15.6	15.0
35.4	67.1	38.7	44.7	39.4	68.1	43.3	45.9	37.0	69.0	43.8	50.6	35.3	67.3	40.3	49.9	38.1	73.3	44.0	52.6
....	42.1	27.8	28.3	....	44.3	33.0	31.3	....	45.2	31.9	32.0	....	43.0	28.5	28.5	.....	43.0	29.8	29.4
....	35.1	27.0	26.6	....	37.9	28.5	28.0	....	37.0	25.7	27.3	....	35.2	26.8	27.0	.....	33.0	26.3	26.0
21.8	43.5	29.1	30.5	23.3	40.4	29.3	29.2	19.5	43.5	33.4	33.3	21.7	37.4	25.3	26.7	21.0	41.0	32.0	30.1
16.2	30.0	17.0	17.7	16.3	29.9	19.3	18.5	18.3	31.8	16.8	16.7	15.4	27.4	12.7	15.4	16.0	28.9	15.9	16.8
....	38.3	22.9	22.5	....	38.3	20.5	20.5	....	35.5	21.2	21.0	....	35.9	21.3	21.5	.....	37.1	23.7	23.1
23.1	49.9	28.5	35.5	26.7	50.4	29.2	35.7	33.0	57.6	36.0	41.2	22.1	49.6	25.2	31.3	32.3	70.8	46.4	40.2
6.1	13.2	9.8	9.9	6.0	11.0	9.5	9.5	6.0	10.6	9.2	9.2	5.7	11.1	8.9	8.9	6.1	11.3	8.6	8.6
3.0	7.9	5.6	5.4	3.5	8.7	6.2	5.9	3.6	8.2	5.8	5.5	3.5	8.1	6.1	5.6	3.4	9.4	6.3	6.4
2.6	7.9	5.0	4.9	2.4	6.2	3.0	3.1	3.2	8.1	5.2	5.1	2.3	6.0	2.6	2.6	3.4	7.9	5.6	6.0
....	12.6	10.0	10.4	....	12.0	11.5	11.7	....	10.9	10.7	10.6	....	11.0	10.2	10.2	.....	11.2	9.8	9.9
....	15.9	13.1	13.0	....	15.9	12.5	13.1	....	14.0	12.7	12.6	....	14.4	12.1	11.9	.....	17.0	13.2	12.9
....	30.3	30.5	30.2	....	30.3	31.8	31.4	....	29.3	29.0	28.9	....	28.6	29.8	29.7	.....	29.9	29.0	29.7
....	21.1	22.4	22.6	....	19.7	21.8	21.8	....	19.1	17.5	17.6	....	20.6	20.1	20.5	.....	26.8	25.4	25.6
8.7	19.1	8.6	8.6	8.3	18.1	7.5	7.4	7.7	18.1	9.7	9.5	8.1	18.9	8.3	8.4	8.8	18.9	8.4	8.6
....	12.6	8.2	8.3	....	12.4	8.4	8.0	....	10.3	8.0	8.0	....	11.9	6.2	6.3	.....	11.7	7.7	7.7
1.8	8.0	2.4	3.3	1.8	8.7	4.0	4.3	1.7	7.9	3.5	2.5	2.0	7.0	2.4	2.6	2.0	8.9	1.5	3.3
....	7.2	6.3	5.7	....	7.3	6.3	5.7	....	4.7	4.0	3.7	....	4.1	4.9	3.7	.....	5.6	6.8	6.9
....	5.6	6.1	4.3	....	8.3	5.6	5.6	....	4.0	3.6	3.9	....	5.9	4.7	6.8	.....	13.0	7.5	8.1
....	17.6	15.1	14.8	....	16.3	14.1	13.7	....	18.4	16.3	16.0	....	15.5	12.7	12.5	.....	17.2	15.9	16.2
....	16.0	12.8	13.0	....	18.3	15.4	14.8	....	18.9	17.1	16.8	....	17.4	15.6	15.8	.....	21.1	18.9	19.0
....	16.9	14.9	14.9	....	19.0	18.2	18.2	....	19.6	18.2	18.1	....	16.8	17.0	17.1	.....	22.3	21.5	21.6
....	15.4	10.6	10.9	....	14.8	11.8	11.7	....	[2]15.5	[2]13.2	[2]13.4	....	14.5	11.2	11.5	.....	[3]22.9	[3]18.5	[3]19.4
5.7	28.8	8.3	7.3	5.8	27.1	8.9	8.1	5.5	24.6	7.5	7.1	5.2	28.5	7.9	7.0	5.3	27.2	7.9	7.5
54.0	83.5	79.0	78.5	50.0	90.9	91.5	91.2	54.5	75.3	68.9	68.9	62.5	86.1	77.8	78.6	47.0	63.0	60.4	58.4
27.8	49.8	37.1	36.7	30.8	53.1	38.5	37.6	36.3	46.4	37.2	36.2	27.5	49.1	34.5	34.1	32.0	51.5	38.2	38.8
....	29.1	17.7	17.4	....	28.5	21.3	21.3	....	29.9	17.4	17.4	....	27.9	22.6	22.2	.....	28.6	18.6	19.3
....	31.3	34.1	33.5	....	25.8	34.0	34.0	....	25.9	30.0	29.5	....	27.8	30.0	29.5	.....	30.9	31.7	31.6
....	55.5	47.5	51.1	....	[4]12.5	[4]12.3	[4]10.7	....	[4]14.5	[4]13.6	[4]14.8	....	43.3	39.0	38.0	.....	[4]13.3	[4]12.3	[4]11.5
....	66.8	50.2	53.7	....	69.8	54.4	55.0	....	41.7	29.0	28.3	....	57.2	46.4	44.5	.....	72.5	49.9	53.9

[2] No. 2½ can. [3] No. 3 can. [4] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Memphis, Tenn.				Milwaukee, Wis.				Minneapolis, Minn.			
		July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
		1913	1920			1913	1920			1913	1920		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	22.9	47.0	33.2	32.4	23.0	46.3	37.7	39.5	24.2	43.6	33.1	34.7
Round steak	do	19.7	42.6	30.2	30.0	21.2	42.8	33.7	35.0	22.2	39.4	29.4	30.8
Rib roast	do	20.4	35.7	26.3	25.8	18.8	34.6	29.1	28.9	20.5	34.8	25.9	25.4
Chuck roast	do	15.9	28.7	18.9	18.7	16.6	29.6	23.6	21.9	17.3	27.4	19.7	19.0
Plate beef	do	12.2	24.0	13.8	13.8	11.6	18.9	13.5	11.7	10.3	16.2	9.8	8.6
Pork chops	do	20.0	40.8	29.5	29.9	20.0	43.1	32.8	33.5	19.3	39.0	30.6	31.8
Bacon	do	31.4	59.3	42.6	42.8	28.6	57.7	45.1	45.4	27.7	58.9	44.5	45.7
Ham	do	30.7	62.1	47.9	51.2	29.0	56.7	47.5	49.3	30.0	62.8	49.2	51.8
Lamb, leg of	do	21.2	43.7	35.8	34.3	20.5	42.2	38.1	38.0	16.5	36.3	32.4	32.1
Hens	do	20.0	39.3	31.3	31.5	20.6	39.1	34.9	35.1	19.2	35.7	29.6	31.7
Salmon (canned)	do	.....	39.6	37.4	34.7	.....	42.3	38.5	37.7	.....	46.2	40.4	41.0
Milk, fresh	Quart	10.0	18.5	17.3	17.3	7.0	13.0	9.0	9.0	7.0	13.0	10.0	10.0
Milk, evaporated	15–16 oz. can	.....	16.0	15.1	14.8	.....	15.4	14.5	13.8	.....	15.9	14.5	14.4
Butter	Pound	36.9	68.6	39.1	45.4	31.3	64.3	36.6	45.5	31.0	61.3	35.0	42.5
Oleomargarine	do	.....	42.3	29.2	30.4	.....	40.2	25.7	25.3	.....	41.8	29.0	29.1
Nut margarine	do	.....	37.6	26.6	26.7	.....	33.8	25.2	24.5	.....	33.6	25.1	25.2
Cheese	do	20.0	39.1	25.3	25.5	21.0	38.7	24.8	25.4	20.8	38.7	27.2	27.6
Lard	do	15.9	27.8	14.8	15.8	15.6	29.3	16.9	17.1	15.4	28.4	15.0	16.0
Crisco	do	.....	36.3	19.2	19.3	.....	36.0	22.2	21.0	.....	36.3	21.7	21.7
Eggs, strictly fresh	Dozen	24.0	52.2	30.3	35.5	23.8	48.1	27.9	35.1	22.7	50.8	29.1	36.6
Bread	Pound	6.0	12.9	10.3	10.3	5.6	10.9	9.4	9.4	5.6	11.1	9.6	9.6
Flour	do	3.5	8.6	6.3	5.9	3.1	8.7	5.6	5.6	3.0	8.2	5.9	5.9
Corn meal	do	2.0	5.7	2.8	2.9	3.0	7.2	4.9	4.6	2.4	7.4	4.4	4.7
Rolled oats	do	.....	12.3	10.7	10.7	.....	9.4	7.0	6.9	.....	9.5	8.0	8.5
Corn flakes	8-oz. pkg	.....	15.4	12.8	12.5	.....	14.7	11.8	11.7	.....	15.4	12.7	12.5
Cream of Wheat	28-oz. pkg	.....	30.1	29.2	29.2	.....	30.0	29.6	29.1	.....	31.3	29.9	30.0
Macaroni	Pound	.....	19.5	17.4	17.1	.....	19.5	19.1	18.8	.....	18.6	17.1	17.6
Rice	do	8.0	17.4	6.5	6.5	9.0	19.0	9.9	9.5	9.1	19.6	8.5	8.6
Beans, navy	do	.....	12.9	7.5	7.4	.....	11.1	7.2	7.1	.....	11.8	8.3	8.3
Potatoes	do	1.9	9.7	3.6	4.3	2.0	10.2	1.5	3.9	1.7	8.7	1.5	3.6
Onions	do	.....	6.6	4.9	4.3	.....	6.1	6.2	6.6	.....	6.6	7.0	6.0
Cabbage	do	.....	7.1	5.1	5.4	.....	11.0	7.5	7.2	.....	5.7	6.8	4.1
Beans, baked	No. 2 can	.....	16.9	14.3	14.8	.....	15.4	12.9	12.5	.....	18.1	16.6	15.9
Corn, canned	do	.....	18.3	14.2	14.1	.....	17.7	14.9	15.3	.....	17.1	13.9	13.7
Peas, canned	do	.....	19.2	15.9	15.9	.....	17.1	15.4	15.8	.....	17.7	14.8	15.4
Tomatoes, canned	do	.....	14.8	10.8	10.7	.....	15.0	12.7	12.2	.....	20.0	14.3	14.3
Sugar, granulated	Pound	5.7	28.3	7.8	7.3	5.5	27.2	7.5	6.7	5.6	28.4	8.0	7.3
Tea	do	63.8	96.2	89.5	88.4	50.0	71.7	68.7	68.1	45.0	65.5	65.3	64.3
Coffee	do	27.5	53.1	35.8	34.8	27.5	47.0	31.9	32.1	30.8	51.6	38.6	40.3
Prunes	do	.....	30.5	21.3	20.6	.....	28.5	19.1	19.0	.....	30.6	18.4	19.3
Raisins	do	.....	25.5	34.9	34.8	.....	29.8	29.8	30.1	.....	29.4	30.4	31.0
Bananas	Dozen	.....	46.8	40.5	38.2	.....	[3]14.7	[3]12.0	[3]11.2	.....	[3]15.3	[3]12.7	[3]12.6
Oranges	do	.....	61.1	51.9	51.9	.....	66.9	48.6	50.8	.....	67.9	52.9	51.1

[1] Whole.

[2] No. 3 can.

OF FOOD FOR 51 CITIES ON CERTAIN SPECIFIED DATES—Continued.

Mobile, Ala.			Newark, N. J.				New Haven, Conn.				New Orleans, La.				New York, N. Y.			
July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
			1913	1920			1913	1920			1913	1920			1913	1920		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
37.4	33.0	32.7	28.4	57.7	43.4	43.8	33.2	62.2	48.6	48.7	22.5	36.0	32.1	31.5	27.0	52.9	42.7	43.4
37.4	33.0	33.0	28.0	57.3	42.0	42.5	30.0	55.4	41.5	41.4	19.5	33.5	29.3	29.1	26.1	52.9	42.0	42.5
31.2	27.0	28.0	21.2	44.4	34.3	34.1	24.8	45.2	35.7	34.8	19.4	31.2	28.3	28.3	22.6	44.4	36.7	36.0
26.6	21.7	21.7	18.0	32.6	23.1	22.1	20.0	37.2	26.4	25.1	14.5	23.2	20.4	19.5	16.4	31.7	23.2	21.9
22.3	17.0	17.0	13.5	18.9	12.3	12.1	.....	.....	16.5	16.9	11.3	18.4	16.2	15.5	14.9	25.1	19.0	17.8
46.9	34.6	35.9	22.8	46.0	36.7	37.4	22.8	48.0	34.6	33.1	23.1	45.4	34.4	35.3	22.6	44.3	37.8	37.9
60.0	45.9	46.8	25.8	48.9	37.2	37.9	29.3	57.6	45.8	45.4	31.3	57.7	43.6	46.3	26.4	52.4	40.3	40.8
60.1	47.3	48.3	[1]22.0	[1]43.7	[1]32.4	[1]34.2	34.0	67.5	54.2	56.5	30.0	58.2	48.2	49.7	30.0	63.2	52.5	54.4
38.2	34.4	32.9	21.2	44.6	37.8	38.0	21.4	45.7	37.6	40.0	21.3	43.1	36.4	37.5	18.1	36.4	33.1	35.4
46.1	38.0	37.5	24.0	50.5	43.8	41.4	24.0	51.6	46.2	45.1	19.3	44.6	37.2	36.7	22.6	47.0	41.9	41.8
38.2	34.5	34.4	.....	38.2	35.5	34.6	.....	40.5	39.3	37.7	.....	37.4	41.0	39.4	.....	42.9	39.3	38.0
23.5	18.0	16.5	9.0	17.0	15.0	15.0	9.0	16.0	14.0	14.0	9.3	17.5	16.5	16.5	9.0	16.0	14.3	14.0
17.6	13.8	13.7	.....	14.4	12.5	12.3	.....	15.0	13.5	13.2	.....	14.8	13.2	13.1	.....	14.9	12.6	12.3
72.8	39.5	46.2	35.6	69.5	41.1	48.8	33.8	67.5	38.2	45.0	34.1	69.5	39.8	45.3	34.4	66.9	39.9	47.6
42.8	30.6	30.7	.....	41.6	29.2	29.2	.....	43.0	28.5	29.5	.....	44.1	28.0	27.8	.....	43.4	29.8	29.5
40.9	27.9	27.9	.....	36.1	26.6	26.4	.....	35.9	26.8	27.0	.....	36.3	26.8	26.7	.....	35.3	26.3	25.7
41.0	25.8	26.2	24.2	43.1	34.6	32.2	22.0	40.4	32.2	31.1	22.0	40.2	27.9	28.9	19.4	41.7	32.2	32.4
30.2	16.0	16.8	16.0	29.3	14.7	15.6	15.7	28.0	14.9	16.2	15.1	27.1	15.7	16.5	16.2	29.2	16.9	17.3
37.5	19.3	19.2	.....	33.2	19.0	19.0	.....	34.7	19.8	19.4	.....	37.3	21.7	20.6	.....	34.7	19.9	19.7
54.8	32.0	40.5	38.2	66.7	44.7	51.8	39.0	74.1	48.9	54.3	27.6	51.7	31.8	39.5	35.9	66.8	44.6	53.4
11.0	9.5	9.5	5.6	11.5	9.3	9.4	6.0	12.0	9.5	9.6	5.1	10.4	8.3	8.2	6.4	11.9	10.0	10.1
9.1	5.9	5.6	3.7	9.2	5.7	5.9	3.3	9.1	6.1	6.0	3.9	8.8	6.6	6.5	3.3	9.8	6.0	6.1
6.8	3.1	3.2	3.6	7.9	6.4	6.5	3.2	7.9	6.1	6.4	2.7	6.0	3.1	3.1	3.4	8.1	6.4	6.4
12.5	10.2	10.3	.....	9.6	8.4	8.9	.....	11.3	10.0	9.9	.....	11.0	9.2	9.4	.....	9.3	8.3	8.3
16.1	12.4	12.6	.....	13.2	10.5	10.4	.....	14.3	10.7	11.0	.....	14.5	10.9	11.1	.....	13.5	10.6	10.4
31.2	29.2	29.2	.....	28.6	28.5	28.4	.....	29.3	28.9	28.6	.....	30.0	29.5	29.5	.....	28.8	28.8	28.6
21.4	19.6	18.8	.....	25.2	21.9	21.9	.....	22.5	21.8	22.0	.....	11.6	10.2	9.9	.....	24.1	22.0	21.9
17.3	7.5	7.6	9.0	18.5	8.1	8.2	9.3	18.1	9.0	8.7	7.4	15.6	7.4	7.5	8.0	18.4	8.7	8.5
13.6	8.5	8.1	.....	11.8	7.6	7.6	.....	11.7	7.4	7.7	.....	11.1	7.1	7.0	.....	12.5	8.5	9.1
10.8	3.0	3.8	2.6	8.6	3.6	3.4	2.1	8.6	1.8	3.1	2.0	9.4	3.0	3.2	2.5	8.7	3.7	3.5
7.8	4.9	5.2	.....	7.0	7.8	6.7	.....	6.5	6.6	5.9	.....	5.6	3.6	3.7	.....	6.4	6.3	5.6
8.8	5.3	6.7	.....	5.8	5.9	5.2	.....	8.0	6.4	5.5	.....	6.8	4.8	6.4	.....	5.2	5.9	4.2
17.3	13.6	13.6	.....	14.4	12.1	12.1	.....	17.2	13.9	14.2	.....	17.0	14.0	13.8	.....	15.2	13.1	12.9
19.1	14.9	15.1	.....	18.6	16.1	15.7	.....	21.7	19.5	19.2	.....	16.4	13.6	13.5	.....	18.4	15.2	14.9
19.9	16.9	17.5	.....	18.8	17.5	17.2	.....	23.1	22.0	21.9	.....	17.0	18.5	18.2	.....	18.0	16.7	16.2
15.4	10.4	10.2	.....	14.1	9.9	9.9	.....	[2]22.2	[2]21.4	[2]21.4	.....	15.0	11.2	11.2	.....	14.9	10.3	11.1
27.2	7.9	7.5	5.3	25.5	6.8	6.5	5.3	26.8	7.5	6.8	5.2	25.1	7.0	6.6	4.9	25.2	6.9	6.3
80.5	74.0	73.3	53.8	55.3	48.6	48.8	55.0	64.3	54.5	54.5	62.1	73.3	71.9	72.4	43.3	59.1	53.3	53.0
46.9	32.3	32.1	29.3	45.7	31.1	31.8	33.8	51.9	37.5	37.6	26.7	41.0	30.2	29.8	27.5	46.4	32.4	32.5
28.4	16.8	16.2	.....	27.4	16.9	17.4	.....	27.7	17.9	18.4	.....	26.7	17.4	17.8	.....	27.7	18.8	18.8
28.4	29.7	30.4	.....	27.2	29.6	29.8	.....	27.1	29.2	29.2	.....	28.2	30.6	30.7	.....	28.6	30.4	30.1
35.0	27.5	25.5	.....	55.8	47.1	43.3	.....	45.7	38.5	38.1	.....	17.5	24.2	23.0	.....	51.0	43.1	41.4
64.5	51.3	51.2	.....	75.0	57.5	57.4	.....	68.4	49.6	53.4	.....	53.3	49.0	44.4	.....	76.9	58.4	57.9

[1] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Norfolk, Va.			Omaha, Nebr.				Peoria, Ill.		
		July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.	July 15, 1921.
					1913	1920					
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	54.6	42.5	42.9	25.2	50.9	36.5	36.8	40.1	34.9	33.1
Round steak	do	48.1	37.0	37.1	22.0	48.8	33.3	33.3	39.5	33.3	32.7
Rib roast	do	43.1	34.8	25.2	18.0	33.1	26.8	26.4	28.8	25.6	25.0
Chuck roast	do	31.1	22.0	21.8	16.2	27.3	20.6	19.6	25.9	21.9	21.5
Plate beef	do	19.8	16.1	14.4	11.1	16.7	11.5	10.8	18.1	14.4	14.3
Pork chops	do	40.3	33.5	32.4	19.9	40.9	31.9	31.8	41.3	30.5	30.0
Bacon	do	52.2	41.0	41.7	28.0	59.1	52.4	51.8	55.6	46.0	44.5
Ham	do	51.3	44.3	43.0	29.0	65.6	52.6	55.9	60.9	50.7	52.9
Lamb, leg of	do	47.8	40.0	39.4	17.8	41.9	32.9	32.4	37.6	35.6	35.0
Hens	do	48.2	41.4	41.4	17.5	39.4	32.9	32.4	40.0	33.4	33.5
Salmon (canned)	do	35.3	28.2	27.7	.....	39.8	37.6	36.3	37.1	35.4	35.6
Milk, fresh	Quart	21.3	20.0	19.0	7.9	15.5	11.9	12.0	14.3	12.5	12.5
Milk, evaporated	15-16-oz. can	14.8	14.0	13.4	.....	15.9	14.4	14.3	15.6	14.9	14.5
Butter	Pound	72.7	44.9	49.5	32.8	64.7	37.5	42.5	61.2	37.9	42.9
Oleomargarine	do	43.7	25.0	30.0	.....	44.5	29.6	31.0	41.8	29.1	28.5
Nut margarine	do	35.3	25.0	27.3	.....	36.1	26.9	27.8	35.3	27.3	27.7
Cheese	do	38.5	27.1	27.7	22.5	41.3	29.7	29.6	41.2	29.7	29.5
Lard	do	29.5	16.8	17.2	17.6	31.9	18.2	18.4	28.7	16.7	16.7
Crisco	do	35.6	19.6	19.8	.....	39.3	22.0	21.6	37.9	23.1	22.3
Eggs, strictly fresh	Dozen	53.8	33.1	38.2	23.3	49.4	26.8	33.9	47.9	26.1	33.4
Bread	Pound	11.9	9.7	9.7	5.2	12.2	11.1	9.8	12.6	10.5	10.2
Flour	do	8.7	6.1	6.1	2.8	8.4	5.1	5.0	9.1	5.9	5.8
Corn meal	do	6.8	3.9	3.8	2.3	6.6	4.4	4.4	6.7	4.0	3.9
Rolled oats	do	11.0	10.1	10.0	.....	11.8	11.2	10.6	12.0	11.1	11.4
Corn flakes	8-oz. pkg	14.5	12.0	12.0	.....	15.4	14.1	14.0	15.8	13.8	13.0
Cream of Wheat	28-oz. pkg	29.1	28.8	29.4	.....	31.2	31.0	31.3	31.5	30.6	30.1
Macaroni	Pound	21.7	19.8	19.4	.....	22.7	20.6	20.8	20.2	20.1	20.2
Rice	do	19.7	10.0	10.1	8.5	19.6	8.2	8.0	19.5	8.8	8.5
Beans, navy	do	12.0	8.2	8.1	.....	12.6	7.6	7.6	12.1	7.2	7.1
Potatoes	do	8.2	3.5	2.8	1.8	8.9	2.4	2.7	9.5	1.8	3.9
Onions	do	7.1	6.6	4.7	.....	7.5	6.7	5.5	8.4	6.0	6.1
Cabbage	do	6.1	3.9	4.2	.....	4.1	6.6	4.4	7.1	6.8	5.7
Beans, baked	No. 2 can	14.0	11.8	11.2	.....	21.1	17.1	16.8	17.6	14.9	13.9
Corn, canned	do	21.1	17.1	16.2	.....	18.3	14.3	14.0	17.6	14.8	14.3
Peas, canned	do	21.7	21.1	20.9	.....	19.1	14.8	14.5	18.8	16.3	16.3
Tomatoes, canned	do	14.7	11.2	11.0	.....	16.3	11.5	11.4	15.5	11.9	11.6
Sugar, granulated	Pound	26.9	7.5	6.9	5.7	25.8	8.1	7.3	28.2	8.3	7.4
Tea	do	89.3	82.8	83.2	56.0	82.9	74.6	74.1	72.9	64.6	64.6
Coffee	do	52.8	40.2	40.4	30.0	52.5	37.8	37.5	47.7	34.3	33.3
Prunes	do	27.5	17.5	17.8	.....	30.0	19.9	20.4	32.0	23.8	23.8
Raisins	do	25.5	32.0	31.5	.....	30.4	33.7	33.3	30.4	32.0	32.0
Bananas	Dozen	48.2	38.6	39.0	.....	[2]14.2	[3]12.9	[3]12.4	[3]13.5	[3]12.3	[3]12.0
Oranges	do	71.0	49.4	52.9	.....	67.9	46.0	48.8	65.9	47.9	49.5

[1] The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

OF FOOD FOR 31 CITIES ON CERTAIN SPECIFIED DATES—Continued.

Philadelphia, Pa.				Pittsburgh, Pa.				Portland, Me.			Portland, Oreg.				Providence, R. I.			
July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
1913	1920			1913	1920						1913	1920			1913	1920		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
[1] 32.0	[1] 62.6	[1] 50.0	[1] 49.4	27.5	55.7	44.2	44.9	[1] 71.0	[1] 57.6	[1] 57.7	23.5	33.6	31.0	30.0	[1] 39.6	[1] 79.7	[1] 65.3	[1] 65.8
27.5	57.1	41.3	41.7	24.8	50.0	37.6	38.6	61.4	45.7	46.8	21.4	31.6	28.6	27.0	31.0	63.4	49.6	49.9
22.7	44.7	34.9	34.9	21.8	40.6	33.0	32.3	36.8	30.0	38.9	19.5	30.2	26.3	25.2	24.2	49.2	37.2	36.4
18.2	33.6	20.8	19.3	16.8	31.8	22.5	21.5	28.8	19.4	18.4	16.4	21.8	18.2	17.2	18.8	37.7	28.9	28.8
12.7	18.4	11.9	10.2	12.4	19.4	11.4	10.5	.....	16.0	15.0	13.6	16.8	13.8	12.1	.....	.....	19.1	19.5
22.2	46.9	36.4	36.8	23.0	45.4	34.6	35.5	43.4	36.5	34.7	22.1	42.5	34.4	35.2	21.6	50.2	38.7	37.2
27.9	51.4	38.5	37.9	29.5	57.6	45.5	46.8	50.4	40.3	40.2	31.3	58.2	46.3	47.3	23.4	50.9	37.0	37.4
32.7	68.0	54.5	57.4	31.5	66.0	54.5	57.3	62.1	49.4	52.9	30.8	59.3	48.3	50.2	32.3	68.2	57.0	58.3
21.0	48.3	39.8	40.8	20.8	45.4	37.7	37.9	40.6	36.9	38.1	18.1	34.7	26.7	27.9	18.7	49.4	41.7	41.7
23.3	50.3	44.4	44.3	26.5	49.6	43.6	43.5	53.3	48.9	46.9	20.3	38.2	33.0	34.6	24.8	53.8	47.6	47.1
.....	36.1	31.4	30.7	.....	40.3	36.8	35.5	38.7	35.5	33.9	.....	44.2	42.0	42.3	.....	41.4	39.9	39.6
8.0	14.0	11.0	11.0	8.6	15.0	14.0	14.0	15.5	15.5	15.5	9.3	15.2	13.0	12.9	9.0	17.0	15.0	15.0
.....	15.2	13.9	13.6	.....	15.1	13.5	12.9	16.2	14.7	14.1	.....	14.6	12.9	12.4	.....	16.0	14.2	14.1
39.2	74.2	46.5	51.3	35.7	69.0	42.2	49.0	73.5	45.8	51.7	37.5	64.8	38.2	44.6	36.0	68.1	41.3	48.7
.....	45.4	29.0	29.0	.....	41.1	27.9	27.4	44.0	34.7	34.2	.....	41.7	28.3	26.2	.....	41.1	32.3	32.1
.....	37.2	27.3	27.3	.....	36.0	24.5	23.3	35.6	27.8	27.1	.....	38.5	27.4	28.4	.....	35.2	27.5	27.3
25.0	44.3	34.6	32.8	24.5	43.0	31.0	31.0	43.2	31.7	32.2	20.8	41.3	29.7	29.6	21.7	41.1	29.9	29.7
15.3	28.0	14.5	15.3	15.5	27.8	13.5	14.1	28.3	15.4	16.2	17.9	34.4	21.6	20.9	15.2	27.9	15.5	16.2
.....	34.4	19.6	19.7	.....	35.4	20.1	19.6	35.5	22.1	23.8	.....	39.6	24.2	24.1	.....	35.3	21.7	21.5
30.4	59.5	36.5	43.4	27.1	56.0	34.7	41.7	68.5	44.5	54.8	24.0	50.9	30.5	36.9	35.7	73.3	48.9	56.7
4.8	10.6	9.0	8.8	5.4	11.8	9.4	9.4	12.0	10.0	10.1	.....	11.3	9.5	9.5	5.9	11.9	10.6	10.6
3.2	9.1	5.9	6.0	3.3	8.7	5.8	5.9	8.9	6.1	6.1	2.9	7.7	5.1	5.0	3.5	9.3	6.4	6.5
2.7	6.1	4.4	4.4	2.7	7.9	4.4	4.3	7.2	4.8	4.5	3.3	7.5	4.7	4.8	2.8	6.8	4.8	4.5
.....	9.8	9.2	9.1	.....	10.8	10.8	10.4	9.3	7.7	7.7	.....	12.6	9.4	9.5	.....	10.7	10.4	10.7
.....	12.6	11.0	11.0	.....	14.3	11.6	11.6	15.3	12.5	12.3	.....	15.3	13.7	13.3	.....	14.6	12.2	11.7
.....	28.9	28.4	28.2	.....	29.6	29.6	29.1	29.7	29.8	29.6	.....	34.3	32.0	31.7	.....	30.5	30.0	29.9
.....	22.5	21.8	21.8	.....	21.3	22.6	21.3	23.9	23.8	23.5	.....	16.8	17.8	16.9	.....	25.2	23.0	22.7
9.8	19.3	9.5	9.5	9.2	19.2	9.8	9.6	19.2	10.2	10.0	8.6	19.8	9.4	8.8	9.3	19.0	10.1	9.7
.....	11.0	8.0	8.0	.....	11.6	7.2	7.1	11.3	7.6	7.4	.....	10.2	6.9	6.7	.....	11.3	8.1	8.0
2.1	8.2	3.4	3.0	1.8	8.4	3.3	3.2	9.1	1.3	2.9	1.2	8.0	1.8	3.1	2.0	8.9	1.6	3.3
.....	5.2	5.1	4.5	.....	5.9	6.3	6.0	6.2	6.3	6.4	.....	4.6	3.2	4.0	.....	6.7	5.7	6.2
.....	6.5	5.1	4.4	.....	8.8	7.0	5.2	11.0	6.3	6.1	.....	4.9	5.3	4.1	.....	8.4	6.0	4.3
.....	14.9	12.7	12.7	.....	16.2	14.2	14.2	18.9	16.9	17.1	.....	20.9	18.9	18.4	.....	16.5	13.9	14.0
.....	17.5	15.2	15.3	.....	18.0	15.1	15.2	19.7	17.0	16.9	.....	21.7	18.9	18.4	.....	20.3	18.1	18.2
.....	18.5	15.9	15.6	.....	18.4	16.2	16.7	20.6	19.0	19.0	.....	20.7	17.8	17.5	.....	21.3	19.9	19.5
.....	14.9	10.6	10.9	.....	14.7	11.1	10.9	17.2	12.0	10.8	.....	[2] 17.5	[2] 11.5	[2] 12.0	.....	16.2	13.1	13.6
5.0	25.7	7.2	6.6	5.5	29.0	7.7	7.0	26.7	7.8	7.0	6.3	25.1	8.6	7.7	5.1	26.7	7.6	6.8
54.0	62.5	61.6	61.8	58.0	79.0	77.0	74.4	63.9	58.1	56.3	55.0	68.3	64.7	64.1	48.3	59.4	60.3	59.4
25.0	43.8	29.9	30.0	30.0	48.4	35.8	36.5	50.8	39.1	38.4	35.0	50.3	38.0	37.7	30.0	52.2	39.4	39.5
.....	27.2	17.4	16.8	.....	30.1	20.4	19.8	26.1	17.0	17.7	.....	26.1	9.1	9.1	.....	28.2	19.4	19.8
.....	26.9	28.8	28.4	.....	30.5	28.5	27.8	29.3	29.5	28.7	.....	27.5	30.0	29.4	.....	28.0	29.9	29.5
.....	45.3	38.8	37.1	.....	53.1	47.0	44.1	[3] 13.8	[3] 13.0	[3] 12.0	.....	[3] 15.1	[3] 14.0	[3] 13.5	.....	50.0	42.5	42.2
.....	68.9	55.3	49.5	.....	65.8	53.9	51.9	78.0	54.8	57 5	.....	71.4	50.3	53.7	.....	72.5	59.5	58.1

[2] No. 2½ can.

[3] Per pound.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Richmond, Va.				Rochester, N. Y.			St. Louis, Mo.			
		July 15—		June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
		1913	1920						1913	1920		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	22.2	47.2	41.3	41.3	44.5	39.5	41.4	24.8	45.0	37.0	36.7
Round steak	do	19.6	43.2	37.2	37.1	40.6	34.8	35.3	22.9	44.3	35.0	35.1
Rib roast	do	19.3	35.8	32.2	31.2	34.2	30.2	29.7	18.3	35.0	30.0	29.6
Chuck roast	do	15.9	30.5	24.8	24.6	29.8	23.8	23.1	14.6	26.2	19.1	18.7
Plate beef	do	12.9	22.9	19.1	18.3	19.4	12.6	11.3	11.0	18.9	12.8	11.8
Pork chops	do	21.2	41.8	35.2	34.5	44.0	36.6	37.2	19.8	42.1	30.5	30.8
Bacon	do	26.6	49.7	37.2	38.1	46.5	34.9	35.0	27.8	53.0	40.1	40.5
Ham	do	26.0	55.5	43.2	46.0	59.8	48.8	51.5	27.3	63.2	48.9	50.2
Lamb, leg of	do	19.3	46.0	42.5	41.5	39.0	36.2	37.4	19.0	38.5	32.9	30.9
Hens	do	20.0	45.4	40.4	40.0	48.0	44.2	42.8	18.0	38.5	35.2	33.6
Salmon (canned)	do	.....	28.2	20.3	19.2	39.2	36.7	36.0	.....	36.1	35.8	35.0
Milk, fresh	Quart	10.0	16.0	14.0	14.0	13.5	12.0	12.0	8.0	15.0	13.0	13.0
Milk, evaporated	15–16 oz. can	.....	16.6	14.7	14.6	16.3	14.3	13.7	.....	14.7	12.8	12.5
Butter	Pound	38.1	77.1	46.6	50.7	67.1	38.4	45.8	33.3	68.5	40.2	46.3
Oleomargarine	do	.....	45.1	31.3	31.4	43.5	29.4	29.0	.....	39.5	28.4	28.3
Nut margarine	do	.....	37.8	28.6	29.1	35.4	25.8	25.8	.....	34.7	25.8	25.6
Cheese	do	22.3	41.9	30.0	29.7	40.5	29.5	29.6	19.5	39.2	26.5	26.6
Lard	do	15.0	30.5	17.2	17.3	28.5	16.0	16.5	14.1	23.7	12.1	13.1
Crisco	do	.....	37.7	21.6	20.9	35.4	18.9	18.4	.....	34.7	20.6	20.8
Eggs, strictly fresh	Dozen	24.6	54.7	33.5	37.6	58.5	34.6	42.1	21.4	49.7	30.0	34.3
Bread	Pound	5.3	13.1	10.7	10.7	11.4	8.5	8.5	5.5	12.8	10.6	10.6
Flour	do	3.3	9.2	6.1	6.1	9.1	5.8	5.9	3.0	8.1	5.3	5.2
Corn meal	do	2.0	7.1	4.2	4.3	7.5	5.3	5.3	2.2	6.5	3.4	3.4
Rolled oats	do	.....	11.6	11.1	11.0	8.8	8.0	8.5	.....	10.1	9.6	9.7
Corn flakes	8-oz. pkg	.....	15.3	12.6	12.6	14.8	12.2	11.8	.....	13.7	10.9	10.8
Cream of Wheat	28-oz. pkg	.....	31.2	30.8	31.2	29.8	29.2	29.1	.....	30.0	30.0	30.1
Macaroni	Pound	.....	21.9	23.2	22.8	20.8	20.4	20.5	.....	18.1	20.9	21.0
Rice	do	10.0	20.5	10.1	10.3	19.0	8.6	8.9	8.4	17.6	8.0	8.0
Beans, navy	do	.....	13.3	8.8	8.7	11.9	7.9	8.0	.....	11.0	6.8	6.7
Potatoes	do	1.7	7.0	3.1	3.0	8.4	1.0	3.0	1.9	8.7	3.8	3.4
Onions	do	.....	9.3	6.8	4.8	6.0	6.8	5.4	.....	5.8	4.8	4.5
Cabbage	do	.....	4.2	3.1	4.4	8.3	6.5	5.2	.....	5.2	4.9	4.5
Beans, baked	No. 2 can	.....	14.6	11.5	11.8	14.4	11.9	12.1	.....	15.6	12.0	11.8
Corn, canned	do	.....	19.9	15.0	16.1	20.1	15.7	15.8	.....	16.0	14.9	15.1
Peas, canned	do	.....	21.4	20.5	20.0	20.6	18.7	18.9	.....	15.9	15.9	15.8
Tomatoes, canned	do	.....	14.8	11.6	11.9	16.3	11.5	11.7	.....	14.7	10.4	10.4
Sugar, granulated	Pound	5.0	27.5	7.9	7.0	26.6	7.3	6.7	5.2	26.3	7.5	6.8
Tea	do	56.0	89.2	84.6	82.2	66.6	59.1	58.1	55.0	74.5	69.7	68.3
Coffee	do	26.8	51.0	36.7	35.5	47.6	33.9	33.9	24.3	44.3	32.5	32.8
Prunes	do	.....	28.5	21.2	21.6	28.9	20.5	20.5	.....	29.0	19.0	20.0
Raisins	do	.....	26.9	31.4	31.4	29.4	30.2	29.8	.....	26.4	30.8	30.6
Bananas	Dozen	.....	53.2	45.3	45.0	50.0	44.9	44.7	.....	39.7	37.4	36.3
Oranges	do	.....	69.0	47.2	50.7	60.9	48.0	51.9	.....	60.7	47.2	46.8

[1] No. 2½ can.

OF FOOD FOR 51 CITIES ON CERTAIN SPECIFIED DATES—Continued.

St. Paul, Minn.				Salt Lake City, Utah.				SanFrancisco, Calif.				Savannah Ga.			Scranton, Pa.			
July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
1913	1920			1913	1920			1913	1920						1913	1920		
Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
27.0	48.4	36.7	38.1	22.9	35.4	31.2	30.8	20.7	31.8	29.9	29.4	43.2	34.2	34.6	26.8	55.4	49.8	49.3
23.3	43.7	31.0	33.2	20.0	33.0	28.1	28.5	19.0	29.6	27.8	27.0	39.6	30.0	29.6	22.8	48.2	40.2	39.9
21.9	37.6	29.1	28.4	19.9	27.7	25.5	24.3	21.0	30.7	27.7	27.2	32.9	26.1	26.8	23.8	41.3	35.6	35.4
17.0	30.3	21.5	20.6	15.7	23.1	19.8	19.9	14.6	20.9	18.1	17.2	24.2	19.0	18.4	17.5	34.3	26.2	26.3
11.2	17.5	11.0	9.6	12.0	16.1	13.4	12.6	13.0	17.1	14.1	13.3	20.0	16.7	15.6	12.1	20.3	12.7	11.8
19.7	39.7	30.2	31.6	22.9	42.1	34.4	34.0	23.2	45.3	37.9	38.8	40.7	33.8	34.1	21.3	46.9	38.1	38.4
26.8	56.3	44.2	44.5	31.7	55.7	45.8	45.0	33.3	63.3	55.0	54.4	54.1	41.1	38.9	27.5	58.3	41.4	42.3
28.0	58.9	47.8	51.3	30.7	57.3	46.5	48.1	30.0	61.0	53.3	53.7	55.0	42.5	42.3	31.7	66.6	53.0	57.9
18.9	35.6	32.5	31.9	18.8	35.1	29.8	30.8	16.7	35.2	29.9	30.8	50.0	40.0	37.0	21.7	49.8	44.0	42.9
19.7	37.9	31.0	31.7	24.8	40.0	37.0	35.0	23.8	46.3	41.3	41.7	45.0	34.3	33.7	23.7	52.0	48.4	51.0
.....	41.2	39.6	40.0	.....	40.0	38.1	38.5	.....	35.1	32.9	31.7	45.5	35.1	34.2	.....	41.6	40.4	40.7
6.8	13.0	10.0	10.0	8.7	12.5	12.5	12.5	10.0	16.0	14.6	14.0	24.7	20.0	20.0	8.4	14.0	12.5	12.3
.....	15.6	14.2	13.8	.....	14.6	12.7	12.7	.....	13.8	12.2	11.8	15.3	13.4	13.3	.....	15.1	13.7	13.6
32.6	61.9	34.6	42.8	35.0	65.0	38.8	44.0	36.4	68.0	46.6	49.1	72.4	41.2	48.7	35.3	67.2	39.3	44.5
.....	42.3	29.1	28.9	.....	39.6	35.0	30.0	.....	38.5	24.6	26.6	44.7	34.2	33.9	.....	43.9	29.3	28.4
.....	35.1	26.9	26.3	.....	38.5	26.3	27.7	.....	35.8	25.6	26.0	39.4	28.5	28.2	.....	36.7	27.4	27.6
21.0	40.6	28.2	28.9	23.3	40.4	25.3	25.7	19.0	42.6	26.5	29.8	41.7	28.7	27.2	18.0	39.9	28.9	28.7
15.0	29.6	16.1	16.3	19.3	31.6	18.5	18.2	18.8	33.2	19.3	18.9	31.7	15.6	18.0	15.6	29.4	16.6	17.5
.....	40.4	23.8	23.9	.....	42.2	26.0	26.3	.....	38.0	21.8	21.5	37.0	19.3	19.0	.....	36.4	21.4	21.8
22.9	49.8	28.2	38.5	29.4	58.6	30.0	40.8	31.4	60.6	33.4	46.7	52.5	34.9	40.4	28.0	59.7	37.2	43.8
5.9	11.4	9.5	9.5	5.9	12.6	9.8	9.8	5.9	10.9	9.6	9.6	12.7	10.6	10.6	5.6	13.9	10.2	10.4
3.0	8.7	5.8	5.8	2.6	7.3	3.7	3.5	3.4	8.5	6.3	5.9	8.9	6.3	6.1	3.6	9.3	6.7	6.8
2.5	7.2	4.5	4.3	3.4	7.3	4.3	4.2	3.4	7.4	5.2	5.0	5.8	3.0	2.8	.....	9.0	7.7	7.8
.....	10.3	9.1	9.2	.....	10.8	9.5	11.0	.....	11.9	10.5	10.7	12.0	11.1	10.8	.....	11.6	11.0	11.1
.....	15.8	13.8	13.6	.....	15.2	14.4	14.6	.....	15.2	12.7	12.6	15.5	11.8	11.6	.....	14.4	12.7	12.7
.....	31.4	29.8	29.9	.....	33.9	32.7	32.7	.....	28.9	28.9	28.7	31.5	29.7	29.7	.....	29.7	29.6	29.6
.....	20.8	19.2	18.8	.....	22.2	21.8	22.8	.....	14.2	14.3	14.5	22.5	20.1	20.2	.....	24.9	24.0	23.9
10.0	19.9	8.8	8.6	8.2	18.3	8.3	8.4	8.5	18.0	8.9	9.0	16.7	7.8	7.9	8.5	18.7	9.6	9.4
.....	11.9	8.6	8.6	.....	12.2	9.0	8.8	.....	9.3	6.8	6.8	14.2	9.6	9.1	.....	13.7	9.8	9.7
1.4	8.6	1.3	4.0	1.6	6.7	2.1	2.5	1.9	7.7	3.2	2.7	10.4	3.1	3.6	2.0	8.8	2.6	3.2
.....	7.2	4.8	6.0	.....	7.5	4.6	6.4	.....	3.2	1.9	1.6	8.9	6.6	6.1	.....	7.8	5.7	5.2
.....	6.3	6.5	4.1	.....	8.1	7.4	6.3	.....	.....	.....	.....	5.3	3.2	4.9	.....	7.8	5.9	5.7
.....	19.7	17.8	17.5	.....	20.0	17.5	17.4	.....	18.3	17.0	17.0	18.7	13.6	13.3	.....	15.5	13.6	13.6
.....	18.4	16.6	16.2	.....	18.4	16.8	16.3	.....	19.0	17.9	18.2	19.8	15.3	14.9	.....	18.6	16.3	16.7
.....	18.2	16.3	15.9	.....	17.5	16.0	16.0	.....	18.4	18.9	18.7	19.2	17.7	18.0	.....	18.7	17.3	17.7
.....	14.8	13.5	13.5	.....	16.8	10.6	11.5	.....	[1]13.9	[1]11.3	[1]11.5	15.7	10.3	10.3	.....	15.4	11.6	12.9
5.6	28.4	8.4	7.5	5.9	26.2	8.8	8.2	5.4	24.9	8.0	7.1	24.5	7.4	6.9	5.6	27.4	7.9	7.2
45.0	71.3	71.5	69.6	65.7	80.3	82.5	82.5	50.0	60.2	58.8	58.6	81.9	69.7	70.8	52.5	69.5	62.4	63.1
30.0	52.1	40.8	39.5	35.8	58.7	46.2	46.5	32.0	45.9	34.9	34.3	47.6	31.2	31.5	31.3	50.8	39.3	38.9
.....	30.8	19.5	19.9	.....	27.9	15.8	15.8	.....	23.1	15.6	15.5	28.9	18.3	17.3	.....	27.8	17.2	17.6
.....	29.3	32.5	32.5	.....	28.8	30.2	30.1	.....	26.4	29.4	29.1	26.1	31.0	31.3	.....	28.4	30.6	30.4
.....	[2]15.4	[2]13.2	[2]12.4	.....	[2]16.7	[2]17.8	[2]17.6	.....	46.7	42.9	40.7	50.5	44.5	40.6	.....	41.6	37.6	37.4
.....	70.3	53.5	53.3	.....	68.5	46.5	46.5	.....	64.5	47.8	47.1	100.0	58.1	60.0	.....	65.8	49.1	50.5

[2] Per pound.

TABLE 5.—AVERAGE RETAIL PRICE OF THE PRINCIPAL ARTICLES OF FOOD FOR 51 CITIES ON CERTAIN SPECIFIED DATES—Concluded.

Article.	Unit.	Seattle, Wash.				Springfield, Ill.			Washington, D. C.			
		July 15—		June 15, 1921.	July 15, 1921.	July 15, 1920.	June 15, 1921.	July 15, 1921.	July 15—		June 15, 1921.	July 15, 1921.
		1913	1920						1913	1920		
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Sirloin steak	Pound	24.4	37.7	32.3	32.2	45.3	38.3	36.5	28.1	59.0	47.0	47.7
Round steak	do	21.5	34.7	29.1	28.9	44.7	36.8	35.2	24.6	54.8	41.2	41.4
Rib roast	do	20.0	30.2	26.4	26.1	30.4	25.1	24.6	22.0	44.2	36.1	35.3
Chuck roast	do	16.2	21.6	18.1	17.2	26.9	21.0	19.9	17.9	34.8	24.9	23.6
Plate beef	do	13.0	17.2	13.8	13.2	19.6	13.9	12.8	12.4	19.6	14.7	13.3
Pork chops	do	23.6	44.7	35.8	35.9	40.1	32.8	31.8	21.9	50.4	37.9	38.3
Bacon	do	31.7	64.8	53.1	52.2	51.9	40.3	39.7	28.1	51.0	40.8	41.7
Ham	do	31.7	61.9	52.6	53.9	59.6	48.9	50.3	30.0	63.1	55.3	57.2
Lamb, leg of	do	19.6	35.7	29.3	29.0	43.6	35.0	32.1	21.4	47.5	42.7	41.9
Hens	do	23.8	39.9	33.9	33.7	46.2	36.0	33.8	22.6	50.6	44.4	44.8
Salmon (canned)	do	.....	38.6	34.8	33.4	40.1	40.7	40.3	.....	37.8	37.0	36.2
Milk, fresh	Quart	8.5	14.0	12.0	12.0	16.7	12.5	12.5	8.0	16.0	13.7	14.0
Milk, evaporated	15-16 oz. can	.....	14.1	12.2	12.2	17.5	15.2	14.5	.....	15.3	14.3	14.2
Butter	Pound	35.5	64.0	38.7	43.8	65.9	40.9	47.6	36.6	70.8	42.6	49.2
Oleomargarine	do	.....	41.7	25.7	25.7	43.9	29.2	29.1	.....	43.8	28.8	28.4
Nut margarine	do	.....	37.1	25.7	28.4	36.1	26.9	26.8	.....	35.8	28.2	27.8
Cheese	do	21.7	40.9	29.3	29.1	43.0	30.1	30.4	23.8	42.7	31.5	31.2
Lard	do	17.8	29.8	19.9	19.1	29.1	15.9	16.1	15.0	29.2	15.7	16.3
Crisco	do	.....	39.5	23.1	22.8	37.8	22.2	21.4	.....	35.0	20.9	21.0
Eggs, strictly fresh	Dozen	34.5	55.2	31.8	41.4	48.6	27.8	35.2	26.0	54.8	35.4	41.0
Bread	Pound	5.5	11.5	9.9	9.9	13.5	10.4	10.4	5.7	12.3	10.2	10.2
Flour	do	2.9	7.7	5.2	4.8	9.1	6.1	6.1	3.8	9.0	6.3	6.4
Corn meal	do	3.1	7.5	4.6	4.5	7.9	4.4	4.4	2.5	6.0	3.7	3.8
Rolled oats	do	.....	10.6	9.0	9.2	12.2	11.1	11.2	.....	11.5	11.4	11.3
Corn flakes	8-oz. pkg	.....	15.1	13.7	13.7	15.4	14.3	14.0	.....	14.2	11.9	11.8
Cream of Wheat	28-oz. pkg	.....	32.3	30.7	30.6	31.4	30.5	30.4	.....	29.6	29.1	29.0
Macaroni	Pound	.....	18.7	18.5	18.3	20.6	22.4	22.0	.....	23.6	22.4	22.2
Rice	do	7.7	19.4	9.6	9.6	19.9	9.4	9.6	9.8	19.3	10.2	10.1
Beans, navy	do	.....	10.3	7.0	7.2	12.9	7.5	7.6	.....	12.1	7.9	7.9
Potatoes	do	1.5	9.5	2.2	3.3	10.0	2.1	4.1	1.8	8.3	3.3	3.4
Onions	do	.....	5.3	3.4	3.4	9.5	6.8	6.7	.....	5.8	7.1	6.6
Cabbage	do	.....	6.2	6.6	6.0	9.5	8.4	7.7	.....	5.1	5.5	6.8
Beans, baked	No. 2 can	.....	20.3	17.4	17.6	17.9	15.0	14.3	.....	14.8	12.5	12.3
Corn, canned	do	.....	19.9	16.9	16.9	17.1	14.7	14.6	.....	17.8	14.0	14.0
Peas, canned	do	.....	20.4	17.2	17.5	18.5	16.7	16.3	.....	18.1	15.5	15.6
Tomatoes, canned	do	.....	[1] 16.1	[1] 12.4	[1] 12.9	15.7	12.0	11.6	.....	15.1	11.3	11.8
Sugar, granulated	Pound	6.1	25.7	8.7	8.0	29.3	8.4	7.9	5.0	25.8	7.6	6.9
Tea	do	50.0	70.0	64.5	64.2	87.5	77.5	76.6	57.5	78.3	74.0	74.2
Coffee	do	28.0	49.1	37.4	37.7	51.0	36.5	36.3	28.8	47.5	33.6	33.7
Prunes	do	.....	27.5	16.4	15.8	30.3	20.9	20.4	.....	28.7	20.8	19.7
Raisins	do	.....	27.9	30.3	29.7	29.0	33.7	33.9	.....	27.0	30.1	30.7
Bananas	Dozen	.....	[2] 15.6	[2] 16.9	[2] 16.4	[2] 13.0	[2] 11.9	[2] 11.0	.....	50.0	44.7	44.2
Oranges	do	.....	64.7	41.7	44.3	73.8	50.7	53.7	.....	66.4	51.7	55.0

[1] No. 2½ can. [2] Per pound.

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 [7] in July, 1921, compared with the average cost in the year 1913, in July, 1920, and in June, 1921. For 12 other cities comparisons are given for the one-year and the one-month periods. These cities have been scheduled by the bureau at different dates since 1913. These percentage changes are based on

[7] For list of articles, see note 2, p. 22.

actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[8]

Effort has been made by the bureau each month to have perfect reporting cities. For the month of July, 99 per cent of all the firms reporting in the 51 cities sent in a report promptly. The following were perfect reporting cities; that is, every merchant in the following-named 41 cities who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Bridgeport, Buffalo, Butte, Charleston, S. C., Cincinnati, Cleveland, Columbus, Dallas, Denver, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Little Rock, Louisville, Manchester, Minneapolis, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Portland, Me., Portland, Oreg., Providence, Richmond, Rochester, St. Louis, St. Paul, San Francisco, Savannah, Springfield, Ill., and Washington, D. C. The following summary shows the promptness with which the merchants responded in July:

RETAIL PRICE REPORTS RECEIVED DURING JULY.

Item.	United States.	Geographical division.				
		North Atlantic.	South Atlantic.	North Central.	South Central.	Western.
Percentage of reports received	99	99	100	99	99	98
Number of cities in each section from which every report was received	41	10	[1] 8	12	7	4

[1] Total number of cities in this division.

TABLE 6.—PERCENTAGE CHANGES IN THE RETAIL COST OF FOOD IN JULY, 1921, COMPARED WITH THE COST IN JUNE, 1921, JULY, 1920, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Percentage increase, July, 1921, compared with year 1913.	Percentage decrease, July, 1921, compared with July, 1920.	Percentage increase, July, 1921, compared with June, 1921.	City.	Percentage increase, July, 1921, compared with year, 1913.	Percentage decrease, July, 1921, compared with July, 1920.	Percentage increase, July, 1921, compared with June, 1921.
Atlanta	45	33	1	Minneapolis	49	35	8
Baltimore	49	33	2	Mobile	----------	35	3
Birmingham	51	32	1	Newark, N. J.	42	33	2
Boston	54	30	5	New Haven	46	33	4
Bridgeport	----------	31	3	New Orleans	44	32	2
Buffalo	50	33	7	New York	50	31	2
Butte	----------	35	6	Norfolk	----------	31	*a* 1
Charleston, S. C.	53	29	1	Omaha	43	38	*a* 0.4
Chicago	53	33	3	Peoria	----------	34	5
Cincinnati	51	32	0.2	Philadelphia	44	34	0.3
Cleveland	47	35	5	Pittsburgh	48	32	1
Columbus	----------	32	5	Portland, Me.	----------	31	5
Dallas	44	31	*a* 0.1	Portland, Oreg.	33	32	4
Denver	41	33	5	Providence	57	30	5
Detroit	55	35	7	Richmond	56	30	1
Fall River	48	33	3	Rochester	----------	33	7
Houston	----------	30	2	St. Louis	50	35	0
Indianapolis	45	35	6	St. Paul	----------	34	9
Jacksonville	43	29	4	Salt Lake City	34	32	4
Kansas City	48	33	4	San Francisco	40	29	0.4
Little Rock	42	31	*a* 0.1	Savannah	----------	32	3
Los Angeles	34	31	*a* 2	Scranton	54	32	3
Louisville	37	35	3	Seattle	38	32	4
Manchester	51	34	4	Springfield, Ill.	----------	35	5
Memphis	43	36	2	Washington, D.C.	57	29	2
Milwaukee	52	35	8				

[8] The consumption figure used from January, 1913, to December, 1920, for each article in each city is given in the MONTHLY 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 MONTHLY LABOR REVIEW for March, 1921, p. 26.

a Decrease.

Retail Prices of Coal in the United States.[1]

TABLE 1 shows the average retail prices of coal on January 15 and July 15 of each year, 1913 to 1921, by cities. The prices are those quoted by the retail trade for household use.

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 made on the several kinds. The coal dealers in each city were asked to quote prices on the kinds of bituminous coal usually sold for household use.

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.

Prices for coal are shown only in the cities in which prices are scheduled for food and are shown for the years when food prices were obtained.

[1] Prices of coal have formerly been secured semiannually and published in the March and September issues of the MONTHLY LABOR REVIEW. Since June, 1920, these prices have been secured and published monthly.

TABLE 1.—RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL FOR HOUSEHOLD USE, ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1921, BY CITIES.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Atlanta, Ga.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$14.667	.....	$18.500	$18.500	$17.500
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.667	.....	18.500	19.125	17.625
Bituminous	$5.875	$4.833	$5.295	$5.083	$5.250	$4.575	$5.050	$4.500	$7.000	$7.050	$7.444	$7.778	$8.029	8.250	$9.050	13.250	11.854	8.841
Baltimore, Md.:																		
Pennsylvania anthracite—																		
Stove	[1]7.700	[1]7.240	[1]7.700	[1]7.280	[1]7.620	[1]7.138	[1]7.650	[1]7.800	[1]8.160	[1]8.542	[1]9.600	[1]10.450	[1]11.983	[1]11.750	[1]12.500	[1]13.750	[1]15.500	[1]14.750
Chestnut	[1]7.930	[1]7.490	[1]7.950	[1]7.520	[1]7.870	[1]7.363	[1]7.880	[1]7.950	[1]8.310	[1]8.700	[1]9.750	[1]10.550	[1]12.042	[1]11.850	[1]12.600	[1]13.850	[1]15.500	[1]14.750
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	[1]7.540	[1]6.893	[1]7.500	[1]8.938	[1]10.250	[1]8.063
Birmingham, Ala.:																		
Bituminous	4.217	4.011	4.228	3.833	4.090	3.646	3.913	3.644	5.080	5.607	5.616	6.461	6.741	7.286	7.496	9.431	10.648	8.674
Boston, Mass.:																		
Pennsylvania anthracite—																		
Stove	8.250	7.500	8.000	7.500	7.750	7.500	8.000	8.000	9.500	9.500	9.850	10.250	12.000	12.000	12.750	14.500	16.000	15.000
Chestnut	8.250	7.750	8.250	7.750	8.000	7.750	8.250	8.000	9.500	9.500	9.850	10.250	12.000	12.000	12.750	14.500	16.000	15.000
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.250	9.000	9.500	13.250	.....	.....
Bridgeport, Conn.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	10.000	8.667	10.500	10.400	12.370	11.750	12.500	15.000	17.500	14.500
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	10.000	8.667	10.500	10.400	12.370	11.750	12.500	15.000	17.500	14.400
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.125	8.000	8.500	.....	.....	.....
Buffalo, N. Y.:																		
Pennsylvania anthracite—																		
Stove	6.750	6.542	6.817	6.650	6.850	6.650	6.850	7.010	7.600	8.138	8.830	9.180	10.400	10.700	10.890	12.080	13.250	12.910
Chestnut	6.992	6.800	7.067	6.900	7.100	6.900	7.100	7.260	7.850	8.163	8.830	9.240	10.500	10.800	10.990	12.080	13.250	12.910
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.000	8.000	.....	12.000	.....	.....
Butte, Mont.:																		
Bituminous	.....	.....	.....	.....	7.417	6.750	7.125	7.125	8.222	8.598	9.188	9.083	9.377	9.836	10.381	10.908	12.715	11.982
Charleston, S. C.:																		
Pennsylvania anthracite—																		
Stove	[1]8.375	[1]7.750	[1]7.750	[1]7.750	[1]7.750	[1]7.750	[1]7.750	[1]7.875	[1]8.750	[1]1.1500	[1]12.275	.....	[2]	[1]13.400	[1]13.400	[1]16.325	[1]17.875	[1]17.000
Chestnut	[1]8.500	[1]8.000	[1]8.250	[1]8.250	[1]8.250	[1]8.250	[1]8.250	[1]8.375	[1]9.250	[1]1.1750	[1]12.475	.....	[2]	[1]13.500	[1]13.500	[1]16.400	[1]17.725	[1]17.100
Bituminous	[1]6.750	[1]6.750	[1]6.750	[1]6.750	[1]6.750	[1]6.750	[1]6.750	[1]6.750	7.000	.8000	8.000	8.375	8.500	8.500	8.500	12.000	13.250	12.000
Chicago, Ill.:																		
Pennsylvania anthracite—																		
Stove	8.000	7.800	8.080	7.900	8.100	7.900	8.100	8.240	9.570	9.583	10.350	10.900	11.808	12.200	12.590	14.675	15.913	15.120
Chestnut	8.250	8.050	8.330	8.130	8.350	8.150	8.350	8.490	9.670	9.667	10.388	10.975	12.016	12.300	12.690	14.788	16.025	15.230
Bituminous	4.969	4.650	5.000	4.850	5.068	4.708	4.938	4.800	7.083	6.813	6.671	6.475	6.700	7.017	8.020	8.946	9.481	8.503

[1] Per ton of 2,240 pounds.

[2] Zoned out by Fuel Administration.

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TABLE 1.—RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL FOR HOUSEHOLD USE, ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1921, BY CITIES—Continued.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Cincinnati, Ohio:																		
Pennsvania anthracite—																		
Stove	$8.250	$7.500	$8.000	$7.917	$7.917	$7.667	$8.000	$7.875	$10.000	.....	$9.500	$11.660	(2)	$12.000	$12.500	$14.000	$15.970	$15.333
Chestnut	8.750	7.750	8.250	8.167	8.167	7.833	8.083	8.125	10.125	.....	9.500	.....	(2)	12.000	12.667	14.000	16.375	15.750
Bituminous	3.500	3.375	3.750	3.500	3.500	3.500	3.688	3.500	5.500	$5.958	6.098	6.725	$6.478	6.139	6.739	8.000	8.679	6.786
Cleveland, Ohio:																		
Pennsylvania anthracite—																		
Stove	7.500	7.250	7.500	7.500	7.650	7.400	7.650	7.850	9.688	9.667	9.825	.....	11.050	11.538	12.300	14.050	14.750	14.188
Chestnut	7.750	7.500	7.750	7.750	7.900	7.650	7.900	8.100	10.000	9.667	9.575	.....	11.175	11.650	12.233	14.025	14.750	14.200
Bituminous	4.143	4.143	4.400	4.571	4.643	4.607	4.643	4.946	8.227	7.000	6.901	6.443	6.821	7.710	7.911	11.357	9.558	8.708
Columbus, Ohio:																		
Pennsylvania anthracite—																		
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.000	12.000	14.650	16.500	14.833
Bituminous	.....	.....	.....	.....	.....	.....	.....	3.640	6.400	6.031	5.943	6.179	6.088	6.056	6.513	9.458	9.457	7.420
Dallas, Tex.:																		
Pennsylvania anthracite—																		
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.000	20.000	22.000	.....	.....	.....
Arkansas anthracite—																		
Egg	.....	.....	.....	.....	.....	8.250	9.000	8.375	11.500	11.000	14.334	14.250	15.800	14.500	18.500	17.500	20.250	17.084
Bituminous	8.250	7.214	7.929	7.150	7.545	6.950	7.458	7.208	10.167	8.583	10.139	10.386	10.980	11.083	14.583	14.083	16.250	14.614
Denver, Colo.:																		
Colorado anthracite—																		
Stove, 3 and 5 mixed	8.500	8.500	10.500	8.929	9.214	9.071	9.333	8.786	9.600	10.750	11.750	12.325	12.650	13.150	14.000	14.875	17.533	16.000
Furnace, 1 and 2 mixed	8.875	9.000	11.000	9.071	9.286	9.071	9.333	9.071	9.900	11.000	11.750	12.325	12.650	12.650	13.500	14.875	17.533	16.000
Bituminous	5.250	4.875	6.474	5.300	5.641	5.192	5.250	5.019	6.000	6.500	7.598	7.995	8.148	8.348	8.908	9.469	11.691	10.979
Detroit, Mich.:																		
Pennsylvania anthracite—																		
Stove	8.000	7.450	8.000	7.500	7.938	7.500	7.950	8.000	9.750	9.125	9.880	10.150	11.600	11.890	12.650	14.625	15.950	14.563
Chestnut	8.250	7.650	8.250	7.750	8.188	7.750	8.200	8.250	9.800	9.313	10.080	10.520	11.710	11.980	12.750	16.625	15.950	14.563
Bituminous	5.200	5.200	5.200	5.188	5.179	5.237	5.237	5.611	7.583	7.500	8.267	8.180	7.732	7.988	8.781	12.417	12.194	10.000
Fall River, Mass.:																		
Pennsylvania anthracite—																		
Stove	8.250	7.425	7.750	7.688	8.000	7.750	8.750	8.438	11.000	10.688	10.750	11.000	12.700	12.500	13.000	14.500	16.500	15.250
Chestnut	8.250	7.613	8.000	7.688	8.000	7.750	8.750	8.438	11.000	10.438	10.750	11.000	12.383	12.250	12.750	14.250	16.250	15.083
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.000	10.250	9.500	10.000	12.875	14.000	11.000
Houston, Tex.:																		
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.000	.....	10.000	10.000	12.000	11.750	16.286	12.800
Indianapolis, Ind.:																		
Pennsylvania anthracite—																		
Stove	8.950	8.000	8.300	7.750	8.250	7.650	8.250	8.500	10.167	.....	9.825	10.250	12.250	12.250	13.000	14.375	16.000	15.375
Chestnut	9.150	8.250	8.500	7.950	8.450	7.900	8.450	8.688	10.333	.....	9.925	10.500	12.333	12.250	13.167	14.875	16.000	15.500
Bituminous	3.813	3.700	4.611	4.000	4.673	4.208	4.411	4.568	6.800	.....	7.107	6.163	6,875	7.375	8.188	9.625	9.838	8.631

Jacksonville, Fla.:																		
Pennsylvania anthracite—																		
Stove	10.000	9.000	9.000	9.125	9.000	9.000	9.000	9.000	11.000	12.000	12.000	.....	[2]	15.000	17.000	18.000	24.000	16.250
Chestnut	10.000	9.000	9.000	9.125	9.000	9.000	9.000	9.000	11.000	12.000	12.000	.....	[2]	15.000	17.000	18.000	23.000	16.250
Bituminous	7.500	7.000	7.125	6.875	7.500	7.000	7.500	7.375	8.000	8.500	9.333	9.825	10.000	10.000	11.000	15.000	15.667	12.250
Kansas City, Mo.:																		
Arkansas anthracite—																		
Furnace	.....	.....	8,286	7.917	8.333	7.833	8.333	8.125	9.292	.....	12.592	13.700	15.107	13.593	15.950	15.750	17.917	16.857
Stove, or No. 4	.....	.....	8.929	8.500	8.833	8.375	8.833	8.667	9.958	.....	13.150	14.200	15.550	14.450	16.583	16.500	18.500	17.563
Bituminous	4.391	3.935	4.276	4.093	4.200	4.056	4.515	4.353	6.438	5.700	6.703	6.700	7.354	7.469	8.625	9.600	10.115	9.550
Little Rock, Ark.:																		
Arkansas anthracite—																		
Egg	.....	.....	.....	.....	.....	.....	7.625	7.625	9.000	.....	11.500	12.750	12.975	12.500	.....	14.500	17.000	16.000
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.333	13.250	.....	.....	17.000	16.000
Bituminous	6.000	5.333	6.250	5.833	5.972	5.361	6.000	5.750	8.000	7.857	8.250	9.155	9.414	9.250	10.375	12.591	14.176	12.423
Los Angeles, Calif.:																		
New Mexico anthracite—																		
Cerillos egg	.....	.....	17.000	.....	15.000	15.000	18.000	16.000	.....	.....	22.000	20.000	21.150	.....	21.000	.....	.....	.....
Bituminous	13.520	12.500	13.500	12.000	13.600	11.375	13.700	12.900	15.000	14.375	14.881	14.700	14.688	14.583	16.000	17.000	19.222	18.000
Louisville, Ky.:																		
Pennsylvania anthracite—																		
Stove	9.000	8.250	8.750	8.450	8.700	.....	.....	.....	.....	.....	.....	.....	[2]	12.750	13.750	.....	16.000	16.875
Chestnut	9.000	8.250	8.750	8.450	.....	.....	.....	.....	.....	.....	.....	10.640	[2]	12.750	13.750	.....	17.000	16.875
Bituminous	4.200	4.000	4.377	3.953	3.997	3.478	3.816	3.737	5.734	6.583	6.038	6.783	6.743	6.816	6.836	9.531	9.750	8.042
Manchester, N. H.:																		
Pennsylvania anthracite—																		
Stove	10.000	8.500	8.750	8.500	8.750	8.500	9.000	8.750	11.000	11.000	11.000	10.500	12.500	12.750	13.417	15.000	18.000	16.500
Chestnut	10.000	8.500	8.750	8.500	8.750	8.500	9.000	8.750	11.000	11.000	11.000	10.500	12.500	12.750	13.417	15.000	18.000	16.500
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.000	10.000	10.000	10.000	13.000	14.000	11.333
Memphis, Tenn.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.000	16.000	16.000	18.000	18.000	18.000
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.000	16.000	16.000	18.000	18.000	18.000
Bituminous	[3] 4.344	[3] 4.219	[3] 4.219	[3] 4.219	[3] 3.883	[3] 3.833	[3] 3.904	[3] 4.083	[3] 6.222	[3] 7.018	6.539	7.171	7.221	7.528	8.000	9.563	10.036	8.393
Milwaukee, Wis.:																		
Pennsylvania anthracite—																		
Stove	8.000	7.850	8.080	7.930	8.100	7.900	8.100	8.300	9.020	9.167	9.500	10.968	12.286	12.400	12.600	14.800	16.200	15.940
Chestnut	8.250	8.100	8.330	8.180	8.350	8.150	8.350	8.550	9.270	9.367	9.650	10.904	12.378	12.500	12.700	14.900	16.280	15.940
Bituminous	6.250	5.714	6.143	5.714	6.143	5.625	6.000	5.875	7.743	8.000	7.385	7.385	7.814	8.144	8.960	12.167	12.948	10.663
Minneapolis, Minn.:																		
Pennsylvania anthracite—																		
Stove	9.250	9.050	9.350	9.133	9.307	9.150	9.350	9.900	10.350	10.650	10.826	12.238	13.708	13.800	14.000	16.520	18.330	17.730
Chestnut	9.500	9.300	9.600	9.383	9.557	9.400	9.600	10.150	10.600	10.900	10.926	12.238	13.786	13.900	14.100	16.560	18.390	17.730
Bituminous	5.889	5.792	5.875	5.846	5.990	5.960	5.977	6.375	8.077	8.600	8.888	8.474	9.000	9.189	10.425	12.044	13.824	12.485
Mobile, Ala.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.000	.....	.....	17.000	17.000	.....	.....	.....
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.000	.....	.....	17.000	17.000	.....	.....	.....
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.000	9.000	9.429	9.722	10.333	11.900	13.214	10.438

[2] Zoned out by Fuel Administration.

[3] Per 10-barrel lots (1,800 pounds).

TABLE 1.—RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL FOR HOUSEHOLD USE, ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1921, BY CITIES—Continued.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Newark, N. J.:																		
Pennsylvania anthracite—																		
Stove	$6.500	$6.250	$6.500	$6.250	$6.500	$6.250	$6.500	$6.750	$7.208	$7.250	$8.100	$8.500	$9.750	$10.050	$10.483	$11.767	$13.000	$12.700
Chestnut	6.750	6.500	6.750	6.500	6.750	6.500	6.750	7.000	7.292	7.250	8.100	8.500	9.750	10.055	10.483	11.767	13.000	12.700
New Haven, Conn.:																		
Pennsylvania anthracite—																		
Stove	7.500	6.250	6.571	6.579	7.000	6.750	7.500	7.742	9.500	9.000	9.750	10.100	12.050	11.333	12.250	14.583	17.083	13.833
Chestnut	7.500	6.250	6.571	6.579	7.000	6.750	7.500	7.742	9.500	9.000	9.750	10.100	12.050	11.333	12.250	14.583	17.083	13.833
New Orleans, La.:																		
Pennsylvania anthracite—																		
Stove	10.000	10.000	10.000	10.000	10.000	10.125	10.500	11.700	13.100	.....	13.067	.....	(2)	16.000	17.500	19.000	22.500	17.000
Chestnut	10.500	10.500	10.500	10.500	10.500	10.625	11.000	12.200	13.500	.....	13.300	14.550	(2)	16.000	17.500	18.833	22.500	17.000
Bituminous	[3] 6.056	[3] 6.063	[3] 5.944	[3] 6.071	[3] 5.950	[3] 6.083	[3] 6.091	[3] 6.063	[3] 6.944	.....	8.040	7.789	8.900	8.292	9.269	10.857	12.873	10.528
New York, N. Y.:																		
Pennsylvania anthracite—																		
Stove	7.071	6.657	6.857	6.850	7.143	6.907	7.107	7.393	8.500	8.440	9.058	9.300	10.757	10.800	11.536	13.067	14.542	13.300
Chestnut	7.143	6.800	7.000	6.993	7.286	7.057	7.250	7.421	8.500	8.420	9.083	9.293	10.764	10.857	11.600	13.067	14.542	13.300
Norfolk, Va.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.000	9.500	11.700	12.500	13.000	14.500	16.000	14.500
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.000	9.500	11.700	12.500	13.000	14.500	16.000	14.500
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.750	7.750	8.250	9.375	9.750	12.125	13.357	11.971
Omaha, Nebr.:																		
Pennsylvania anthracite—																		
Stove	12.000	10.750	10.700	10.700	10.750	10.700	10.750	11.750	13.200	13.250	13.188	.....	.....	16.450	17.275	21.300	23.250	22.000
Chestnut	12.000	11.000	10.950	10.950	11.000	10.950	11.000	12.000	13.400	13.500	13.338	.....	.....	16.550	17.450	21.400	23.375	22.000
Bituminous	6.625	6.125	6.125	6.125	6.083	6.167	6.042	6.000	7.857	7.750	7.950	7.388	8.471	8.930	10.108	11.465	13.697	12.344
Peoria, Ill.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.250	11.000	.....	11.667	13.000	14.000	16.500	15.375
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.500	11.025	.....	11.750	13.000	14.000	16.500	15.500
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.500	.....	5.850	5.550	6.000	7.429	7.750	6.406
Philadelphia, Pa.:																		
Pennsylvania anthracite—																		
Stove	[1] 7.156	[1] 6.894	[1] 7.281	[1] 7.050	[1] 7.250	[1] 7.013	[1] 7.250	[1] 7.494	[1] 7.969	[1] 8.319	[1] 9.594	[1] 9.806	[1] 11.244	[1] 10.850	[1] 11.881	[1] 13.469	[1] 14.975	[1] 14.150
Chestnut	[1] 7.375	[1] 7.144	[1] 7.531	[1] 7.300	[1] 7.500	[1] 7.263	[1] 7.500	[1] 7.744	[1] 8.188	[1] 8.519	[1] 9.681	[1] 9.888	[1] 11.319	[1] 10.950	[1] 11.906	[1] 13.438	[1] 14.975	[1] 14.125
Pittsburgh, Pa.:																		
Pennsylvania anthracite—																		
Stove	[1] 7.938	[1] 7.375	[1] 7.713	[1] 7.550	[1] 7.875	[1] 7.567	[1] 7.967	[1] 8.000	[1] 10.500	[1] 10.625	.....	[1] 11.000	[1] 12.750	[1] 12.750	[1] 13.750	[1] 15.250	[1] 18.500	[1] 15.750
Chestnut	[1] 8.000	[1] 7.438	[1] 7.775	[1] 7.550	[1] 7.933	[1] 7.567	[1] 8.017	[1] 8.100	[1] 10.850	[1] 10.650	[1] 10.150	[1] 11.050	[1] 12.700	[1] 12.663	[1] 14.000	[1] 15.175	[1] 18.500	[1] 15.867
Bituminous	[4] 3.158	[4] 3.176	[4] 3.188	[4] 3.158	[4] 3.225	[4] 3.225	[4] 3.326	[4] 3.450	[4] 4.857	[4] 5.750	5.278	6.656	6.000	5.833	6.179	7.375	8.188	6.857

Portland, Me.:																		
Pennsylvania anthracite—																		
Stove											10.890	11.040	13.000	12.200	13.440	15.360	16.320	15.120
Chestnut											10.890	11.040	13.000	12.200	13.440	15.360	16.320	15.120
Bituminous											10.453	10.890	10.853	8.573	9.370	14.810	12.740	9.310
Portland, Oreg.:																		
Bituminous	9.786	9.656	9.625	9.279	9.382	9.224	9.438	9.263	10.276	9.659	10.181	10.442	10.566	11.493	11.618	11.955	13.792	13.469
Providence, R. I.:																		
Pennsylvania anthracite—																		
Stove	[5]8.250	[5]7.500	[5]7.750	[5]7.450	[5]7.750	[5]7.500	[5]8.750	[5]8.500	[5]10.000	[5]9.500	[5]10.500	[5]11.375	[5]12.400	[5]12.000	[5]12.950	[5]14.500	[5]17.000	[5]15.000
Chestnut	[5]8.205	[5]7.750	[5]8.000	[5]7.700	[5]8.000	[5]7.750	[5]9.000	[5]8.500	[5]10.000	[5]9.500	[5]10.500	[5]11.375	[5]12.400	[5]12.000	[5]13.000	[5]14.500	[5]17.000	[5]15.000
Bituminous													[5]10.500	[5]9.000	[5]10.000	[5]13.625	[5]13.583	[5]9.500
Richmond, Va.:																		
Pennsylvania anthracite—																		
Stove	8.000	7.250	7.750	7.542	8.000	7.500	7.900	8.000	9.450	9.500	9.500	9.900	11.500	12.000	12.125	13.500	15.500	14.250
Chestnut	8.000	7.250	7.750	7.542	8.000	7.500	7.900	8.000	9.450	9.500	9.500	9.900	11.500	12.000	12.125	13.500	15.500	14.250
Bituminous	5.500	4.944	5.423	5.042	5.444	5.023	5.364	5.063	7.268	7.250	7.686	7.811	8.222	8.464	8.931	10.882	12.289	10.738
Rochester, N. Y.:																		
Pennsylvania anthracite—																		
Stove								7.200	7.750	8.150	8.550	9.050	10.300	10.600	10.800	12.200	13.550	13.350
Chestnut								7.450	7.900	8.250	8.650	9.150	10.400	10.700	10.900	12.300	13.550	13.350
St. Louis, Mo.:																		
Pennsylvania anthracite—																		
Stove	8.438	7.740	8.150	8.175	8.333	8.033	8.583	8.500	9.813	10.250	10.433	11.000		12.900	13.100	14.350	17.288	15.938
Chestnut	8.680	7.990	8.350	8.363	8.500	8.200	8.750	8.750	10.050	10.563	10.533	11.250		12.900	13.225	14.350	17.288	16.125
Bituminous	3.360	3.037	3.288	3.056	3.214	3.050	3.179	3.073	4.615	4.788	5.444	5.893	5.463	5.425	5.970	6.632	8.066	6.789
St. Paul, Minn.:																		
Pennsylvania anthracite—																		
Stove	9.198	9.050	9.333	9.183	9.350	9.150	9.350	9.883	10.350	10.675	10.727	12.248	13.453	13.800	14.000	16.483	18.283	17.750
Chestnut	9.448	9.300	9.583	9.433	9.600	9.400	9.600	10.133	10.600	10.883	10.827	12.417	13.543	13.900	14.100	16.517	18.317	17.750
Bituminous	6.073	6.041	6.121	6.089	6.167	6.153	6.203	6.610	8.213	8.568	9.162	9.148	9.582	9.875	11.531	13.258	15.131	12.831
Salt Lake City, Utah.:																		
Colorado anthracite—																		
Furnace, 1 and 2 mixed	11.000	11.500	11.500		11.500	11.563	11.714	11.429	12.000	12.875	14.000	15.000	15.333	16.000	16.313	18.375	17.700	19.300
Stove, 3 and 5 mixed	11.000	11.500	11.472		11.500	11.571	11.786	11.429	12.000	12.875	14.000	15.000	15.333	16.000	16.583	18.375	18.500	20.000
Bituminous	5.639	5.458	5.580	5.552	5.462	5.462	5.464	5.464	5.658	6.368	7.250	7.303	7.875	7.250	8.236	9.250	10.012	9.750
San Francisco, Calif.:																		
New Mexico anthracite—																		
Cerillos egg	17.000	17.000	17.000	17.000	16.833	16.833	17.000	17.000	19.000	19.000	20.750	18.600	21.550	20.500	23.000	24.000	28.650	26.500
Colorado anthracite—																		
Egg	17.000	17.000	17.000	17.000	16.833	16.833	17.000	17.000	19.000		18.600	18.600	19.400	19.400	21.750	23.000	26.750	26.000
Bituminous	12.000	12.000	12.091	12.400	12.273	12.333	12.250	12.250	13.429	14.500	13.867	14.083	14.200	13.591	15.100	16.643	19.400	18.455

[1] Per ton of 2,240 pounds.
[2] Zoned out by Fuel Administration.
[3] Per 10-barrel lots (1,800 pounds).
[4] Per 25-bushel lots (1,900 pounds).
[5] 50 cents per ton additional is charged for "binning." Most customers require binning or basketing the coal into the cellar.

TABLE 1.—RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL FOR HOUSEHOLD USE, ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1921, BY CITIES—Concluded.

City, and kind of coal.	1913		1914		1915		1916		1917		1918		1919		1920		1921	
	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.
Savannah, Ga.:																		
Pennsylvania anthracite—																		
Stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	[6]$15.100	[6]$17.600	[6]$19.100	[6]$17.100
Chestnut	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	[6]15.100	[6]17.600	[6]19.100	[6]17.100
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	[6]11.100	[6]14.500	[6]15.100	[6]12.767
Scranton, Pa.:																		
Pennsylvania anthracite—																		
Stove	$4.250	$4.313	$4.500	$4.313	$4.438	$4.125	$4.375	$4.800	$5.250	$5.250	$6.113	$6.050	$7.475	$7.683	8.233	9.275	9.833	9.550
Chestnut	4.500	4.563	4.750	4.563	4.688	4.313	4.625	4.800	5.250	5.250	6.150	6.150	7.563	7.783	8.300	9.275	9,833	9,550
Seattle, Wash.:																		
Bituminous	[7]7.125	[7]7.200	[7]6.167	[7]5.800	[7]5.906	[7]5.313	[7]5.528	[7]5.750	[7]5.850	[7]6.133	[8]7.867	[8]9.133	[8]9.163	[8]9.103	[8]9.588	[8]9.843	[8]11.611	[8]11.337
Springfield, Ill.:																		
Bituminous	.....	.....	.....	2.646	2.078	2.094	2.563	2.750	2.706	3.455	3.711	3.661	3.832	3.976	3.950	4.450	4.950	4.425
Washington, D. C.:																		
Pennsylvania anthracite—																		
Stove	[1]7.500	[1]7.381	[1]7.588	[1]7.419	[1]7.731	[1]7.400	[1]7.625	[1]7.725	[1]8.206	[1]8.567	[1]10.100	[1]9.960	[1]11.890	[1]11.911	[1]12.447	[1]13.793	[1]15.593	[1]14.514
Chestnut	[1]7.650	[1]7.531	[1]7.738	[1]7.569	[1]7.881	[1]7.550	[1]7.775	[1]7.856	[1]8.200	[1]8.625	[1]10.190	[1]10.064	[1]12.019	[1]12.011	[1]12.538	[1]13.857	[1]15.557	[1]14.400
Bituminous	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	[1]7.700	[1]7.974	[1]8.050	[1]8.267	[1]9.694	[1]11.577	[1]10.055

[1] Per ton of 2,240 pounds.
[6] 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 is included in the price.
[7] At yard, delivery $0.50 to $2, according to distance.
[8] Prices in Zone A. The cartage charge in Zone A was $1.85 until in July, 1921, when it was $1.55. These charges have been included in the averages. The cartage charges in Seattle ranged from $1.85 to $2.90, according to distance.

Table 2 shows for the United States both average and relative retail prices of Pennsylvania white ash coal, stove and chestnut sizes, and of bituminous coal on specified dates from January, 1913, to July, 1921. An average price for the year 1913 has been made from the averages for January and July of that year. The average prices for each month have been divided by this average price for the year 1913 to obtain the relative prices.

July, 1921, compared with July, 1913, shows an increase of 100 per cent in the price of Pennsylvania white ash stove coal, 95 per cent in the price of chestnut, and 94 per cent in the price of bituminous.

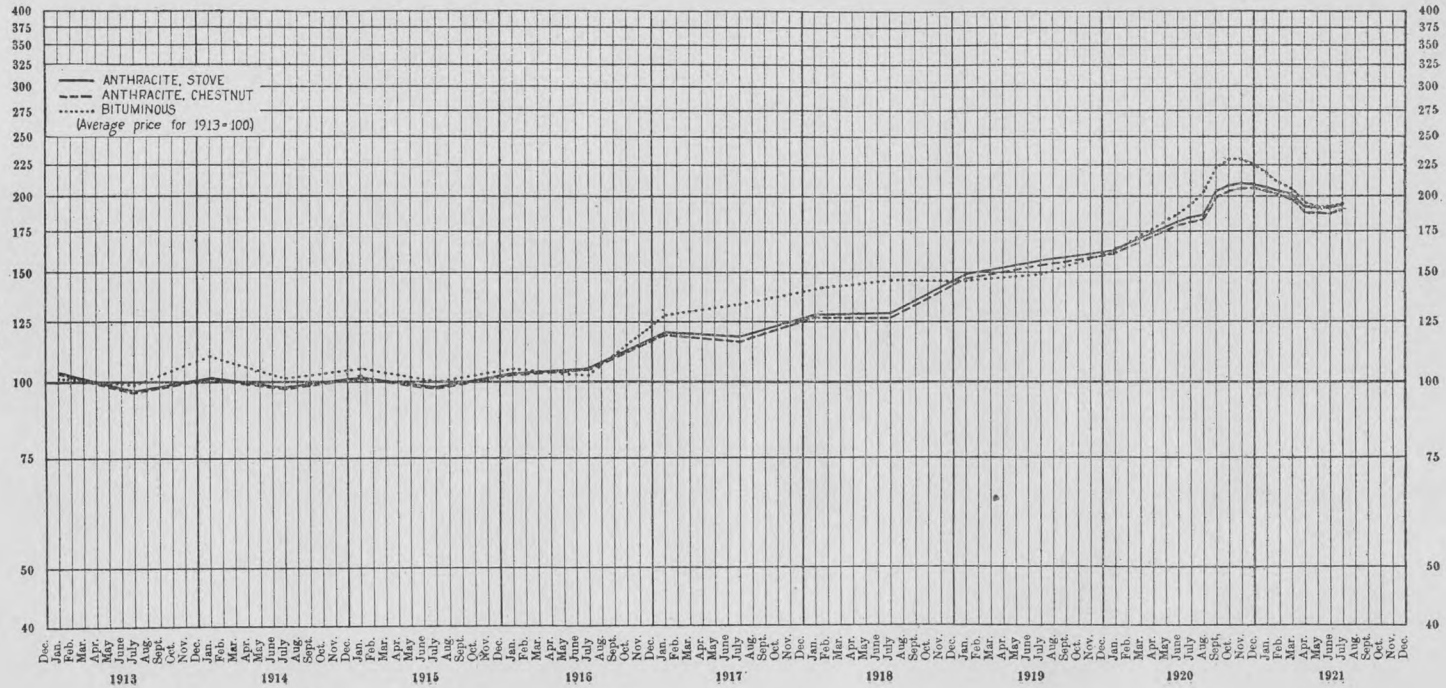
July, 1921, compared with July, 1920, shows an increase of 4 per cent in the price of Pennsylvania white ash stove and in the price of chestnut and a decrease of 1 per cent in the price of bituminous coal.

The figures for the chart, showing the trend in the retail prices of coal, have been taken from Table 2.

TABLE 2.—AVERAGE AND RELATIVE PRICES OF COAL IN TON LOTS FOR THE UNITED STATES ON SPECIFIED DATES FROM JAN. 15, 1913, TO JULY 15, 1921.

Year and month.	Pennsylvania anthracite, white ash.				Bituminous.	
	Stove.		Chestnut.		Average price.	Relative price.
	Average price.	Relative price.	Average price.	Relative price.		
1913:						
Average for year	$7.73	100	$7.91	100	$5.43	100
January	7.99	103	8.15	103	5.48	101
July	7.46	97	7.68	97	5.39	99
1914:						
January	7.80	101	8.00	101	5.97	110
July	7.60	98	7.78	98	5.46	101
1915:						
January	7.83	101	7.99	101	5.71	105
July	7.54	98	7.73	98	5.44	100
1916:						
January	7.93	103	8.13	103	5.69	105
July	8.12	105	8.28	105	5.52	102
1917:						
January	9.29	120	9.40	119	6.96	128
July	9.08	118	9.16	116	7.21	133
1918:						
January	9.88	128	10.03	127	7.68	141
July	9.96	129	10.07	127	7.92	146
1919:						
January	11.51	149	11.61	147	7.90	145
July	12.14	157	12.17	154	8.10	149
1920:						
January	12.59	163	12.77	161	8.81	162
June	14.07	182	14.14	179	10.19	187
July	14.28	185	14.33	181	10.55	194
August	14.40	186	14.50	183	11.04	203
September	15.77	204	15.85	200	12.12	223
October	16.08	208	16.15	204	12.50	230
November	16.22	210	16.29	206	12.53	230
December	16.16	209	16.29	206	12.30	226
1921:						
January	15.99	207	16.13	204	11.82	218
February	15.80	204	15.88	201	11.41	210
March	15.63	202	15.66	198	11.15	205
April	14.87	192	14.86	188	10.58	195
May	14.79	191	14.88	188	10.39	191
June	14.77	191	14.83	187	10.39	191
July	14.89	193	14.95	189	10.47	193

TREND IN THE RETAIL PRICE OF COAL FOR THE UNITED STATES, JANUARY, 1913, TO JULY, 1921.



Wholesale Prices in July.

NO CHANGE in the general level of wholesale prices from June to July is shown by information gathered by the United States Department of Labor through the Bureau of Labor Statistics. The bureau's weighted index number, which includes a larger number of commodities than any other currently published series, and which gives to each commodity an influence equal to its importance in the country's markets, again registered 148 in July, as compared with 100 representing the level of prices in the year 1913.

Farm products and foodstuffs were slightly higher than in June, the former group advancing 1¾ per cent and the latter 1½ per cent over the level of the previous month. In all other groups decreases took place, varying from one-half of 1 per cent in the case of cloths and clothing to 6 per cent in the case of house-furnishing goods. Building materials were 1 per cent cheaper than in June, fuel and lighting materials were 1½ per cent cheaper, and chemicals and drugs 1¾ per cent cheaper.

Metals and metal products declined 5¼ per cent in average price from June to July. In the group of miscellaneous commodities, including such important articles as cottonseed meal and oil, lubricating oil, jute, rubber, newsprint and wrapping paper, soap, tobacco, and wood pulp, the decline was less than three-fourths of 1 per cent.

Of the 327 commodities, or series of quotations, for which comparable data for June and July were obtained, increases were found to have occurred for 82 commodities and decreases for 121 commodities. In 124 cases no change in price took place in the two months.

Some of the more important changes occurring between June and July, as measured by average prices in each month, are as follows:

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN JULY AS COMPARED WITH JUNE, 1921, BY GROUPS OF COMMODITIES.

Increases.

Commodity.	Per cent.
Farm products.	
Cotton, middling:	
New Orleans	4.2
New York	2.7
Flaxseed, Minneapolis	7.1
Hay, timothy, No. 1, Chicago	9.0
Live stock, Chicago:	
Cattle, steers, good to choice	3.9
Hogs, light	23.6
Sheep, ewes	8.1
Sheep, wethers	9.5
Poultry, live, New York	2.4
Food, etc.	
Butter, extra, creamery:	
Chicago	21.2
New York	18.5
San Francisco	12.5
Cheese:	
Chicago	20.7
New York	22.9
San Francisco	29.2
Eggs, fresh:	
Chicago	19.0
New York	23.7
San Francisco	19.0
Food, etc.—Concluded.	
Lemons, California, Chicago	25.8
Lard, prime, contract, New York	18.1
Meat:	
Bacon, short clear sides, Chicago	2.5
Hams, smoked, Chicago	13.4
Mutton, dressed, New York	12.9
Poultry, dressed, New York	1.7
Milk, fresh:	
Chicago (vicinity)	12.2
New York (vicinity)	10.9
Rice, blue rose, New Orleans	15.6
Sugar, raw, New York	5.5
Potatoes, white, Chicago	5.4
Cloths and clothing.	
Hosiery, women's, silk mercerized, New York	2.6
Fuel and lighting.	
Coal, anthracite, New York tidewater:	
Chestnut	1.4
Fuel and lighting—Concld.	
Coal, anthracite, New York tidewater—Concld.	
Egg	1.2
Stove	1.1
Metals and metal products.	
Silver, bar, fine, New York	2.8
Building materials.	
Brick, New York	1.7
Oak, white, plain, New York	4.2
Pine, yellow, siding, Norfolk, Va	8.1
Chemicals and drugs.	
Copper sulphate, New York	4.5
Miscellaneous.	
Cottonseed oil, New York	13.9
Linseed Meal, New York	11.9
Sisal, Mexican, New York	2.5
Soya bean oil, crude, New York	3.9

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN JULY AS COMPARED WITH JUNE, 1921, BY GROUPS OF COMMODITIES—Concluded.

Decreases.

Commodity.	Per cent.
Farm products.	
Oats, cash, Chicago	1.7
Rye, No. 2, cash, Chicago	4.8
Wheat:	
No. 1 northern spring, Chicago	10.6
No. 2 red winter, Chicago	14.6
No. 2 hard winter, Kansas City	11.4
No. 1 northern spring, Minneapolis	4.1
No. 1 hard white, Portland, Oreg	12.5
Hay, alfalfa, No. 1, Kansas City	8.8
Hides, calfskins No. 1, Chicago	1 5
Hops, Pacifics, Portland	10.6
Live stock, lambs, Chicago	3.7
Peanuts, No. 1, Norfolk, Va	3.7
Fuel and lighting.	
Coal, bituminous:	
Mine run, Chicago	4.5
Prepared sizes, Chicago	2.5
Screenings, Chicago	4.5
Run of mine, St. Louis	2.7
Coke, Connelsville, furnace, at ovens	6.1
Gasoline, motor, New York	6.0
Petroleum, crude, at wells:	
Kansas-Oklahoma	15.8
Pennsylvania	14.3
Metal and metal products.	
Bar iron, refined iron bars, Pittsburgh	6.9
Copper, ingot, New York	2.4
Iron ore, Mesabi, Bessemer, lower lake ports	7.5
Lead, pig, New York	2.4
Nails, wire, Pittsburgh	6.0
Pig iron, Pittsburgh:	
Bessemer	7.6
Foundry No. 2, northern	7.3
Steel billets, Bessemer, Pittsburgh	12.8
Steel plates tank, Pittsburgh	5.1
Steel, structural, Chicago	7.5
Tin, pig, New York	4.0
Metal and metal products—Concluded.	
Tin plate, domestic, coke, Pittsburgh	9.0
Wire, barbed, galvanized, Chicago	8.1
Zinc, pig, New York	2.8
Food, etc.	
Coffee, Rio, New York	2.9
Salmon, canned, red, N. Y.	13.8
Flour, rye, white, Minneapolis	2.8
Flour, wheat:	
Patent, Kansas City	10.2
Standard patent, Minneapolis	1.2
Patent, Portland, Oreg	7.7
Soft patent, St. Louis	12.0
Prunes, California, New York	3.2
Raisins, New York	6.0
Corn meal, white, Decatur	9.2
Meat:	
Beef, fresh, good native steers, Chicago	6.9
Lamb, dressed round, Chicago	14.0
Rice, Honduras, New Orleans	14.8
Milk, fresh, San Francisco	14.2
Sugar, granulated, New York	4.0
Building materials.	
Brick, common, red building, Cincinnati	2.1
Lumber:	
Hemlock, New York	8.5
Maple, New York	9.5
Spruce, Boston	3.2
Oxide of zinc, New York	9.4
Shingles, cypress, New Orleans	7.4
Chemicals and drugs.	
Alcohol, wood, New York	1.6
Alum, lump, New York	5.1
Glycerine, refined, New York	6.6
Soda, caustic, New York	9.4
Chemicals and drugs—Concluded.	
Soda, nitrate of, New York	11.8
Soda ash, light, New York	5.9
Sulphur, crude, New York	3.2
Cloths and clothing.	
Denims, Massachusetts, No. 220, New York	4.1
Drilling, brown, New York:	
Pepperell	3.5
Massachusetts D standard	3.4
Yarn, Boston:	
Carded, 10/1	5.3
Twisted, 20/2	4.2
Leather, glazed kid, black, Boston	3.6
Leather, sole, hemlock, Boston	2.8
Wool, Ohio, scoured fleece, fine delaine, Boston	5.3
Yarns, worsted, 2/32s, Boston	4.2
House-furnishing goods.	
Bedroom sets, 3 pieces, Chicago	9.1
Bedroom chairs, rockers, Chicago	14.3
Kitchen tables, with drawer, Chicago	6.1
Knives and forks, factory	6.9
Miscellaneous.	
Bran, Minneapolis	4.5
Cottonseed meal, New York	4.8
Paper, news print, f. o. b. mills	3.5
Rope, manila, best grade, New York	15.8
Wood pulp, sulphite, domestic, New York	5.2
Hemp, manila, New York	8.6
Millfeed, middlings, Minneapolis	6.0
Tankage, 9 and 20 per cent, Chicago	5.3
Coconut oil, crude, Pacific coast	2.7

Comparing prices in July with those of a year ago, it is seen from the following table that farm products and foodstuffs have declined 50 per cent, and clothing materials 43½ per cent. Building materials, measured by changes in their index number, show a decrease of 40 per cent and miscellaneous commodities a decrease of 38½ per cent. House-furnishing goods were 35 per cent cheaper in July than in the same month of last year, and metals and metal products were 34½ per cent cheaper. Fuel and lighting materials decreased 27 per cent and chemicals and drugs approximately 25 per cent in the 12-month period. All commodities, considered in the aggregate, decreased 43½ per cent.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED YEARS AND MONTHS, 1913 TO JULY, 1921, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1913	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	97	99	100	103	107	100	101	100	100	100
April	97	96	100	98	102	101	101	100	98	98
July	101	102	100	99	98	101	99	100	101	100
October	103	102	100	100	99	98	100	100	100	101
1914	**103**	**103**	**98**	**96**	**87**	**97**	**101**	**99**	**99**	**100**
January	101	102	98	99	92	98	100	99	99	100
April	103	95	99	98	91	99	100	99	101	98
July	104	104	99	95	85	97	99	99	97	100
October	103	107	97	93	83	96	105	99	96	99
1915	**105**	**104**	**100**	**93**	**97**	**94**	**114**	**99**	**99**	**101**
January	102	106	96	93	83	94	103	99	100	99
April	107	105	99	89	91	94	102	99	99	100
July	108	104	99	90	102	93	108	99	98	101
October	105	103	103	96	100	93	124	99	99	101
1916	**122**	**126**	**128**	**119**	**148**	**101**	**159**	**115**	**120**	**124**
January	108	113	110	105	126	99	150	105	107	110
April	114	117	119	108	147	101	172	108	110	117
July	118	121	126	108	145	99	156	121	120	119
October	136	140	138	133	151	101	150	124	132	134
1917	**189**	**176**	**181**	**175**	**208**	**124**	**198**	**144**	**155**	**176**
January	148	150	161	176	183	106	159	132	138	151
April	181	182	169	184	208	114	170	139	149	172
July	199	181	187	192	257	132	198	152	153	186
October	208	183	193	146	182	134	252	152	163	181
1918	**220**	**189**	**239**	**163**	**181**	**151**	**221**	**196**	**193**	**196**
January	207	187	211	157	174	136	232	161	178	185
February	208	186	216	157	176	138	232	161	181	186
March	212	177	223	158	176	144	232	165	184	187
April	217	178	232	157	177	146	229	172	191	190
May	214	177	237	160	178	148	223	173	194	190
June	217	179	245	159	178	150	219	198	196	193
July	224	184	249	166	184	154	216	199	190	198
August	230	191	252	166	185	157	222	221	191	202
September	237	199	255	167	184	159	220	226	194	207
October	224	201	257	167	187	158	218	226	196	204
November	221	206	256	171	188	164	215	226	203	206
December	222	210	250	171	184	164	195	227	204	206
1919	**234**	**210**	**261**	**173**	**161**	**192**	**179**	**236**	**217**	**212**
January	222	207	234	170	172	161	191	218	212	203
February	218	196	223	169	168	163	185	218	208	197
March	228	203	216	168	162	165	183	218	217	201
April	235	211	217	167	152	162	178	217	216	203
May	240	214	228	167	152	164	179	217	213	207
June	231	204	258	170	154	175	174	233	212	207
July	246	216	282	171	158	186	171	245	221	218
August	243	227	304	175	165	208	172	259	225	226
September	226	211	306	181	160	227	173	262	217	220
October	230	211	313	181	161	231	174	264	220	223
November	240	219	325	179	164	236	176	299	220	230
December	244	234	335	181	169	253	179	303	220	238
1920	**218**	**236**	**302**	**238**	**186**	**308**	**210**	**337**	**236**	**243**
January	246	253	350	184	177	268	189	324	227	248
February	237	244	356	187	189	300	197	329	227	249
March	239	246	356	192	192	325	205	329	230	253
April	246	270	353	213	195	341	212	331	238	265
May	244	287	347	235	193	341	215	339	246	272
June	243	279	335	246	190	337	218	362	247	269
July	236	268	317	252	191	333	217	362	243	262
August	222	235	299	268	193	328	216	363	240	250
September	210	223	278	284	192	318	222	371	239	242
October	182	204	257	282	184	313	216	371	229	225
November	165	195	234	258	170	274	207	369	220	207
December	144	172	220	236	157	266	188	346	205	189
1921:										
January	136	162	208	228	152	239	182	283	190	177
February	129	150	198	218	146	221	178	277	180	167
March	125	150	192	207	139	208	171	275	167	162
April	115	141	186	199	138	203	168	274	154	154
May	117	133	181	194	38	202	166	262	151	151
June	113	132	180	187	132	202	166	250	150	148
July[1]	115	134	179	184	125	200	163	235	149	148

[1] Preliminary

Wholesale Prices in the United States and Foreign Countries, 1913 to June, 1921.

IN THE following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base, in order that the trend of prices in the several countries may be directly compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913; i. e., by dividing the index for 1913 on the original base into the index for each year or month on that base. These results are therefore to be regarded only as approximations of the correct index numbers in the case of series constructed by averaging the relative prices of individual commodities.[1] This applies to the index numbers of the Department of Labor of Canada, the Statisque Générale of France, the British series of the Economist, the series for Italy constructed by Prof. Riccardo Bachi, and the series here shown for Japan and Netherlands. The index numbers of the United States Bureau of Labor Statistics and the Census and Statistics Office of New Zealand are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices, and therefore can readily be shifted to any desired base. The series here shown for Sweden and Australia are reproduced as published, the latter after being rounded off to three digits. It should be understood also that the validity of the comparisons here made is affected by the wide difference in the number of commodities included in the different series of index numbers.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES.

[Index numbers expressed as percentages of the index number for 1913. See text explanation.]

Year and month.	United States: Bureau of Labor Statistics; 328 commodities (variable).	Canada: Department of Labor; 272 commodities (variable).	United Kingdom: Economist; 44 commodities.	France: Statistique Générale; 45 commodities.	Italy: Riccardo Bachi; 38 commodities until end of 1919; thereafter 76 commodities.	Japan: Bank of Japan, Tokyo; 56 commodities.	Netherlands: Centraal Bureau voor de Statistiek; 51 commodities.	Sweden: Svensk Handelstidning; 47 commodities.	Australia: Bureau of Census and Statistics; 92 commodities.	New Zealand: Census and Statistics Office; 140 commodities.
1913	100	100	100	100	100	100	100	[a] 100	.....	100
1914	100	100	99	102	95	96	106	116	[b] 100	102
1915	101	110	123	140	133	97	147	145	141	121
1916	124	134	160	188	201	117	229	185	132	131
1917	176	174	204	262	299	147	294	244	146	148
1918	196	205	225	339	409	192	400	339	170	172
1919	212	216	235	356	364	236	306	331	180	175
1914.										
January	100	101	97	100	102	.....	.....	.....	.....	.....
April	98	101	96	100	92	.....	.....	.....	.....	.....
July	100	99	95	101	92	.....	.....	.....	.....	.....
October	99	102	101	107	98	.....	.....	.....	.....	.....
1915.										
January	99	103	112	124	105	.....	.....	.....	.....	.....
April	100	108	124	135	121	.....	.....	.....	.....	.....
July	101	111	122	142	130	.....	.....	.....	.....	.....
October	101	112	125	158	148	.....	.....	.....	.....	.....

[1] For a discussion of index numbers, constructed according to this method, see Bulletin No. 181 of the Bureau of Labor Statistics, pp. 245-252.

[a] July, 1913–June, 1914.

[b] July, 1914.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES—Concluded.

Year and month.	United States: Bureau of Labor Statistics; 328 commodities (variable).	Canada: Department of Labor; 272 commodities (variable).	United Kingdom: Economist; 44 commodities.	France: Statistique Générale; 45 commodities.	Italy: Riccardo Bachi; 38 commodities until end of 1919; thereafter 76 commodities.	Japan: Bank of Japan, Tokyo; 56 commodities.	Netherlands: Centraal Bureau voor de Statistiek; 51 commodities.	Sweden: Svensk Handelstidning; 47 commodities.	Australia: Bureau of Census and Statistics; 92 commodities.	New Zealand: Census and Statistics Office; 140 commodities.
1916.										
January...	110	127	143	179	184	.....	.....	.....	.....	.....
April.....	117	132	156	190	201	.....	.....	.....	.....	.....
July.....	119	132	156	186	193	.....	.....	.....	.....	.....
October...	134	138	171	198	207	.....	.....	.....	133	.....
1917.										
January...	151	154	184	215	229	.....	.....	.....	133	.....
April.....	172	169	200	248	265	.....	.....	.....	136	.....
July.....	186	179	208	268	304	.....	.....	.....	148	.....
October...	181	179	212	284	350	.....	.....	.....	155	.....
1918.										
January...	185	190	215	313	363	.....	.....	.....	164	160
February.	186	194	216	319	380	.....	.....	.....	164	159
March.....	187	199	218	327	394	.....	.....	.....	167	161
April.....	190	199	221	333	401	.....	.....	.....	168	166
May.....	190	204	223	335	409	.....	.....	.....	171	167
June.....	193	207	227	329	415	.....	.....	.....	171	169
July.....	198	210	228	337	429	.....	.....	.....	170	172
August....	202	210	233	350	432	.....	.....	.....	172	177
September	207	211	232	355	433	.....	.....	.....	172	179
October...	204	214	231	360	442	.....	.....	370	173	182
November.	206	215	231	358	437	.....	.....	367	172	186
December.	206	213	226	353	371	.....	.....	372	172	187
1919.										
January...	203	211	217	348	325	.....	.....	369	171	180
February.	197	206	216	340	321	.....	.....	358	167	176
March.....	201	205	212	337	325	.....	.....	354	168	170
April.....	203	206	214	332	332	.....	.....	339	171	168
May.....	207	210	222	325	338	.....	.....	330	172	167
June.....	207	210	230	330	358	.....	.....	324	173	168
July.....	218	217	240	349	362	.....	.....	320	176	170
August....	226	222	242	347	369	.....	.....	321	182	174
September	220	223	245	360	372	.....	.....	319	185	178
October...	223	221	252	382	390	.....	.....	307	200	179
November	230	227	259	405	439	.....	.....	308	199	181
December.	238	238	273	423	457	.....	.....	317	197	183
1920.										
January...	248	250	288	487	508	301	295	319	203	190
February.	249	254	303	522	557	314	290	342	206	194
March.....	253	258	310	554	602	322	294	354	209	202
April.....	265	261	306	588	664	300	300	354	217	235
May.....	272	263	304	550	660	272	301	361	225	206
June.....	269	258	291	493	632	248	302	366	233	205
July.....	262	256	292	496	604	239	304	364	234	215
August....	250	244	288	501	625	235	296	365	236	215
September	242	241	284	526	655	231	293	362	230	216
October...	225	234	266	502	659	226	289	346	215	218
November	207	225	245	460	670	221	268	331	208	214
December.	189	214	220	435	655	206	240	299	197	214
1921.										
January...	177	208	209	407	642	201	218	267	196	212
February.	167	199	192	377	613	195	203	250	192	206
March.....	162	194	189	360	604	191	193	237	181	204
April.....	154	187	183	347	584	190	182	229	171	201
May.....	151	183	182	329	549	191	183	218	166	.....
June.....	148	179	179	324	509	192	.....	218	162	.....

Price Changes, Wholesale and Retail, of Important Food Articles in Selected Cities.

CONTINUING information published in previous issues of the MONTHLY LABOR REVIEW, the trend of wholesale and retail prices since 1913 for a number of important food products is shown herewith. Exact comparison of wholesale with retail prices is not attempted in the tables. Some food products—fresh meats, for example—are not sold by the retailer in the same form in which they leave the wholesaler, hence strictly comparable prices are not obtainable. It was found impracticable also to obtain both wholesale and retail prices for the same date, the retail prices being those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days prior to the 15th. The figures in the table are therefore to be considered as merely indicative of price variations in the retail as compared with the wholesale markets.

To assist in comparing the fluctuations at wholesale and at retail, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential in any case represents the margin of profit to the retailer, since, in addition to a possible difference of grade between the articles shown at wholesale and at retail, the various items of handling cost to both the wholesaler and the retailer are included in the figure.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale, R=retail. The wholesale price is the mean of the high and low quotations on the date selected as published in leading trade journals. The retail price is the average of prices reported to the Bureau of Labor Statistics by dealers.]

Article and city.	Unit.	1913: Average for year.	July—			1920		1921						
			1917	1918	1919	Jan.	July	Jan.	Feb.	Mar.	Apr.	May	June	July
Beef, Chicago:														
Steer loin ends (hip)...W..	Lb..	*Cts.* 16.8	*Cts.* 19.0	*Cts.* 34.0	*Cts.* 27.0	*Cts.* 32.0	*Cts.* 36.0	*Cts.* 34.0	*Cts.* 27.0	*Cts.* 28.0	*Cts.* 28.0	*Cts.* 25.0	*Cts.* 24.0	*Cts.* 26.0
Sirloin steak.....R..	Lb..	23.2	30.2	37.7	39.3	37.2	47.8	40.2	36.2	38.6	38.4	38.1	37.6	38.4
Price differential.....	.....	6.4	11.2	3.7	12.3	5.2	11.8	6.2	9.2	10.6	10.4	13.1	13.6	12.4
Beef, Chicago:														
Steer rounds, No. 2..W..	Lb..	13.1	17.0	25.0	22.0	20.0	29.0	16.0	14.0	14.0	16.0	16.0	15.0	16.0
Round steak.....R..	Lb..	20.2	26.6	35.0	35.5	32.0	40.9	32.7	29.3	30.7	31.2	31.0	31.3	31.8
Price differential.....	.....	7.1	9.6	10.0	13.5	12.0	11.9	16.7	15.3	16.7	15.2	15.0	16.3	15.8
Beef, Chicago:														
Steer ribs, No. 2...W..	Lb..	15.7	20.0	28.0	24.0	35.0	35.0	26.0	23.0	23.0	23.0	19.0	20.0	19.0
Rib roast.....R..	Lb..	19.5	24.6	31.8	31.9	[1]30.1	35.9	31.9	29.3	31.5	31.6	30.4	30.0	29.5
Price differential.....	.....	3.8	4.6	3.8	7.9	.....	.9	5.9	6.3	8.5	8.6	11.4	10.0	10.5
Beef, New York:														
No. 2 loins, city....W..	Lb..	15.8	19.0	28.0	28.5	37.0	43.0	30.0	28.0	27.5	30.0	30.5	28.0	28.0
Sirloin steak.....R..	Lb..	25.9	33.7	43.9	44.4	43.3	52.9	43.9	40.3	41.7	42.9	42.9	43.0	43.4
Price differential.....	.....	10.1	14.7	15.9	15.9	6.3	9.9	13.9	12.3	14.2	12.9	12.4	15.0	15.4
Beef, New York:														
No. 2 rounds, city..W..	Lb..	12.1	17.5	28.0	22.0	21.0	30.0	16.0	15.0	15.5	15.5	17.0	17.0	17.0
Round steak.....R..	Lb..	24.9	33.7	46.3	46.2	44.6	52.9	43.6	39.9	40.7	41.9	42.1	42.0	42.5
Price differential.....	.....	12.8	16.2	18.3	24.2	23.6	22.9	27.6	24.9	25.2	26.4	25.1	25.0	25.5
Beef, New York:														
No. 2 ribs, city....W..	Lb..	15.1	19.0	28.0	27.5	31.0	36.0	27.5	26.0	24.0	26.0	23.0	22.5	22.5
Rib roast.....R..	Lb..	21.8	27.9	37.5	38.6	38.4	44.4	38.3	35.6	36.4	38.0	37.3	36.7	36.0
Price differential.....	.....	6.7	8.9	9.5	11.1	7.4	8.4	10.8	9.6	12.4	12.0	14.3	14.2	13.5
Pork, Chicago:														
Loins.....W..	Lb..	14.9	25.0	29.0	37.0	25.0	35.0	21.0	19.0	24.0	28.0	23.0	21.0	21.0
Chops.....R..	Lb..	19.0	29.2	35.5	41.7	32.4	42.6	30.8	28.2	35.2	36.0	31.1	29.8	30.2
Price differential.....	.....	4.1	4.2	6.5	4.7	7.4	7.6	9.8	9.2	11.2	8.0	8.1	8.8	9.2

[1] Price is for different quality of beef from that quoted at wholesale.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Continued.

Article and city.	Unit.	1913: Average for year.	July—			1920		1921						
			1917	1918	1919	Jan.	July	Jan.	Feb.	Mar.	Apr.	May	June	July
Pork, New York:		*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Loins, western....W..	Lb..	15.2	23.5	30.5	37.0	29.0	29.5	29.0	23.0	25.5	29.0	27.0	24.5	25.0
Chops....R..	Lb..	21.7	32.6	40.6	47.5	39.9	44.3	39.4	35.4	36.6	39.7	38.3	37.8	37.9
Price differential.....	.....	6.5	9.1	10.1	10.5	10.9	14.8	10.4	12.4	11.1	10.7	11.3	13.3	12.9
Bacon, Chicago:														
Short clear sides...W..	Lb..	12.7	24.7	27.4	33.1	21.6	20.6	12.8	14.6	15.4	15.2	12.9	15.9	12.9
Sliced....R..	Lb..	29.4	43.9	54.7	61.5	53.1	60.1	50.7	50.4	51.6	52.2	52.3	51.6	52.0
Price differential.....	.....	16.7	19.2	27.3	28.4	31.5	39.5	37.9	35.8	36.2	37.0	39.4	37.7	39.1
Ham, Chicago:														
Smoked....W..	Lb..	16.6	24.3	30.1	38.3	28.9	37.5	24.5	26.3	27.8	27.8	27.3	27.3	31.5
Smoked, sliced....R..	Lb..	26.6	41.4	49.1	58.8	51.4	61.3	51.2	51.0	51.8	51.7	50.9	51.3	51.7
Price differential.....	.....	10.0	17.1	19.0	20.5	22.5	23.8	26.7	24.7	24.0	23.9	23.6	24.0	20.2
Lard, New York:														
Prime, contract....W..	Lb..	11.0	20.1	26.2	35.8	24.5	19.6	13.6	12.5	12.3	10.5	9.8	9.9	12.0
Pure, tub....R..	Lb..	16.0	27.4	32.2	42.5	33.8	29.2	22.7	20.9	19.9	19.1	17.6	16.9	17.3
Price differential.....	.....	5.0	7.3	6.0	6.7	9.3	9.6	9.1	8.4	7.6	8.6	7.8	7.0	5.3
Lamb, Chicago:														
Dressed, round....W..	Lb..	14.9	26.0	31.0	29.0	29.0	31.0	23.5	18.0	20.0	20.0	24.0	28.0	25.0
Leg of, yearling....R..	Lb..	19.8	28.7	35.7	36.2	37.0	41.5	36.1	32.2	33.7	33.6	34.4	35.1	34.3
Price differential.....	.....	4.9	2.7	4.7	7.2	8.0	10.5	12.6	4.2	13.7	13.6	10.4	7.1	9.3
Poultry, New York:														
Dressed fowls.....W..	Lb..	18.2	24.8	36.0	34.5	35.3	39.0	35.5	38.5	37.5	38.5	36.0	33.5	33.5
Dressed hens.....R..	Lb..	21.4	28.7	41.0	41.5	40.3	47.0	43.1	44.2	44.4	44.6	42.9	41.9	41.8
Price differential.....	.....	3.2	3.9	5.0	7.0	5.0	8.0	7.6	5.7	6.9	6.1	6.9	8.4	8.3
Butter, Chicago:														
Creamery, extra...W..	Lb..	31.0	37.5	42.5	52.0	62.0	55.5	48.5	45.0	45.5	46.0	29.0	31.0	38.0
Creamery, extra....R..	Lb..	36.2	43.2	48.0	57.1	69.0	62.9	56.3	52.3	53.8	53.5	37.6	37.2	45.6
Price differential.....	.....	5.2	5.7	5.5	5.1	7.0	7.4	7.8	7.3	8.3	7.5	8.6	6.2	7.6
Butter, New York:														
Creamery, extra...W..	Lb..	32.3	39.5	44.4	51.0	63.8	57.4	53.8	43.3	46.4	49.4	29.5	32.8	39.8
Creamery, extra...R..	Lb..	38.2	45.3	51.4	61.3	75.2	66.9	63.4	54.7	56.8	57.2	41.5	39.9	47.6
Price differential.....	.....	5.9	5.8	7.0	10.3	11.4	9.5	9.6	11.4	10.4	7.8	12.0	7.1	7.8
Butter, San Francisco:														
Creamery, extra...W..	Lb..	31.7	38.5	50.0	56.5	61.0	59.0	46.5	45.5	40.0	38.0	34.0	37.0	41.5
Creamery, extra....R..	Lb..	38.8	45.5	56.6	64.7	71.0	68.0	54.9	57.0	49.6	45.5	41.8	46.6	49.1
Price differential.....	.....	7.1	7.0	6.6	8.2	10.0	9.0	8.4	11.5	9.6	7.5	7.8	9.6	7.6
Cheese, Chicago:														
Whole milk.....W..	Lb..	14.2	21.6	22.7	30.9	30.4	24.9	24.3	24.4	27.1	18.3	14.0	14.0	17.0
Full cream.....R..	Lb..	.....	33.9	34.5	44.1	44.5	43.4	40.3	39.7	39.2	39.0	35.8	34.5	34.6
Price differential.....	.....	.....	12.3	11.8	13.2	14.1	18.5	16.0	15.3	12.1	20.7	21.8	20.5	17.6
Cheese, New York:														
Whole milk, State.W..	Lb..	15.4	23.8	23.9	31.5	31.4	26.5	23.0	22.8	25.5	22.3	15.3	14.9	17.6
Full cream.....R..	Lb..	.....	32.8	33.2	42.8	43.3	41.7	39.0	38.9	38.2	38.6	36.3	32.2	32.4
Price differential.....	.....	.....	9.0	9.3	11.3	11.9	15.2	16.0	16.1	12.7	16.3	21.0	17.3	14.8
Cheese, San Francisco:														
Fancy.....W..	Lb..	15.9	20.0	26.0	32.0	32.5	33.0	24.5	27.5	24.0	21.5	16.0	18.0	22.5
Full cream.....R..	Lb..	.....	29.7	32.3	41.2	43.2	42.6	39.7	39.2	37.6	36.8	27.0	26.5	29.8
Price differential.....	.....	.....	9.7	6.3	9.2	10.7	9.6	15.2	11.7	13.6	15.3	11.0	8.5	7.3
Milk, Chicago:														
Fresh.....W..	Qt..	3.8	4.7	5.3	6.8	8.1	7.2	5.9	5.1	5.1	5.1	4.4	4.4	5.0
Fresh, bottled [2]....R..	Qt..	8.0	10.0	12.0	14.0	15.0	15.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Price differential.....	.....	4.2	5.3	6.7	7.2	6.9	7.8	8.1	8.9	8.9	8.9	9.6	9.6	9.0
Milk, New York:														
Fresh.....W..	Qt..	3.5	5.0	5.4	7.1	8.5	7.0	7.5	6.2	5.2	5.2	5.6	4.9	5.4
Fresh, bottled [2]....R..	Qt..	9.0	11.4	12.7	16.0	18.0	16.0	17.0	16.0	15.0	15.0	15.0	14.3	14.0
Price differential.....	.....	5.5	6.4	7.3	8.9	9.5	9.0	9.5	9.8	9.8	9.8	9.4	9.4	8.6
Milk, San Francisco:														
Fresh.....W..	Qt..	3.9	4.3	5.9	7.4	8.4	8.4	8.4	7.6	7.1	7.1	7.1	7.1	6.1
Fresh, bottled.....R..	Qt..	10.0	10.0	12.1	14.0	15.8	16.0	15.8	15.4	14.8	14.6	14.6	14.6	14.0
Price differential.....	.....	6.1	5.7	6.2	6.6	7.4	7.6	7.4	7.8	7.7	7.5	7.5	7.5	7.9
Eggs, Chicago:														
Fresh, firsts.....W..	Doz.	22.6	31.0	36.5	42.0	68.5	41.5	68.5	33.8	31.3	24.3	21.3	23.8	29.5
Strictly fresh.....R..	Doz.	29.2	40.6	45.7	53.2	77.8	53.4	78.6	45.0	40.2	32.5	32.4	33.4	41.8
Price differential.....	.....	6.6	9.6	9.2	11.2	9.3	11.9	10.1	11.2	8.9	8.2	11.1	9.6	12.3
Eggs, New York:														
Fresh, firsts.....W..	Doz.	24.9	35.0	40.0	44.5	77.5	46.5	68.5	38.5	33.0	27.3	23.5	26.5	34.0
Strictly fresh.....R..	Doz.	39.7	47.7	57.3	66.4	95.8	66.8	89.7	58.8	49.9	43.7	42.5	44.6	53.4
Price differential.....	.....	14.8	12.7	17.3	21.9	18.3	20.3	21.2	20.3	16.9	16.4	19.0	18.1	19.4
Eggs, San Francisco:														
Fresh.....W..	Doz.	26.8	32.0	44.0	45.0	54.5	48.0	59.0	28.5	29.0	26.5	21.0	25.5	31.5
Strictly fresh.....R..	Doz.	37.3	39.2	51.4	56.6	68.9	60.6	70.5	41.4	39.4	33.5	30.3	33.4	46.7
Price differential.....	.....	10.5	7.2	7.4	11.6	14.4	12.6	11.5	12.9	10.4	7.0	9.3	7.9	15.2

[2] Delivered.

[3] Good to choice.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July—			1920		1921						
			1917	1918	1919	Jan.	July	Jan.	Feb.	Mar.	Apr.	May	June	July
Meal, corn, Chicago:		*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*
Fine.....W..	Lb..	1.4	4.5	5.4	4.6	3.7	4.3	1.9	1.6	1.7	1.7	1.8	1.9	1.9
Fine.....R..	Lb..	2.9	5.8	6.8	6.1	6.6	7.2	6.7	6.1	6.0	6.2	6.1	6.0	5.9
Price differential.....	.....	1.5	1.3	1.4	1.5	2.9	2.9	4.8	4.5	4.3	4.5	4.3	4.1	4.0
Beans, New York:														
Medium, choice....W..	Lb..	4.0	15.4	11.9	7.5	7.9	8.3	5.6	5.6	5.6	5.4	4.8	4.8	4.8
Navy, white.....R..	Lb..	.....	18.8	17.5	12.2	12.5	12.5	9.9	9.4	8.9	9.0	8.6	8.5	9.1
Price differential.....	.....	.....	3.4	5.6	4.7	4.6	4.2	4.3	3.8	3.3	3.6	3.8	3.7	4.3
Potatoes, Chicago:														
White[3].....W..	Lb..	1.0	4.4	1.5	1.4	4.3	7.4	1.3	1.2	1.3	.9	1.0	2.0	2.9
White.....R..	Lb..	1.5	5.0	3.7	5.0	5.2	9.8	2.5	2.1	2.1	2.0	1.8	3.0	3.6
Price differential.....	.....	.5	.6	2.2	3.6	.9	2.4	1.2	.9	.8	1.1	.8	1.0	.7
Rice, New Orleans:														
Head.....W..	Lb..	5.0	7.1	9.3	10.5	12.6	12.5	3.9	5.3	5.0	3.1	3.3	4.8	3.4
Head.....R..	Lb..	.....	10.1	11.9	14.2	16.0	15.6	8.9	7.9	7.6	7.2	7.1	7.4	7.5
Price differential.....	.....	.....	3.0	2.6	3.7	3.4	3.1	5.0	2.6	2.6	4.1	3.8	2.6	4.1
Sugar, New York:														
Granulated.....W..	Lb..	4.3	7.4	7.4	8.8	15.7	19.9	7.6	6.7	7.8	7.5	6.3	5.6	5.4
Granulated.....R..	Lb..	4.9	8.4	8.8	10.0	17.3	25.2	9.0	8.2	9.0	8.9	7.3	6.9	6.3
Price differential.....	.....	.6	1.0	1.4	1.2	1.6	5.3	1.4	1.5	1.2	1.4	1.0	1.3	.9

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[Average for 1913=100.]

Article and city.	Average for 1913.	July—			1920		1921						
		1917	1918	1919	Jan.	July	Jan.	Feb.	Mar.	Apr.	May	June	July
Beef, Chicago:													
Steer loin ends (hip).....W..	100	113	202	161	190	214	202	161	167	167	149	143	155
Sirloin steak.....R..	100	130	162	169	160	206	173	156	166	166	164	162	166
Beef, Chicago:													
Steer rounds, No. 2.....W..	100	130	191	168	153	221	122	107	107	122	122	115	122
Round steak.....R..	100	132	173	176	158	202	162	145	152	154	153	155	157
Beef, Chicago:													
Steer ribs, No. 2.....W..	100	127	178	153	223	223	166	146	146	146	121	127	121
Rib roast.....R..	100	126	163	164	154	184	164	150	162	162	156	154	151
Beef, New York:													
No. 2 loins, city.....W..	100	120	177	180	234	272	190	177	174	190	193	177	177
Sirloin steak.....R..	100	130	169	171	167	204	169	156	161	166	166	166	168
Beef, New York:													
No. 2 rounds, city.....W..	100	145	231	182	174	248	132	124	128	128	140	140	140
Round steak.....R..	100	135	186	186	179	212	175	160	163	168	169	169	171
Beef, New York:													
No. 2 ribs, city.....W..	100	126	185	182	205	238	182	172	159	172	152	149	149
Rib roast.....R..	100	128	172	177	176	204	176	163	167	174	171	168	165
Pork, Chicago:													
Loins.....W..	100	168	195	248	168	235	141	128	161	188	154	141	141
Chops.....R..	100	154	187	219	171	224	162	148	185	189	164	157	159
Pork, New York:													
Loins, western.....W..	100	155	201	243	191	194	191	151	168	191	178	161	164
Chops.....R..	100	150	187	219	184	204	182	163	169	183	176	174	175
Bacon, Chicago:													
Short clear sides.....W..	100	194	216	261	170	162	101	115	121	120	102	109	102
Sliced.....R..	100	149	186	209	181	204	172	171	176	178	178	176	177
Ham, Chicago:													
Smoked.....W..	100	146	181	231	174	226	148	158	167	167	164	164	190
Smoked, sliced.....R..	100	156	185	221	193	230	192	192	195	194	191	193	194
Lard, New York:													
Prime, contract.....W..	100	183	238	325	223	178	124	114	112	95	89	90	109
Pure, tub.....R..	100	171	201	266	211	183	142	131	124	119	110	106	108
Lamb, Chicago:													
Dressed, round.....W..	100	174	208	195	195	208	158	121	134	134	161	188	168
Leg of, yearling. .....R..	100	145	180	183	187	210	182	163	170	170	174	177	173
Poultry, New York:													
Dressed fowls.....W..	100	136	198	190	194	214	195	212	206	212	198	184	184
Dressed hens.....R..	100	134	192	194	188	220	201	207	207	208	200	196	195

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Average for 1913.	July—			1920		1921						
		1917	1918	1919	Jan.	July	Jan.	Feb.	Mar.	Apr.	May	June	July
Butter, Chicago:													
Creamery, extra.....W..	100	121	137	168	200	179	156	145	147	148	94	100	123
Creamery, extra.....R..	100	119	133	158	191	174	156	144	149	148	104	103	126
Butter, New York:													
Creamery, extra.....W..	100	122	137	158	198	178	167	134	144	153	91	102	123
Creamery, extra.....R..	100	119	135	160	197	175	166	143	149	150	109	104	125
Butter, San Francisco:													
Creamery, extra.....W..	100	121	158	178	192	186	147	144	126	120	107	117	131
Creamery, extra.....R..	100	117	146	167	183	175	141	147	128	117	108	120	127
Milk, Chicago:													
Fresh.....W..	100	124	139	179	213	189	155	134	134	134	116	116	132
Fresh, bottled, delivered.R..	100	125	150	175	188	188	175	175	175	175	175	175	175
Milk, New York:													
Fresh.....W..	100	143	154	203	243	200	214	177	149	149	160	140	154
Fresh, bottled, delivered.R..	100	127	141	178	200	178	189	178	167	167	167	159	156
Milk, San Francisco:													
Fresh.....W..	100	110	151	190	215	215	215	195	182	182	182	182	156
Fresh, bottled.....R..	100	100	121	140	158	160	158	154	148	146	146	146	140
Eggs, Chicago:													
Fresh, firsts.....W..	100	137	162	186	303	184	303	150	138	108	94	105	131
Strictly fresh.....R..	100	139	157	182	266	183	269	154	138	111	111	114	143
Eggs, New York:													
Fresh firsts.....W..	100	141	161	179	311	187	275	155	133	110	94	106	137
Strictly fresh.....R..	100	120	144	167	241	168	226	148	126	110	107	112	135
Eggs, San Francisco:													
Fresh.....W..	100	119	164	168	203	179	220	106	108	99	78	95	118
Strictly fresh.....R..	100	105	138	152	185	162	189	111	106	90	81	90	125
Meal, corn, Chicago:													
Fine.....W..	100	321	386	329	264	307	136	114	121	121	129	136	136
Fine.....R..	100	200	234	210	228	248	231	210	207	214	210	207	203
Potatoes, Chicago:													
White, good to choice....W..	100	440	150	140	430	740	130	120	130	90	100	200	290
White.....R..	100	333	247	333	347	653	167	140	140	133	120	200	240
Sugar, New York:													
Granulated.....W..	100	172	172	205	365	463	177	156	181	174	147	130	126
Granulated.....R..	100	171	180	204	353	514	184	167	184	182	149	141	129

Scales for Standardization of Families According to Size.

AN ARTICLE entitled "The classification of the population according to income," by Edgar Sydenstricker, of the United States Public Health Service, and Willford I. King, of the National Bureau of Economic Research, appears in the July, 1921, number of The Journal of Political Economy. The material used in the study is that collected in 1917 by the Public Health Service in an investigation into the economic life of the inhabitants of 24 South Carolina cotton-mill villages. Although the actual process of compiling the material is not published, the results appear to involve a proportional distribution of the net family income among the various individuals, according to their requirements as shown by individual expenditures.

The article outlines the method of securing data from 1,500 families, which were visited from two to five times during the year. The many problems arising in connection with the computation of net income of an "economic family" are enumerated, and the methods of handling income from boarders and lodgers, gardens, live stock, etc., are explained carefully. These methods are substantially the same as those employed by the Bureau of Labor Statistics in its budget studies of cost of living. The article also mentions the effect on incomes of the revolutionary changes in price level. If com-

parisons for different years are to be made, the annual incomes of families must be reduced to incomes of purchasing power by means of a chronological series of weighted average index numbers.

Although the report states that a hasty review of the literature on the subject does not reveal a single instance in which families were scientifically rated according to size, the statement is evidently in error, since, for purposes of confirmation, the results obtained in this study were compared with the Atwater scale of equivalent adult males. In addition to this, the Bureau of Labor Statistics during the past few years has reduced several thousand families included in cost-of-living studies to the basis of the equivalent adult male in food consumption, and has published tables showing in parallel columns the number of persons and the number of equivalent adult males.

The present article, however, goes into more minute details than any of the previous studies, and presents three scales for males and females of each age from 1 to 80. In each scale the maximum adult expense for the items under consideration was taken as a base, and all other quantities considered as fractions of that base.

The first scale is based on expenditures for clothing, drinks, tobacco, amusement, education, medical and dental services, etc: The material was secured from expenditures of individuals in 140 families in the cotton-mill villages. The range in this scale is as follows: Under 1 year, male 0.11, female 0.11; 24 years, male 1.0, female 0.61; 80 years, male 0.43, female 0.25.

The second scale is based on food records of 1,500 families. In connection with this table, the authors have adopted a new word "fammain," which is a contraction of the phrase "food for adult male maintenance." It is defined as "a demand for food of a money value equal to that demanded by the average male in the given class at the age when the expense for his food reaches a maximum." Since the Atwater scale is based on calorie consumption and the fammain on money value, the authors made a comparison of the two scales, which proved with a "reasonable degree of conclusiveness" that the relative food requirements of persons of different ages and sexes vary in identical fashion, whether these requirements are originally measured in terms of calories or of money value. The range of fammain figures is as follows: Under 1 year, male 0.278, female 0.265; 22 to 42 years, male 1.0, female 0.858; 80 years, male 0.903, female 0.768.

The article uses as an illustration a dietary group of 10 persons, including two boarders and a visitor, giving the age and sex of each. The total fammains represented by this group are given as 6.995 with a weekly food cost per fammain of $2.47. Using the same total food cost, and applying the scale used by the Bureau of Labor Statistics, this group would total 7.15 equivalent adult males, with a weekly food cost per equivalent adult male of $2.41. It is interesting to note how closely the fammain scale, based on money value, agrees with the scale of equivalent adult males based on calorie consumption.

The third scale is a combination of the two previous scales, representing the proportional demands upon income made by each individual for the items of food, clothing, amusement, education, and the other miscellaneous items previously enumerated. Expenditures for rent, fuel, light, and furniture are omitted on the assumption that the apportionment of these items would not differ materially

from that of food, clothing, etc. It seems doubtful, however, if any figure should be accepted as final which does not embrace the total family expense. In submitting their final scale, the authors have found it necessary to coin another new word "ammain," which is an abbreviation of the phrase "adult male maintenance," and is defined in full as "a gross demand for articles of consumption having a total money value equal to that demanded by the average male in the given class at the age when his total requirements for expense of maintenance reach a maximum." A few of the figures, which give an idea of the range in the scale, are as follows: Under 1 year, male 0.220, female 0.220; 24 years, male 1.000, female 0.788; 40 years, male 0.931, female 0.739; 80 years, male 0.741, female 0.616.

The application of the final ammain scale is readily seen. By reducing various families to an ammain basis, all are comparable as to income, regardless of the number of persons composing the family or the age and sex of the number. As an index of well being, however, the fammain and ammain figures would be more indicative if applied to net expenditure rather than net income. In using income as a basis, no allowance is made for the portion of income which is diverted to expenses incurred in a previous year, or which is invested in savings such as Liberty bonds. The Bureau of Labor Statistics found that the purchase of Liberty bonds during the years of the war made a considerable difference between the annual net income of the family and the net expenditure.

It must also be borne in mind that the ammain and fammain are based on existing expenditures of cotton-mill employees, and, except that relatively the fammain and Atwater scales are not materially inconsistent, nothing is said as to the sufficiency of the food, clothing, etc., which was secured by these expenditures. Scales of this character to be adopted as standards would inspire greater confidence if based on families or individuals who were known to have sufficient nutrition, comfortable clothing, and enough of amusement, education, etc., to lead normal, healthy lives.

Cost of Clothing in Argentina.[1]

THE table following shows the increase in the cost of clothing in Argentina in 1919 and 1920, the second quarter of 1919 being taken as the base or 100. These figures were obtained by observing month by month the average prices of 20 different kinds of cloth.

INDEX NUMBERS OF COST OF CLOTHING IN ARGENTINA IN 1919 AND 1920.

[Second quarter of 1919=100.]

Period.	Index number.
1919:	
Second quarter	100
Third quarter	102
Fourth quarter	102
1920:	
First quarter	110
Second quarter	121
Third quarter	132
Fourth quarter	135

[1] Crónica Mensual del Departamento Nacional del Trabajo, Buenos Aires, Abril de 1921.

Retail Prices in Czechoslovakia, 1914 and March, 1921.

THE annual report of the Central Federation of Czecho-Slovak Industrial Employers for the year 1920[1] contains the following table showing the retail prices in Prague on March 1, 1921, of various foodstuffs and other necessaries of life as compared with average retail prices prevailing during 1914 for the same commodities:

RETAIL PRICES OF FOODSTUFFS AND OTHER NECESSARIES IN PRAGUE MAR. 1, 1921, AS COMPARED WITH 1914.

[One krone at par=20.3 cents; 1 kilogram=2.2 pounds; 1 metric centner=220.46 pounds; 1 dekagram=0.35 ounce; 1 liter=1.06 quarts; 1 meter=1.09 yards.]

Article.	Unit.	Average price.		Per cent increase.
		1914	Mar. 1, 1921.	
		Kronen.	*Kronen.*	
Flour, wheat, reduced price [a]	Kilogram	0.36	2.00	455
Flour, wheat, regular price [a]	do	.36	5.00	1,289
Flour, rye, reduced price [a]	do	.28	1.00	258
Flour, rye, regular price [a]	do	.28	4.00	1,326
Average for flour, reduced price [a]	do	.32	1.50	368
Average for flour, regular price [a]	do	.32	4.50	1,306
Peas	do	.22	5.50	2,400
Lentils	do	.34	10.00	2,841
Beans, white	do	.44	5.40	1,127
Average for legumes	do	.33	6.96	2,122
Potatoes	do	.04	.82	1,950
Rice	do	.44	7.60	1,604
Butter, table	do	3.80	56.00	1,373
Lard, in packages	do	2.04	36.00	1,669
Lard, bulk	do	1.82	32.00	1,655
Ceres (lard substitute)	do	1.60	24.00	1,425
Margarine	do	1.80	24.00	1,233
Tallow, crude	do	1.20	22.00	1,733
Tallow, melted	do	1.40	26.00	1,757
Butter, cooking	do	3.10	24.00	1,320
Average for fats	do	2.09	33.00	1,520
Beef, fore quarter	do	1.54	17.00	1,004
Beef, hind quarter	do	1.62	20.00	1,134
Pork, fat meat	do	1.82	20.00	1,000
Pork, lean meat	do	1.70	18.00	1,070
Veal	do	1.48	16.00	981
Mutton	do	1.52	14.00	820
Smoked meat	do	1.96	32.00	1,532
Average for meat	do	1.66	19.57	1,077
Salame sausage, Prague	do	2.70	30.00	1,030
Salame sausage, fat	do	3.50	36.00	928
Bologna sausage	do	1.90	24.00	1,163
Average for sausage	do	2.70	30.00	1,040
Milk	Liter	.30	4.00	1,233
Cream cheese	Kilogram	.32	11.00	3,025
Cottage cheese	do	.34	12.00	3,429
Swiss cheese	do	1.40	10.00	714
Average for milk products	do	.59	9.25	2,100

[1] Zentralverband der Čechoslovakischen Industriellen im Jahre 1920. Bericht für die Generalversammlung für das Jahr 1920. Prague, 1921. p. 6.

[a] In explanation of the two prices (regular and reduced price) quoted for flour it should be noted that employers are legally obligated to pay to their workers a flour and bread bonus which represents the difference in the price of a year ago and the current price. The reduced price quoted in the table represents the actual cost of flour to workers.

RETAIL PRICES OF FOODSTUFFS AND OTHER NECESSARIES IN PRAGUE MAR. 1, 1921, AS COMPARED WITH 1914—Concluded.

Article.	Unit.	Average price.		Per cent increase.
		1914	Mar. 1, 1921.	
		Kronen.	*Kronen.*	
Prunes, dried	Kilogram	.50	11.00	2,100
Marmalade	do	.80	6.70	700
Plum jam	do	.92	12.00	1,204
Poppy seed	do	.64	10.00	1,462
Average	do	.70	9.92	1,366
Eggs, fresh	Each	.10	1.20	1,100
Eggs, storage	do	.20	1.30	550
Average for eggs	do	.15	1.25	825
Coffee, substitutes	Kilogram	1.00	7.60	660
Chicory	do	.60	9.20	1,433
Sugar	do	.83	8.10	876
Average	do	.81	8.30	989
Bread	do	.42	2.50	495
Onions	do	.18	2.20	1,122
Carrots	do	.12	1.20	900
Sauerkraut	do	.24	1.60	566
Average for vegetables	do	.18	1.66	869
Caraway	10 dekagrams	.20	1.80	800
Pepper	do	.24	2.20	810
Pimento	do	.22	2.80	1,150
Average for spices	do	.22	2.26	922
Salt	Kilogram	.26	1.80	600
Vinegar	Liter	.24	2.40	900
Beer	do	.28	2.40	756
Average for miscellaneous foodstuffs	Kilogram	.26	2.20	752
Lignite	Metric centner	2.12	34.00	1,500
Cordwood	Kilogram	.04	.50	1,150
Petroleum	Liter	.42	6.00	1,328
Matches	Box	.02	.24	1,100
Soda	Kilogram	.12	4.00	3,333
Ticking, pink	Meter	.32	43.20	5,170
Linen cloth	do	.68	34.00	4,900
Woolens for men's clothing, medium quality	do	5.50	180.00	3,172
Hat, ordinary quality	Each	7.00	120.00	1,614
Shoes, men's	Pair	12.00	270.00	2,150
Shoes, ladies'	do	12.00	240.00	1,900
Shirts, men's, medium quality	Each	1.80	60.00	3,244
Drawers	Pair	1.70	40.00	2,253
Stockings, black	do	.80	24.00	2,900
Socks	do	.60	12.00	1,900
Handkerchiefs	Each	.24	7.00	2,816
Collars, white	do	.50	7.00	1,390
Soap, laundry	Kilogram	.72	20.80	2,778
Rent	Per year	400.00	520.00	30
Daily papers	Each	.04	.60	1,400
Postage, letter	One stamp	.10	.60	500
Writing paper	One sheet	.04	.20	400
Car fare	One person	.08	.60	650

From the preceding table it will be seen that the rise in prices of all commodities in Czechoslovakia as compared with prewar prices has been phenomenal. By far the greater part of this rise has taken place since the close of the war, and is principally due to the depreciation of the krone in all countries which formerly formed part of the Austro-Hungarian Empire. The Czecho-Slovak krone, the par value of which is 20.3 cents, was worth only about $1\frac{1}{4}$ cents on

March 1, 1921, the date on which the prices quoted in the above table were current in Prague, the capital of Czechoslovakia. The report states that recently there has set in a general slight reduction of prices.

The increases in food prices vary between 258 per cent for rye flour (reduced price, i. e., the price paid workers) and 3,429 per cent for cottage cheese. Of the various groups of foodstuffs, that of legumes shows the greatest increase, namely, 2,122 per cent. Potatoes increased 1,950 per cent in price, meat 1,077 per cent, fats 1,520 per cent, bread 495 per cent, and flour 368 per cent (for workmen; for other consumers 1,306 per cent).

Other necessaries increased even more in price than foodstuffs, especially textiles and clothing. Cotton ticking, for instance, increased in price 5,170 per cent, linen cloth 4,900 per cent, woolens for men's clothing 3,172 per cent, shirts 3,244 per cent. The increases in the cost of letter postage (500 per cent), writing paper (400 per cent), and carfare (650 per cent) were moderate if compared with the increases in the prices of other necessaries. Rent is the only expenditure which underwent a negligible increase. A workman's apartment which before the war could be rented for 400 crowns ($81.20 par) per year is now obtainable for 520 crowns ($105.56 par), i. e., at an increase of only 30 per cent. This is due to the fact that during the war when the present Czecho-Slovak Republic still formed a part of Austria-Hungary the raising of rents was prohibited by law. After the war, when Czechoslovakia obtained its independence, its Government issued a law allowing rents to be raised only 30 per cent above the prewar renting rates.

The report of the Central Federation of Czecho-Slovak Industrial Employers contains also wage statistics, which are reproduced on pages 127 to 130 of the present issue of the MONTHLY LABOR REVIEW.

Cost of Living in Germany, June, 1921.[1]

SINCE February, 1920, the National Ministry of Labor in Germany is publishing monthly in the Reichs-Arbeitsblatt cost-of-living statistics for 610 cities and towns of the country. These data are compiled by the National Statistical Office in cooperation with the various State statistical offices and include every town with a population in excess of 10,000 inhabitants.

The cost-of-living figures are based on the monthly expenditure of a normal workman's family of two adult persons and three children aged 12, 7, and 1½ years, respectively, for food, fuel, lighting, and rent (2 rooms and kitchen). The figures do not include expenditures for clothing or miscellaneous expenditures, and therefore do not indicate the minimum of existence, but serve purely as a measure of comparison.

In view of the large number of cities and towns included in the statistics, it always took about 3 months to compile the data. In order to make possible quicker publication, the National Statistical Office has initiated a special "rush service" for these cost-of-living statistics, which covers only 47 representative cities. This special

[1] Reichs-Arbeitsblatt. Berlin, July 15, 1921.

service makes it possible to publish cost-of-living statistics for a given month within 15 days after the expiration of that month.

The changes in the cost of living during the period January to June, 1921, are shown in the following table:

CHANGES IN COST OF LIVING FOR A FAMILY OF FIVE PERSONS IN GERMANY, JANUARY TO JUNE, 1921.

[1 mark at par=23.8 cents.]

City.	Population, Oct. 8, 1919.	Cost of living—					Index numbers. (Average cost of living, 1913-14=100.)				
		Jan., 1921.	Mar., 1921.	Apr., 1921.	May, 1921.	June, 1921.	Jan., 1921.	Mar., 1921.	Apr., 1921.	May, 1921.	June, 1921
		Marks.	*Marks.*	*Marks.*	*Marks.*	*Marks.*					
Berlin	1,902,509	960	913	897	875	880	926	881	866	844	849
Hamburg	985,779	1,026	989	964	912	905	923	890	867	820	814
Munich	630,711	925	901	886	913	.....	866	843	829	855	.....
Dresden	529,326	920	876	880	888	897	922	878	882	890	899
Breslau	528,360	881	825	811	792	858	895	838	824	805	872
Essen	439,257	951	893	861	849	833	969	910	877	865	849
Frankfort on the Main	433,002	1,007	950	1,008	941	971	973	918	974	909	938
Nuremberg	352,675	936	897	941	851	892	990	949	996	901	944
Stuttgart	309,197	890	819	891	870	892	858	790	859	839	860
Chemnitz	303,775	1,034	934	906	948	951	1,033	933	905	947	950
Dortmund	295,026	925	848	861	889	874	902	827	840	867	852
Magdeburg	285,856	873	879	852	848	841	987	994	963	959	951
Königsberg, Prussia	260,895	876	852	789	810	813	877	853	790	811	814
Mannheim	229,576	895	823	842	.....	980	908	835	854	.....	994
Kiel	205,330	950	938	903	893	963	985	973	937	926	999
Augsburg	154,555	835	782	787	810	870	922	864	869	895	961
Aix-la-Chapelle	145,748	1,151	976	937	975	975	1,160	983	944	982	982
Brunswick	139,539	894	933	922	876	895	1,115	1,164	1,150	1,093	1,117
Karlsruhe	136,952	920	836	853	904	978	954	867	885	938	1,015
Erfurt	129,646	980	920	929	886	940	1,235	1,159	1,170	1,116	1,184
Lubeck	113,071	961	874	863	908	891	1,109	1,008	996	1,048	1,028
Hagen, Westphalia	92,862	1,072	1,000	1,017	1,000	1,047	925	863	878	863	904
Ludwigshafen on the Rhine	90,721	921	849	934	.....	918	949	875	963	.....	946
Darmstadt	82,367	867	890	876	847	896	998	1,025	1,009	975	1,032
Frankfort on the Oder	65,055	874	863	855	790	823	938	926	918	848	883
Solingen	48,912	1,015	1,051	1,064	973	986	1,116	1,156	1,170	1,070	1,084
Halberstadt	47,144	870	865	873	826	842	1,003	997	1,006	952	971
Schwerin	45,455	868	832	792	833	856	1,045	1,002	953	1,003	1,030
Kattowitz	45,422	976	972	925	.....	.....	1,057	1,052	1,002	.....	.....
Heilbroun	44,012	830	827	823	835	796	879	876	872	884	843
Gottingen	41,246	828	773	748	752	846	968	903	874	879	989
Eisenach	39,223	755	804	796	768	824	862	918	909	877	941
Herford	34,835	1,007	972	916	939	830	1,271	1,226	1,156	1,185	1,047
Bautzen	34,342	992	853	905	892	905	1,195	1,027	1,090	1,074	1,090
Giessen	33,402	930	888	887	875	905	943	900	899	887	917
Oldenburg	32,540	879	848	842	886	842	1,110	1,070	1,063	1,118	1,063
Schweinfurt	27,779	788	773	793	827	929	951	933	957	998	1,121
Eberswalde	26,786	908	824	898	827	885	1,039	943	1,028	947	1,013
Wald, Rhine Province	25,883	1,083	949	862	827	.....	1,302	1,141	1,037	994	.....
Fulda	23,881	878	861	785	790	849	1,156	1,134	1,034	1,040	1,118
Straubing	22,481	755	755	818	837	811	841	841	911	932	903
Reichenbach, Silesia	15,194	835	838	872	835	794	1,062	1,066	1,109	1,062	1,010
Auerbach, Voigtland	13,827	984	915	903	900	951	1,051	978	965	962	1,016
Rastenburg	13,275	875	767	771	801	853	969	849	854	887	945
Selb	12,453	845	959	832	876	876	986	1,118	970	1,022	1,022
Grimma	10,581	857	855	835	842	915	1,009	1,007	983	991	1,077
Blumenthal	10,300	928	899	969	941	921	1,212	1,174	1,265	1,229	1,203
All of Germany	.....	.....	.....	.....	.....	.....	924	901	894	880	896

The cost of living index for all of Germany based on the average cost of living for the prewar years 1913–14, which in January, 1921, had reached its highest level with 924, fell gradually during the months February to May to 880. In June, 1921, however, it again rose by 16 points to 896, according to the preceding table. In the individual communes covered by the statistics the movement of the

cost-of-living index varies greatly. In some of them the downward movement of the index continued during the month, in others there was a considerable rise in the cost of living. Increases in the price of eggs, vegetables, potatoes, fish, milk, sugar, gas, and electricity are chiefly responsible for the rise in June of the general index. Beef, bacon, lard, butter, margarine, and table oil are the articles which decreased in price.

A noteworthy fact made evident by the preceding table is that the cost-of-living index of towns with a population under 50,000 is much higher than that of large cities.

Retail Prices of Clothing in Great Britain, 1914 to 1921.

THE following figures from the British Labor Gazette for July, 1921 (p. 343), show the average per cent of increase in the retail prices of clothing of the kind ordinarily purchased by the working classes, at intervals of three months from March, 1915, to June, 1921, as compared with July, 1914:

PER CENT OF INCREASE IN RETAIL PRICES OF CLOTHING IN GREAT BRITAIN AT QUARTERLY INTERVALS, MARCH, 1915, TO JUNE, 1921, AS COMPARED WITH JULY, 1914.

Year.	Percentage increase as compared with July, 1914, at the beginning of—			
	March.	June.	September.	December.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
1915	12½	25	30	35
1916	45	55	65	80
1917	90	100	120	140
1918	170	210	240	260
1919	260	260	260	270
1920	310	320–330	330	300–310
1921	240	200	.....	.....

For each of the six main groups into which the articles of clothing are classified the per cent of increase June 1, 1921, as compared with July, 1914, was as follows:

PER CENT OF INCREASE IN PRICE OF CLASSIFIED GROUPS OF CLOTHING IN GREAT BRITAIN, JUNE 1, 1921, AS COMPARED WITH JULY, 1914.

Group.	Percentage increase.
(1) Men's suits and overcoats	170
(2) Woolen material for women's outer garments	250
(3) Woolen underclothing and hosiery	240
(4) Cotton material for women's outer garments	290
(5) Cotton underclothing material and hosiery	220
(6) Boots	160

The method of calculating the above changes is by combining the percentage changes in the prices quoted by retailers from month to month and not that of averaging the prices quoted. As an indication of the general ranges of prices on which the percentages are based, the

following table is given, showing the retail prices of specified articles of clothing July, 1914, and June 1, 1921.

RETAIL PRICES OF ARTICLES OF CLOTHING PURCHASED BY WORKING-CLASS FAMILIES IN GREAT BRITAIN JULY, 1914, AND JUNE 1, 1921.

[Quotations for materials are "per yard," for footwear "per pair," and for other articles "each."]

Article.	Retail prices of grades purchased by working-class families.	
	July, 1914.	June 1, 1921.
Men's suits and overcoats:		
Ready-made suits	21s.–30s	60s.–80s.
Ready-made overcoats	21s.–30s	50s.–80s.
Bespoke suits	30s.–42s	70s.–110s.
Bespoke overcoats	30s.–35s	70s.–110s.
Woolen material for women's outer garments:		
Costume cloth	1s. 6d.–3s	4s. 11d.–10s. 11d.
Tweed	1s.–2s	2s. 11d.–6s. 11d.
Serge	1s.–2s	2s. 11d.–6s. 11d.
Frieze	1s. 6d.–3s	4s. 11d.–8s. 11d.
Cashmere	1s. 6d.–2s	3s. 11d.–6s. 11d.
Woolen underclothing and hosiery:		
Men's vests and pants	2s. 6d.–2s. 11d	7s. 11d.–12s. 6d.
Men's merino socks	6½d.–1s	1s. 6d.–2s. 6d.
Women's vests	1s.–1s. 6¾d.	3s. 11d.–5s. 11d.
Women's woolen stockings	9¾d.–1s. ¾d.	1s. 11d.–2s. 11d.
Flannel	8¾d.–1s. ¾d.	1s. 11d.–3s. 6d.
Cotton material for women's outer garments:		
Print	3¾d.–4¾d.	1s.–1s. 9d.
Zephyr	3¾d.–4¾d.	1s. 3d.–1s. 9½d.
Sateen	3¾d.–4¾d.	1s. 3d.–1s. 9½d.
Drill	4¾d.–6¾d.	1s. 3d.–2s.
Galatea	4¾d.–6¾d.	1s. 3d.–2s.
Cotton underclothing and hosiery:		
Men's cotton socks	4½d.–7½d.	1s.–1s. 6d.
Women's cotton stockings	4¾d.–1s. ¾d.	1s.–2s.
Calico, white	2¾d.–4¾d.	8¾d.–1s. 6½d.
Longcloth	3¾d.–4¾d.	10½d.–1s. 6½d.
Shirting	3¾d.–4¾d.	1s. 3d.–1s. 9d.
Flannelette	3¾d.–4¾d.	10½d.–1s. 6½d.
Boots:		
Men's heavy boots	5s. 11d.–8s. 11d	16s. 6d.–24s.
Men's light boots	6s. 11d.–10s. 6d	16s. 6d.–25s.
Women's boots	4s. 11d.–8s. 11d	14s.–22s. 6d.
Boys' boots	3s. 11d.–5s. 11d	8s. 11d.–16s.
Girls' boots	3s. 6d.–5s. 11d	8s. 11d.–15s.

High Cost of Living in Iceland.

THE Danish Statistical Department in a statistical statement in Statistiske Efterretninger No. 14, June, 1921, publishes a table showing retail prices of food and a few other commodities in Reykjavik, Iceland, as compared with prices in Copenhagen. During the war Iceland's Statistical Bureau prepared quarterly reports of retail prices of 60 to 70 articles, an average price being arrived at from retail prices secured from merchants in Reykjavik, and in the table following are given the latest available figures.

The table shows that from 1914 to 1921 the per cent of increase was greater for Reykjavik than for Copenhagen, and as far back as 1914 prices as a whole were higher in Reykjavik. This applied to necessities like bread, flour, potatoes, milk, soap, and coal. Prices were lower in Reykjavik for cheaper grades of meat, butter, rice, oaten grits, and fish. It is also stated that in a few instances comparisons may be a little difficult because of a possible difference in quality, as, for example, under the item butter, where Iceland uses the home-

churned butter and exports the more expensive dairy butter, Denmark uses dairy butter both for home consumption and for export. It is better to compare mutton in Iceland with pork in Denmark, as the amount of these articles consumed in the two countries compares better than pork with pork.

The two most marked examples of difference in price are bread and sugar, for which Denmark still has price regulation. In Reykjavik the increase in price of rye bread in January, 1921, as compared with July, 1914, was 274 per cent, wheat bread 313 per cent, and sifted rye bread 429 per cent; the corresponding increases in Copenhagen were 79, 283, and 158 per cent. The prices of loaf sugar, crushed loaf sugar, and brown sugar increased 568, 488, and 512 per cent, respectively, in Reykjavik, as compared with 72, 86, and 97 per cent in Copenhagen. Most of the other articles increased from 50 to 100 per cent more in Reykjavik than in Copenhagen.

RETAIL PRICES OF FOOD AND OTHER COMMODITIES IN REYKJAVIK, ICELAND, AND COPENHAGEN, DENMARK, JULY, 1914, AND JANUARY, 1921.

[1 öre at par=0.268 cent; 1 kilogram=2.2 pounds; 1 liter=1.06 quarts; 1 hectoliter=2.8 bushels.]

Article.	Unit.	Reykjavik.			Copenhagen.		
		July, 1914.	January, 1921.	Per cent of increase.	July, 1914.	January, 1921.	Per cent of increase.
		Öre.	*Öre.*		*Öre.*	*Öre.*	
Rye bread	4 kilograms	67	249	274	61	[1] 109	79
Wheat bread	Kilogram	46	190	313	40	[1] 153	283
Sifted rye bread	do	28	148	429	24	[1] 62	158
Fine flour	do	31	160	416	26	95	265
Barley flour	do	29	120	314	.....	.....	.....
Rice	do	31	194	526	50	212	324
Sago	do	40	181	353	36	139	286
Semolina	do	42	140	233	[2] 43	101	135
Oaten grits, rolled	do	32	125	291	39	152	290
Potato flour	do	36	183	408	[3] 31	121	290
Peas, whole	do	35	146	317	[3] 34	.....	.....
Peas, shelled	do	33	146	342	40	119	198
Potatoes	do	12	54	350	7	26	271
White cabbage	do	16	72	350	.....	21	.....
Dried apricots	do	186	621	234	[2] 158	455	188
Dried apples	do	141	520	269	110	340	209
Raisins	do	66	411	523	.....	408	.....
Prunes	do	80	421	426	80	353	341
Loaf sugar	do	53	354	568	43	[1] 74	72
Crushed loaf sugar	do	51	300	488	37	[1] 69	86
Brown sugar	do	49	300	512	32	[1] 63	97
Coffee, roasted	do	236	484	105	210	570	171
Tea	do	471	880	87	400	928	132
Butter	do	196	764	290	235	669	185
Margarine, animal	do	107	364	240	140	390	179
Margarine, vegetable	do				125	318	154
Tallow	do	90	376	318	.....	.....	.....
Sweet milk	Liter	22	100	355	19	59	211
Cheese	Kilogram	110	555	405	[4] 66	[5] 288	336
Eggs	Each	8	50	525	7½	53	607
Beef, soup meat	Kilogram	85	328	286	110–140	325	195–132
Veal	do	50	210	320	.....	.....	.....
Mutton, salted	do	67	240	258	.....	.....	.....
Mutton, smoked	do	100	359	259	.....	.....	.....
Pork, salted	do	170	600	253	140	531	279
Pork, smoked	do	213	700	229	200	686	243
Fish, fresh cod	do	14	48	243	[3] 48	117	144
Split cod	do	40	126	215	89	257	189
Common codfish	do	13	63	385	.....	.....	.....
Soda	do	12	58	383	[3] 7	24	243
Brown soap	do	43	241	460	41	196	378
Petroleum	Liter	18	85	372	18	82	356
Coal	Hectoliter	220	1,529	595	170	1,242	631

[1] Maximum price.
[2] December, 1914.
[3] For whole country.
[4] Skimmed milk cheese. For whole country.
[5] Skimmed milk cheese.

Cost of Living in Mexico, 1910, and February to May, 1921.

RECENT numbers of the monthly publication [1] of the Mexican Department of Labor contain data on the cost of living in the Federal District in February, March, April, and May, 1921, as compared with 1910. According to earlier issues of the same publication the index number of the cost of living (average price for 1910 = 100) rose from 169.14 in January, 1918, to 197.79 in December, 1919, 223.66 in March, 1920, and reached the peak, 230.62, in August, 1920. Since that time a gradual decline is noted. In January of this year the index number was 215.38 and in February it was 195.77, the greatest decrease shown in any one month. Since then the decrease has been much less, the figure for March being 195.23, for April, 193.72, and for May, 192.37.

The table which is here reproduced gives the prices for the most important articles of consumption in February, March, April, and May, 1921, and the average prices for the year 1910. It will be noted that coffee, bread, flour, and maize increased in price in May as compared with April, while beans, peppers, beef, lard, sugar, and coal decreased.

AVERAGE PRICES OF PRINCIPAL ARTICLES OF CONSUMPTION IN THE FEDERAL DISTRICT, 1910, AND FEBRUARY TO MAY, 1921.

[1 peso at par = 49.9 cents; 1 kilogram = 2.2 pounds; 1 liter = 1.06 quarts; 1 meter = 1.09 yards.]

Item.	Unit.	1910	1921			
			February.	March.	April.	May.
Food:		*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*
Beans, small brown	Kilogram	0.120	0.255	0.270	0.260	0.245
Beef	do	.420	1.200	1.335	1.350	1.300
Bread, white	do	.320	.335	.410	.450	.475
Coffee, roasted and ground	do	.600	.850	.860	.800	.850
Coffee, green	do	.430	.765	.675	.675	.750
Flour, wheat	do	.170	.330	.370	.400	.440
Lard	do	.600	1.350	1.420	1.300	1.100
Maize	do	.090	.155	.160	.170	.175
Milk	Liter	.150	.325	.305	.270	.270
Peppers, small green	Kilogram	.200	.725	.675	.580	.450
Rice, first grade	do	.150	.420	.385	.420	.415
Salt, coarse	do	.040	.090	.090	.090	.100
Sugar, loaf	do	.170	.450	.470	.480	.435
Coal	do	.040	.075	.095	.085	.075
Wood	do	.020	.045	.045	.045	.040
Cloth, coarse cotton	Meter	.140	.300	.300	.300	.300
Canvas, blue	do	.400	1.250	1.250	1.250	1.100
Percale	do	.120	.350	.350	.350	.300
Shoes	Pair	5.000	9.500	9.500	9.250	9.250
Hats, palm	Each	.440	.650	.750	.750	.750
Blankets	do	2.750	4.500	4.500	4.500	4.500
Rent (one room)	Month	5.000	11.620	11.620	11.620	11.620
Petroleum	Liter	.120	.235	.235	.235	.235
Candles, paraffin	Kilogram	.330	.670	.900	.750	.875
Baths	Each	.250	.300	.300	.300	.300
Soap	Kilogram	.250	.600	.650	.650	.725

The same publication also contains data on the cost of living for Mexican workmen in 1920. In January of that year the cost of living in 11 States and Territories was higher than in the Federal District; in 3 it was equal, and in 17 it was lower. Maize showed the smallest

[1] Gaceta Mensual del Departamento del Trabajo de la Secretaria de Industria, Comercio y Trabajo. Mexico Marzo y Abril de 1921, and Mayo de 1921.

fluctuations in price. The price of meat rose rapidly from an average of 0.57 peso (28 cents, par) per kilogram in January, 1920, to 1.08 pesos (54 cents, par) in June and July, after which it decreased to 0.76 peso (38 cents, par) in December. It is stated that food costs make up 54.1 per cent of the workman's total living costs, clothing 17.1 per cent, and housing and fuel 21.25 per cent.

Cost of Living in Spain in April, 1921.

THE May, 1921, bulletin of the Institute of Social Reforms [1] contains a table giving the current, maximum, and minimum prices of articles of prime necessity in the provincial capitals of Spain in April, 1921. The information was furnished by the heads of the local boards of social reform and is for the class of goods used by workmen. The table following gives the data for 10 of the largest cities:

CURRENT, MAXIMUM, AND MINIMUM PRICES OF ARTICLES OF PRIME NECESSITY IN 10 PROVINCIAL CAPITALS OF SPAIN IN APRIL, 1921.

[1 peseta at par=19.3 cents; 1 kilogram=2.2 pounds; 1 liter=1.06 quarts.]

Article.	Price.	Alicante.	Cordova.	Coruña.	Granada.	Madrid.	Málaga.	Santander.	Seville.	Valencia.	Saragossa.
		Pes.	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*
Beans, kidney.....kilo..	Cur.	1.10	0.50	0.70	0.80	0.90	1.60	1.30	0.80	1.40	
	Max.	1.20	1.15	.55	1.80	1.00		1.30	.90	1.60	
	Min.		1.05	.50		.75		1.30	.80		
Beef.....do....	Cur.	3.60	3.40	3.50	5.50	4.50	5.70	2.40	4.00	5.00	5.00
	Max.	5.60	3.40	4.50		6.50	5.70		5.00	6.00	
	Min.	3.20	3.20	2.00		2.60	3.75		4.00	4.00	
Bread.....do....	Cur.	.70	.75	.70	.70	.66	.80	.80	.90	.75	.70
	Max.	.80	.75	.70			.80		1.00	.80	
	Min.	.65	.75	.70			.75		.90	.75	
Chick-peas.....do....	Cur.	1.80	1.20	1.40	1.00	1.20	.90	2.00	1.00	2.00	1.60
	Max.	2.00	1.20	1.60		2.00	1.50		1.25	2.30	2.00
	Min.	1.60	.80	1.20		1.00	.80		.80	1.50	1.45
Codfish.....do....	Cur.	2.20	2.20	2.00	2.25	1.60	1.80	2.00	3.00	1.85	2.00
	Max.	3.50	2.30	2.40		3.00	2.50	2.50	3.50	2.00	3.00
	Min.	2.00	2.15	1.20			1.60		2.50	1.75	1.75
Coffee.....do....	Cur.	8.00	7.75	6.00	8.00		6.50	6.00	6.00	6.50	8.00
	Max.	9.00	8.00	9.00			7.25		8.00	7.00	
	Min.	7.00	7.50	6.00			6.00		5.00	6.00	
Eggs.....doz..	Cur.	2.25	2.40	1.90	2.50	1.80	2.50	2.00	2.75	2.10	2.40
	Max.		2.75	2.00		3.00	2.75	2.50	3.00	2.25	2.75
	Min.		2.25	1.85			2.00		2.75	2.10	2.20
Fish, fresh.....kilo..	Cur.	2.00	1.75	3.00	2.50	1.90	1.40	.80	2.00	4.00	
	Max.	4.00	1.75	3.60		2.25	1.80		3.00	5.00	
	Min.	1.00	1.75	2.00			1.25		2.00	3.50	
Flour.....100 kilos..	Cur.	70.00	75.00		80.00	72.00	85.00	76.00	100.00	90.00	70.00
	Max.	80.00	80.00				88.00	78.00	120.00	100.00	72.00
	Min.	60.00	75.00				85.00		100.00	90.00	
Milk.....liter..	Cur.	.80	.65	.30	.80	.70	.80	.40	.80	.60	.60
	Max.	1.00	.70	.60		.80	1.00	.50	.80		
	Min.		.60	.25			.80		.80		
Mutton.....kilo..	Cur.	3.20	2.80		3.75	2.80	3.75	3.00	3.00	4.40	4.40
	Max.	4.40	3.00			3.50	4.00		4.00	4.60	4.70
	Min.	3.00	1.60				3.75		3.00	2.80	
Oil.....liter..	Cur.	1.80	1.80	2.60	1.80	1.50	1.70	1.80	1.75	2.25	1.80
	Max.		1.80	3.40		2.40	2.00	2.00	1.90	2.30	2.00
	Min.		1.80	1.90			1.70		1.75	2.10	1.65
Potatoes.....kilo..	Cur.	.35	.25	.15	.40	.20	.25	.15	.25	.40	.20
	Max.	.45	.30	.15		.55	.30		.30	.50	
	Min.	.30	.25	.15		.10	.25		.25	.30	
Rice.....do....	Cur.	.70	.70	.80	.80	.70	.70	1.00	1.00	.60	.80
	Max.	1.00	.80	1.00		1.40	.85		1.20	.70	1.00
	Min.	.50	.65	.70			.75		.75	.50	.75
Sugar.....do....	Cur.	1.60	1.70	1.50	1.70	1.45	1.60	1.50	1.65	1.55	1.50
	Max.		1.85	1.60		2.50	1.85	1.60	1.90	1.55	
	Min.	1.50	1.65	1.40			1.60		1.65	1.50	

[1] Boletin del Instituto de Reformas Sociales, Madrid, Mayo de 1921.

CURRENT, MAXIMUM, AND MINIMUM PRICES OF ARTICLES OF PRIME NECESSITY IN 10 PROVINCIAL CAPITALS OF SPAIN IN APRIL, 1921—Concluded.

Article.	Price.	Alicante.	Cordova.	Coruña.	Granada.	Madrid.	Málaga.	Santander.	Seville.	Valencia.	Saragossa.
		Pes.	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*	*Pes.*
Wine.....liter..	Cur.	.40	.60	.80	.50	.50	.50	.50	.60	.50	.40
	Max.	.50	.60	.80	.....	.70	.80	.....	.70	.55	.50
	Min.	.30	.60	.80	.....	.....	.45	.....	.60	.50	.....
Charcoal.....11½ kilos..	Cur.	3.45	3.00	2.75	5.00	2.75	3.25	3.00	3.00	3.85	3.50
	Max.	.....	3.00	2.75	.....	.....	3.45	3.50	3.50	.....	4.00
	Min.	.....	3.00	2.25	.....	.....	3.25	.....	3.00	.....	.....
House rent.....1 year..	Cur.	420.00	150.00	300.00	.....	.....	90.00	306.00	300.00	.....	300.00
	Max.	.....	250.00	300.00	.....	.....	150.00	.....	360.00	.....	.....
	Min.	.....	150.00	150.00	.....	.....	60.00	.....	240.00	.....	.....
Petroleum.....liter..	Cur.	1.00	1.80	1.30	.....	1.40	1.50	.80	1.50	1.35	1.30
	Max.	.....	1.85	1.30	.....	.....	1.50	.....	1.50	.....	.....
	Min.	.....	1.75	1.30	.....	.....	1.50	.....	1.50	.....	.....
Soap.....kilo..	Cur.	1.80	1.20	1.50	1.50	1.10	1.00	1.40	1.40	1.40	1.40
	Max.	.....	1.30	1.60	.....	2.00	1.20	1.50	1.50	1.50	1.80
	Min.	1.60	1.00	1.40	.....	.....	.90	.....	1.40	1.20	.....

Cost of Living in Zurich, Switzerland.

A RECENT report from the consul general at Zurich, Switzerland, under date of June 27, 1921, contains the following table relative to necessary monthly expenditures of laborers' and other employees' families for the most important items of household expense in May, 1921. The data were published by the statistical office of the city of Zurich in Tagblatt der Stadt Zurich, June 23, 1921.

Laborer's family of father, mother, and three children of 3, 7, and 10 years of age.

	Francs.[1]
Bread and other cereals	41.42
Edible fats and oils	6.83
Eggs	4.55
Fruit and vegetables, including potatoes	38.23
Meat and sausage	33.80
Milk and milk products	59.91
Sweets, coffee, tea, cocoa, and chocolate	19.56
Other articles of food	7.09
Total food	211.39
Fuel and lighting materials	30.36
Total	241.75

Laborer's family of father, mother, and two children of 3 and 7 years of age.

	Francs.
Bread and other cereals	35.04
Edible fats and oils	5.78
Eggs	3.85
Fruit and vegetables, including potatoes	32.35
Meat and sausage	28.60
Milk and milk products	50.69
Sweets, coffee, tea, cocoa, and chocolate	16.55
Other articles of food	6.00
Total food	178.86
Fuel and lighting materials	25.69
Total	204.55

[1] One franc at par=19.3 cents.

Employee's family of father, mother, and three children of 3, 7, and 10 years of age.

	Francs.
Bread and other cereals	43.63
Edible fats and oils	4.83
Eggs	5.29
Fruit and vegetables, including potatoes	44.06
Meat and sausage	41.26
Milk and milk products	61.64
Sweets, coffee, tea, cocoa, and chocolate	20.47
Other articles of food	11.29
Total food	232.47
Fuel and lighting materials	35.59
Total	268.06

Employee's family of father, mother, and two children of 3 and 7 years of age.

	Francs.
Bread and other cereals	36.91
Edible fats and oils	4.08
Eggs	4.48
Fruit and vegetables, including potatoes	37.29
Meat and sausage	34.92
Milk and milk products	52.15
Sweets, coffee, tea, cocoa, and chocolate	17.31
Other articles of food	9.55
Total food	196.69
Fuel and lighting materials	30.12
Total	226.81

In the same issue of the Tagblatt the municipal information bureau for advertising available dwellings published a list of flats offered at once for July 1, as follows:

Cost of flat (with kitchen) per annum.

[One franc at par=19.3 cents.]

Two rooms	624	to	900 francs.
Three rooms	770	to	3,000 francs.
Four rooms	1,500	to	3,000 francs.
Five rooms	2,250	to	8,000 francs.
Six rooms	2,800	to	7,000 francs.
Seven rooms	3,600	to	12,800 francs.

WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in the Slaughtering and Meat-Packing Industry in 1921.[1]

IN 1917 the Bureau of Labor Statistics made a study of wages and hours of labor in the slaughtering and meat-packing industry, the results of which were published in Bulletin 252. The data were taken for varying dates in the first half of 1917 and thus represent the period at the entrance of the United States into the World War.

The present study was made in April, 1921, and was limited to 34 representative establishments, all of which were included in the 1917 report. The data used in the compilation of both reports were obtained from the pay rolls of the establishments and by inquiries made by agents of the bureau who visited the establishments.

Numerous changes took place in wages and hours between the dates of the two investigations, and for the purpose of comparison the 1917 figures are here reproduced in part. The reproduced data for 1917 are for 66 of the 83 establishments taken in 1917. The 1917 data excluded from this article are for all nonproductive or miscellaneous employees except laborers, repairers, and repairers' helpers, for 2 plants in Colorado, for 8 on the Pacific Coast, 2 of which were not included in the totals in the 1917 report, and for 7 other plants that were not included in the totals in the 1917 report; thus bringing together in this article only properly comparable data. No data are presented in this article for Colorado or for any State on the Pacific coast.

The report shows the peak reached in the wage rate in 1920 and the rate following such reductions as occurred in the winter of 1920 and spring of 1921. In two of the 34 establishments no reduction had been made up to May 1. In addition to getting a statement of wage rates and regular working hours, the actual time worked and earnings of individual employees were taken from a pay roll in April, 1921, and averages based on such actual hours and earnings are here given. The sample pay rolls taken covered one week in 33 establishments and two weeks in 1 establishment.

The slaughtering and meat-packing industry is the largest industry engaged in the production of food products, and is also one of the largest and most important industries in the United States. It has become an actual necessity, not only to the people in the large cities and industrial centers, but also to those in small cities and villages. To a very great extent the people of the whole country are dependent upon the large meat-packing establishments for cattle, hog, sheep, and calf products.

[1] This article is an abridgement of Bulletin No. 294 of the United States Bureau of Labor Statistics.

In the year 1917 the employees in the 34 establishments embraced in this investigation constituted approximately 70 per cent of all employees in the 83 establishments covered that year. The 83 establishments, according to figures of the Bureau of Animal Industry, Department of Agriculture, slaughtered approximately 50 per cent of all cattle, hogs, sheep, and calves that were slaughtered in the United States in 1917. In 1917 the 34 establishments slaughtered about 35 per cent of all animals. As many animals are slaughtered in rural districts, towns, and villages by butchers who have no employees, it is safe to assume that the 34 establishments of this report represent more than 35 per cent of the wage earners in the industry.

The establishments covered in this report are located in or near Boston, Buffalo, Chicago, Cincinnati, Cleveland, Fort Worth, Indianapolis, Kansas City, Milwaukee, New York City, Omaha, Ottumwa (Iowa), Philadelphia, St. Joseph, St. Louis, East St. Louis, and South St. Paul. They include every large and important meat-packing center in the United States, and are for representative establishments of Armour & Co., Cuhady Packing Co., Morris & Co., Swift & Co., Wilson & Co., and 10 other companies.

The bureau here expresses its appreciation of the cooperation and courtesy extended by all these companies.

Inspection of animals, carcasses, meats, etc., is made by employees of the Bureau of Animal Industry of the United States Department of Agriculture, in all establishments for which data are shown in this report. This inspection is made to protect the public from diseased, unclean, or unwholesome meat, and meat food products. A full description of inspection appears in Bulletin 252, page 64.

The work in this industry begins with live cattle, hogs, sheep and lambs, calves, and goats and kids, and ends only when every process necessary to convert the animals into the various meat products and by-products have been completed. The work varies so much that it is necessary that hours, wages, and earnings be shown separately for occupations in the following 13 departments: Cattle-killing, hog-killing, sheep and calf-killing, offal, hide, casing, cutting or fresh-beef, cutting or fresh-pork, lard and oleo oil, sausage, cured-meat, canning, and maintenance and repair.

The above departments, except maintenance and repair, and the occupations in them are described and defined in Bulletin 252, pages 1075 to 1114. Employees in the maintenance and repair department are, as a rule, skilled, such as blacksmiths, boiler makers, carpenters, coopers, machinists, pipe fitters, etc., and are necessary to the repair and upkeep of the buildings and equipment of the establishments. In Bulletin No. 252 they are shown under nonproductive or miscellaneous employees as laborers, repairers, and repairers' helpers.

Employees in the box factories, the brush, cooper, tin, and other shops in which the production is entirely new, and not repair work, and employees in butterine, mincemeat, produce, extract, soap, curled hair, wool, or bone departments are not included in the data shown in this report.

The following table shows the number of males and females in each department in 1917 and 1921 in the establishments for which wage data are given in this report. It should be observed that the table includes 66 establishments in 1917 and 34 in 1921.

TABLE 1.—NUMBER OF MALES AND FEMALES, BY DEPARTMENTS, 1917 AND 1921.

Department.	Number of employees in—					
	1917 (66 establishments).			1921 (34 establishments).		
	Males.	Females.	Total.	Males.	Females.	Total.
Cattle-killing	3,292	16	3,308	2,077	21	2,098
Hog-killing	4,098	24	4,122	1,756	23	1,779
Sheep and calf killing	1,063	6	1,069	954	5	959
Offal	3,637	310	3,947	2,034	241	2,275
Hide	1,218	.....	1,218	814	.....	814
Casing	3,081	352	3,433	1,792	349	2,141
Cutting or fresh-beef	6,294	49	6,343	2,955	10	2,965
Cutting or fresh-pork	4,461	1,066	5,527	2,810	655	3,465
Lard and oleo oil	1,727	90	1,817	1,561	107	1,668
Sausage	2,771	1,777	4,548	1,839	1,053	2,892
Cured-meat	6,941	286	7,227	4,516	218	4,734
Canning	3,130	2,536	5,666	406	566	972
Maintenance and repair	11,387	.....	11,387	5,455	.....	5,455
Total	53,100	6,512	59,612	28,969	3,248	32,217

Table 1 shows that females are employed in all except the hide and maintenance and repair departments. Females now do a variety of work that was formerly done by males. One woman is shown in Table 6, cured meat department, as a "trucker." Truckers in this department load and unload hand trucks and shove the trucks into and about the department. The work of truckers is heavy and requires strength and endurance. A full description of the work of females in the industry appears in Bulletin 252, page 63.

In 1917 establishments were operated with full forces of employees, while in 1921, owing to the general depression of the industry, they were operated with much less than the regular or normal forces of employees. Unemployment affected the employees in the canning department in 1921 more than in any other, because of lack of orders for canned meats.

Table 2 shows a percentage distribution of employees according to rates of wages per hour. Segregation is made by sex, department, and year, but not by occupation.

TABLE 2.—PER CENT OF EMPLOYEES AT EACH CLASSIFIED RATE OF WAGES PER HOUR, BY SEX AND DEPARTMENTS, 1917 AND 1921.

Sex and department.	Year.	Number of establishments.	Number of employees.	Average rate of wages per hour.	Per cent of employees whose rates of wages per hour were—													
					Under 15 cents.	15 and under 20 cents.	20 and under 25 cents.	25 and under 30 cents.	30 and under 35 cents.	35 and under 40 cents.	40 and under 45 cents.	45 and under 50 cents.	50 and under 55 cents.	55 and under 60 cents.	60 and under 65 cents.	65 and under 70 cents.	70 and under 80 cents.	80 cents and over.
Males.																		
Cattle-killing	1917	54	3,292	$0.313	(1)	1	31	27	17	9	2	2	2	8	(1)	(1)	(1)	1
	1921	30	2,077	.550	.....	.....	.....	.....	(1)	1	6	45	17	11	3	3	3	11
Hog-killing	1917	57	4,098	.279	(1)	1	31	31	23	9	4	(1)	(1)	.....	.....	.....	.....	.....
	1921	29	1,756	.493	.....	.....	.....	.....	(1)	2	14	38	26	7	10	2	(1)	(1)
Sheep and calf killing	1917	31	1,063	.309	(1)	1	29	27	19	10	8	3	(1)	(1)	.....	.....	(1)	1
	1921	21	954	.566	.....	.....	.....	.....	.....	(1)	4	48	24	6	2	9	1	5
Offal	1917	62	3,637	.274	(1)	2	36	41	12	3	2	1	1	1	1	(1)	(1)	(1)
	1921	33	2,034	.485	.....	.....	.....	(1)	(1)	2	12	66	10	3	2	2	2	2
Hides	1917	55	1,218	.246	.....	1	55	39	4	1	(1)	.....	.....	.....	.....	.....	.....	.....
	1921	30	814	.465	.....	.....	.....	.....	.....	(1)	11	76	8	2	2	1	(1)	.....
Casing	1917	62	3,081	.278	(1)	2	24	42	26	2	1	1	1	(1)	(1)	(1)	(1)	(1)
	1921	32	1,792	.499	.....	.....	.....	.....	(1)	1	6	47	22	8	10	2	1	2
Cutting or fresh-beef	1917	53	6,294	.271	(1)	1	49	33	8	3	1	1	(1)	1	1	1	1	(1)
	1921	31	2,955	.483	.....	.....	.....	.....	(1)	(1)	8	70	8	9	2	1	1	1
Cutting or fresh-pork	1917	61	4,461	.271	(1)	1	40	37	13	4	2	1	1	1	(1)	(1)	(1)	(1)
	1921	31	2,810	.513	.....	.....	.....	(1)	(1)	2	11	48	19	7	6	1	1	4
Lard and oleo oil	1917	61	1,727	.243	1	4	51	35	8	1	(1)	.....	.....	.....	.....	.....	.....	.....
	1921	33	1,561	.462	.....	.....	.....	.....	(1)	1	14	70	11	1	(1)	1	1	(1)
Sausage	1917	58	2,771	.252	1	2	49	33	9	5	1	(1)	(1)	.....	.....	(1)	(1)	.....
	1921	32	1,839	.474	.....	.....	.....	.....	(1)	1	9	74	7	3	2	1	1	1
Cured-meat	1917	62	6,941	.252	(1)	1	47	42	9	1	(1)	(1)	(1)	.....	.....	.....	.....	.....
	1921	34	4,516	.463	.....	.....	.....	.....	(1)	1	14	71	9	1	1	(1)	(1)	(1)
Canning	1917	12	3,130	.236	.....	1	81	15	2	1	(1)	.....	.....	.....	.....	.....	.....	.....
	1921	17	406	.465	.....	.....	.....	.....	(1)	1	14	74	7	2	1	(1)	1	(1)
Maintenance and repair	1917	66	11,387	.288	(1)	1	35	25	21	12	4	1	(1)	(1)	(1)	(1)	1	(1)
	1921	34	5,455	.565	.....	.....	.....	.....	(1)	1	5	31	11	16	17	11	5	4
Total, all departments	1917	66	53,100	.272	(1)	1	42	32	14	6	2	1	(1)	1	(1)	(1)	(1)	(1)
	1921	34	28,969	.505	.....	.....	.....	(1)	(1)	1	10	55	13	7	6	3	2	3
Females.																		
Cattle-killing	1917	3	16	.157	13	88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	5	21	.340	.....	.....	.....	24	52	10	5	10	.....	.....	.....	.....	.....	.....
Hog-killing	1917	3	24	.150	79	4	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	8	23	.336	.....	.....	.....	30	35	26	4	4	.....	.....	.....	.....	.....	.....
Sheep and calf killing	1917	2	6	.158	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	2	5	.368	.....	.....	.....	.....	.....	100	.....	.....	.....	.....	.....	.....	.....	.....

Offal	1917	17	310	.175	25	56	15	2	.....	.....	.....	(1)	1	1	.....	.....	.....	.....
	1921	22	241	.365	.....	.....	.....	14	35	32	6	10	1	(1)	(1)	(1)	(1)	(1)
Casing	1917	22	352	.172	8	70	20	1	1	(1)	.....	(1)	.....	.....	.....	.....	.....	.....
	1921	20	349	.366	.....	.....	.....	6	37	44	2	9	1	(1)	.....	.....	1	.....
Cutting or fresh-beef	1917	4	49	.162	4	96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	2	10	.308	.....	.....	.....	50	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cutting or fresh-pork	1917	38	1,066	.217	14	33	26	15	6	4	1	(1)	(1)	(1)	.....	(1)	(1)	.....
	1921	23	655	.402	(1)	3	2	10	21	22	13	8	8	5	3	1	2	1
Lard and oleo oil	1917	19	90	.161	9	79	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	18	107	.312	.....	.....	.....	35	55	8	1	1	.....	.....	.....	.....	.....	.....
Sausage	1917	48	1,777	.172	21	60	14	5	1	(1)	(1)	.....	.....	.....	.....	.....	.....	.....
	1921	30	1,053	.361	.....	.....	.....	10	52	13	15	5	3	1	(1)	1	(1)	.....
Cured-meat	1917	43	286	.171	16	67	13	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1921	25	218	.320	.....	.....	.....	22	64	11	.....	2	.....	(1)	.....	.....	.....	.....
Canning	1917	12	2,536	.171	11	76	7	4	2	(1)	.....	.....	.....	.....	.....	.....	.....	.....
	1921	18	566	.345	.....	.....	.....	15	55	17	6	3	1	1	1	(1)	(1)	.....
Total, all departments	1917	51	6,512	.179	15	63	13	6	2	1	(1)	(1)	(1)	(1)	.....	(1)	(1)	.....
	1921	34	3,248	.362	(1)	1	3	13	44	20	9	6	3	2	1	(1)	1	(1)
Grand total	1917	66	59,612	.262	2	8	39	29	13	5	2	1	(1)	1	(1)	(1)	(1)	(1)
	1921	34	32,217	.491	(1)	(1)	(1)	1	5	3	10	50	12	7	6	3	2	2

[1] Less than one-half of 1 per cent.

In Table 3 is shown the number of starts that were made in one week. Starts as shown here means the number of days on which an employee worked. If an employee reports for duty and works any part of the day he is counted as having made a start.

TABLE 3.—NUMBER OF EMPLOYEES CLASSIFIED BY STARTS (DAYS ON WHICH EMPLOYED) MADE IN ONE WEEK IN APRIL, 1921, BY SEX AND DEPARTMENT.

[This table includes data for 33 establishments in which employees are paid weekly.]

Sex and department.	Number of establishments.	Number of employees.	Average number of starts in one week.	Number of employees whose starts (days) made in one week were—						
				1	2	3	4	5	6	7
Males.										
Cattle-killing	29	2,050	5.4	27	46	55	198	431	1,293	....
Hog-killing	28	1,650	5.6	20	34	69	28	165	1,334	....
Sheep and calf killing	19	952	5.6	5	24	16	33	192	682	....
Offal	32	1,978	5.6	17	34	41	93	274	1,519	....
Hide	32	808	5.4	11	37	19	40	144	557	....
Casing	31	1,754	5.6	14	31	29	88	253	1,339	....
Cutting or fresh-beef	30	2,867	5.7	37	29	40	67	175	2,516	3
Cutting or fresh-pork	30	2,708	5.7	39	61	61	49	226	2,272	....
Lard and oleo oil	32	1,522	5.7	14	17	22	30	137	1,301	1
Sausage	31	1,803	5.8	20	30	23	34	91	1,597	8
Cured-meat	32	4,294	5.7	68	74	71	101	262	3,704	14
Canning	17	406	5.9	2	3	3	2	25	371	....
Maintenance and repair	33	5,321	5.8	50	37	69	100	495	4,523	47
Total	33	28,113	5.6	324	457	518	863	2,870	23,008	73
Females.										
Cattle-killing	5	21	5.4	1	.....	.....	1	6	13	....
Hog-killing	7	18	5.9	.....	.....	.....	.....	1	17	....
Sheep and calf killing	2	5	6.0	.....	.....	.....	.....	.....	5	....
Offal	22	241	5.5	2	7	9	6	35	182	....
Casing	19	344	5.7	2	3	10	12	40	277	....
Cutting or fresh-beef	2	5	6.0	.....	.....	.....	.....	.....	5	....
Cutting or fresh-pork	22	644	5.6	10	9	14	31	55	525	....
Lard and oleo oil	18	107	5.7	.....	.....	2	5	21	79	....
Sausage	30	1,037	5.7	5	15	15	26	107	869	....
Cured-meat	25	205	5.6	5	4	4	3	23	166	....
Canning	17	566	5.6	.....	10	11	22	105	418	....
Total	33	3,193	5.6	25	48	65	106	393	2,556	....
Grand total	33	31,306	5.7	349	505	583	969	3,263	25,564	73

Table 4 shows for each establishment for 1921 the basic or regular hours of operation per day and per week, the guaranteed hours of pay per week, the proportionate increase in wages per hour for overtime, the increase for work on Sundays or holidays, and the date and amount of the reduction of wages.

Basic or regular hours.—Each establishment has stated or fixed hours of operation; that is, a time for employees to begin work in the morning and stop work in the afternoon, with a fixed period of time off duty at noon for lunch or dinner. The time from beginning in the morning to stopping in the afternoon, exclusive of the time off at noon, is the basic or regular hours.

Guaranteed hours of pay per week.—All establishments except seven promise or assure certain, or all, of their employees that payment will be made for a specified or stated number of hours per week. This is called guaranteed hours of pay, and will be paid for at base or regular

rate whenever the hours of operation in any one week are less than the guaranteed hours. In order to be entitled to pay for the guaranty, it is necessary for employees to be on duty each day of the week so much of the basic or regular hours as the establishment may be in operation.

Overtime.—Any time worked in excess of basic or regular hours on week days is overtime, and is paid for at one and one-half times base or regular rate by all the establishments except seven. To illustrate, an employee whose base or regular rate is 50 cents per hour is paid 75 cents per hour for overtime.

Work on Sundays or holidays.—Work on Sundays is limited to a very small percentage of the employees of an establishment, and usually only to a few in the maintenance and repair department. Work on holidays is not frequent. This work is paid for at double the base or regular rate by all establishments except seven.

Date of reduction of wages.—The peak of wages was reached in 1920. A reduction was made by 1 establishment in the latter part of 1920, by 25 in March, and by 5 in April, 1921. Up to May 1, 1921, no reduction had been made by 2 establishments. One establishment, instead of reducing rates, increased basic or regular hours and reduced pay for overtime and for work on Sundays or holidays.

Amount of reduction.—All except seven establishments reduced hourly rates 8 cents and piece rates 12½ per cent, but made no reduction in weekly rates. Not to exceed 10 per cent of all the employees are paid piece rates, and not to exceed 5 per cent are paid weekly rates.

TABLE 4.—BASIC OR REGULAR HOURS, GUARANTEED HOURS OF PAY, PAY FOR OVERTIME AND FOR WORK ON SUNDAYS AND HOLIDAYS, AND DATE AND AMOUNT OF REDUCTION OF WAGES, BY DISTRICTS AND ESTABLISHMENTS, 1921.

[District 1: Chicago. District 2: Kansas City, Omaha, St. Joseph, St. Louis, and East St. Louis. District 3: Milwaukee, Ottumwa, Iowa, and South St. Paul. District 4: Fort Worth and Oklahoma City. District 5: Buffalo, Cincinnati, Cleveland, and Indianapolis. District 6: Boston, New York City, and Philadelphia.]

District and establishment.	Basic or regular hours.				Guaranteed hours of pay per week.[1]	Wages per hour for—		Date of reduction of wages.	Reduction of wages of employees who are paid—		
	Monday.	Tuesday to Friday.	Saturday.	Per week.		Overtime.	Sundays and holidays.		Hourly rates.	Piece rates.[2]	Weekly rates.[3]
District 1.						*Regular rate multiplied by—*				*Per ct.*	*Per ct.*
Establishment No. 1	8	8	8	48	40	1½	2	Mar. 14, 1921	8¢	12½	None.
2	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
3	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
4	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
5	8	8	5	45	40	1½	2	.....do.....	8¢	12½	None.
6	8	8	8	48	[4] 40	1½	2	.....do.....	8¢	12½	None.
7	[5] 8	8	8	[6] 48	40	1½	2	.....do.....	8¢	12½	None.

[1] This column applies to all employees except those who are paid weekly rates and luggers in cutting or fresh-beef department. Those paid weekly rates, except in establishments 1 and 2, district 6, receive full weekly rates even though they work more or less than basic or regular hours per week. Employees of establishments 1 and 2, district 6, receive full weekly rates for basic or regular hours per week or less, and rate and one-half for any time over 8 hours per day, or 48 per week. Luggers in establishments in which there is a guaranty are entitled to 44 or 40 hours of pay per week. Those entitled to 44 hours' pay represent more than 50 per cent of employees in the occupation.

[2] Paid to not to exceed 10 per cent of the employees. The per cent varies in different establishments from 1 or less to 10 to 15.

[3] Paid to not to exceed 5 per cent of the employees. The per cent varies in different establishments from 1 or less to 50 in establishment 1 and 80 in establishment 2, district 6.

[4] To employees in cattle-killing, hog-killing, offal, and cutting or fresh-pork departments. No guaranty to employees in other departments.

[5] In all departments except cattle-killing and casing. Cattle-killing, 5; casing, 6.

[6] In all departments except cattle-killing and casing. Cattle-killing, 45; casing, 46.

TABLE 4.—BASIC OR REGULAR HOURS, GUARANTEED HOURS OF PAY, PAY FOR OVERTIME AND FOR WORK ON SUNDAYS AND HOLIDAYS, AND DATE AND AMOUNT OF REDUCTION OF WAGES, BY DISTRICTS AND ESTABLISHMENTS, 1921—Concluded.

District and establishment.	Basic or regular hours.				Guaranteed hours of pay per week.[a]	Wages per hour for—		Date of reduction of wages.	Reduction of wages of employees who are paid—		
	Monday.	Tuesday to Friday.	Saturday.	Per week.		Overtime.	Sundays and holidays.		Hourly rates.	Piece rates.	Weekly rates.
District 2.						*Regular rate multiplied by—*				*Per ct.*	*Per ct.*
Establishment No. 1	8	8	8	48	40	1½	2	Mar. 14, 1921	8¢	12½	None.
2	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
3	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
4	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
5	[7] 8	8	8	[8] 48	40	1½	2	.....do.....	8¢	12½	None.
6	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
7	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
8	8	8	8	48	[9] 40	1½	2	Apr. 11, 1921	8¢	12½	None.
9	8	8	8	48	40	1½	2	Apr. 9, 1921	8c	12½	None.
10	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
District 3.											
Establishment No. 1	8	8	8	48	40	1½	2	Mar. 14, 1921	8¢	12½	None.
2	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
3	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
4	8	8	8	48	None	1½	2	.....do.....	8¢	12½	None.
District 4.											
Establishment No. 1	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
2	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
3	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
4	8	8	8	48	40	1½	2	.....do.....	8¢	12½	None.
District 5.											
Establishment No. 1	[10] 8	[10] 8	[10] 4	[11] 44	None	1	1	Nov. 20, 1920	[12] [13] 10%	[13] 10%	[13] 10%
2	8	8	8	48	None	1	1	Mar. 17, 1921	[14]	[14]	[14]
3	[15] 9½	[15] 9½	5	[16] 52½	None	[17] 1	[18] 1	Mar. 1, 1921	[19]	[19]	[19]
4	10	10	10	60	None	1	1	Apr. 4, 1921	10%	10%	10%
District 6.											
Establishment No. 1	8	8	8	48	[20] 40	[21] 1½	[21] 1½	No reduction	None	None	None.
2	[22] 8	[22] 8	[22] 8	[23] 48	None	[21] 1½	[21] 1½	.....do.....	None	None	None.
3	8	8	8	48	[24] 40	[25]	2	Mar. 14, 1921	[26]	[26]	[26]
4	8	8	8	48	[24] 40	[25]	2	.....do.....	8¢	12½	None.
5	[27] 10	[28] 10½	[29] 8	[30] 60	None	1	1	Apr. 1, 1921	10%	10%	10%

[a] See note 1, p. 81

[7] In all departments except cattle-killing, offal, sheep-killing, and casing. Cattle-killing and offal, none; sheep-killing and casing, 5.

[8] In all departments except cattle-killing, offal, sheep-killing, and casing. Cattle-killing and offal, 40; sheep-killing and casing, 45.

[9] To all employees who are paid hourly rates. No guaranty to those who are paid piece rates.

[10] In cattle-killing, offal, hide, and cutting or fresh beef departments; 10 in hog-killing and cutting combined, casing, lard and oleo oil, sausage, cured meat, and maintenance and repair.

[11] In cattle-killing, offal, hide, and cutting or fresh beef departments; 60 in hog-killing and cutting combined, casing, lard and oleo oil, sausage, cured-meat, and maintenance and repair.

[12] In casing, lard and oleo oil, hog-killing and cutting combined, cured-meat, and maintenance and repair departments. December 13 in cattle-killing, offal, hide, and cutting or fresh-beef departments.

[13] In addition to this reduction individual rates have been reduced from time to time, the reduction being based on the value of the work of the individual to the establishment.

[14] The reductions in this establishment were individual and were from 1 to 12½ cents per hour, based on the value of the work of the individual to the establishment.

[15] Increased from 8, Mar. 1, 1921.

[16] Increased from 45, Mar. 1, 1921.

[17] Reduced from one and one half times base or regular rate, Mar. 1, 1921.

[18] Reduced from double base or regular rate, Mar. 1, 1921.

[19] No reduction except in pay for overtime; that is, for work in excess of basic or regular hours per day on week days, or for work on Sundays or holidays. See notes 15, 16, 17, and 18.

[20] To employees in hide and lard and oleo oil departments, and to a very small per cent of the employees in the cured-meat department. No guaranty to other employees.

[21] To all employees, including those who are paid weekly rates. Employees in other establishments who are paid weekly rates are not paid for time in excess of basic or regular hours per day or week. See note 1.

[22] In all departments except sheep-killing. Sheep-killing, 9.

[23] In all departments except sheep-killing. Sheep-killing, 54.

(Footnotes continued on p. 83).

Table 5 shows the average rate of wages per hour for males and females in each department for three periods: (1) First half of 1917, or the period before the entrance into the World War by the United States. (2) Fall of 1920, or period which represents the peak in the wage rate in the industry. (3) April, 1921, or the period after the wage rate had been reduced in 32 of the 34 establishments.

TABLE 5.—AVERAGE RATE OF WAGES PER HOUR, BY SEX AND DEPARTMENT, 1917, 1920, AND 1921.

Sex and department.	Average rate of wages per hour.			Sex and department.	Average rate of wages per hour.		
	First half of 1917.	Fall of 1920.	April, 1921.		First half of 1917.	Fall of 1920.	April, 1921.
Males.				*Females.*			
Cattle-killing	$0.313	$0.622	$0.550	Cattle-killing	$0.157	$0.401	$0.340
Hog-killing	.279	.568	.493	Hog-killing	.150	.416	.336
Sheep and calf killing	.309	.637	.566	Sheep and calf killing	.158	.448	.368
Offal	.274	.560	.485	Offal	.175	.435	.365
Hide	.246	.535	.465	Casing	.172	.441	.366
Casing	.278	.573	.499	Cutting or fresh-beef	.162	.364	.308
Cutting or fresh-beef	.271	.556	.483	Cutting or fresh-pork	.217	.459	.402
Cutting or fresh-pork	.271	.590	.513	Lard and oleo oil	.161	.381	.312
Lard and oleo oil	.243	.530	.462	Sausage	.172	.431	.361
Sausage	.252	.549	.474	Cured-meat	.171	.386	.320
Cured-meat	.252	.540	.463	Canning	.171	.416	.345
Canning	.236	.536	.465				
Maintenance and repair	.288	.642	.565	Total	.179	.430	.362
Total	.272	.580	.505	Grand total	.262	.565	.491

Table 6 shows for 1917, for each occupation, the number of establishments and employees, average rate of wages and earnings per hour, and average hours actually worked and earnings actually received in one pay-roll period; also for 1921 the number of establishments and employees, average rate of wages per hour before and after the reduction, average earnings per hour after the reduction, average number of days on which employees worked in one week, average basic or regular hours of operation per week, average hours actually worked and earnings actually received in one week, and average full-time earnings per week before and after the reduction of wages, based on average rate of wages per hour, and average basic or regular hours of operation per week.

[24] For all weeks except those in which holidays occur; 33½ for weeks with holidays, a reduction from 40, Mar. 14, 1921.

[25] One and one-half times base or regular rate after 10 hours in any one day, or 54 per week. This rate was paid after 8 hours in any one day, or 48 per week, prior to Mar. 14, 1921.

[26] In addition to this reduction, pay for overtime was changed from one and one-half times basic rate after 8 hours per day, or 48 per week, to one and one-half times basic rate after 10 hours per day, or 54 per week. See note 25.

[27] In hog-killing and cutting combined, offal, casing, lard and oleo oil, and cured-meat departments; 10½ for males and 8½ for females in sausage department. In maintenance and repair department 8 for machinists, electrical workers, and pipe fitters, 9 for carpenters, and 8½ for coopers.

[28] In hog-killing and cutting combined, offal, casing, lard and oleo oil, cured-meat departments, and for males in sausage department; 8½ for females in sausage department. In maintenance and repair department 8 for machinists, electrical workers, and pipe fitters, 9 for carpenters, and 8½ for coopers Tuesday, Wednesday, and Thursday, and 9½ Friday.

[29] In hog-killing and cutting combined, offal, casing, lard and oleo oil, and cured-meat departments, 7½ for males and 4½ for females in sausage department. In maintenance and repair department 8 for machinists and electrical workers, 5 for carpenters, 4½ for coopers, and 4 for pipe fitters.

[30] In hog-killing and cutting combined, offal, casing, lard and oleo oil, and cured-meat departments, 60 for males and 47 for females in sausage department. In maintenance and repair department 56 for machinists and electrical workers, their hours being 8 per day, 7 days per week, 50 for carpenters, 48 for coopers, and 44 for pipe fitters.

The 1917 average rate of wages per hour for males, excluding the mechanical force, ranged from 70.5 cents for sheep and calf butchers in the sheep-killing department to 13.5 cents for labelers in the lard and oleo oil department. The average for females ranged from 23.2 cents for painters, cans (by hand) in the canning department to 14 cents for tripe scalders and cookers in the offal department and for packers in the canning department.

The 1921 average rate per hour for males before the reduction ranged from $1.412 for sheep and calf butchers in the sheep-killing department to 41 cents for cap setters in the canning department. The average for females ranged from 53 cents for truckers in the casing department to 25 cents for truckers in the cured meat department.

The 1921 average for males after the reduction ranged from $1.396 for sheep and calf butchers in the sheep-killing department to 33 cents for cap setters in the canning department. The average for females ranged from 45 cents for truckers in the casing department to 25 cents for truckers in the cured meat department.

TABLE 6.—HOURS, WAGES, AND EARNINGS OF EMPLOYEES IN THE SLAUGHTERING AND MEAT-PACKING INDUSTRY IN THE UNITED STATES, 1917 AND 1921, BY DEPARTMENT, SEX, AND OCCUPATION.

Department, sex, and occupation.	1917						1921									
	Number of establishments.	Number of employees.	Average rate of wages per hour.	Average earnings per hour.	Average hours actually worked in one week.	Average earnings received in one week.	Number of establishments.	Number of employees.	Average rate of wages per hour.		Average earnings per hour after reduction.	Average number of starts (days) made in one week.	Average basic or regular hours of operation per week.	Average hours actually worked in one week.	Average earnings received in one week.	Average basic or regular full-time earnings per week.	
									Before reduction.	After reduction.						Before reduction.	After reduction.
Cattle-killing department—Males.																	
Drivers and penners	24	67	$0.252	$0.253	56.7	$14.33	16	30	$0.515	$0.464	$0.484	5.8	48.3	46.0	$22.24	$24.62	$22.41
Knockers	40	58	.292	.294	50.1	14.70	27	33	.593	.517	[1].539	[1] 5.7	48.0	[1] 43.8	[1] 23.59	28.35	24.82
Shacklers or slingers	30	48	.262	.276	47.8	13.20	24	34	.552	.482	.502	5.4	47.9	40.6	20.41	26.22	23.09
Head holders	2	2	.334	.576	34.5	19.89	2	2	.645	.645	1.031	4.0	48.0	30.0	30.93	30.96	30.96
Stickers	22	27	.360	.361	49.9	18.04	15	20	.666	.584	.605	5.3	48.6	41.1	24.83	32.17	28.38
Headers	46	90	.369	.384	51.3	19.71	23	53	.680	.610	[1].645	[1] 5.5	47.6	[1] 40.9	[1] 26.36	32.16	29.04
Droppers and pritchers-up	35	62	.254	.266	49.3	13.12	27	47	.559	.489	[1].528	[1] 5.3	48.2	[1] 39.6	[1] 20.93	26.78	23.57
Foot skinners	29	80	.277	.281	42.5	13.89	23	48	.562	.485	[1].484	[1] 5.5	47.8	[1] 40.5	[1] 19.61	26.70	23.18
Leg breakers	45	141	.306	.318	50.2	15.95	30	89	.600	.530	[1].574	[1] 5.2	47.8	[1] 38.9	[1] 22.33	28.56	25.33
Rippers-open	3	4	.315	.343	44.9	15.41	3	4	.624	.533	.530	6.0	47.0	41.8	22.15	29.33	25.05
Gullet raisers	5	7	.249	.246	51.1	12.57	14	18	.547	.469	.474	5.4	48.2	41.6	19.71	26.37	22.61
Caul pullers	33	50	.308	.318	50.1	15.96	22	29	.568	.515	.545	5.3	47.9	38.7	21.08	27.04	24.67
Floormen or siders	52	200	.572	.563	49.1	27.63	30	122	.932	.859	[1].848	[1] 5.6	48.0	[1] 41.8	[1] 35.45	44.64	41.23
Breast or brisket breakers and sawyers	28	43	.291	.298	50.9	15.20	20	32	.576	.504	[1].526	[1] 5.5	47.6	[1] 41.8	[1] 22.00	27.30	23.99
Crotch breakers	15	20	.266	.268	52.1	13.94	17	22	.568	.495	.532	5.6	47.8	43.2	22.97	27.15	23.66
Hoisters	30	89	.254	.264	48.9	12.92	27	91	.543	.470	[1].498	[1] 5.4	47.9	[1] 40.6	[1] 20.23	25.96	22.51
Tail rippers and pullers	28	45	.271	.284	54.8	15.57	22	31	.566	.495	.523	5.2	48.1	40.0	20.91	27.11	23.81
Bung droppers	7	10	.258	.257	48.6	12.51	2	2	.618	.513	.503	5.5	46.0	47.5	23.88	28.43	23.60
Rumpers	40	65	.449	.468	50.4	23.57	30	51	.791	.712	[1].743	[1] 5.6	47.8	[1] 43.8	[1] 32.52	37.73	34.03
Fell cutters	28	78	.335	.340	50.9	17.30	21	54	.625	.553	.597	5.4	47.6	39.1	23.33	29.69	26.32
Fell pullers and beaters	22	68	.261	.267	51.5	13.74	21	44	.550	.478	.506	5.2	47.8	38.8	19.65	26.13	22.85
Backers	43	71	.517	.511	50.3	25.71	28	54	.965	.895	[1].839	[1] 5.5	48.1	[1] 41.3	[1] 34.64	46.22	43.05
Gutters	46	87	.321	.326	50.5	16.45	29	55	.615	.543	[1].581	[1] 5.4	47.9	[1] 40.0	[1] 23.28	29.34	26.01
Shank skinners	10	21	.311	.307	55.5	17.03	5	7	.651	.571	.578	5.7	46.9	44.6	25.78	30.53	26.78
Hide droppers	42	98	.401	.397	50.8	20.17	30	72	.759	.687	[1].666	[1] 5.4	47.9	[1] 41.1	[1] 27.36	36.28	32.91
Tail sawyers	37	93	.322	.325	51.4	16.68	29	62	.617	.547	[1].579	[1] 5.5	48.0	[1] 42.0	[1] 24.16	29.62	26.26
Splitters	47	118	.600	.591	50.6	29.89	29	82	.930	.855	[1].855	[1] 5.7	47.8	[1] 42.9	[1] 36.63	44.36	40.87
Chuck splitters	33	52	.365	.361	51.9	18.74	20	27	.677	.597	.602	5.7	47.9	42.6	25.68	32.23	28.60
Scribers	29	38	.266	.271	56.4	15.26	22	27	.557	.483	.513	5.6	47.6	42.8	21.92	26.51	22.99

[1] Not including data for 1 establishment in which employees are paid biweekly.

TABLE 6.—HOURS, WAGES, AND EARNINGS OF EMPLOYEES IN THE SLAUGHTERING AND MEAT-PACKING INDUSTRY IN THE UNITED STATES, 1917 AND 1921, BY DEPARTMENT, SEX, AND OCCUPATION—Continued.

Department, sex, and occupation.	1917						1921									
	Number of establishments.	Number of employees.	Average rate of wages per hour.	Average earnings per hour.	Average hours actually worked in one week.	Average earnings received in one week.	Number of establishments.	Number of employees.	Average rate of wages per hour.		Average earnings per hour after reduction.	Average number of starts (days) made in one week.	Average basic or regular hours of operation per week.	Average hours actually worked in one week.	Average earnings received in one week.	Average basic or regular full-time earnings per week.	
									Before reduction.	After reduction.						Before reduction.	After reduction.
Cattle-killing department—Males—Concld.																	
Trimmers (bruises, rounds, skirts, and tails)	28	104	$0.275	$0.273	54.7	$14.92	24	100	$0.551	$0.473	$0.490	5.5	47.7	42.6	$20.87	$26.23	$22.56
Utility men	33	58	.341	.345	56.3	19.42	19	37	.685	.609	.608	5.5	47.8	43.8	26.65	32.74	29.11
Washers and wipers	44	356	.233	.236	51.4	12.14	29	216	.525	.451	[1].473	[1]5.3	47.8	[1]40.1	[1]18.96	24.99	21.56
Butchers, general	11	30	.377	.390	47.1	18.34											
Tonguers	43	85	.293	.288	50.9	14.65	14	17	.644	.562	[1].558	[1]5.2	48.3	[1]39.7	[1]22.18	30.78	27.14
Laborers	47	724	.232	.238	47.8	11.39	27	409	.519	.452	[1].471	[1]5.1	47.8	[1]39.5	[1]18.62	24.76	21.61
Truckers	32	103	.228	.254	43.0	10.90	20	56	.524	.456	.499	4.8	48.1	36.3	18.09	25.10	21.93
Total males	54	3,292	.313	.318	50.1	15.95	30	2,077	.622	.550	.570	5.4	47.9	40.7	23.19	29.67	26.35
Cattle-killing department—Females.																	
Carcass wipers, bruise and tail trimmers and neck-rag inserters	3	14	.158	.156	50.1	7.82	4	13	.395	.340	.339	5.5	50.7	42.4	14.36	20.03	17.24
Laborers	1	2	.150	.150	60.0	9.00	3	8	.411	.341	.348	5.3	48.6	41.3	14.35	19.56	16.57
Total females	3	16	.157	.155	51.3	7.97	5	21	.401	.340	.342	5.4	49.9	41.9	14.35	19.69	16.97
Hog-killing department—Males.																	
Laborers [2]	55	1,356	.235	.237	46.9	11.14	29	523	.514	.440	[1].451	[1]5.4	48.8	[1]42.1	[1]18.99	24.98	21.47
Shackelers	56	134	.305	.298	49.5	14.74	23	59	.599	.523	.542	5.4	48.9	43.2	23.40	29.23	25.57
Stickers	56	70	.359	.357	51.9	18.54	27	33	.683	.610	[1].611	[1]5.8	49.6	[1]49.2	[1]30.07	33.74	30.26
Scalders [3]	56	298	.294	.295	52.2	15.38	28	139	.573	.498	[1].516	[1]5.7	48.8	[1]44.2	[1]22.79	27.85	24.30
Hookers-on [4]	51	224	.284	.282	51.4	14.50	24	69	.580	.501	[1].509	[1]5.8	48.3	[1]46.4	[1]23.60	28.01	24.20
Shavers and scrapers	57	846	.290	.290	48.7	14.10	27	303	.565	.491	[1].502	[1]5.6	48.9	[1]43.8	[1]21.99	27.35	24.01
Headers	48	85	.347	.343	50.9	17.43	24	47	.658	.580	[1].588	[1]5.8	48.4	[1]43.8	[1]25.78	31.72	28.07
Gutters [5]	57	206	.338	.337	51.1	17.22	28	100	.640	.563	[1].584	[1]5.8	48.7	[1]45.9	[1]26.78	31.04	27.42
Ham facers	43	56	.327	.328	52.5	17.19	23	34	.600	.525	[1].541	[1]5.7	48.8	[1]43.8	[1]23.69	29.16	25.62
Splitters	56	143	.369	.364	52.0	18.92	27	68	.690	.614	[1].621	[1]5.7	48.8	[1]44.4	[1]27.58	33.60	29.96
Leaf lard pullers	50	80	.304	.301	52.4	15.78	25	44	.588	.511	[1].526	[1]5.5	49.1	44.1	[1]23.21	28.87	25.09

[572]

Leaf lard scrapers	34	63	.248	.251	45.2	11.34	10	21	.509	.433	[1].442	[1]5.8	48.6	[1]44.5	[1]19.66	24.74	21.04
Bruise trimmers, head removers, and kidney pullers	49	139	.277	.277	50.7	14.06	26	107	.569	.492	[1].501	[1]5.7	48.3	[1]43.2	[1]21.63	27.43	23.76
Utility men	49	197	.329	.331	54.1	17.88	26	115	.631	.556	[1].566	[1]5.9	48.5	[1]47.8	[1]27.04	30.54	26.97
Truckers	32	201	.239	.241	45.8	11.03	18	93	.502	.439	[1].446	[1]5.6	49.1	[1]42.8	[1]19.08	23.95	21.55
Total males	57	4,098	.279	.281	49.1	13.79	29	1,756	.568	.493	.507	5.6	48.8	43.8	22.23	27.55	24.06
Hog-killing department—Females.																	
Kidney pullers, shavers, singers, neck brushers and spreaders	3	24	.150	.150	39.0	5.83	8	23	.416	.336	[1].351	[1]5.9	48.0	[1]45.5	[1]15.98	19.97	16.13
Sheep-killing department—Males.																	
Laborers [6]	26	280	.231	.237	44.6	10.57	18	201	.529	.457	.471	5.5	48.2	40.2	18.94	25.44	22.03
Shackelers	19	29	.249	.252	44.6	11.23	13	30	.550	.472	.480	5.4	47.8	39.2	18.80	26.29	22.56
Stickers	15	18	.285	.285	45.9	12.10	13	16	.584	.504	.505	5.5	48.0	39.7	20.03	28.03	24.19
Joint breakers	12	16	.273	.271	52.1	14.13	9	12	.565	.485	.488	5.4	48.0	37.8	18.43	27.12	23.28
Scalpers	15	22	.269	.270	48.5	13.11	8	11	.582	.502	.552	5.5	48.0	40.0	22.07	27.94	24.10
Miscellaneous workers [7]	16	70	.253	.256	48.7	12.48	16	101	.553	.473	.480	5.5	47.8	39.8	19.10	26.43	22.61
Leggers (fore and hind)	22	97	.324	.334	48.2	16.11	17	95	.619	.539	.561	5.6	47.9	42.0	23.59	29.65	25.82
Brisket or breast pullers	22	46	.346	.346	50.9	17.63	13	33	.653	.573	.604	5.7	47.8	42.7	25.79	31.21	27.39
Facers	21	79	.431	.453	47.9	21.67	15	66	.735	.655	.677	5.7	48.0	42.0	28.41	35.28	31.44
Rumpers and back pullers	20	50	.307	.307	50.2	15.40	16	66	.603	.523	.544	5.5	48.0	39.2	21.33	28.94	25.10
Brisket and breast splitters	14	19	.297	.302	51.7	15.63	9	11	.581	.501	.498	5.5	47.7	39.7	19.76	27.71	23.90
Pelt droppers	9	14	.269	.261	58.8	15.36	9	11	.559	.481	.483	5.2	47.7	37.7	18.23	26.66	22.94
Scrubbers, washers, and wipers	14	58	.235	.240	36.0	8.63	14	77	.529	.451	.458	5.3	47.8	38.3	17.54	25.29	21.56
Caul pullers	11	19	.307	.305	53.3	16.27	10	17	.595	.543	.527	5.8	48.0	41.9	22.11	28.56	26.06
Gutters, bung droppers, and rippers open	19	32	.290	.293	50.0	14.63	17	45	.570	.490	.503	5.5	47.9	40.0	20.12	27.30	23.47
Headers and neck trimmers	11	18	.264	.273	49.3	13.58	14	35	.553	.477	.489	5.7	47.9	40.7	19.91	26.49	22.85
Dressers [8]	22	112	.398	.404	51.0	20.62	1	4	.675	.595	.640	6.0	48.0	43.8	28.00	32.40	28.56
Luggers	16	31	.253	.262	46.3	12.11	12	22	.554	.481	.508	5.8	47.9	42.4	21.53	26.54	23.04
Utility men, spillers, handy men, and all-round men	10	16	.336	.339	51.5	17.44	15	35	.625	.577	.657	5.7	49.5	44.7	29.37	30.94	28.56
Sheep or calf butchers	11	37	.705	.652	41.2	26.86	6	66	1.412	1.396	1.381	[1]5.7	52.5	[1]44.0	[1]60.71	74.13	73.29
Total males	31	1,063	.309	.314	47.1	14.81	21	954	.637	.566	.585	5.6	48.3	40.7	23.85	30.77	27.34
Sheep-killing department—Females.																	
Scrubbers, washers and wipers	2	6	.158	.155	44.1	6.82	2	5	.448	.368	.377	6.0	48.0	40.2	15.15	21.50	17.66

[1] Not including data for 1 establishment in which employees are paid biweekly.
[2] Includes drivers, penners, steamers, singers, washers, and aich-bone breakers.
[3] Includes tubmen, droppers, gamb cutters, polemen, and duckers.
[4] Includes hookers-off, hangers-off, straighteners, and feeders, chain.
[5] Includes bung droppers and rippers-open.
[6] Includes drivers, penners, holders, shovers, hookers-on to conveyors, hangers-up of racks, and squilgeers.
[7] Includes hookers-up, fore quarters and hind legs, shoulder punchers, and shank pinners.
[8] Includes rib-sawyers or Boston cutters, setters or Boston setters, caul dressers, and dressers.

TABLE 6.—HOURS, WAGES, AND EARNINGS OF EMPLOYEES IN THE SLAUGHTERING AND MEAT-PACKING INDUSTRY IN THE UNITED STATES, 1917 AND 1921, BY DEPARTMENT, SEX, AND OCCUPATION—Continued.

Department, sex, and occupation.	1917						1921									
	Number of establishments.	Number of employees.	Average rate of wages per hour.	Average earnings per hour.	Average hours actually worked in one week.	Average earnings received in one week.	Number of establishments.	Number of employees.	Average rate of wages per hour.		Average earnings per hour after reduction.	Average number of starts (days) made in one week.	Average basic or regular hours of operation per week.	Average hours actually worked in one week.	Average earnings received in one week.	Average basic or regular full-time earnings per week.	
									Before reduction.	After reduction.						Before reduction.	After reduction.
Offal (other than hides and casings) department—Males.																	
Chiselers, checkers, and templers	40	150	$0.333	$0.326	50.5	$16.48	30	217	$0.637	$0.560	[1] $0.585	[1] 5.7	48.2	[1] 43.3	[1] $25.33	$30.45	$26.99
Machine operators [9]	54	272	.268	.265	53.4	14.16	29	164	.557	.478	[1] .490	[1] 5.5	47.8	[1] 42.2	[1] 20.69	26.57	22.85
Trimmers	60	1,238	.282	.279	52.6	14.69	32	471	.561	.487	[1] .504	[1] 5.6	47.9	[1] 42.1	[1] 21.24	26.82	23.33
Pluck trimmers	31	60	.258	.262	48.9	12.80	30	103	.565	.479	[1] .493	[1] 5.7	47.7	[1] 43.1	[1] 21.25	26.89	22.85
Inspectors [10]	9	20	.253	.253	56.6	14.33	6	12	.546	.480	.466	6.0	48.0	51.0	23.74	26.21	23.04
Laborers	38	677	.231	.232	52.7	12.22	32	331	.526	.455	[1] .473	[1] 5.5	48.1	[1] 43.4	[1] 20.49	25.20	21.89
Rippers open of paunches and pecks	43	93	.263	.267	52.7	14.05	23	69	.541	.467	[1] .475	[1] 5.5	48.0	[1] 41.3	[1] 19.59	25.75	22.42
Washers	47	240	.259	.258	49.7	12.85	18	77	.527	.454	.464	5.6	47.9	42.4	19.65	25.24	21.75
Truckers	37	241	.238	.242	51.2	12.39	26	214	.524	.449	[1] .456	[1] 5.6	48.0	[1] 42.6	[1] 19.42	25.15	21.55
Tripe washers	47	165	.250	.255	52.6	13.43	28	77	.566	.497	[1] .529	[1] 5.6	48.3	[1] 43.4	[1] 22.96	27.11	24.01
Tripe scalders and cookers	21	59	.271	.272	64.9	17.67	12	21	.559	.481	[1] .482	[1] 6.2	48.0	[1] 48.4	[1] 23.29	26.83	23.09
Tripe scrapers and finishers	35	157	.435	.414	51.8	21.40	24	115	.590	.518	[1] .530	[1] 5.7	48.2	[1] 42.5	[1] 22.54	28.26	24.97
Pigs-feet shavers, cleaners, scrapers, and singers	35	116	.293	.289	49.5	14.33	19	54	.579	.504	[1] .484	[1] 5.6	49.7	[1] 43.9	[1] 21.22	28.78	25.05
Toe pullers, feet splitters, and trimmers	18	38	.269	.257	48.2	12.40	10	14	.541	.464	.465	5.6	48.9	45.6	21.19	26.45	22.69
Finishers	9	18	.273	.277	57.2	15.82	4	6	.529	.449	.450	6.0	48.0	46.2	20.77	25.39	21.55
Slunk skinners, utility men, and spellmen	30	93	.291	.289	61.8	17.84	26	89	.564	.488	[1] .493	[1] 5.8	47.7	[1] 46.3	[1] 22.80	26.85	23.28
Total males	62	3,637	.274	.272	52.5	14.27	33	2,034	.560	.485	.499	5.6	48.0	43.0	21.44	26.77	23.28
Offal (other than hides and casings) department—Females.																	
Chiselers, checkers, and templers	1	1	.200	.200	35.5	7.10	4	9	.452	.372	.396	5.7	48.0	43.8	17.35	21.70	17.86
Machine operators [9]	3	5	.193	.197	41.7	8.21	4	4	.458	.378	.378	6.0	48.0	47.0	17.75	21.98	18.14
Trimmers	16	88	.173	.182	41.4	7.52	14	103	.458	.381	.382	5.7	48.0	42.7	16.31	21.89	18.29
Pluck trimmers	1	1	.175	.194	37.0	7.17	5	15	.373	.319	.323	5.7	48.0	43.2	13.93	17.12	14.64
Laborers	1	1	.175	.175	57.0	9.97	7	17	.434	.366	.362	5.1	45.9	37.5	13.58	20.75	17.68
Washers	15	91	.172	.173	44.3	7.65	12	35	.435	.364	.373	5.5	48.3	40.3	15.03	20.45	17.40
Tripe washers	5	46	.154	.154	48.3	7.44	6	18	.356	.313	.311	4.8	47.8	34.9	10.86	16.80	15.43

Tripe scalders and cookers	1	1	.140	.140	33.5	4.69												
Tripe scrapers and finishers	1	5	.169	.169	51.2	8.67	1	3	.390	.310	.317	4.7	48.0	30.2	9.56	18.72	14.88
Pigs-feet shavers, cleaners, scrapers, and singers	13	49	.185	.170	50.1	8.53	5	20	.436	.371	.362	5.5	48.0	39.6	14.34	20.93	17.81
Toe pullers, feet splitters, and trimmers	9	22	.220	.205	47.7	9.81	3	4	.337	.289	.288	5.8	51.0	45.2	13.01	17.19	14.74
Inspectors and graders							2	2	.425	.360	.371	6.0	48.0	47.0	17.42	20.40	17.28
Total females	17	310	.175	.174	45.2	7.89	22	241	.435	.365	.367	5.5	47.9	41.0	15.04	20.71	17.48
Hide department—Males.																	
Inspectors and graders and trimmers	48	194	.280	.287	56.6	16.25	30	161	.563	.491	1.501	[1] 5.7	48.1	[1] 44.8	[1] 22.40	26.97	23.62
Spreaders and salters	35	219	.260	.264	55.6	14.69	29	192	.553	.484	1.486	[1] 5.7	48.2	[1] 45.2	[1] 21.95	26.60	23.33
Laborers	42	805	.234	.231	45.2	10.73	26	461	.518	.448	.452	5.2	48.1	39.7	17.94	24.81	21.55
Total males	55	1,218	.246	.252	48.9	12.33	30	814	.535	.465	.470	5.4	48.1	42.0	19.75	25.68	22.37
Casing department—Males.																	
Casing pullers or runners	59	597	.298	.296	53.1	15.71	32	408	.582	.509	1.526	[1] 5.4	48.5	[1] 44.0	[1] 23.12	28.17	24.69
Strippers	49	305	.260	.262	53.3	13.95	28	203	.561	.482	1.483	[1] 5.6	47.9	[1] 41.9	[1] 20.25	26.87	23.09
Fatters and slimers	52	571	.311	.312	54.1	16.88	30	336	.622	.547	1.547	[1] 5.6	48.4	[1] 42.3	[1] 23.12	29.98	26.47
Turners	36	112	.260	.264	52.0	13.75	31	99	.567	.494	1.516	[1] 5.3	48.2	[1] 41.0	[1] 21.16	27.27	23.81
Blowers, graders, and inspectors	39	152	.266	.267	55.5	14.82	28	94	.550	.478	1.495	[1] 5.6	49.1	[1] 43.6	[1] 21.57	26.95	23.47
Measurers and bunchers	30	62	.274	.283	58.6	16.59	26	59	.558	.487	.512	5.6	48.4	45.1	23.08	26.95	23.57
Salters and packers	40	190	.277	.278	58.3	16.19	27	132	.564	.490	1.502	[1] 5.7	48.1	[1] 45.5	[1] 22.84	27.07	23.57
Trimmers of casings	50	299	.279	.280	53.4	14.94	29	163	.566	.490	1.510	[1] 5.7	48.1	[1] 43.7	[1] 22.25	27.22	23.57
Blowers and tiers of bladders and weasands	16	29	.268	.268	56.4	15.13	7	14	.557	.482	.492	5.7	48.0	43.4	21.36	26.74	23.14
General workers	58	410	.272	.275	52.7	14.52	27	121	.548	.492	.512	5.6	49.5	44.1	22.55	26.58	24.35
Laborers	30	307	.226	.228	53.5	12.19	20	108	.522	.444	1.462	[1] 5.6	48.7	[1] 42.3	[1] 19.54	25.42	21.62
Truckers	15	47	.235	.238	48.4	11.53	16	55	.508	.438	.445	5.6	48.8	42.1	18.74	24.43	21.37
Total males	62	3,081	.278	.279	53.8	15.03	32	1,792	.573	.499	.512	5.3	48.4	43.2	22.10	27.68	24.15
Casing department—Females.																	
Casing pullers or runners	2	2	.195	.196	48.3	9.45	5	17	.471	.391	.401	5.6	48.0	42.1	16.86	22.61	18.77
Strippers	1	17	.151	.151	52.8	7.98	8	41	.443	.363	.363	5.9	48.0	42.7	15.51	21.26	17.42
Fatters and slimers	3	5	.153	.152	54.5	8.30	3	4	.475	.395	.392	6.0	48.0	43.9	17.20	22.80	18.96
Turners	1	3	.167	.169	50.8	8.61	4	12	.474	.394	.392	5.4	48.0	41.2	16.16	22.75	18.91
Blowers, graders, and inspectors	13	132	.163	.163	51.0	8.30	11	77	.441	.353	1.354	[1] 5.7	47.9	[1] 41.5	[1] 14.69	21.12	16.91
Measurers and bunchers	2	7	.172	.170	47.6	8.09	4	12	.458	.378	.377	5.9	48.0	44.9	16.95	21.98	18.14
Salters and packers	4	14	.154	.166	47.6	7.62	5	12	.432	.352	.352	6.0	48.0	42.8	15.68	20.74	16.90
Trimmers of casings	14	104	.189	.187	50.0	9.33	16	54	.474	.397	.398	5.6	48.1	40.9	16.28	22.80	19.10
Blowers and tiers of bladders and weasands	5	22	.157	.155	52.5	8.15	3	70	.433	.353	.358	5.9	48.0	41.6	14.87	20.78	16.94
General workers	8	43	.183	.181	44.1	7.98	7	26	.373	.336	.339	5.0	50.4	37.3	12.65	17.31	16.93
Laborers	1	3	.175	.175	44.8	7.84	6	23	.456	.376	.376	5.4	48.0	41.6	15.62	21.89	18.05
Truckers							1	1	.530	.450	.450	6.0	48.0	45.0	20.25	25.44	21.60
Total females	22	352	.172	.171	49.8	8.51	20	349	.441	.366	.369	5.6	48.2	40.9	15.06	21.08	17.64

[1] Not including data for 1 establishment in which employees are paid biweekly. [9] Includes skull splitters, jawbone pullers, horn sawyers, teeth grinders. [10] Includes graders.

TABLE 6.—HOURS, WAGES, AND EARNINGS OF EMPLOYEES IN THE SLAUGHTERING AND MEAT-PACKING INDUSTRY IN THE UNITED STATES, 1917 AND 1921, BY DEPARTMENT, SEX, AND OCCUPATION—Continued.

Department, sex, and occupation.	1917						1921									
	Number of establishments.	Number of employees.	Average rate of wages per hour.	Average earnings per hour.	Average hours actually worked in one week.	Average earnings received in one week.	Number of establishments.	Number of employees.	Average rate of wages per hour.		Average earnings per hour after reduction.	Average number of starts (days) made in one week.	Average basic or regular hours of operation per week.	Average hours actually worked in one week.	Average earnings received in one week.	Average basic or regular full-time earnings per week.	
									Before reduction.	After reduction.						Before reduction.	After reduction.
Cutting or fresh-beef department—Males.																	
Ribbers	23	41	$0.311	$0.317	60.0	$19.03	17	26	$0.608	$0.547	$0.610	6.0	48.3	41.8	$25.54	$29.06	$26.42
Laborers	49	2,700	.236	.236	55.8	13.18	27	1,229	.531	.457	[1].462	[1]5.7	48.2	[1]44.6	[1]20.62	25.59	22.03
Luggers and lifters	42	493	.296	.302	58.4	17.64	24	340	.588	.523	.558	5.8	48.3	44.5	24.82	28.28	25.26
Sawyers, power	7	16	.265	.263	62.3	16.40	12	18	.573	.503	[1].503	[1]6.0	47.5	[1]45.2	[1]22.74	27.22	23.89
Ham facers, strippers, and markers	16	57	.337	.335	54.0	18.12	11	27	.637	.558	.557	6.0	48.1	45.0	25.06	30.64	26.84
Boners	35	426	.526	.510	40.9	20.87	18	86	.677	.595	[1].585	[1]5.4	48.5	[1]40.1	[1]23.46	32.70	28.86
Trimmers	29	201	.292	.291	56.2	16.37	15	31	.575	.505	[1].501	[1]5.6	48.3	[1]41.4	[1]20.75	27.49	24.39
Utility men, handy men, spell men, assistant foremen, and straw bosses	32	177	.294	.302	60.0	18.11	18	59	.618	.560	[1].568	[1]5.9	47.4	[1]46.2	[1]26.26	29.29	26.54
Cutters and general butchers	33	166	.302	.303	57.3	17.39	22	121	.627	.567	[1].578	[1]5.6	48.1	[1]43.6	[1]25.19	30.10	27.27
Graders and inspectors	20	58	.274	.282	58.2	16.43	13	23	.568	.495	.511	5.7	47.7	43.9	22.43	27.09	23.61
Packers, meat runners, order men, and stowers	44	750	.254	.255	57.7	14.71	29	353	.538	.465	[1].470	[1]5.8	48.4	[1]45.3	[1]21.28	25.93	22.51
Truckers	29	894	.231	.231	54.8	12.67	19	483	.529	.451	[1].456	[1]5.7	48.4	[1]44.2	[1]20.16	25.60	21.83
Freezer and temperature men	21	282	.250	.251	68.3	17.15	22	123	.563	.498	[1].503	[1]5.9	48.2	[1]46.6	[1]23.43	27.02	24.00
Calf skinners	11	34	.492	.420	58.6	24.62	13	36	.833	.741	.741	5.7	47.9	44.2	32.77	39.90	35.49
Total	49	6,294	.271	.266	55.9	14.87	31	2,755	.556	.483	.492	5.7	48.2	44.5	21.90	26.80	23.28
Cutting or fresh-beef department—Females.																	
Trimmers of trimmings	4	49	.162	.160	48.9	7.82	2	10	.364	.308	[1].286	[1]6.0	51.0	[1]54.0	[1]15.44	18.56	15.71
Cutting or fresh-pork department—Males.																	
Laborers [11]	54	1,680	.238	.239	51.7	12.35	31	822	.522	.447	[1].454	[1]5.6	49.3	[1]45.0	[1]20.42	25.68	22.04
Ham and shoulder sawyers	24	47	.292	.290	55.0	15.94	24	53	.590	.513	[1].520	[1]5.8	48.3	[1]43.6	[1]22.67	28.44	24.78
Ham cutters-off	20	34	.310	.304	54.7	16.67	17	28	.599	.526	[1].530	[1]5.7	49.0	[1]43.6	[1]23.14	29.23	25.77
Ham trimmers	24	83	.373	.375	52.5	19.69	28	86	.669	.591	[1].611	[1]5.8	49.2	[1]44.1	[1]26.91	32.65	29.08
Ham boners	52	259	.397	.367	50.0	18.35	26	161	.917	.804	[1].794	[1]5.7	49.1	[1]43.6	[1]34.60	44.84	39.48

[1921]

Choppers-off, shoulders and ribs	23	43	.334	.347	53.9	18.69	25	47	.662	.593	[1].611	[1]5.7	49.2	[1]43.6	[1]26.59	32.37	29.18
Shoulder trimmers	27	72	.323	.327	49.3	16.13	24	72	.619	.546	[1].560	[1]5.7	48.6	[1]42.4	[1]23.73	29.77	26.54
Shoulder boners	20	52	.318	.325	47.2	15.33	19	45	.615	.535	[1].545	[1]5.4	48.0	[1]39.1	[1]21.29	29.52	25.68
Butt pullers	17	29	.269	.269	49.7	13.34	15	24	.560	.482	[1].480	[1]5.7	48.5	[1]43.7	[1]20.97	27.16	23.38
Scribe sawyers	15	37	.295	.295	47.9	14.13	22	43	.592	.516	[1].517	[1]5.9	48.5	[1]45.1	[1]23.34	28.48	25.03
Loin pullers	22	55	.323	.321	51.4	16.53	27	60	.614	.542	[1].551	[1]5.7	49.6	[1]44.5	[1]24.53	30.27	26.88
Ribbers	27	119	.318	.320	50.8	16.26	25	86	.628	.555	[1].559	[1]5.6	48.2	[1]41.9	[1]23.44	30.21	26.75
Trimmers and ham and shoulder skinners	41	368	.290	.292	50.4	14.71	29	362	.601	.529	[1].530	[1]5.6	49.0	[1]41.8	[1]22.15	29.33	25.92
Trimmers of trimmings	34	328	.318	.316	51.0	16.14	15	180	.704	.611	.601	5.5	48.0	44.5	26.77	33.79	29.33
Utility men [12]	36	100	.309	.310	58.8	18.24	28	144	.588	.519	[1].525	[1]5.9	48.5	[1]46.9	[1]24.59	28.52	25.17
Packers, nailers, car stowers, and small order men	61	721	.251	.253	54.0	13.65	28	340	.529	.457	[1].458	[1]5.7	48.5	[1]45.3	[1]20.74	25.55	22.16
Truckers	33	434	.235	.234	49.6	11.62	25	257	.516	.443	[1].450	[1]5.5	49.1	[1]43.3	[1]19.50	25.18	21.75
Total males	61	4,461	.271	.271	51.7	13.98	31	2,810	.590	.513	.516	5.6	48.9	44.1	22.76	28.73	25.09
Cutting or fresh-pork department—Females.																	
Trimmers of trimmings	35	1,027	.219	.219	41.1	9.01	23	580	.463	.405	[1].410	[1]5.6	48.7	[1]41.4	[1]16.97	22.55	19.72
Packers [13]	8	39	.182	.181	48.8	8.84	10	75	.427	.372	.377	5.6	48.2	41.8	15.78	20.58	17.93
Total females	38	1,066	.217	.218	41.3	9.00	23	655	.459	.402	.406	5.6	48.7	41.5	16.83	22.35	19.58
Lard and oleo oil department—Males.																	
Laborers	51	920	.231	.232	53.4	12.41	32	817	.523	.447	[1].451	[1]5.7	48.2	[1]45.3	[1]20.43	25.21	21.55
Melters [14]	50	140	.277	.278	63.1	17.53	32	161	.551	.482	[1].490	[1]5.9	49.8	[1]50.0	[1]24.59	27.16	24.00
Roller men	21	26	.263	.263	60.5	15.91	21	30	.556	.487	[1].485	[1]6.0	49.8	[1]50.8	[1]24.64	27.52	24.25
Fillers	50	271	.241	.241	57.4	13.82	30	220	.503	.461	[1].463	[1]5.8	48.9	[1]46.7	[1]21.63	24.55	22.54
Pumpers and refiners	34	84	.277	.279	62.2	17.36	27	107	.557	.482	[1].483	[1]5.9	48.2	[1]47.7	[1]23.07	26.79	23.23
Utility men [15]	43	111	.291	.295	56.5	16.70	20	49	.595	.538	[1].543	[1]5.9	48.2	[1]48.1	[1]26.15	28.68	25.93
Labelers	4	27	.135	.139	44.9	6.25	1	3	.513	.433	.432	5.7	48.0	45.3	19.57	24.62	20.78
Pressmen and wheelmen	29	148	.252	.252	52.9	13.34	25	174	.544	.474	.477	5.6	48.2	45.0	21.47	26.17	22.85
Total males	61	1,727	.243	.246	55.4	13.60	33	1,561	.530	.462	.466	5.7	48.5	46.3	21.58	25.65	22.41
Lard and oleo oil department—Females.																	
Can washers [16]	19	90	.161	.160	50.6	8.09	18	107	.381	.312	.314	5.7	48.8	43.6	13.70	18.59	15.23

[1] Not including data for 1 establishment in which employees are paid biweekly.
[11] Includes shovers, spacers, temperature men, counters, cutters-down, block tenders, sawyers-off of feet, wrappers, machine tenders, and skin bundlers.
[12] Includes handy men, all-round men, assistant foremen, and straw bosses.
[13] Includes inspectors, wrappers, helpers, skin bundlers, labelers, graders, etc.
[14] Includes kettlemen, cookers, settlers, clarifiers, skimmers, tankmen, and oleo makers.
[15] Includes handy men, straw bosses, and assistant foremen.
[16] Includes tub liners, fillers, and labelers.

TABLE 6.—HOURS, WAGES, AND EARNINGS OF EMPLOYEES IN THE SLAUGHTERING AND MEAT-PACKING INDUSTRY IN THE UNITED STATES, 1917 AND 1921, BY DEPARTMENT, SEX, AND OCCUPATION—Continued.

Department, sex, and occupation.	1917						1921									
	Number of establishments.	Number of employees.	Average rate of wages per hour.	Average earnings per hour.	Average hours actually worked in one week.	Average earnings received in one week.	Number of establishments.	Number of employees.	Average rate of wages per hour.		Average earnings per hour after reduction.	Average number of starts (days) made in one week.	Average basic or regular hours of operation per week.	Average hours actually worked in one week.	Average earnings received in one week.	Average basic or regular full-time earnings per week.	
									Before reduction.	After reduction.						Before reduction.	After reduction.
Sausage department—Males.																	
Truckers and forkers	19	139	$0.229	$0.229	51.4	$11.78	24	305	$0.528	$0.449	[1] $0.452	[1] 5.7	48.1	[1] 45.3	[1] $20.49	$25.34	$21.60
Cutters (choppers, grinders, mixers, curers, feeders, and machine tenders)	55	253	.277	.275	56.4	15.54	31	193	.573	.496	[1] .501	[1] 5.9	48.6	[1] 47.8	[1] 23.97	27.79	24.11
Casing workers (washers, turners, re-turners, measurers, cutters, tiers, and fatters)	31	107	.241	.241	55.3	13.35	19	36	.539	.461	[1] .469	[1] 6.0	48.3	[1] 47.5	[1] 22.27	26.03	22.27
Stuffers	57	444	.298	.295	51.7	15.23	31	225	.612	.535	[1] .536	[1] 5.8	48.8	[1] 46.0	[1] 24.69	29.87	26.11
Linkers, twisters, tiers, and hangers	13	103	.248	.250	49.7	12.41	6	45	.539	.460	.475	5.9	48.0	49.7	23.57	25.87	22.08
Ropers (wrappers and tiers)	5	10	.247	.259	50.0	12.92											
Laborers [17]	52	1,022	.228	.228	57.0	13.03	32	528	.524	.448	[1] .449	[1] 5.6	48.2	[1] 44.7	[1] 20.06	25.20	21.59
Cookers	48	119	.270	.269	60.2	16.19	30	99	.555	.479	[1] .484	[1] 5.7	49.0	[1] 48.8	[1] 23.61	27.14	23.47
Smokers	50	90	.282	.281	62.9	17.68	28	73	.576	.508	[1] .528	[1] 6.0	48.9	[1] 50.7	[1] 26.77	28.05	24.84
Packers (scalers and packers, shippers and nailers)	43	376	.232	.238	54.7	12.99	29	251	.536	.461	[1] .466	[1] 5.8	48.4	[1] 45.9	[1] 21.40	25.94	22.31
Utility men (assistant foremen, straw bosses, subforemen, handy men, small order men, all-round men)	36	108	.291	.290	60.8	17.60	24	84	.577	.523	[1] .529	[1] 5.7	48.4	[1] 46.9	[1] 24.78	27.87	25.31
Total males	58	2,771	.252	.252	56.6	14.00	32	1,839	.549	.474	.478	5.8	48.4	46.2	22.09	26.52	22.94
Sausage department—Females.																	
Cutters (choppers, grinders, mixers, curers, feeders, and machine tenders)	2	3	.173	.177	40.4	7.17	2	3	.440	.360	.360	6.0	46.0	44.0	15.84	20.24	16.56
Casing workers (washers, turners, re-turners, measurers, cutters, tiers, and fatters)	32	317	.175	.175	50.7	8.85	21	142	.435	.364	[1] .366	[1] 5.7	48.6	[1] 43.5	[1] 15.93	21.05	17.69
Stuffers	10	44	.260	.191	53.6	10.24	8	42	.458	.400	.402	5.8	49.4	45.1	18.14	22.21	19.76
Sinkers, twisters, tiers, and hangers	42	719	.181	.179	46.4	8.31	28	379	.439	.378	[1] .378	[1] 5.7	49.4	[1] 43.3	[1] 16.38	21.60	18.67
Ropers (wrappers and tiers)	10	137	.162	.163	50.0	8.14	8	123	.461	.385	.388	5.6	48.0	44.3	17.20	22.13	18.48
Smokers	1	1	.180	.179	53.0	9.50											

Cookers	1	2	.200	.200	52.9	10.58	2	3	.376	.325	.325	5.7	48.0	46.2	14.99	18.05	15.60
Packers (wrappers, inspectors, labelers, taggers, tiers, box makers, and packers' helpers)	39	421	.158	.158	50.1	7.90	25	259	.406	.328	[1].329	[1]5.7	48.1	[1]43.9	[1]14.46	19.49	15.78
General workers	22	133	.167	.170	48.3	8.20											
Laborers							18	72	.412	.338	.341	5.7	48.2	44.1	15.04	19.86	16.29
Box makers							8	17	.399	.319	.319	5.6	48.0	43.0	13.72	19.15	15.31
Sorters							1	3	.420	.340	.340	6.0	45.0	45.0	15.30	18.90	15.30
Utility							4	4	.430	.350	[1].350	[1]5.3	47.3	[1]41.7	[1]14.57	20.34	[1]6.56
Labelers							2	6	.438	.358	.358	6.0	48.0	43.8	15.66	21.02	17.18
Total females	48	1,777	.172	.171	48.7	8.33	30	1,053	.431	.361	.363	5.7	48.7	43.7	15.86	20.90	17.58
Cured-meat department—Males.																	
Graders (sorters, sizers, average men, spotters inspectors, and chute men)	47	509	.275	.275	60.6	16.67	32	372	.561	.483	[1].487	[1]5.9	47.0	[1]47.2	[1]22.97	26.31	22.70
Laborers[18]	57	2,497	.236	.236	53.4	12.62	33	1,506	.520	.442	[1].448	[1]5.6	48.5	[1]44.9	[1]20.10	25.22	21.44
Packers[19]	55	705	.256	.258	56.6	14.58	31	484	.538	.461	[1].465	[1]5.8	48.8	[1]46.3	[1]21.52	26.20	22.50
Overhaulers (meat pullers and turners)	45	465	.265	.265	58.2	15.42	29	370	.559	.478	[1].482	[1]5.6	48.4	[1]45.3	[1]21.79	27.06	23.1
Picklers (pickle men, pickle makers, pumpers, and curers)	55	419	.286	.274	58.1	15.91	32	270	.558	.482	[1].485	[1]5.9	48.5	[1]47.7	[1]23.10	27.01	23.38
Rubbers, salters, and pilers	48	613	.257	.258	56.7	14.62	32	374	.541	.465	[1].469	[1]5.8	48.7	[1]45.8	[1]21.51	26.35	22.65
Smokers	47	84	.261	.259	70.7	18.33	25	61	.563	.510	[1].476	[1]5.6	54.5	[1]54.6	[1]25.97	30.63	27.80
Butchers, trimmers, and knifemen	40	231	.271	.272	58.7	15.99	30	182	.621	.540	[1].537	[1]5.8	48.4	[1]46.5	[1]24.96	29.93	26.14
Truckers	45	1,003	.234	.246	49.9	12.26	29	726	.523	.444	[1].449	[1]5.5	48.2	[1]43.6	[1]19.58	25.21	21.40
Utility men (assistant butchers, straw bosses, assistant foremen, and small-order men)	50	415	.293	.287	58.0	16.64	26	171	.577	.514	[1].519	[1]5.9	48.0	[1]47.6	[1]24.67	27.70	24.67
Total males	62	6,941	.252	.253	55.6	14.05	34	4,516	.540	.463	.467	5.7	48.4	45.6	21.31	26.14	22.41
Cured-meat department—Females.																	
Wrappers (labelers, packers; sewers, hand or machine; bag makers, weighers, tiers, wipers, and baggers)	40	286	.171	.172	48.5	8.33	13	83	.391	.320	[1].324	[1]5.9	48.4	[1]45.3	[1]14.66	18.92	15.49
Laborers							17	124	.388	.320	.326	5.6	48.1	42.2	13.75	18.66	15.39
Butchers, trimmers							2	10	.341	.323	.344	3.7	51.2	25.4	8.73	15.65	16.54
Truckers							1	1	.250	.250	.250	5.0	48.0	37.0	9.25	12.00	12.00
Total females	40	286	.171	.172	48.5	8.33	25	218	.386	.320	.325	5.6	48.4	42.4	13.79	18.57	15.49

[1] Not including data for 1 establishment in which employees are paid biweekly.

[17] Includes roustabouts, ham cylinder washers, cleaners-up, ham pressers, hangers, cooks, helpers, smokers' helpers, truckers of cages or bilkes.

[18] Includes graders' helpers, pickle-makers' helpers, inspectors' helpers, sorters' helpers, pumpers' helpers, smokers' helpers, ham passers, meat passers, passers to pumpers, passers to salters, passers to packers, takers from pumpers, haulers to vats, meat carriers, meat tossers, meat wipers, meat hangers, meat scrapers, meat stringers, bacon stringers, ham stringers, sewers, tiers, meat soakers, meat washers, roustabouts, vat washers, truck washers, and general workers.

[19] Includes packers of beef, barrel pork, bellies, briskets, pig rinds, and smoked meat; dippers, vat men, sweet pickle packers, burlap sackers, wrappers, car loaders, and car stowers.

TABLE 6.—HOURS, WAGES, AND EARNINGS OF EMPLOYEES IN THE SLAUGHTERING AND MEAT-PACKING INDUSTRY IN THE UNITED STATES, 1917 AND 1921, BY DEPARTMENT, SEX, AND OCCUPATION—Concluded.

Department, sex, and occupation.	1917						1921									
	Number of establishments.	Number of employees.	Average rate of wages per hour.	Average earnings per hour.	Average hours actually worked in one week.	Average earnings received in one week.	Number of establishments.	Number of employees.	Average rate of wages per hour.		Average earnings per hour after reduction.	Average number of starts (days) made in one week.	Average basic or regular hours of operation per week.	Average hours actually worked in one week.	Average earnings received in one week.	Average basic or regular full-time earnings per week.	
									Before reduction.	After reduction.						Before reduction.	After reduction.
Canning department—Males.																	
Cookers	11	42	$0.254	$0.255	67.7	$17.29	8	14	$0.536	$0.465	$0.476	5.7	48.3	48.8	$23.21	$25.62	$22.46
Steam tenders, process men and retort men	11	50	.256	.256	64.8	16.60	4	7	.550	.483	.485	5.7	47.4	47.9	23.23	25.47	22.89
Washers of empty cans	2	14	.214	.213	49.3	10.51	2	2	.514	.435	.434	5.5	48.0	50.0	21.68	24.67	20.88
Passers and pilers, cans	7	68	.227	.229	54.3	12.41	1	1	.530	.450	.450	6.0	48.0	48.0	21.60	25.44	21.60
Trimmers, meat (by hand)	4	43	.247	.246	65.2	16.06	8	15	.517	.441	.442	6.0	47.8	48.1	21.27	24.71	21.08
Machine tenders (preparing and stuffing meat into cans)	11	99	.247	.247	61.8	15.24	9	35	.554	.478	.482	5.9	48.1	46.7	22.51	26.54	22.99
Stuffers (meat into cans by hand)	6	100	.234	.237	51.1	12.12	3	6	.533	.458	.461	5.7	48.0	45.9	21.15	25.58	21.19
Packers	9	190	.245	.244	59.1	14.45	8	33	.538	.466	.465	5.9	47.6	45.7	21.27	25.61	22.48
Cap setters	2	5	.238	.236	46.1	10.90	1	1	.410	.330	.330	6.0	48.0	45.5	15.01	19.68	15.81
Cappers	12	177	.252	.255	54.2	13.81	11	33	.547	.476	.477	5.8	47.5	45.5	21.73	25.76	22.68
Washing and painting machine tenders	5	9	.271	.268	71.3	19.11	5	7	.529	.451	.442	5.9	47.6	48.7	21.54	25.18	21.47
Labelers and wrappers	5	20	.250	.251	59.3	14.86	2	4	.549	.469	.470	5.3	45.8	39.8	18.67	24.14	20.48
General workers	8	406	.237	.238	55.1	13.15	7	58	.577	.507	.513	5.9	46.0	45.2	23.17	26.54	23.32
Inspectors	10	257	.258	.260	58.2	15.10	7	29	.560	.482	.486	6.0	47.6	47.8	23.26	26.66	22.94
Truckers	9	154	.230	.231	56.4	13.02	12	70	.520	.449	.450	5.9	47.3	46.3	20.85	24.54	21.24
Laborers	9	1,496	.228	.229	57.6	13.16	13	91	.508	.441	.442	5.7	47.5	44.4	19.60	23.93	20.95
Total males	14	3,130	.236	.237	57.3	13.61	17	406	.536	.465	.467	5.9	47.4	45.9	21.45	25.30	22.04
Canning department—Females.																	
Machine tenders (preparing and stuffing meat into cans)	6	19	.167	.167	51.9	8.65	6	30	.434	.355	.354	5.8	47.3	44.8	15.86	20.53	16.79
Stuffers (meat into cans by hand)	7	283	.168	.168	51.5	8.65	6	28	.445	.377	.385	5.8	48.3	45.1	17.35	21.14	18.21
Packers (sliced bacon and chipped dried beef in cans, glass jars, or cartons, by hand)	9	233	.167	.168	50.0	8.43	13	198	.411	.338	.337	5.7	47.0	44.0	14.83	19.32	15.89
Cooks							1	4	.425	.345	.345	6.0	48.0	45.4	15.65	20.40	16.56
Operators, can-painting and can-washing machines							2	6	.437	.370	.385	5.8	48.0	45.8	17.57	20.98	17.76
Cappers	5	142	.172	.172	52.1	8.94	5	18	.418	.365	.367	5.1	47.3	38.9	14.28	19.77	17.26

Painters (cans by hand)	5	43	.232	.232	54.9	12.74	1	1	.410	.330	.330	6.0	48.0	48.0	15.84	19.68	15.84
Labelers and wrappers	10	457	.199	.200	55.5	11.12	12	53	.449	.382	.378	5.6	47.4	44.3	16.78	21.19	18.11
Weighers (filled cans)	9	141	.169	.170	49.5	8.41	9	33	.416	.341	.342	5.8	47.6	44.7	15.27	19.80	16.23
Wipers (filled cans)	4	88	.158	.161	50.7	8.15	2	2	.408	.328	.375	6.0	48.0	45.0	16.88	19.58	15.74
Cap setters	5	44	.161	.162	49.6	8.02	3	5	.374	.306	.305	5.8	48.0	44.6	13.62	17.95	14.69
Washers of empty cans	5	38	.182	.182	49.4	8.99	4	11	.347	.286	.290	4.9	48.0	39.6	11.48	16.66	13.73
Passers and pilers, cans	9	219	.155	.155	47.6	7.37	3	12	.389	.322	.320	5.8	48.0	44.2	14.16	18.67	15.46
Trimmers, meat (by hand)	7	244	.168	.169	50.9	8.59	5	45	.393	.324	.327	5.3	48.4	42.4	13.86	19.02	15.68
Packers	1	5	.140	.140	53.0	7.42	6	15	.397	.353	.352	5.3	49.6	42.1	14.83	18.50	17.51
General workers	10	535	.158	.159	49.8	7.92	8	87	.426	.349	.349	5.6	46.4	42.7	14.91	19.77	16.19
Inspectors	7	45	.159	.159	48.3	7.69	1	1	.390	.310	.310	6.0	48.0	45.0	13.95	18.72	14.88
Total females	11	2,536	.171	.173	51.2	8.83	17	566	.416	.345	.346	5.6	47.3	43.5	15.05	19.64	16.32
Maintenance and repair—Males.																	
Blacksmiths	55	161	.348	.355	57.4	20.38	31	78	.713	.636	[1] .640	[1] 5.9	48.7	[1] 47.0	[1] 30.13	34.65	30.97
Boilermakers, flangers, and riveters	16	125	.335	.336	59.9	20.09	13	44	.748	.668	.673	5.8	48.0	46.1	31.06	35.90	32.06
Bricklayers and masons	40	115	.706	.683	46.1	31.44	25	50	1.128	1.054	[1] 1.072	[1] 5.6	48.7	[1] 42.2	[1] 45.22	54.93	51.33
Carpenters	58	1,345	.343	.341	54.7	18.69	33	600	.722	.640	[1] .640	[1] 5.7	48.5	[1] 45.3	[1] 28.94	34.94	31.04
Coopers—repairers	60	642	.326	.324	55.9	18.12	32	483	.651	.573	[1] .574	[1] 5.7	48.2	[1] 45.3	[1] 25.98	31.38	27.62
Electrical workers	56	288	.340	.338	60.2	20.35	31	218	.724	.650	[1] .652	[1] 5.9	48.4	[1] 47.3	[1] 30.79	35.04	31.46
Laborers	66	4,584	.238	.232	56.3	13.04	33	908	.523	.447	[1] .449	[1] 5.7	48.7	[1] 46.1	[1] 20.70	25.42	21.77
Machinists	58	415	.365	.366	59.7	21.85	33	270	.742	.665	[1] .667	[1] 5.9	48.1	[1] 46.6	[1] 31.08	35.62	31.99
Machine hands	13	102	.286	.292	58.2	17.00	13	117	.647	.567	.568	5.9	48.0	46.6	26.44	31.06	27.22
Millwrights	34	304	.353	.353	62.3	21.98	29	288	.691	.613	[1] .625	[1] 5.9	46.6	[1] 47.7	[1] 29.79	32.20	28.57
Painters	48	294	.279	.297	52.3	15.50	29	138	.616	.538	[1] .537	[1] 5.6	48.7	[1] 44.3	[1] 23.78	29.81	26.20
Repairers [20]	55	796	.310	.313	57.2	17.88	31	446	.698	.615	[1] .611	[1] 5.7	48.7	[1] 45.3	[1] 27.67	33.85	29.95
Steam fitters, pipe fitters, and plumbers	56	473	.353	.352	59.7	21.02	34	291	.713	.641	[1] .655	[1] 5.9	48.4	[1] 47.6	[1] 31.13	34.37	31.02
Tinners	43	299	.326	.327	56.8	18.58	30	182	.687	.609	.608	5.7	48.4	44.9	27.32	33.18	29.48
Other skilled occupations [21]	31	86	.288	.291	61.2	17.83	30	453	.636	.563	[1] .564	[1] 5.8	48.4	[1] 46.6	[1] 26.28	30.78	27.25
Blacksmiths' helpers	39	126	.248	.251	56.0	14.07	27	57	.555	.481	[1] .501	[1] 5.7	48.5	[1] 45.4	[1] 22.75	26.86	23.33
Boiler makers' helpers	11	114	.247	.247	55.5	13.68	8	23	.554	.476	.480	5.7	48.0	45.2	21.70	26.59	22.85
Carpenters' helpers	26	193	.243	.309	40.0	12.35	21	162	.536	.464	[1] .466	[1] 5.7	48.4	[1] 45.9	[1] 21.41	25.67	22.46
Electrical workers' helpers	36	96	.240	.241	57.7	13.92	21	54	.544	.478	.481	5.7	49.0	46.7	22.45	26.66	23.42
Machinists' helpers	37	112	.257	.256	56.3	14.43	21	79	.553	.478	.480	5.6	48.3	44.9	21.56	26.60	23.09
Millwrights' helpers	20	101	.248	.248	61.3	15.23	21	80	.549	.470	.479	5.7	48.3	45.9	21.98	26.52	22.70
Repairers' helpers	21	67	.241	.241	57.6	13.89	27	139	.557	.493	[1] .491	[1] 5.7	49.7	[1] 46.1	[1] 22.61	27.13	24.50
Steam fitters' helpers	48	431	.247	.246	55.6	13.70	29	234	.539	.466	.472	5.7	48.6	46.1	21.77	26.20	22.65
Tinsmiths' helpers	33	118	.246	.244	54.4	13.24	17	61	.542	.465	.469	5.9	48.0	46.3	21.73	26.02	22.32
Total	66	11,387	.288	.289	56.2	16.25	34	5,455	.642	.565	.567	5.8	48.4	46.0	26.09	31.01	m 27.35
Total, all departments, males	66	53,100	.272	.272	54.1	14.72	34	28,969	.580	.505	.512	5.7	48.4	44.4	22.77	28.01	24.44
females	51	6,512	.179	.178	48.3	8.61	34	3,248	.430	.362	.365	5.7	48.3	42.6	15.55	20.73	17.48
Grand total, males and females	66	59,612	.262	.263	53.4	14.05	34	32,217	.565	.491	.498	5.7	48.4	44.3	22.03	27.23	22.76

[1] Not including data for 1 establishment in which employees are paid biweekly.

[20] Includes beltmen, box makers, brush makers, brush repairers, calkers, door canvassers, harness makers, plasterers, plugmen, pumpmen's pump repairers, ropemen's repairers, saw filers, automatic sprinkler repairers, tool grinders, truckmen, upholsterers, welders, wheelmen and wheelwrights.

[21] Includes assistant foremen, boiler washers, cranemen, elevator operators, molders, oilers, pattern makers, pipe coverers, roofers, steelmen, stencil cutters, utility and general workers.

Changes in Union Scale of Wages and Hours of Labor, 1913 to 1921.[a]

THE Bureau of Labor Statistics during the past summer has collected information concerning the union scale of wages and hours of labor in the principal time-work trades in the leading industrial centers of the United States, and a full compilation of the material is now in progress.

An abridged compilation has been made for certain trades and cities, and the rates and hours of labor as of May 15, 1921, are brought into comparison in the following table with like figures for preceding years (except 1914) back to 1913.

The union-wage-scale figures here published represent the minimum wage of union members employed in the trades stated, but these figures do not always represent the maximum wage that was paid, as in some instances part or even all of the organized workers in the trades received more than the scale.

In cases where scales have been revised since May 15, 1921, and made retroactive to that date or earlier the changes have been included in the tabulation, in so far as information has been received.

Double quotations of rates and hours are shown for some occupations in some cities. Such quotations indicate that there were two or more agreements with different employers and possibly made also by different unions. The figures are the highest and lowest contractual terms in the city.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS.

Blacksmiths, manufacturing shops.

[Owing to lack of space, the year 1914 has been omitted. Figures for that year may be found in the October, 1920, issue of the MONTHLY LABOR REVIEW.]

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Atlanta	37.5	37.5	37.5	39.0	55.0	68.0	75.0	75.0	54	54	60	60	54	54	48	48
Buffalo	40.0	50.0	55.0	55.0	65.0	72.5	100.0	94.0	54	54	50	50	44	44	48	48
Charleston, S.C.	36.0	36.0	41.7	41.7	72.5	80.0	90.0	90.0	54	54	54	54	48	[1] 48	[1] 48	44
Chicago	43.2	43.2	46.2	56.0	75.0	90.0	110.0	99.0	49½	49½	49½	48	48	44	44	44
Manchester	.....	.....	.....	.....	.....	.....	70.0	61.0	.....	.....	.....	.....	.....	.....	48	48
New Orleans	36.1	36.1	36.1	36.1	68.8	80.0	80.0	80.0	54	54	54	54	48	48	48	44
New York	44.4	44.4	53.1	53.1	72.5	80.0	80.0	72.0	[2] 53	[2] 53	48	48	48	48	48	48
Philadelphia	.....	.....	.....	{44.4 / 50.0}	72.5	80.0	110.0	110.0	.....	.....	.....	{54 / 48}	44	44	44	44
Pittsburgh	37.5	37.5	37.5	46.9	57.5	70.0	80.0	90.0	48	48	48	48	48	48	48	48
Portland, Oreg.	45.0	45.0	45.0	50.0	72.2	80.0	88.0	88.0	54	54	54	48	48	44	44	44
Richmond, Va.	32.5	32.5	35.0	{40.0 / 52.0}	52.0	68.0	75.0	68.0	55	55	55	{48 / 50}	48	48	48	48
St. Louis	33.3	33.3	33.3	40.0	50.0	80.0	90.0	100.0	54	54	54	54	54	48	48	44
Salt Lake City	44.7	44.7	45.7	56.3	62.5	75.0	87.5	87.5	48	48	48	48	48	48	48	48
San Francisco	50.0	50.0	.....	50.0	72.5	80.0	90.0	90.0	48	48	.....	48	48	44	44	44
Seattle	.....	.....	.....	.....	75.0	80.0	88.0	80.0	.....	.....	.....	.....	48	44	44	44

[1] 44 hours per week, June to August, inclusive.
[2] Work 53 hours, paid for 54.
[a] A brief summary of the changes from 1907 to 1920 is given in the MONTHLY LABOR REVIEW for March, 1921.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Boiler makers, manufacturing and jobbing shops.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Atlanta	40.0	35.0	35.0	44.0	55.0	68.0	72.0	85.0	54	54	54	50	50	50	50	50
Baltimore	30.6	30.6	30.6	48.0	50.0	80.0	80.0	80.0	54	54	54	49½	44	44	44	44
Birmingham	40.0	40.0	42.5	47.5	67.5	80.0	90.0	75.0	60	60	60	60	48	48	48	48
Boston	.....	.....	.....	.....	.....	70.0	80.0	80.0	.....	.....	.....	.....	.....	48	44	44
Buffalo	36.0	36.0	40.0	46.0	70.0	80.0	80.0	80.0	54	54	54	54	54	[4] 48	[4] 48	[4] 48
Charleston S.C.	36.1	36.1	.....	42.8	72.5	80.0	90.0	90.0	54	54	.....	54	48	[4] 48	[4] 48	44
Chicago	40.0	40.0	40.0	42.0	52.0	60.0	74.0	74.0	54	54	54	54	54	54	54	54
Cincinnati	40.0	35.0	35.0	38.0	40.0	55.0	100.0	80.0	54	49½	49½	49½	49½	49½	50	50
Cleveland	35.0	35.0	40.0	50.0	60.0	70.0	85.0	80.0	54	[5] 49½	[5] 49½	[5] 49½	49½	49½	49½	49½
Denver	41.0	41.0	41.0	42.0	52.0	68.0	72.0	64.0	54	54	54	51	48	48	48	48
Indianapolis	35.0	35.0	37.5	42.0	50.0	55.0	75.0	75.0	50	50	50	50	48	48	48	48
Jacksonville	40.0	40.0	40.0	40.0	50.0	70.0	75.0	64.0	54	54	54	54	54	[4] 48	[4] 48	[4] 48
Kansas City, Mo.	38.0	40.0	40.0	45.0	45.0	68.8	100.0	100.0	54	54	54	54	54	44	44	44
Little Rock	41.0	42.5	42.5	45.0	58.0	68.0	72.0	90.0	60	60	60	60	60	45	48	48
Los Angeles	.....	.....	.....	.....	.....	.....	71.9	71.9	.....	.....	.....	.....	.....	.....	48	48
Louisville	32.0	32.0	32.0	35.0	45.0	65.0	76.0	76.0	54	54	54	50	50	50	48	48
Memphis	41.0	41.0	41.0	45.0	55.0	70.0	75.0	90.0	54	54	54	54	54	54½	54½	48
Milwaukee	.....	.....	.....	.....	.....	.....	85.0	85.0	.....	.....	.....	.....	.....	.....	44	44
New Orleans	38.9	38.9	38.9	43.8	62.5	80.0	80.0	80.0	54	54	54	48	48	48	48	44
New York	41.7	41.7	46.9	49.4	70.0	80.0	80.0	72.0	54	54	48	48	48	48	48	48
Philadelphia	33.3	33.3	33.3	50.0	70.0	80.0	90.0	90.0	49	49	49	48	44	44	44	44
Pittsburgh	40.0	40.0	44.0	46.0	60.0	66.0	75.0	82.5	54	54	50	50	50	50	50	50
Portland, Oreg.	44.4	44.4	44.4	53.0	72.5	80.0	88.0	88.0	54	54	54	48	48	44	44	44
St. Louis	40.0	40.0	40.0	40.0	50.0	70.0	90.0	90.0	[7] 49½	[7] 49½	[7] 49½	[7] 49½	48	48	44	48
Salt Lake City	43.0	43.0	44.0	56.3	62.5	75.0	87.5	87.5	54	54	54	48	48	44	[4] 48	[4] 48
San Francisco	50.0	50.0	53.1	53.1	72.5	80.0	90.0	90.0	48	48	48	48	48	44	44	44
Seattle	50.0	50.0	50.0	56.3	75.0	80.0	88.0	80.0	48	48	48	48	48	44	44	44
Washington	.....	.....	.....	53.7	68.8	75.6	80.6	90.0	.....	.....	.....	48	48	44	44	44

Bricklayers.

Atlanta	45.0	45.0	50.0	60.0	60.0	70.0	112.5	100.0	53	50	50	50	50	44	44	44
Baltimore	62.5	70.0	70.0	75.0	75.0	100.0	125.0	125.0	[8] 45	[8] 45	[8] 45	44	44	[8] 45	[8] 45	[8] 45
Birmingham	70.0	70.0	70.0	70.0	87.5	87.5	100.0	100.0	[9] 44	44	44	44	44	44	44	44
Boston	65.0	65.0	65.0	70.0	80.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	65.0	65.0	65.0	70.0	75.0	85.0	100.0	100.0	48	[4] 48	[4] 48	[10] 44	[10] 44	[10] 44	[10] 44	44
Charleston, S.C.	40.0	40.0	40.0	40.0	50.6	75.0	100.0	85.0	[11] 53	[11] 53	[11] 53	[11] 53	48	48	48	48
Chicago	75.0	75.0	75.0	75.0	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	65.0	70.0	70.0	75.0	90.0	90.0	125.0	125.0	45	45	45	45	45	45	45	45
Cleveland	65.0	70.0	70.0	75.0	90.0	90.0	125.0	125.0	48	44	44	44	44	44	44	44
Dallas	87.5	87.5	87.5	87.5	100.0	100.0	112.5	150.0	44	44	44	44	44	44	44	44
Denver	75.0	75.0	87.5	87.5	100.0	100.0	125.0	125.0	44	44	44	44	44	44	44	44
Detroit	65.0	65.0	70.0	75.0	80.0	90.0	125.0	100.0	[13] 48	[14] 44	[15] 44	[15] 44	[15] 44	[15] 44	44	44
Fall River	55.0	60.0	60.0	65.0	75.0	85.0	115.0	115.0	48	48	44	[10] 44	44	44	44	44
Indianapolis	75.0	75.0	75.0	75.0	85.0	85.0	125.0	115.0	44	44	44	44	44	44	44	44
Jacksonville	62.5	62.5	62.5	62.5	62.5	75.0	87.5	100.0	48	48	48	48	48	44	44	44
Kansas City, Mo.	75.0	75.0	75.0	75.0	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44
Little Rock	75.0	75.0	75.0	87.5	87.5	100.0	125.0	125.0	[17] 44	[17] 44	[17] 44	44	44	44	44	44
Los Angeles	75.0	75.0	62.5	62.5	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Louisville	65.0	65.0	65.0	70.0	75 0	85.0	115.0	125.0	48	44	44	44	44	44	44	44
Manchester	55.0	60.0	60.0	65.0	75.0	90.0	112.5	112.5	48	44	44	44	44	44	44	44

[4] 44 hours per week, June to August, inclusive.
[5] 54 hours per week, October to April, inclusive.
[7] 54 hours per week, September to April, inclusive.
[8] 44½ hours per week, November to March, inclusive.
[9] 48 hours per week, October to December, inclusive.
[10] 48 hours per week, November 16 to March 15, inclusive.
[11] Work 53 hours, paid for 54.
[13] 44 hours per week, October to April, inclusive.
[14] 48 hours per week, November to April, inclusive.
[15] 48 hours per week, December to February, inclusive.
[17] 48 hours per week, October to April, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Bricklayers—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Memphis	75.0	75.0	75.0	82.5	87.5	87.5	125.0	112.5	44	44	44	44	44	44	44	44
Milwaukee	67.5	67.5	67.5	72.5	72.5	90.0	125.0	100.0	44	44	44	44	44	44	44	44
Minneapolis	65.0	70.0	70.0	75.0	75.0	87.5	125.0	112.5	48	48	[17] 44	[17] 44	[17] 44	44	44	44
Newark, N. J	65.0	65.0	70.0	75.0	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
New Haven	60.0	60.0	60.0	65.0	70.0	82.5	100.0	100.0	44	44	44	44	44	44	44	44
New Orleans	62.5	62.5	62.5	62.5	62.5	75.0	100.0	100.0	44	44	44	44	44	44	44	44
New York	70.0	75.0	75.0	75.0	81.3	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Omaha	70.0	70.0	75.0	75.0	75.0	87.5	125.0	112.5	44	44	44	44	44	44	44	44
Philadelphia	62.5	65.0	65.0	70.0	80.0	80.0	130.0	130.0	44	44	44	44	44	44	44	44
Pittsburgh	70.0	70.0	70.0	75.0	75.0	90.0	112.5	150.0	44	44	44	44	44	44	44	44
Portland, Oreg.	75.0	75.0	75.0	75.0	87.5	100.0	125.0	125.0	44	44	44	44	44	44	44	44
Providence	65.0	65.0	65.0	70.0	70.0	80.0	115.0	115.0	44	44	44	44	44	44	44	44
St. Louis	70.0	75.0	75.0	75.0	85.0	100.0	125.0	125.0	44	44	44	44	44	44	44	44
St. Paul	65.0	70.0	70.0	75.0	75.0	87.5	125.0	112.5	48	48	44	44	[17] 44	44	44	44
Salt Lake City	75.0	80.0	80.0	87.5	87.5	100.0	125.0	112.5	44	44	44	44	44	44	44	44
San Francisco	87.5	87.5	87.5	87.5	100.0	112.5	125.0	125.0	44	44	44	44	44	44	44	44
Scranton	60.0	60.0	65.0	70.0	75.0	75.0	112.5	125.0	[18] 44	[17] 44	[17] 44	44	44	44	44	44
Seattle	75.0	75.0	75.0	81.3	100.0	112.5	125.0	112.5	44	44	44	44	44	40	40	44
Washington	62.5	66.7	70.0	70.0	75.0	87.5	100.0	125.0	[19] 45	[19] 45	[19] 45	[19] 45	[19] 45	44	44	44

Building laborers.

Baltimore	.....	.....	.....	48.3	56.3	75.0	75.0	75.0	.....	.....	.....	44	44	44	44	44
Boston	35.0	35.0	35.0	37.5	40.0	40.0	67.5	67.5	48	48	48	48	48	44	44	44
Chicago	40.0	40.0	42.5	45.0	50.0	57.5	100.0	100.0	44	44	44	44	44	44	44	44
Cincinnati	.....	25.0	25.0	30.0	35.0	40.0	45.0	50.0	.....	50	50	50	50	50	50	50
Cleveland	.....	31.3	31.3	40.0	55.0	57.5	87.5	87.5	.....	48	48	44	44	44	44	44
Dallas	.....	.....	.....	.....	.....	.....	50.0	62.5	.....	.....	.....	.....	.....	.....	48	48
Denver	.....	.....	.....	.....	.....	.....	50.0	62.5	.....	.....	.....	.....	.....	.....	44	44
Detroit	.....	30.0	30.0	.....	.....	65.0	75.0	60.0	.....	54	54	.....	.....	44	44	44
Kansas City, Mo	27.5	35.0	35.0	37.5	37.5	57.5	75.0	75.0	48	48	48	48	48	48	44	44
Little Rock	.....	.....	.....	.....	.....	.....	50.0	50.0	.....	.....	.....	.....	.....	.....	49½	44
Los Angeles	34.4	34.4	34.4	34.4	43.8	50.0	62.5	62.5	44	44	44	44	44	44	44	44
Louisville	27.9	22.2	22.2	22.2	30.0	35.0	50.0	80.0	48	54	54	54	50	50	44	44
Milwaukee	.....	.....	.....	.....	.....	.....	65.0	65.0	.....	.....	.....	.....	.....	.....	44	44
New York	22.5	25.0	25.0	30.0	40.5	40.5	75.0	60.0	48	44	44	44	44	48	48	48
Omaha	.....	.....	30.0	30.0	45.0	50.0	60.0	60.0	.....	.....	44	54	54	48	48	48
Pittsburgh	25.0	25.0	30.0	30.0	45.0	45.0	70.0	80.0	54	54	48	48	48	44	44	44
Portland, Oreg.	37.5	37.5	37.5	37.5	50.0	62.5	75.0	67.5	48	48	48	48	48	44	44	44
Providence	25.0	25.0	25.0	30.0	35.0	47.5	50.0	50.0	50	50	50	50	50	50	44	44
St. Louis	25.0	25.0	25.0	30.0	{33.3 40.0	40.0 45.0	54.0 67.5	54.0 67.5	44	44	44	44	44	44	44	44
St. Paul	.....	.....	.....	.....	.....	.....	61.3	61.3	.....	.....	.....	.....	.....	.....	49½	49½
Salt Lake City	.....	.....	.....	.....	.....	50.0	68.8	56.3	.....	.....	.....	.....	.....	48	44	44
San Francisco	27.8	31.3	31.3	37.5	43.8	62.5	75.0	81.3	54	48	48	48	48	48	48	48
Scranton	25.0	22.5	30.0	30.0	30.0	50.0	58.5	70.0	54	54	48	48	48	48	48	48
Seattle	37.5	37.5	37.5	43.8	56.3	68.8	75.0	75.0	44	44	44	44	44	40	44	44
Washington	25.0	25.0	25.0	31.3	40.0	50.0	50.0	50.0	48	48	48	44	44	44	44	44

Carpenters.

Atlanta	40.0	40.0	40.0	50.0	50.0	60.0	80.0	70.0	50	50	50	50	50	44	44	44
Baltimore	43.8	43.8	43.8	50.0	62.5	80.0	90.0	90.0	48	[20] 44	[20] 44	44	44	44	44	44
Birmingham	52.5	45.0	45.0	45.0	55.0	65.0	75.0	75.0	48	48	48	48	48	44	44	44
Boston	50.0	55.0	57.0	60.0	65.0	75.0	100.0	100.0	44	44	41	44	40	40	40	40
Buffalo	50.0	50.0	50.0	62.5	70.0	70.0	100.0	87.5	48	[21] 48	[21] 48	44	44	44	44	44

[17] 48 hours per week, October to April, inclusive.
[18] 48 hours per week, September to April, inclusive.
[19] 44½ hours per week, October to April, inclusive.
[20] 48 hours per week, November to March, inclusive.
[21] 44 hours per week, June to August, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Carpenters—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Charleston, S.C.	33.3	33.3	33.3	33.3	37.5 / 50.0	70.0	80.0	80.0	[22] 53	[22] 53	[22] 53	[22] 53	48	48	48	48
Chicago	65.0	65.0	70.0	70.0	70.0	80.0	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	50.0	55.0	60.0	62.5	65.0	70.0	100.0	100.0	44½	44½	44½	44½	44½	44½	44½	44½
Cleveland	50.0	55.0	60.0	70.0	80.0	85.0	125.0	125.0	48	44	44	44	44	44	44	44
Dallas	55.0	60.0	60.0	62.5	62.5	87.5	100.0	100.0	44	44	44	44	44	44	44	44
Denver	60.0	60.0	60.0	70.0	75.0	87.5	112.5	112.5	44	44	44	44	44	44	44	44
Detroit	50.0	.....	50.0	60.0	60.0	80.0	100.0	85.0	48	.....	44	44	44	44	44	44
Fall River	42.0	44.0	48.0	50.0	62.5	75.0	100.0	100.0	48	44	44	44	44	44	44	44
Indianapolis	50.0	55.0	55.0	57.5	60.0	75.0	100.0	92.5	44½	44	44	44½	44½	44½	44½	44½
Jacksonville	31.3	37.5	37.5	37.5	40.0 / 45.0	65.0	80.0	80.0	48	48	48	48	48	48	44	44
KansasCity,Mo	55.0	65.0	65.0	65.0	65.0	85.0	100.0	100.0	44	44	44	44	44	44	44	44
Little Rock	50.0	50.0	50.0	60.0	60.0	80.0	92.5	80.0	48	48	44	44	44	44	44	44
Los Angeles	50.0	50.0	50.0	50.0	62.5	75.0	87.5	100.0	48	48	44	48	48	44	44	44
Louisville	45.0	45.0	45.0	50.0	60.0	60.0	80.0	80.0	44	44	44	44	44	44	44	44
Manchester	40.0	40.0	40.0	50.0	60.0	60.0	100.0	90.0	48	48	48	44	44	44	44	44
Memphis	50.0	50.0	50.0	55.0	65.0	75.0	100.0	75.0	44	44	44	44	44	44	44	44
Milwaukee	50.0	50.0	50.0	56.3	56.3	70.0	100.0	85.0	44	44	44	44	44	44	44	44
Minneapolis	50.0	50.0	50.0	55.0	60.0	75.0	100.0	100.0	48	48	48	48	44	44	44	44
Newark, N. J.	50.0	50.0	56.3	65.0	70.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44
New Haven	47.5	50.0	50.0	55.0	55.0	65.0	100.0	100.0	44	44	44	44	44	44	44	44
New Orleans	40.0	40.0	40.0	40.0	50.0	60.0	75.0	100.0	48	48	48	48	48	48	48	44
New York	62.5	62.5	62.5	68.8	68.8	75.0	112.5	112.5	44	44	44	44	44	44	44	44
Omaha	50.0	50.0	50.0	57.5	60.0	75.0	112.5	101.3	44	44	44	44	44	44	44	44
Philadelphia	50.0	55.0	55.0	60.0	70.0	80.0	112.5	112.5	44	44	44	44	44	44	44	44
Pittsburgh	55.0	62.5	62.5	71.0	71.0	80.0	90.0	125.0	44	44	44	44	44	44	44	44
Portland, Oreg.	50.0	50.0	50.0	56.3	75.0	86.0	100.0	90.0	44	44	44	44	44	44	44	44
Providence	50.0	50.0	50.0	50.0	60.0	70.0	100.0	100.0	44	44	44	44	44	44	44	44
Richmond, Va.	37.5	37.5	37.5	43.8	62.5	62.5	72.5	72.5	48	48	48	48	48	48	47	47
St. Louis	62.5	62.5	62.5	65.0	70.0	82.5	100.0	125.0	44	44	44	44	44	44	44	44
St. Paul	50.0	50.0	50.0	55.0	60.0	75.0	100.0	100.0	48	48	48	48	44	44	44	44
Salt Lake City	62.5	62.5	62.5	75.0	75.0	100.0	112.5	100.0	44	44	44	44	44	44	44	44
San Francisco	62.5	62.5	62.5	68.8	75.0	87.5	106.3	112.5	44	44	44	44	44	44	44	44
Scranton	42.5	47.5	50.0	50.0	60.0	70.0	87.5	87.5	48	44	44	44	44	44	44	44
Seattle	56.3	56.3	56.3	65.0	82.5	93.8	100.0	87.5	44	44	44	44	44	40	44	44
Washington	50.0	55.0	55.0	62.5	62.5	87.5	95.0	105.0	44½	44½	44½	44½	44½	44	44	44

Cement finishers.

Baltimore	.....	.....	50.0	50.0	62.5	75.0	100.0	100.0	.....	.....	48	48	44	44	44	44
Birmingham	50.0	50.0	62.5	62.5	62.5	75.0	75.0	100.0	48	48	48	48	48	48	48	48
Boston	62.5	62.5	62.5	62.5	70.0	75.0	100.0	100.0	48	44	44	44	44	44	44	44
Buffalo	.....	50.0	50.0	50.0	65.0	65.0	100.0	100.0	.....	48	48	48	48	48	44	44
Chicago	65.0	65.0	65.0	67.5	75.0	80.0	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	50.0	50.0	50.0	55.0	57.5	60.0	90.0	90.0	50	50	50	50	50	50	44½	44½
Cleveland	60.0 / 50.0	60.0 / 55.0	60.0	65.0	77.5	80.0	90.0	125.0	48	[23] 48	44	44	44	44	44	44
Dallas	50.0	62.5	62.5	62.5	62.5	87.5	100.0	125.0	48	48	48	48	48	48	48	48
Denver	68.8	.....	.....	75.0	75.0	87.5	100.0	100.0	44	.....	.....	44	44	44	44	44
Detroit	50.0	50.0	50.0	55.0	60.0	80.0	125.0	100.0	54	54	54	48	44	44	44	44
Fall River	.....	.....	60.0	65.0	75.0	85.0	115.0	115.0	.....	.....	44	44	44	44	44	40
Indianapolis	50.0	57.5	57.5	60.0	62.5	70.0	90.0	100.0	50	50	50	50	50	50	50	44
Kansas City,Mo	62.5	65.0	65.0	65.0	75.0	87.5	107.5	107.5	44	44	44	44	44	44	44	44
Little Rock	55.6	55.6	55.6	75.0	75.0	87.5	100.0	112.5	54	54	54	54	[24] 44	[24] 44	44	54
Los Angeles	.....	.....	.....	.....	.....	.....	100.0	112.5	.....	.....	.....	.....	.....	.....	44	44
Louisville	45.0	45.0	45.0	.....	60.0	70.0	80.0	90.0	60	60	60	.....	44	44	44	44
Manchester	.....	.....	60.0	60.0	75.0	90.0	112.5	112.5	.....	.....	44	44	44	44	44	44
Milwaukee	45.0	45.0	45.0	50.0	60.0	70.0	85.0	100.0	48	48	48	48	44	44	44	44
Minneapolis	.....	50.0	50.0	55.0	55.0	75.0	100.0	100.0	.....	48	48	48	48	44	44	44
Newark, N J.	62.5	65.0	70.0	75.0	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44

[22] Work 53 hours, paid for 54.
[23] 44 hours per week, June to September, inclusive.
[24] 48 hours per week, October to March, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Cement finishers—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
New Haven	.....	.....	60.0	65.0	70.0	82.5	100.0	100.0	.....	.....	44	44	44	44	44	44
New York	62.5	62.5	62.5	70.0	70.0	75.0	112.5	112.5	44	44	44	44	44	44	44	44
Omaha	.....	62.5	62.5	62.5	62.5	75.0	112.5	100.0	.....	44	44	44	44	44	44	44
Philadelphia	45.0	50.0	50.0	55.0	65.0	72.5	100.0	100.0	49½	44	44	44	44	44	44	44
Pittsburgh	.....	50.0	50.0	56.3	75.0	75.0	82.5	112.5	.....	48	44	44	44	44	44	44
Portland, Oreg.	62.5	62.5	62.5	62.5	87.5	87.5	100.0	90.0	48	48	48	44	44	44	44	44
Providence	.....	50.0	62.5	62.5	62.5	80.0	100.0	100.0	.....	44	44	44	44	44	44	44
St. Louis	60.0	60.0	{62.5 / 65.0}	{62.5 / 65.0}	75.0	82.5	125.0	125.0	44	44	44	44	44	44	44	44
St. Paul	50.0	55.0	60.0	60.0	60.0	75.0	100.0	100.0	48	48	48	48	48	44	44	44
Salt Lake City	62.5	62.5	62.5	75.0	75.0	87.5	112.5	100.0	48	48	48	48	48	48	48	48
San Francisco	75.0	75.0	75.0	75.0	87.5	100.0	112.5	112.5	44	44	44	44	44	44	44	44
Seattle	62.5	62.5	62.5	68.8	81.3	100.0	112.5	112.5	48	48	48	48	48	40	40	40
Washington	.....	.....	62.5	70.0	70.0	87.5	90.0	100.0	.....	.....	44	44	44	44	44	44

Compositors: Book and job.

Atlanta	34.4	37.5	37.5	37.5	37.5	43.8	57.5	75.0	48	48	48	48	48	48	48	48
Baltimore	37.5	37.5	37.5	43.8	43.8	54.2	81.3	83.3	48	48	48	48	48	48	48	48
Birmingham	40.6	40.6	40.6	44.8	44.8	44.8	76.0	80.0	48	48	48	48	48	48	48	44
Boston	41.7	43.8	43.8	45.8	50.0	55.2	72.9	87.0	48	48	48	48	48	48	48	44
Buffalo	39.6	41.7	41.7	43.8	45.8	59.4	71.9	90.9	48	48	48	48	48	48	48	44
Charleston, S. C.	33.3	33.3	33.3	37.5	37.5	37.5	37.5	98.9	48	48	48	48	48	48	48	44
Chicago	46.9	50.0	50.0	50.0	57.3	75.0	95.8	106.0	48	48	48	48	48	48	48	44
Cincinnati	40.6	43.8	43.8	46.9	46.9	51.0	75.0	104.5	48	48	48	48	48	48	48	44
Cleveland	39.6	41.7	41.7	43.8	50.0	62.5	87.5	93.8	48	48	48	48	48	48	48	48
Dallas	52.1	52.1	52.1	52.1	57.3	70.8	88.5	100.0	48	48	48	48	48	48	48	44
Denver	54.2	54.2	54.2	54.2	59.4	65.6	81.3	81.3	48	48	48	48	48	48	48	48
Detroit	38.5	43.8	45.8	50.0	54.7	72.9	92.7	96.9	48	48	48	48	48	48	48	48
Fall River	33.3	33.3	35.4	37.5	39.6	41.7	62.5	72.7	48	48	48	48	48	48	48	44
Indianapolis	43.8	45.8	45.8	45.8	52.1	54.2	75.0	100.0	48	48	48	48	48	48	48	44
Jacksonville	37.5	43.8	43.8	43.8	43.8	52.1	75.0	81.8	48	48	48	48	48	48	48	44
Kansas City, Mo	41.7	43.8	43.8	45.8	50.0	54.2	72.9	79.2	48	48	48	48	48	48	48	48
Little Rock	37.5	41.7	41.7	43.8	43.8	43.8	72.9	72.9	48	48	48	48	48	48	48	48
Los Angeles	46.9	50.0	50.0	50.0	52.1	58.3	75.0	95.5	48	48	48	48	48	48	48	44
Lousiville	37.5	39.6	39.6	39.6	43.8	45.8	45.8	79.2	48	48	48	48	48	48	48	48
Manchester	35.4	35.4	35.4	37.5	39.6	41.7	66.7	77.3	48	48	48	48	48	48	48	44
Memphis	40.0	45.0	45.0	47.1	48.1	55.4	93.8	93.8	48	48	48	48	48	48	48	48
Milwaukee	41.7	45.8	45.8	47.9	47.9	54.2	72.9	85.4	48	48	48	48	48	48	48	48
Minneapolis	43.8	43.8	43.8	45.8	45.8	54.0	87.5	87.5	48	48	48	48	48	48	48	48
Newark, N. J.	47.9	47.9	50.0	50.0	56.3	72.9	91.7	111.4	48	48	48	48	48	48	48	44
New Haven	40.6	40.6	40.6	40.6	44.8	45.8	58.3	58.3	48	48	48	48	48	48	48	48
New Orleans	43.8	43.8	43.8	43.8	43.8	50.0	71.9	71.9	48	48	48	48	48	48	48	48
New York	50.0	50.0	52.1	52.1	58.3	75.0	93.8	113.6	48	48	48	48	48	48	48	44
Omaha	37.5	43.8	45.8	46.9	53.1	68.8	87.5	93.2	48	48	48	48	48	48	48	44
Philadelphia	39.6	41.7	41.7	43.8	50.0	60.4	89.6	89.6	48	48	48	48	48	48	48	48
Pittsburgh	39.6	41.7	43.8	43.8	47.9	66.4	81.3	100.0	48	48	48	48	48	48	48	44
Portland, Oreg.	53.1	53.1	53.1	53.5	59.4	75.0	85.4	95.8	48	48	48	48	48	48	48	44
Providence	37.5	37.5	37.5	37.5	45.8	50.0	72.9	72.9	48	48	48	48	48	48	48	48
Richmond, Va.	33.3	37.5	37.5	37.5	37.5	48.5	56.3	56.3	48	48	48	48	48	48	48	48
St. Louis	43.8	43.8	45.8	47.9	52.7	52.7	79.2	92.8	48	48	48	48	48	48	48	44
St. Paul	43.8	43.8	43.8	45.8	45.8	54.0	83.3	87.5	48	48	48	48	48	48	48	48
Salt Lake City	50.0	52.1	54.2	54.2	54.2	62.5	75.0	75.0	48	48	48	48	48	48	48	48
San Francisco	50.0	50.0	52.6	54.2	58.3	62.5	81.3	104.5	48	48	48	48	48	48	48	44
Scranton	43.8	43.8	43.8	47.9	47.9	52.1	71.9	77.1	48	48	48	48	48	48	48	48
Seattle	53.1	53.1	53.1	56.3	59.4	75.0	87.5	93.8	48	48	48	48	48	48	48	44
Washington	40.0	40.0	43.8	47.9	50.0	62.5	83.3	90.9	48	48	48	[25] 48	[25] 48	[25] 48	[25] 48	44

[25] 44 hours per week, for 3 months, between June 1 and Sept. 30.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Compositors, daywork: Newspaper.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Atlanta	43.8	43.8	43.8	43.8	50.0	60.6	63.8	91.0	48	48	48	48	48	48	48	48
Baltimore	50.0	59.5	59.5	61.9	61.9	65.5	93.3	93.3	42	42	42	42	42	42	45	45
Birmingham	52.5	54.5	55.5	56.5	57.5	67.5	67.5	67.5	[26] 42	[26] 42	[26] 42	[26] 42	[26] 42	[26] 42	[26] 42	[26] 42
Boston	63.0	63.0	63.0	68.0	68.0	83.0	95.0	95.0	[29] 42	[30] 42	[30] 42	[30] 42	[30] 42	[30] 42	[30] 42	[30] 42
Buffalo	50.0	50.0	50.0	53.1	59.4	65.6	71.9	87.5	48	48	48	48	48	48	48	48
Charleston, S. C	33.3	33.3	33.3	42.9	42.9	42.9	42.9	103.6	48	48	48	[26] 42	[26] 42	[26] 42	[26] 42	[26] 42
Chicago	62.0	62.0	62.0	62.0	66.0	79.0	89.0	115.0	[27] 45	[27] 45	[27] 45	[27] 45	[26] 45	[26] 45	[26] 45	[26] 45
Cincinnati	52.1	56.3	56.3	56.3	56.3	87.5	107.3	107.3	[28] 47⅜	48	48	48	48	48	45	45
Cleveland	53.8	53.8	53.8	62.5	62.5	68.8	87.5	93.8	48	48	48	48	48	48	48	48
Dallas	55.0	55.0	59.4	59.4	62.5	76.0	88.5	88.5	48	48	48	48	48	48	48	48
Denver	63.3	63.3	63.3	63.3	72.7	72.7	97.8	97.8	45	45	45	45	45	45	45	45
Detroit	55.0	55.0	55.0	60.5	60.5	74.5	87.0	87.0	48	[29] 48	[29] 48	[29] 48	[29] 48	[29] 48	[29] 48	[29] 48
Fall River	37.5	43.8	43.8	44.8	45.8	49.0	75.0	79.2	48	48	48	48	48	48	48	48
Indianapolis	50.0	50.0	50.0	56.3	56.3	60.4	81.3	93.8	48	48	48	48	48	48	48	48
Jacksonville	37.5	46.9	46.9	46.9	52.1	65.6	83.3	83.3	48	48	48	48	48	48	48	48
Kansas City, Mo	59.4	59.4	59.4	59.4	59.4	68.8	90.6	90.6	48	48	48	48	48	48	48	48
Little Rock	47.9	50.0	50.0	52.1	52.1	62.5	72.9	83.3	48	48	48	48	48	48	48	48
Los Angeles	62.2	64.4	64.4	66.7	66.7	75.6	86.7	86.7	45	45	45	45	45	45	45	45
Louisville	49.0	50.0	50.0	54.2	54.2	62.5	87.5	82.9	48	48	48	48	48	48	48	48
Manchester	35.4	35.4	35.4	37.5	39.6	41.7	66.7	70.8	48	48	48	48	48	48	48	48
Memphis	57.8	57.8	57.8	57.8	60.0	66.7	86.7	92.8	45	45	45	45	[26] 45	[26] 45	[26] 45	[26] 45
Milwaukee	45.8	50.0	50.0	54.2	56.3	56.3	77.1	93.8	48	48	48	48	48	48	48	48
Minneapolis	54.0	54.0	54.0	54.0	54.0	62.5	87.5	93.8	48	48	48	48	48	48	48	48
Newark, N. J	60.9	60.9	60.9	63.0	69.6	76.1	89.1	110.9	46	46	46	46	46	46	46	46
New Haven	46.9	47.9	47.9	50.0	50.0	50.0	72.9	79.2	48	48	48	48	48	48	48	48
New York	66.7	66.7	66.7	66.7	71.1	96.7	122.2	122.2	45	45	45	45	45	45	45	45
Omaha	50.0	53.1	53.1	53.1	53.1	68.8	87.5	87.5	48	48	48	48	48	48	48	48
Philadelphia	41.7	41.7	41.7	41.7	50.0	66.7	81.3	79.2	48	48	48	48	48	48	48	48
Pittsburgh	55.0	60.0	60.0	61.0	65.0	77.0	87.5	111.8	48	[26] 45	[26] 45	[26] 45	[26] 45	[26] 45	48	46½
Portland, Oreg	68.3	68.3	68.3	68.3	72.7	100.0	106.7	106.7	45	45	45	45	45	45	45	45
Providence	47.9	50.0	50.0	50.0	52.1	66.7	87.5	100.0	48	48	48	48	48	48	48	48
Richmond, Va	33.3	37.5	37.5	37.5	45.8	45.8	58.3	87.5	48	48	48	48	48	48	48	48
St. Louis	58.7	58.7	58.7	63.4	63.4	63.4	91.3	91.3	46	46	46	46	46	46	46	46
St. Paul	54.5	54.5	54.5	54.5	54.5	63.0	94.0	94.0	48	48	48	[31] 48	[31] 48	[31] 48	[31] 48	[31] 48
Salt Lake City	62.5	62.5	62.5	62.5	62.5	71.9	87.5	87.5	48	48	48	48	48	48	48	48
San Francisco	64.4	69.0	69.0	69.0	68.9	75.6	93.3	107.8	45	42	42	42	45	45	45	45
Scranton	47.9	47.9	47.9	52.1	52.1	60.4	81.3	87.5	48	48	48	48	48	48	48	48
Seattle	75.0	75.0	75.0	78.6	78.6	100.0	114.3	114.3	42	42	42	42	42	42	42	42
Washington	60.7	60.7	60.7	60.7	69.8	92.9	104.0	104.0	42	42	42	42	42	42	42	42

Electrotypers: Finishers.

Atlanta	45.8	50.0	50.0	50.0	50.0	57.3	88.5	96.6	48	48	48	48	48	48	48	44
Baltimore	41.7	45.8	45.8	47.9	47.9	50.0	81.3	81.3	48	48	48	48	48	48	48	48
Birmingham	50.0	50.0	50.0	50.0	50.0	50.0	72.9	89.8	48	48	48	48	48	48	48	44
Boston	50.0	50.0	50.0	50.0	52.5	52.5	78.1	90.6	48	48	48	48	48	48	48	48
Buffalo	43.8	43.8	43.8	43.8	50.0	56.3	72.9	77.1	48	48	48	48	48	48	48	48
Chicago	49.0	52.1	52.1	56.3	58.3	77.1	104.2	113.7	48	48	48	48	48	48	48	44
Cincinnati	43.8	45.8	45.8	45.8	47.9	52.1	66.7	87.5	48	48	48	48	48	48	48	48
Cleveland	43.7	47.9	47.9	47.9	52.1	58.3	83.3	83.3	48	48	48	48	48	48	48	48
Dallas	37.5	37.5	37.5	37.5	43.8	65.6	72.9	72.9	48	48	48	48	48	48	48	48
Denver	43.8	43.8	43.8	47.9	47.9	54.2	62.5	75.0	48	48	48	48	48	48	48	44
Detroit	37.5	47.9	52.1	52.1	56.3	56.3	93.8	102.3	48	48	48	48	48	48	48	44
Indianapolis	43.8	45.8	47.9	50.0	50.0	63.6	63.6	63.6	48	48	44	44	44	44	44	44
Kansas City, Mo	43.8	46.9	46.9	50.0	50.0	62.5	90.6	89.6	48	48	48	48	48	48	48	48
Los Angeles	50.0	50.0	56.3	56.3	56.3	70.8	86.4	86.4	48	48	48	48	48	48	44	44
Memphis	45.8	45.8	45.8	45.8	45.8	62.5	62.5	68.2	48	48	48	48	48	48	48	44

[26] Minimum; maximum, 8 hours per day, 48 per week.
[27] Hours actually worked: Minimum, 7 hours per day, 42 per week; maximum, 8 hours per day, 48 per week.
[28] Worked 47⅜ hours, paid for 48.
[29] Maximum; minimum, 7 hours per day, 42 per week.
[30] Actual hours worked: Minimum, 6; maximum, 8 hours per day, 48 per week.
[31] Maximum; minimum, 45 hours per week.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Electrotypers: Finishers—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Milwaukee	43.8	43.8	43.8	50.0	50.0	56.3	75.0	81.3	48	48	48	48	48	48	48	48
Minneapolis	36.1	43.8	45.8	50.0	50.0	59.4	81.3	91.7	54	48	48	48	48	48	48	48
Newark, N.J.	.....	.....	.....	.....	.....	75.0	109.1	134.1	.....	.....	.....	.....	.....	.....	44	44
New Haven	37.4	40.7	40.7	44.9	44.9	46.7	62.5	75.0	54	54	54	53½	53½	53½	48	48
New Orleans	.....	.....	40.0	40.0	40.0	55.0	88.9	90.9	.....	.....	45	45	[26] 45	[26] 45	[26] 45	44
New York	62.5	65.6	68.8	68.8	68.8	75.0	109.1	134.1	44	44	44	44	44	44	44	44
Omaha	43.8	43.8	43.8	52.1	52.1	66.7	113.6	102.3	48	48	48	48	48	48	44	44
Philadelphia	41.7	47.9	50.0	52.1	64.2	70.0	103.1	113.6	48	48	48	48	48	48	48	44
Pittsburgh	43.8	43.8	43.8	45.8	45.8	45.8	85.4	79.2	48	48	48	48	48	48	48	44
Portland, Oreg.	50.0	50.0	50.0	56.3	56.3	90.9	104.5	104.5	48	48	48	48	48	44	44	44
Richmond, Va.	.....	46.3	46.3	52.1	57.3	60.4	78.1	93.8	.....	54	54	48	48	48	48	48
St. Louis	45.8	45.8	45.8	47.9	55.0	55.0	85.4	89.6	48	48	48	48	48	48	48	48
St. Paul	43.8	43.8	45.8	50.0	50.0	59.4	81.3	91.7	48	48	48	48	48	48	48	48
San Francisco	56.3	56.3	56.3	56.3	62.5	62.5	79.2	113.6	48	48	48	48	48	48	48	44
Scranton	41.7	41.7	41.7	43.8	43.8	50.0	75.0	90.9	48	48	48	48	48	48	48	44
Seattle	52.1	52.1	52.1	52.1	66.7	77.8	104.5	104.5	48	48	48	48	45	45	44	44
Washington	50.0	52.1	54.2	56.3	58.3	58.3	93.8	102.3	44	48	48	48	48	48	48	44

Electrotypers: Molders.

Atlanta	45.8	50.0	50.0	50.0	50.0	57.3	88.5	96.6	48	48	48	48	48	48	48	48
Baltimore	43.8	50.0	50.0	52.1	52.1	54.2	83.3	83.3	48	48	48	48	48	48	48	48
Birmingham	50.0	50.0	56.3	50.0	50.0	50.0	72.9	89.8	48	48	48	48	48	48	48	44
Boston	50.0	50.0	50.0	50.0	52.5	52.5	78.1	90.6	48	48	48	48	48	48	48	48
Buffalo	43.8	43.8	50.0	50.0	50.0	56.3	72.9	77.1	48	48	48	48	48	48	48	44
Chicago	54.2	56.3	56.3	60.4	60.4	77.1	104.2	113.7	48	48	48	48	48	48	48	48
Cincinnati	47.9	50.0	50.0	50.0	52.1	52.1	70.8	87.5	48	48	48	48	48	48	48	44
Cleveland	43.8	52.1	52.1	52.1	56.3	60.4	83.3	83.3	48	48	48	48	48	48	48	44
Dallas	43.8	41.7	41.7	41.7	43.8	65.6	72.9	72.9	48	48	48	48	48	48	48	48
Denver	52.1	52.1	52.1	54.2	54.2	60.4	69.8	79.5	48	48	48	48	48	48	48	44
Detroit	37.5	47.9	52.1	52.1	56.3	56.3	93.8	102.3	48	48	48	48	48	48	48	44
Indianapolis	45.8	47.9	50.1	52.3	52.3	65.9	65.9	65.9	48	48	44	44	44	44	44	44
Kansas City, Mo	43.8	46.9	46.9	50.0	50.0	62.5	90.6	95.8	48	48	48	48	48	48	48	48
Los Angeles	50.0	50.0	50.0	56.3	56.3	70.8	86.4	86.4	48	48	48	48	48	48	44	44
Memphis	45.8	45.8	45.8	45.8	45.8	62.5	62.5	68.2	48	48	48	48	48	48	48	44
Milwaukee	43.8	43.8	43.8	50.0	50.0	56.3	75.0	81.3	48	48	48	48	48	48	48	48
Minneapolis	36.1	50.0	52.1	56.3	56.3	59.4	81.3	91.7	54	48	48	48	48	48	48	48
Newark	.....	.....	.....	.....	.....	75.0	109.1	134.1	.....	.....	.....	.....	.....	44	44	44
New Haven	37.4	40.7	40.7	44.9	44.9	46.7	62.5	75.0	54	54	54	53½	53½	53½	48	48
New Orleans	.....	.....	.....	40.0	40.0	55.6	88.9	90.9	.....	.....	.....	[26] 45	[26] 45	[26] 45	[26] 45	44
New York	62.5	65.6	68.8	68.8	68.8	75.0	109.1	134.1	44	44	44	44	44	44	44	44
Omaha	43.8	43.8	43.8	52.1	52.1	66.7	113.6	102.3	48	48	48	48	48	48	48	44
Philadelphia	45.8	52.1	54.2	56.3	64.2	70.0	103.1	113.6	48	48	48	48	48	48	44	44
Pittsburgh	50.0	50.0	50.0	52.1	53.1	53.1	87.5	87.5	48	48	48	48	48	48	48	48
Portland, Oreg.	50.0	50.0	50.0	56.3	56.3	90.9	104.5	104.5	48	48	48	48	48	44	44	44
Richmond, Va.	.....	46.3	46.3	52.1	57.3	60.4	78.1	93.8	.....	54	54	48	48	48	48	48
St. Louis	47.9	47.9	47.9	50.0	57.3	57.3	85.4	89.6	48	48	48	48	48	48	48	48
St. Paul	50.0	50.0	52.1	56.3	56.3	59.4	81.3	91.7	48	48	48	48	48	48	48	48
San Francisco	56.3	56.3	56.3	56.3	62.5	62.5	79.2	113.6	48	48	48	48	48	48	48	44
Scranton	47.9	47.9	47.9	50.0	50.0	56.3	75.0	90.9	48	48	48	48	48	48	48	44
Seattle	52.1	52.1	52.1	52.1	66.7	77.8	104.5	104.5	48	48	48	48	45	45	44	44
Washington	50.0	52.1	54.2	56.3	58.3	58.3	93.8	102.3	44	48	48	48	48	48	48	44

[26] Minimum; maximum, 8 hours per day, 48 per week.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Granite cutters, inside.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Atlanta	41.3	41.3	50.0	50.0	60.0	70.0	75.0	100.0	45	45	44	44	44	44	44	44
Baltimore	50.0	50.0	50.0	50.0	62.5	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Boston	45.6	45.6	50.0	50.0	60.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	43.8	50.0	52.1	53.1	63.1	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Charleston, S.C.	45.0	45.0	45.0	45.0	50.0	69.0	87.5	100.0	44	44	44	44	44	44	44	44
Chicago	50.0	50.0	53.1	56.3	66.3	76.3	86.3	112.5	44	44	44	44	44	44	44	44
Cincinnati	.....	50.0	50.0	50.0	62.5	75.0	100.0	100.0	.....	44	44	44	44	44	44	44
Cleveland	50.0	50.0	50.0	50.0	62.5	81.3	100.0	100.0	44	44	44	44	44	44	44	44
Dallas	.....	50.0	50.0	50.0	62.5	81.3	100.0	100.0	.....	44	44	44	44	44	44	44
Denver	57.0	57.0	57.0	57.0	68.8	85.0	100.0	106.3	44	44	44	44	44	44	44	44
Detroit	45.0	45.0	50.0	51.3	62.5	75.0	100.0	100.0	44½	44½	44	44	44	44	44	44
Fall River	43.0	43.0	50.0	50.0	62.5	75.0	100.0	100.0	45	45	44	44	44	44	44	44
Los Angeles	62.5	62.5	66.3	67.5	70.0	87.5	100.0	112.5	48	44	44	44	44	44	44	44
Louisville	45.0	47.5	50.0	50.0	60.0	75.0	100.0	100.0	45	45	44	44	44	44	44	44
Manchester	40.6	40.6	50.0	50.0	50.0	72.5	100.0	100.0	44	44	44	44	44	44	44	44
Newark, N. J.	50.0	50.0	50.0	50.0	62.5	79.0	100.0	112.5	44	44	44	44	44	44	44	44
New Haven	41.0	45.5	50.0	50.0	60.0	72.5	87.5	100.0	44	44	44	44	44	44	44	44
New Orleans	45.0	45.0	50.0	50.0	50.0	75.0	80.0	100.0	45	45	44	44	44	44	44	44
New York	50.0	50.0	50.0	50.0	68.8	79.0	100.0	112.5	44	44	44	44	44	44	44	44
Philadelphia	50.0	56.3	56.3	56.3	65.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Pittsburgh	50.0	50.0	53.1	54.4	62.5	81.3	100.0	106.3	44	44	44	44	44	44	44	44
Providence	40.6	40.6	50.0	50.0	60.0	70.0	70.0	100.0	44	44	44	44	44	44	44	44
Richmond, Va.	43.8	45.0	50.0	50.0	50.0	70.0	82.5	100.0	44	44	44	44	44	44	44	44
St. Louis	50.0	50.0	50.0	50.0	60.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Salt Lake City	62.5	62.5	62.5	62.5	75.0	81.3	100.0	100.0	44	44	44	44	44	44	44	44
San Francisco	62.5	62.5	66.3	67.5	70.0	87.5	100.0	112.5	44	44	44	44	44	44	44	44
Seattle	62.5	62.5	62.5	62.5	75.0	87.5	100.0	112.5	44	44	44	44	44	44	44	40
Washington	45.0	45.0	50.0	50.0	62.5	87.5	100.0	100.0	44	44	44	44	44	44	44	44

Hod carriers.

Baltimore	31.3	34.4	34.4	40.0	56.3	75.0	87.5	87.5	[33] 45	[33] 45	[33] 45	44	44	44	44	44
Boston	35.0	35.0	35.0	40.0	42.5	50.0	70.0	70.0	44	44	44	44	44	44	44	44
Chicago	40.0	40.0	42.5	45.0	50.0	57.5	100.0	100.0	44	44	44	44	44	44	44	44
Cincinnati	42.5	42.5	42.5	42.5 45.0	50.0	65.0 57.5	85.0	85.0	45	45	45	45	45	45	45	45
Cleveland	31.3	31.3 35.0	31.3 35.0	40.0 45.0	55.0	57.5	87.5	87.5	48	[35] 44	[35] 44	44	44	44	44	44
Dallas	25.0 28.1	35.0	.....	.....	35.0	35.0	50.0	75.0	44	44	.....	.....	48	48	44	44
Denver	37.5 40.6	37.5 40.6	37.5 40.6	43.8 46.9	53.1 56.3	65.6	75.0 78.1	75.0 78.1	44	44	44	44	44	44	44	44
Detroit	35.0	35.0 40.0	35.0 40.0	40.0 43.8	50.0	65.0	100.0	75.0	48	49½	49½	44	[37] 44	44	44	44
Indianapolis	40.0 42.5	40.0 42.5	40.0 42.5	42.5 45.0	47.5 50.0	55.0	72.5 75.0	67.5 70.0	44	44	44	44	44	44	44	44
Kansas City, Mo.	37.5	45.0	45.0	47.5	50.0	62.5	90.0	90.0	44	44	44	44	44	44	44	44
Little Rock	.....	.....	.....	30.0	40.0	50.0	62.5	62.5	.....	.....	.....	54	54	49½	49½	44
Los Angeles	34.4 40.6	34.4 40.6	34.4 40.6	40.6	50.0	53.1	75.0	75.0	44	44	44	44	44	44	44	44
Louisville	35.0 38.0	35.0 38.0	35.0 38.0	45.0	45.0	50.0	55.0	80.0	48	44	44	44	50	50	44	44
Memphis	30.0	30.0	30.0	37.5	50.0	50.0	75.0	62.5	44	44	44	44	44	44	44	44
Milwaukee	32.5	35.0	35.0	40.0 42.5	50.0	55.0	70.0	70.0	48	48	48	48	48	[38] 44	44	44

[33] 44 hours per week, November to March, inclusive.
[35] 48 hours per week, September to April, inclusive.
[37] 48 hours per week, December to February, inclusive.
[38] 48 hours per week, November to April, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Hod carriers—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Newark, N. J.	35.0	35.0	37.5	45.0	45.0	50.0	87.5	87.5	44	44	44	44	44	44	44	44
New York	37.5	37.5	37.5	42.5	47.0	50.0	87.5	87.5	44	44	44	44	44	44	44	44
Omaha	.....	.....	40.0	40.0	50.0	55.0	75.0	75.0	.....	.....	44	44	44	44	44	44
Philadelphia	35.0	35.0	25.0 / 40.0	45.0	60.0	70.0	100.0	85.0	44	44	44	44	44	44	44	44
Pittsburgh	25.0 / 40.0	25.0 / 40.0	30.0 / 45.0	30.0 / 45.0	45.0 / 55.0	60.0	90.0	100.0	44 / 49	44	44	44	44	44	44	44
Portland, Oreg.	50.0	50.0	50.0	50.0	62.5	75.0	93.8	90.0	48	48	48	48	48	44	44	44
Providence	28.1 / 30.0	28.1 / 30.0	30.0	35.0	38.0	50.0	65.0	55.0	50	50	50	50	50	50	44	44
St. Louis	42.5 / 45.0	47.5 / 50.0	47.5 / 50.0	47.5 / 50.0	46.9 / 55.0	62.5 / 65.0	70.0	85.0	44	44	44	44	44	44	44	44
St. Paul	.....	.....	37.5	40.6	40.6	60.0	80.0	80.0	.....	.....	48	44	44	44	44	44
Salt Lake City	37.5 / 50.0	37.5 / 50.0	37.5 / 50.0	43.8 / 56.3	56.3 / 62.5	62.5 / 68.8	87.5 / 93.8	75.0 / 81.3	44	44	44	44	44	44	44	44
San Francisco	50.0	50.0	50.0	50.0	62.5	75.0	93.8	100.0	44	44	44	44	44	44	44	44
Scranton	30.0	30.0	35.0	35.0	35.0	50.0	58.5	70.0	48	[39] 44	[39] 44	[39] 44	[39] 44	44	44	44
Seattle	43.8	43.8	43.8	50.0	62.5	75.0	75.0	75.0	44	44	44	44	44	40	40	44
Washington	23.1 / 28.1	28.1	28.1	31.3	50.0	62.5	75.0	75.0	[40] 45	[40] 45	[40] 45	[40] 45	[40] 45	[40] 45	44	44

Inside wiremen.

Atlanta	44.5	.....	.....	38.9	55.0	75.0	90.0	90.0	54	.....	.....	54	48	44	44	44
Baltimore	43.8	43.8	43.8	50.0	70.0	70.0	92.5	112.5	48	48	48	48	[41] 48	44	44	44
Birmingham	62.5	50.0	50.0	50.0	62.5	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Boston	55.0	60.0	62.5	65.0	70.0	77.5	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	45.0	50.0	56.3	62.5	70.0	70.0	90.0	90.0	48	[42] 48	[42] 48	[42] 48	44	44	44	44
Charleston, S.C.	33.3	.....	33.3	33.3	57.0	80.0	80.0	80.0	54	.....	[43] 54	[43] 54	[44] 48	[44] 48	48	44
Chicago	75.0	75.0	75.0	75.0	81.3	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	50.0	53.1	56.3	62.5	68.8	71.9	100.0	100.0	44½	44½	44½	44½	44½	44½	44½	44½
Cleveland	57.5	68.8	70.0	75.0	81.3	90.0	125.0	137.5	48	44	44	44	44	44	44	44
Dallas	56.3	62.5	62.5	65.0	80.0	87.5	100.0	112.5	44	44	44	44	44	44	44	44
Denver	56.3	56.3	60.0	62.5	82.5	82.5	100.0	100.0	44	44	44	44	44	44	44	44
Detroit	46.9	53.1	59.4	66.9	75.0	93.8	125.0	100.0	48	[45] 48	48	44	44	44	44	44
Fall River	37.5	37.5	41.0	50.0	60.0	70.0	85.0	90.0	48	48	44	44	44	44	44	44
Indianapolis	47.5	47.5	53.0	57.0	67.5	72.0	100.0	100.0	[45] 48	[45] 48	44	44	44	44	44	44
Jacksonville	45.0	45.0	45.0	45.0	65.0	85.0	100.0	100.0	48	45	48	48	48	44	44	44
Kansas City, Mo.	62.5	68.8	65.0	68.8	75.0	87.5	100.0	100.0	48	44	44	44	44	44	44	44
Little Rock	50.0	50.0	50.0	50.0	55.0	75.0	87.5	87.5	48	48	[46] 48	[46] 48	[46] 48	[46] 48	44	44
Los Angeles	50.0	50.0	50.0	50.0	62.5	80.0	100.0	100.0	48	48	48	48	48	44	44	44
Louisville	40.0	40.0	40.0	45.0	50.0	75.0	75.0	100.0	48	48	48	48	48	44	44	44
Manchester	31.3	34.4	37.5	42.5	60.0	75.0	100.0	100.0	48	48	48	44	44	44	44	44
Memphis	45.0	50.0	50.0	56.3	62.5	75.0	100.0	100.0	48	44	44	44	44	44	44	44
Milwaukee	45.0	50.0	50.0	56.3	56.3	75.0	85.0	100.0	44	44	44	44	44	44	44	44
Minneapolis	50.0	56.3	56.3	56.3	68.8	68.8	81.3	100.0	48	44	44	44	44	44	44	44
Newark, N. J.	56.3	62.5	62.5	62.5	68.8	75.0	100.0	112.5	44	44	44	44	44	44	44	44
New Haven	.....	.....	44.5	60.0	60.0	75.0	82.5	93.8	.....	.....	44	44	44	44	44	44
New Orleans	45.0	50.0	50.0	50.0	56.3	70.0	90.0	100.0	48	48	48	48	48	48	44	44
New York	56.3	60.0	60.0	65.0	65.0	75.0	112.5	112.5	44	44	44	44	44	44	44	44
Omaha	50.0	50.0	57.5	57.5	70.0	87.5	112.5	112.5	44	44	44	44	44	44	44	44
Philadelphia	45.0	45.0	50.0	56.3	65.0	75.0	100.0	112.5	44	44	44	44	44	44	44	44
Pittsburgh	57.5	57.5	62.5	62.5	68.8	75.0	100.0	125.0	48	44	44	44	44	44	44	44
Portland, Oreg.	56.3	56.3	56.3	56.3	72.2	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Providence	43.8	50.0	50.0	55.0	60.0	70.0	85.0	115.0	44	44	44	44	44	44	44	44
Richmond, Va.	43.8	43.8	43.8	50.0	60.0	75.0	75.0	75.0	48	48	48	48	48	44	44	44
St. Louis	65.0	75.0	75.0	75.0	75.0	87.5	100.0	125.0	44	44	44	44	44	44	44	44
St. Paul	46.9	53.1	56.3	62.5	68.8	68.8	81.3	100.0	44	44	44	44	44	44	44	44

[39] 48 hours per week, October to April, inclusive.
[40] 44½ hours per week, October to April, inclusive.
[41] 44 hours per week, August to December, inclusive.
[42] 44 hours per week, June to August, inclusive.
[43] 49½ hours per week, June 15 to September 15.
[44] 44 hours per week, June 15 to September 15.
[45] 44 hours per week, June to September, inclusive.
[46] 44 hours per week, July to September, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Inside wiremen—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Salt Lake City	56.3	62.5	62.5	62.5	75.0	87.5	112.5	90.0	44	44	44	44	44	44	44	44
San Francisco	62.5	62.5	62.5	75.0	75.0	87.5	112.5	125.0	44	44	44	44	44	44	44	44
Scranton	46.9	46.9	50.0	60.0	62.5	75.0	95.0	87.5	48	48	44	44	44	44	44	44
Seattle	62.5	62.5	62.5	75.0	87.5	100.0	112.5	112.5	44	44	44	44	44	40	40	40
Washington	55.0	60.0	60.0	60.0	75.0	100.0	100.0	106.3	44	44	44	44	44	44	44	44

Machine operators: Book and job.

Baltimore	46.9	46.9	46.9	50.0	50.0	60.4	81.3	83.3	48	48	48	48	48	48	48	48
Birmingham	52.5	54.5	54.5	57.3	57.3	57.3	78.1	80.0	48	48	48	48	48	48	48	44
Boston	45.8	47.9	47.9	50.0	54.2	59.4	77.1	91.5	48	48	48	48	48	48	48	44
Buffalo	50.0	50.0	50.0	53.1	59.4	59.4	71.9	95.5	48	48	48	48	48	48	48	44
Charleston, S.C.	.....	37.5	37.5	50.0	50.0	50.0	50.0	103.4	.....	48	48	48	48	48	48	44
Chicago	50.0	50.0	50.0	50.0	60.2	77.9	98.8	109.2	48	48	48	48	48	48	48	44
Cincinnati	49.0	52.1	52.1	54.2	54.2	58.3	81.3	104.5	48	48	48	48	48	48	48	44
Cleveland	53.8	53.8	53.8	62.5	62.5	68.8	87.5	93.8	48	48	48	48	48	48	48	48
Dallas	[47]12.5	[47]12.5	[47]12.5	[47]12.0	[47]12.0	[47]12.0	[47] 12.0	[47]15.0	[47] 15.0	48	48	48	48	48	48	48	44
Denver	54.2	54.2	54.2	54.2	59.4	65.6	81.3	81.3	48	48	48	48	48	48	48	48
Detroit	55.0	55.0	55.0	60.5	60.5	85.0	100.0	100.0	48	48	48	48	48	48	48	48
Fall River	.....	.....	.....	45.8	46.9	46.9	62.5	72.7	.....	.....	.....	48	48	48	48	44
Indianapolis	50.0	50.0	50.0	56.3	56.3	60.4	81.3	100.0	48	48	48	48	48	48	48	44
Jacksonville	43.8	52.1	52.1	53.1	53.1	58.3	75.0	102.3	48	48	48	48	48	48	48	44
KansasCity,Mo	55.2	57.3	57.3	57.3	62.5	69.8	78.1	84.4	48	48	48	48	48	48	48	48
Little Rock	50.0	50.0	50.0	50.0	50.0	50.0	72.9	72.9	48	48	48	48	48	48	48	48
Los Angeles	58.3	60.4	60.4	60.4	62.5	70.8	81.3	104.5	48	48	48	48	48	48	48	44
Louisville	49.0	50.0	50.0	50.0	52.1	54.2	54.2	79.2	48	48	48	48	48	48	48	48
Manchester	35.4	35.4	35.4	37.5	39.6	41.7	66.7	77.3	48	48	48	48	48	48	48	44
Memphis	62.5	56.3	56.3	56.3	56.3	68.8	93.8	93.8	48	48	48	48	48	48	48	48
Milwaukee	47.9	52.1	52.1	54.2	54.2	60.4	75.0	87.5	48	48	48	48	48	48	48	48
Minneapolis	50.0	50.0	50.0	52.1	52.1	61.5	87.5	87.5	48	48	48	48	48	48	48	48
Newark, N. J.	47.9	47.9	50.0	50.0	56.3	72.9	91.7	111.4	48	48	48	48	48	48	48	44
New Haven	45.8	45.8	45.8	45.8	45.8	45.8	58.3	58.3	48	48	48	48	48	48	48	48
New York	54.2	54.2	54.2	54.2	58.3	75.0	93.8	113.6	48	48	48	48	48	48	48	44
Omaha	50.0	53.1	53.1	53.1	53.1	68.8	87.5	93.2	48	48	48	48	48	48	48	44
Philadelphia	43.8	45.8	45.8	47.9	54.2	64.6	93.8	93.8	48	48	48	48	48	48	48	48
Pittsburgh	47.9	50.0	52.1	52.1	56.3	68.8	87.5	106.8	48	48	48	48	48	48	48	44
Portland, Oreg.	65.6	65.6	65.6	65.6	68.8	100.0	100.0	110.0	48	48	48	48	48	48	48	44
Providence	47.9	47.9	47.9	47.9	52.1	54.2	72.9	79.2	48	48	48	48	48	48	48	48
Richmond, Va.	41.7	45.8	45.8	45.8	45.8	54.2	62.5	62.5	48	48	48	48	48	48	48	48
St. Louis	50.0	50.0	52.1	54.2	59.6	63.8	87.5	101.0	48	48	48	48	48	48	48	44
St. Paul	50.0	50.0	50.0	52.1	52.1	61.5	83.3	87.5	48	48	48	48	48	48	48	48
Salt Lake City	56.3	56.3	56.3	56.3	56.3	64.6	75.0	75.0	48	[48] 48	[48] 48	[48] 48	[48] 48	[48] 48	[48] 48	48
San Francisco	64.4	64.4	65.0	65.0	68.8	68.8	81.3	104.5	45	45	48	48	48	48	48	44
Scranton	45.8	45.8	45.8	50.0	50.0	54.2	81.3	85.4	48	48	48	48	48	48	48	48
Seattle [49]	.....	75.0	75.0	78.6	85.7	107.1	121.4	121.4	.....	42	42	42	42	42	42	42
Washington	50.0	50.0	50.0	56.3	56.3	75.0	87.5	95.5	48	48	48	48	48	[50] 48	[50] 48	44

Machine operators, daywork: Newspaper.

Atlanta	[47] 8.5	[47] 8.5	[47] 8.5	[47] 8.5	[47] 8.5	[47] 8.5	[47] 9.0	[47]10.5	48	48	48	48	48	48	48	48
Baltimore	53.6	59.5	59.5	61.9	61.9	65.5	93.3	93.3	42	42	42	42	42	42	45	45
Birmingham	52.5	54.5	55.5	56.5	57.5	67.5	67.5	110.0	[52] 42	[52] 42	[52] 42	[52] 42	[52] 42	[52] 42	[52] 42	[52] 42
Boston	63.0	63.0	63.0	68.0	68.0	83.0	95.0	95.0	[66] 42	[30] 42	[30] 42	[30] 42	[30] 42	[30] 42	[30] 42	[30] 42
Buffalo	50.0	50.0	50.0	53.1	59.4	65.6	71.9	87.5	48	48	48	48	48	48	48	48

[47] Per 1,000 ems nonpareil.
[48] 45 hours per week, June to August, inclusive.
[49] For the years 1918 to 1921, inclusive, the rates are for machinist operators.
[50] 44 hours per week, for 3 months, between June 1 and Sept. 30.
[52] Minimum; maximum, 8 hours per day, 48 per week.
[30] Actual hours worked, minimum 6, maximum 8 hours per day, 48 hours per week.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Machine operators, daywork; Newspaper—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Charleston, S.C.	[47] 9.0	[47] 9.0	[47] 9.0	[47] 9.0	[47] 9.0	[47] 9.0	57.1	108.3	[52] 39	[52] 39	[52] 39	[52] 39	[52] 39	[52] 39	[52] 42	[52] 42
Chicago	[53]50.0	[53]50.0	[53]50.0	[53]50.0	[54]53.0	[55] 64.0	[55] 72.0	[65]96.0	48	45	45	45	45	[52] 45	[52] 45	[52] 45
Cincinnati	52.1	56.3	56.3	56.3	56.3	87.5	107.3	107.3	[56] 47⅞	48	48	48	48	48	45	45
Cleveland	53.8	53.8	53.8	62.5	62.5	68.8	87.5	93.8	48	48	48	48	48	48	48	48
Dallas	[47]12.5	[47]12.5	[47]12.0	[47]12.0	[47]12.0	[47] 12.0	[47] 15.0	[47]15.0	39	[57] 39	[57] 39	[57] 39	[57] 39	[57] 39	[57] 39	[57] 39
Denver	63.3	63.3	63.3	63.3	72.7	72.7	97.8	97.8	45	45	45	45	45	45	45	45
Detroit	55.0	55.0	55.0	60.5	60.5	74.5	87.0	87.0	48	[58] 48	[58] 48	[58] 48	[58] 48	[58] 48	[58] 48	[58] 48
Fall River	45.8	45.8	45.8	45.8	46.9	50.0	75.0	79.2	48	48	48	48	48	48	48	48
Indianapolis	50.0	50.0	50.0	56.3	56.3	60.4	81.3	93.8	48	48	48	48	48	48	48	48
Jacksonville	[49] 0	52.1	52.1	52.1	55.2	58.3	83.3	83.3	45	[58] 48	[58] 48	48	48	48	48	48
Kansas City, Mo	59.4	59.4	59.4	59.4	59.4	68.8	90.6	90.6	48	48	48	48	48	48	48	48
Little Rock	[47] 9.5	65.0	65.0	65.0	65.0	78.6	90.5	90.5	42	42	42	42	42	42	42	42
Los Angeles	62.2	64.4	64.4	66.7	66.7	75.6	86.7	86.7	45	45	45	45	45	45	45	45
Louisville	49.0	50.0	50.0	54.2	54.5	62.5	87.5	82.9	48	48	48	48	48	48	48	48
Manchester	35.4	35.4	35.4	37.5	39.6	41.7	66.7	70.8	48	48	48	48	48	48	48	48
Memphis	[47] 9.5	[47] 9.5	[47] 9.5	[47] 9.5	[47] 9.5	[61] 9.5	[47] 12.0	[47]12.5	[52] 45	[52] 45	[52] 45	[52] 45	[52] 45	[52] 45	[52] 45	[52] 45
Milwaukee	45.8	50.0	50.0	54.2	56.3	56.3	77.1	93.8	48	48	48	48	48	48	48	48
Minneapolis	[47]10.0	[47]10.0	[47]10.0	[47]10.0	[47]10.0	[47]10.0	[47] 11.0	[47]12.5	48	48	48	48	48	48	48	48
Newark, N.J.	60.9	60.9	60.9	63.0	69.6	76.1	89.1	110.9	46	46	46	46	46	46	46	46
New Haven	46.9	47.9	47.9	50.0	50.0	50.0	72.9	79.2	48	48	48	48	48	48	48	48
New York	66.7	66.7	66.7	66.7	71.1	96.7	122.2	122.2	45	45	45	45	45	45	45	45
Omaha	50.0	53.1	53.1	53.1	53.1	68.8	87.5	87.5	48	48	48	48	48	48	48	48
Philadelphia	45.8	45.8	45.8	45.8	52.1	66.7	81.3	79.2	48	48	48	48	48	48	48	48
Pittsburgh	55.0	60.0	60.0	61.0	65.0	77.0	87.5	111.8	48	[52] 45	[52] 45	[52] 45	[52] 45	[52] 45	48	46½
Portland, Oreg.	68.3	68.3	68.3	68.3	72.7	100.0	106.7	106.7	45	45	45	45	45	45	45	45
Providence	47.9	50.0	50.0	50.0	52.1	66.7	87.5	100.0	48	48	48	48	48	48	48	48
St. Louis	[47]11.0	[47]11.0	[47]11.0	[47]11.5	[47]11.5	[47] 11.5	[47] 15.0	[47]15.0	[59] 39	[59] 39	[59] 39	[59] 42	[59] 42	[59] 42	46	46
St. Paul	54.5	54.5	54.5	54.5	63.0	63.0	94.0	94.0	48	48	48	48	[31] 48	[31] 48	[31] 48	[31] 48
Salt Lake City	[47]10.0	[47]10.0	[47]10.0	[47]10.0	[47]10.0	[47] 11.0	[62] 11.0	[64]11.0	48	[60] 48	[60] 48	[60] 48	[60] 48	[60] 48	[60] 46½	[60] 46½
San Francisco	64.4	69.0	69.0	69.0	68.9	75.6	93.3	107.8	45	42	42	42	45	45	45	45
Scranton	47.9	47.9	47.9	52.1	52.1	60.4	81.3	87.5	48	48	48	48	48	48	48	48
Seattle	75.0	75.0	75.0	78.6	80.1	100.0	114.3	114.3	42	42	42	42	42	42	42	42
Washington	60.7	60.7	60.7	60.7	69.8	92.9	104.0	104.0	42	42	42	42	42	42	42	42

Machinists, manufacturing shops.

Atlanta	35.0	35.0	35.0	40.0	55.0	70.0	80.0	80.0	60	60	60	54	54	54	54	50
Baltimore	33.3	37.5	37.5	{47.0 / 65.0}	{62.0 / 68.8}	75.0	75.0	85.0	54	48	48	48	48	48	44	44
Birmingham	35.0	40.0	45.0	47.5	60.0	68.0	78.5	75.0	60	60	54	54	54	48	48	48
Boston	{38.9 / 43.8}	28.0 / 42.0	35.0 / 42.0	50.0	55.0	65.0	{75.0 / 90.0}	75.0 / 90.0	48 / 54	50 / 54	50 / 54	{48 / 50}	48	48	48	48
Buffalo	37.5	37.5	40.0	40.0	55.0	73.0	73.0	65.0	54	54	54	{48 / 54}	54	54	54	48
Charleston, S.C.	.....	36.1	38.9	42.8	59.0	73.0	90.0	90.0	.....	54	54	54	54	48	48	48
Chicago	39.0	{41.7 / 43.5}	46.9	55.0	65.0	80.0	100.0	90.0	54	{48 / 54}	48	48	[63] 48	44	44	44
Cincinnati	{25.0 / 35.0}	32.5	35.0	42.0	42.0	50.0	75.0	75.0	55	52½	48	48	48	48	48	48
Cleveland	33.3	35.0	45.0	45.0	60.0	60.0	75.0	65.0	54	54	50	50	50	50	50	50
Dallas	40.0	42.0	42.0	.....	.....	70.0	80.0	80.0	54	48	48	.....	.....	48	48	48

[31] Maximum; minimum, 45 hours per week.
[47] Per 1,000 ems nonpareil.
[52] Minimum; maximum 8 hours per day, 48 per week.
[53] For 3,500 ems per hour; 55 cents for 4,500 ems, and 1 cent for each 100 ems over 4,500 per hour.
[54] For 3,500 ems per hour; 58 cents for 4,500 ems, and 1 cent for each 100 ems over 4,500 per hour.
[55] For 3,500 ems per hour; 70 cents for 4,500 ems, and 1 cent for each 100 ems over 4,500 per hour.
[56] Work 47⅞ hours, paid for 48.
[57] Maximum; minimum, 5½ hours per day, 33 per week.
[58] Maximum; minimum, 7 hours per day, 42 per week.
[59] Minimum; maximum, 7⅞ hours per day, 46 per week.
[60] Maximum; minimum, 6½ hours per day, 39 per week.
[61] Per 1,000 ems nonpareil, and 45 cents per day bonus.
[62] Per 1,000 ems nonpareil, and $1 per day bonus.
[63] 44 hours per week, June to September, inclusive.
[64] Per 1,000 ems nonpareil, and $1.25 per day bonus.
[65] For 4,000 ems per hour; 105 cents for 4,500 ems, and 1 cent for each 100 ems over 4,500 per hour.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Machinists, manufacturing shops—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Denver	40.0	40.0	40.0	42.5	52.0	68.0	72.0	85.0	54	54	54	51	48	48	48	48
Indianapolis	.....	.....	.....	47.5	62.5	70.0	80.0	80.0	.....	.....	.....	50	48	48	45	45
Kansas City, Mo	37.0	40.0	50.0	50.0	75.0	75.0	100.0	100.0	54	54	48	48	48	48	44	44
Little Rock	42.5	42.5	42.5	45.0	60.0	68.0	85.0	85.0	54	54	54	54	54	48	45	48
Los Angeles	.....	.....	.....	.....	.....	70.0	70.0	70.0	.....	.....	.....	.....	.....	48	48	48
Memphis	40.0	42.0	42.0	50.0	55.0	70.0	100.0	100.0	54	54	54	48	48	48	48	48
Manchester	.....	.....	.....	.....	.....	40.0	50.0	50.0	.....	.....	.....	.....	.....	48	48	48
Milwaukee	.....	.....	.....	.....	.....	65.0	75.0	62.5	.....	.....	.....	.....	.....	52½	48	48
Minneapolis	33.5	33.5	.....	40.0	40.0	72.5	90.0	90.0	59	59	.....	54	54	48	44	44
New Haven	{33.3 / 35.0}	....	42.5	50.0	60.0	60.0	80.0	72.0	{54 / 59}	....	48	48	48	48	48	48
New Orleans	38.9	38.9	43.8	50.0	68.8	80.0	80.0	80.0	54	54	48	48	48	48	48	44
New York	{38.2 / 40.6}	{38.2 / 40.6}	46.9	56.3	{73.0 / 82.0}	73.0	80.0	85.0	48	48	48	48	48	48	48	{48 / 44}
						90.0	90.0	95.0	51	51						
Omaha	40.0	40.0	40.0	{45.0 / 50.0}	60.0	70.0	85.0	85.0	54	54	54	54	48	48	48	48
Philadelphia	33.3	35.0	45.0	48.0	{65.0 / 72.5}	72.0 / 80.0	80.0	75.0	54	54	54	{48 / 54}	48 / 54	48 / 54	48	48
Portland, Oreg.	45.0	45.0	45.0	50.0	75.0	80.0	88.0	88.0	48	48	48	48	48	44	44	44
Richmond, Va.	35.5	35.5	35.5	{37.5 / 51.0}	57.0	75.0	75.0	68.0	55	55	55	{48 / 55}	50	48	48	48
St. Louis	33.0	37.0	37.0	44.0	60.0	70.0	85.0	90.0	54	54	54	54	48	48	48	48
St. Paul	33.5	35.0	40.0	40.0	40.0	72.5	90.0	90.0	{54 / 59}	54	54	54	54	48	44	44
Salt Lake City	44.0	43.0	43.0	56.3	62.5	75.0	87.5	87.5	48	54	54	48	48	44	a 48	a 48
San Francisco	43.8	43.8	50.0	50.0	72.5	80.0	90.0	90.0	48	48	48	48	a 48	44	44	44
Seattle	45.0	45.0	45.0	50.0	75.0	80.0	88.0	80.0	48	48	48	48	48	44	44	44
Washington	40.6	{40.6 / 50.0}	50.0	55.0	68.0	78.0	86.0	86.0	48	48	48	48	48	a 48	a 48	a 48

Molders, iron.

Atlanta	35.0	35.0	35.0	41.7	50.0	70.0	80.0	80.0	60	60	60	54	54	54	50	50
Baltimore	36.1	36.1	36.1	46.9	68.8	68.8	93.8	87.5	54	54	54	48	48	48	48	48
Boston	38.9	38.9	44.4	50.0	58.3	58.3	90.0	90.0	54	54	54	54	54	54	48	48
Buffalo	36.1	36.1	41.7	47.2	58.3	58.3	88.0	75.0	54	54	54	54	54	54	48	48
Chicago	44.4	44.4	50.0	56.3	68.8	80.0	105.0	90.0	54	54	48	48	48	48	48	48
Cincinnati	36.1	38.9	44.4	44.4	55.5	58.3	81.3	75.0	54	54	54	54	54	54	48	48
Cleveland	38.9	38.9	38.9	44.4	61.1	61.1	90.0	75.0	54	b 54	b 54	54	66 50	66 50	48	48
Denver	44.4	44.4	44.4	50.0	59.4	75.0	80.0	100.0	54	54	54	48	48	48	48	48
Detroit	38.9	38.9	44.4	50.0	61.1	80.0	100.0	90.0	54	54	54	54	54	48	48	48
Fall River	33.3	33.3	36.1	41.7	50.0	65.6	72.5	78.1	54	54	54	54	54	48	48	48
Indianapolis	36.1	36.1	38.9	44.4	55.6	55.6	90.0	75.0	54	54	54	54	54	54	48	48
Kansas City, Mo	40.0	40.0	45.0	50.0	60.0	67.5	90.0	90.0	54	54	54	54	54	48	48	48
Little Rock	38.9	38.9	38.9	41.7	44.4	68.0	80.0	90.0	54	54	54	54	54	54	54	54
Los Angeles	.....	.....	.....	.....	.....	80.0	87.5	87.5	.....	.....	.....	.....	.....	48	48	48
Manchester	.....	.....	.....	.....	.....	72.5	72.5	90.0	.....	.....	.....	.....	.....	48	48	48
Memphis	38.9	40.0	40.0	40.0	56.0	68.0	82.0	85.0	54	54	54	54	54	54	54	54
Minneapolis	36.7	38.9	38.9	44.4	55.6	72.5	77.8	77.8	54	54	54	54	54	48	54	54
Newark, N. J.	38.9	38.9	41.7	47.2	55.6	75.0	88.0	80.0	54	54	54	54	54	48	48	48
New Orleans	36.1	36.1	38.9	50.0	62.5	80.0	80.0	80.0	54	54	54	48	48	48	48	48
New York	38.9	41.7	41.7	47.2	52.8	75.0	88.0	88.0	54	54	54	54	54	48	48	48
Omaha	36.7	40.0	40.0	45.0	55.6	68.0	85.0	93.8	54	54	54	67 54	54	48	48	48
Philadelphia	36.1	38.9	44.4	50.0	68.8	68.8	100.0	90.0	54	54	54	54	48	48	48	48
Pittsburgh	44.4	44.4	44.4	50.0	65.6	75.0	93.8	84.4	54	54	54	48	48	48	48	48
Portland, Oreg.	41.7	41.7	41.7	56.3	72.5	87.5	93.8	88.0	54	54	54	48	48	44	44	48

a 44 hours per week, June to August, inclusive.
b 49½ hours per week, June to August, inclusive.
66 54 hours per week, November to April, inclusive.
67 49½ hours per week, May 19 to Sept. 15.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Molders, iron—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Richmond, Va.	33.3	33.3	33.3	47.2	58.3	70.0	80.0	80.0	54	54	54	54	54	54	48	48
St. Louis	38.9	38.9	41.7	50.0	61.1	75.0	90.0	85.0	54	54	54	54	54	48	48	48
St. Paul	38.9	38.9	42.8	47.2	55.6	72.5	90.0	90.0	54	54	54	54	54	48	48	48
Salt Lake City	41.7	41.7	44.4	56.3	62.5	75.0	87.5	87.5	54	54	54	48	48	[68] 48	[68] 48	[68] 48
San Francisco	50.0	50.0	50.0	53.1	72.5	80.0	88.0	100.0	48	48	48	48	[68] 48	44	44	44
Scranton	25.0	27.5	27.5	38.9	58.3	71.9	87.5	75.0	60	60	60	54	54	48	48	48
Seattle	44.4	44.4	44.4	56.3	82.5	87.5	88.0	80.0	54	54	54	48	48	44	44	44
Washington	.....	30.6	34.4	43.8	68.8	68.8	80.0	80.0	.....	54	48	48	48	48	48	48

Painters.

Atlanta	33.3	33.3	33.3	36.1	50.0	60.0	60.0	85.0	[69] 53	[69] 53	[69] 53	[69] 53	48	44	44	44
Baltimore	37.5	37.5	37.5	43.8	56.3	68.8	90.0	90.0	48	48	48	48	44	44	44	44
Birmingham	45.0	45.0	45.0	50.0	62.5	75.0	87.5	87.5	48	48	48	44	44	44	44	44
Boston	50.0	55.0	60.5	62.5	75.0	82.5	100.0	100.0	44	44	40	40	40	40	40	40
Buffalo	43.8	46.9	46.9	50.0	56.3	62.5	87.5	87.5	48	[68] 48	[68] 48	[68] 48	[70] 48	[70] 48	[70] 48	[70] 48
Charleston, S. C	25.0	25.0	25.0	25.0	{31.3 50.0	50.0 65.0	65.0 80.0	65.0 80.0	48	48	48	48	48	48	48	{44 48
Chicago	65.0	70.0	70.0	72.5	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	50.0	50.0	55.0	55.0	60.0	62.5	87.5	100.0	44	44	44	44	44	44	44	44
Cleveland	50.0	50.0	55.0	55.0	67.5	75.0	112.5	112.5	44	44	44	44	44	44	44	44
Dallas	50.0	50.0	50.0	60.0	70.0	87.5	100.0	100.0	44	44	44	44	44	44	44	44
Denver	50.0	50.0	55.0	62.5	68.8	85.0	100.0	112.5	44	44	44	44	44	44	44	44
Detroit	45.0	45.0	50.0	60.0	70.0	80.0	100.0	100.0	48	48	44	44	44	44	44	44
Fall River	37.5	37.5	41.0	41.0	55.0	62.5	100.0	100.0	44	44	44	44	44	44	44	44
Indianapolis	47.5	50.0	50.0	55.0	55.0	70.0	100.0	100.0	44	44	44	44	44	44	44	44
Jacksonville	37.5	37.5	37.5	45.0	50.0	75.0	87.5	75.0	48	48	48	48	48	44	44	44
Kansas City, Mo	60.0	60.0	60.0	60.0	70.0	82.5	100.0	100.0	44	44	44	44	44	44	44	44
Little Rock	50.0	50.0	55.0	55.0	60.0	80.0	100.0	100.0	48	48	44	44	44	44	44	44
Los Angeles	43.8	43.8	43.8	50.0	56.3	75.0	87.5	100.0	48	48	48	48	44	44	44	44
Louisville	45.0	50.0	50.0	50.0	50.0	62.5	75.0	87.5	48	48	48	48	48	44	44	44
Manchester	.....	31.3	37.5	37.5	50.0	62.5	80.0	80.0	.....	48	48	48	44	44	44	44
Memphis	50.0	52.5	52.5	60.0	62.5	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Milwaukee	50.0	50.0	50.0	55.0	60.0	70.0	85.0	85.0	44	44	44	44	44	44	44	44
Minneapolis	50.0	50.0	55.0	55.0	62.5	70.0	100.0	100.0	44	44	44	44	44	44	44	44
Newark, N. J.	44.0	44.0	46.9	50.0	62.5	75.0	100.0	100.0	44	44	44	44	44	44	44	44
New Haven	40.9	40.9	40.9	45.5	53.1	62.5	87.5	100.0	44	44	44	44	44	44	44	44
New Orleans	40.0	40.0	40.0	40.0	50.0	65.0	75.0	90.0	48	48	48	48	48	44	44	44
New York	50.0	50.0	62.5	62.5	62.5	75.0	112.5	112.5	44	44	44	44	44	44	40	40
Omaha	50.0	50.0	55.0	62.5	62.5	75.0	100.0	101.3	44	44	44	44	44	44	44	44
Philadelphia	42.5	42.5	42.5	45.0	60.0	75.0	100.0	100.0	44	44	44	44	44	44	40	40
Pittsburgh	55.0	58.1	58.1	65.0	67.5	87.5	112.5	112.5	44	44	44	44	44	44	44	44
Portland, Oreg.	50.0	50.0	50.0	50.0	70.0	90.0	100.0	90.0	48	44	44	44	44	44	44	44
Providence	45.5	45.5	45.5	50.0	62.5	62.5	90.0	90.0	44	44	44	44	44	44	44	44
Richmond, Va.	37.5	30.6	30.6	37.5	50.0	60.0	65.0	75.0	48	54	54	48	48	48	48	48
St. Louis	57.5	62.5	62.5	62.5	75.0	75.0	100.0	125.0	44	44	44	44	44	44	44	44
St. Paul	50.0	50.0	55.0	55.0	62.5	70.0	100.0	100.0	44	44	44	44	44	44	44	44
Salt Lake City	56.3	56.3	62.5	75.0	75.0	90.0	100.0	100.0	44	44	44	44	44	44	44	44
San Francisco	56.3	62.5	62.5	62.5	75.0	87.5	106.3	106.3	44	44	44	44	44	44	44	44
Scranton	40.0	42.5	45.0	50.0	50.0	65.0	87.5	87.5	48	44	44	44	44	44	44	44
Seattle	56.3	56.3	56.3	65.0	75.0	90.0	100.0	93.8	44	44	44	44	40	40	40	40
Washington	50.0	50.0	50.0	56.3	75.0	75.0	90.0	100.0	44	44	44	44	44	44	44	44

[68] 44 hours per week, June to August, inclusive.
[69] Work 53 hours, paid for 54.
[70] 44 hours per week, July to March, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Plasterers.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Atlanta	45.0	45.0	45.0	45.0	50.0	60.0	100.0	100.0	53	53	53	53	49½	49½	44	44
Baltimore	62.5	62.5	62.5	68.8	72.0	87.5	112.5	125.0	44	44	44	44	44	44	44	44
Birmingham	62.5	62.5	62.5	62.5	62.5	75.0	75.0	100.0	44	44	44	44	44	44	44	44
Boston	65.0	65.0	70.0	70.0	70.0	80.0	100.0	125.0	44	44	40	40	40	40	40	40
Buffalo	60.0	60.0	60.0	65.0	70.0	85.0	100.0	100.0	48	[71] 44	[71] 44	44	44	44	[72] 40	40
Charleston, S. C.	40.0	40.0	40.0	40.0	50.6	75.0	100.0	85.0	[73] 53	[73] 53	[73] 53	[73] 53	48	48	48	48
Chicago	75.0	75.0	75.0	75.0	81.3	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	68.8	75.0	75.0	75.0	75.0	87.5	100.0	112.5	44½	44½	44½	44½	44½	44½	44½	44½
Cleveland	62.5	68.8	68.8	75.0	85.0	90.0	125.0	125.0	44	44	44	44	44	44	44	44
Dallas	75.0	87.5	87.5	87.5	100.0	112.5	112.5	150.0	44	44	44	44	44	44	44	44
Denver	75.0	75.0	75.0	87.5	87.5	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Detroit	68.8	68.8	68.8	75.0	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Fall River	55.0	60.0	60.0	65.0	75.0	85.0	115.0	115.0	48	48	44	44	44	44	44	44
Indianapolis	62.5	68.8	68.8	72.0	75.0	87.5	100.0	112.5	44½	44½	44½	44½	44½	44½	44	44
Jacksonville	56.3	62.5	56.3	56.3	68.8	75.0	87.5	87.5	48	48	48	48	44	44	44	44
Kansas City, Mo	75.0	75.0	75.0	75.0	87.5	100.0	120.0	120.0	44	44	44	44	44	44	44	44
Little Rock	62.5	62.5	62.5	75.0	75.0	87.5	112.5	112.5	48	48	[74] 44	[74] 44	[74] 44	[74] 44	44	44
Los Angeles	75.0	75.0	75.0	62.5	75.0	87.5	112.5	125.0	44	44	44	44	44	44	44	40
Louisville	65.0	65.0	65.0	65.0	70.0	75.0	100.0	112.5	44	44	44	44	44	44	44	44
Manchester	50.0	50.0	60.0	60.0	75.0	90.0	112.5	112.5	48	44	44	44	44	44	44	44
Memphis	75.0	75.0	75.0	75.0	87.5	87.5	100.0	112.5	44	44	44	44	44	44	44	44
Milwaukee	65.0	65.0	65.0	65.0	70.0	87.5	87.5	112.5	44	44	44	44	44	44	44	44
Minneapolis	70.0	70.0	70.0	75.0	75.0	90.0	112.5	125.0	44	44	44	44	44	44	44	44
Newark, N. J.	65.0	65.0	70.0	75.0	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
New Haven	60.0	60.0	60.0	65.0	70.0	82.5	100.0	100.0	44	44	44	44	44	44	44	44
New Orleans	62.5	50.0	50.0	62.5	62.5	75.0	100.0	100.0	48	48	48	45	45	45	45	45
New York	68.8	68.8	75.0	75.0	75.0	93.8	118.8	125.0	44	44	44	44	44	44	44	44
Omaha	75.0	75.0	75.0	75.0	80.0	87.5	112.5	125.0	44	44	44	44	44	44	44	44
Philadelphia	62.5	62.5	65.0	70.0	75.0	80.0	125.0	125.0	44	40	40	40	40	40	40	40
Pittsburgh	62.5	71.9	75.0	75.0	75.0	85.0	115.0	125.0	44	44	44	44	44	44	44	44
Portland, Oreg.	75.0	75.0	75.0	75.0	87.5	110.0	112.5	112.5	44	44	44	44	44	44	44	44
Providence	62.5	62.5	62.5	68.8	68.8	80.0	100.0	115.0	44	44	44	40	40	40	40	40
Richmond, Va.	37.5	.....	.....	.....	.....	62.5	75.0	87.5	48	.....	.....	.....	.....	44	44	44
St. Louis	75.0	75.0	75.0	75.0	87.5	100.0	125.0	137.5	44	44	44	44	44	44	44	44
St. Paul	62.5	62.5	70.0	70.0	75.0	90.0	112.5	100.0	44	44	44	44	44	44	44	44
Salt Lake City	75.0	75.0	75.0	87.5	87.5	100.0	125.0	112.5	44	44	44	44	44	44	44	44
San Francisco	87.5	87.5	87.5	87.5	100.0	112.5	125.0	137.5	44	44	40	40	40	40	40	40
Scranton	55.0	60.0	65.0	65.0	70.0	80.0	100.0	150.0	44	44	44	44	44	44	44	44
Seattle	75.0	75.0	75.0	87.5	100.0	112.5	125.0	125.0	44	44	40	40	40	40	40	40
Washington	62.5	62.5	62.5	70.0	70.0	87.5	100.0	125.0	44	44	44	44	44	44	44	44

Plasterers' laborers.

Boston	40.0 41.5	41.5	45.0	45.0	50.0	60.0	80.0	80.0	44	44	40	40	40	40	40	40
Chicago	48.0	50.0	50.0	50.0	56.3	62.5	106.3	106.3	44	44	44	44	44	44	44	44
Cincinnati	45.0	45.0	45.0	45.0	50.0	65.0	85.0	85.0	45	45	45	45	45	45	45	45
Cleveland	35.0	35.0	35.0	45.0	55.0	57.5	87.5	87.5	48	44	44	44	44	44	44	44
Dallas	30.0	.....	.....	.....	35.0	35.0	50.0	75.0	44	.....	.....	.....	48	48	44	44
Denver	43.8	43.8	43.8	50.0	59.4	68.8	81.3	81.3	44	44	44	44	44	44	44	44
Detroit	37.5	43.8	43.8	50.0	50.0	75.0	100.0	75.0	44	44	44	44	44	44	44	44
Indianapolis	.....	.....	42.5	45.0	50.0	55.0	75.0	70.0	.....	.....	44	44	44	44	44	44
Kansas City, Mo	37.5	45.0	45.0	50.0	55.0	68.8	90.0	90.0	44	44	44	44	44	44	44	44
Los Angeles	61.4	56.3	56.3	50.0	62.5	75.0	100.0	112.5	44	44	44	44	44	44	44	40
Louisville	38.0	38.0	38.0	45.0	45.0	55.0	55.0	80.0	44	44	44	44	44	44	47	44
Memphis	32.5	.....	.....	.....	50.0	50.0	75.0	62.5	44	.....	.....	.....	44	44	44	44
Milwaukee	32.5	37.5	37.5	42.9	50.0	55.0	70.0	85.0	48	48	48	48	48	[75] 44	44	44
Minneapolis	40.6	[76] 45.0	[76] 45.0	50.0	55.0	60.0	85.0	85.0	48	44	44	44	44	44	44	44

[71] 48 hours per week, Nov. 16 to Mar. 15.
[72] 44 hours per week, Nov. 14 to May 14.
[73] Work 53 hours, paid for 54.
[74] 48 hours per week, October to March, inclusive.
[75] 48 hours per week, November to April, inclusive.
[76] For tenders.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Plasterers' laborers—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Newark, N. J.	.....	35.0	37.5	45.0	45.0	50.0	87.5	87.5	.....	44	44	44	44	44	44	44
New Orleans	22.5	22.5	22.5	28.3	28.3	35.0 / 45.0	50.0 / 65.0	50.0 / 65.0	48	48	48	45	45	45	45	45
New York	40.6	40.6	43.8	46.9	56.3	62.5	87.5	93.8	44	44	44	44	44	44	44	44
Philadelphia	43.8	44.0	44.0	46.9	50.0	62.5	110.0	110.0	44	44	40	40	44	44	44	44
Pittsburgh	40.0	40.0	45.0	45.0	55.0	60.0	90.0	100.0	44	44	44	44	44	44	44	44
Portland, Oreg.	[76]50.0	[76]50.0	[76]50.0	50.0	62.5	75.0	93.8	90.0	48	48	48	48	48	44	44	44
Providence	.....	.....	.....	45.0	50.0	55.0	75.0	75.0	.....	.....	.....	44	44	44	44	44
St. Louis	[77]56.3	56.3	56.3	56.3	62.5	75.0	87.5	100.0	44	44	44	44	44	44	44	44
Salt Lake City	56.3	56.3	56.3	62.5	68.8	75.0	100.0	87.5	44	44	44	44	44	44	44	44
San Francisco	62.5	62.5	62.5	62.5	68.8	87.5	106.3	112.5	44	44	44	44	44	44	40	40
Scranton	.....	.....	35.0	35.0	35.0	50.0	58.5	70.0	.....	.....	44	44	44	44	44	44
Seattle	50.0	50.0	50.0	62.5	75.0	87.5	87.5	87.5	44	44	44	44	44	40	40	40
Washington	31.3	31.3	31.3	37.5	50.0	50.0	75.0	62.5	44	44	44	44	44	44	44	44

Plumbers.

Baltimore	50.0	50.0	50.0	56.3	68.8	75.0	87.5	100.0	48	48	48	44	44	44	44	44
Birmingham	68.8	75.0	75.0	75.0	87.5	112.5	150.0	150.0	44	44	44	44	44	44	44	44
Boston	60.0	65.0	65.0	68.8	75.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	56.3	56.3	56.3	62.5	68.8	75.0	100.0	100.0	48	[78] 48	[79]48	[79]48	44	44	44	44
Charleston, S.C.	.....	43.8	43.8	50.0	59.0	75.0	100.0	100.0	.....	48	48	48	48	48	44	44
Chicago	75.0	75.0	75.0	75.0	75.0	84.4	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	61.8	61.8	61.8	65.6	65.6	75.0	100.0	100.0	44½	44½	44	44	44	44	44	44
Cleveland	62.5	62.5	68.8	75.0	81.3	90.0	100.0	137.5	44	44	44	44	44	44	44	44
Dallas	68.8	75.0	75.0	81.3	87.5	100.0	125.0	137.5	44	44	44	44	44	44	44	44
Denver	62.5	62.5	62.5	75.0	87.5	87.5	100.0	106.3	44	44	44	44	44	44	44	44
Detroit	56.3	60.0	62.5	68.8	75.0	90.0	125.0	100.0	48	48	44	44	44	44	44	44
Fall River	43.8	43.8	50.0	50.0	56.3	67.5	100.0	100.0	48	48	44	44	44	44	44	44
Indianapolis	62.5	62.5	62.5	67.5	75.0	87.5	100.0	125.0	44	44	44	44	44	44	44	44
Jacksonville	62.5	62.5	62.5	62.5	75.0	80.0	93.8	112.5	48	48	48	48	44	44	44	44
Kansas City, Mo	62.5	68.8	75.0	75.0	87.5	100.0	100.0	125.0	48	44	44	44	44	44	44	44
Little Rock	56.3	62.5	62.5	68.8	75.0	87.5	125.0	112.5	[80]48	[81] 44	[81] 44	44	44	44	44	44
Los Angeles	56.3	56.3	56.3	62.5	68.8	81.3	112.5	112.5	48	48	48	48	44	44	44	44
Louisville	60.0	60.0	60.0	60.0	70.0	70.0	80.0	100.0	44	44	44	44	44	44	44	44
Manchester	31.3	31.3	47.7	47.7	50.0	70.0	100.0	90.0	48	48	44	44	44	44	44	44
Memphis	62.5	62.5	62.5	62.5	81.3	93.8	125.0	125.0	48	48	48	48	48	44	44	44
Milwaukee	62.5	62.5	62.5	62.5	68.8	75.0	87.5	100.0	44	44	44	44	44	44	44	44
Minneapolis	56.3	62.5	62.5	62.5	68.8	75.0	100.0	100.0	48	44	44	44	44	44	44	44
Newark, N. J.	62.5	62.5	62.5	62.5	75.0	87.5	112.5	112.5	44	44	44	44	44	44	44	44
New Haven	50.0	54.5	54.5	54.5	62.5	75.0	87.5	100.0	44	44	44	44	44	44	44	44
New Orleans	56.3	56.3	56.3	56.3	68.8	80.0	90.0	100.0	48	48	48	48	48	48	48	44
New York	68.8	68.8	68.8	68.8	68.8	75.0	75.0	112.5	112.5	44	44	44	44	44	44	44
Omaha	68.3	68.3	68.3	75.0	75.0	87.5	125.0	125.0	44	44	44	44	44	44	44	44
Philadelphia	43.8 / 50.0	43.8 / 50.0	43.8 / 50.0	56.3	62.5	80.0	90.0	115.0	44	44	44	44	44	44	44	44
Pittsburgh	62.5	68.8	68.8	75.0	75.0	93.8	106.3	125.0	44	44	44	44	44	44	44	44
Portland, Oreg.	75.0	75.0	75.0	75.0	81.3	100.0	112.5	112.5	44	44	44	44	44	44	44	44
Providence	56.3	56.3	56.3	62.5	75.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Richmond, Va.	50.0	50.0	50.0	50.0	62.5	75.0	75.0	75.0	48	48	48	48	48	44	44	44
St. Louis	66.3	75.0	75.0	75.0	81.3	100.0	125.0	125.0	44	44	44	44	44	44	44	44
St. Paul	62.5	62.5	62.5	62.5	68.8	75.0	87.5	100.0	44	44	44	44	44	44	44	44
Salt Lake City	75.0	75.0	75.0	75.0	87.5	100.0	112.5	100.0	44	44	44	44	44	44	44	44
San Francisco	75.0	75.0	75.0	81.3	87.5	100.0	125.0	125.0	44	44	44	44	44	44	44	44
Scranton	50.0	53.1	53.8	53.8	62.5	75.0	87.5	87.5	48	[82] 44	44	44	44	44	44	44
Seattle	81.3	75.0	75.0	81.3	90.0	100.0	112.5	112.5	44	44	44	44	44	40	40	40
Washington	50.0	56.3	56.3	56.3	75.0	87.5	100.0	100.0	48	48	44	44	44	44	44	44

[76] For tenders.
[77] For hepers.
[79] 44 hours per week, June to August, inclusive.
[80] 44 hours per week, June to September, inclusive.
[81] 48 hours per week, November to April, inclusive.
[82] 48 hours per week, October to April, inclusive.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Sheet-metal workers.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Atlanta	33.3	33.3	33.3	33.3	60.0	60.0	60.0	80.0	53	50	50	[83] 50	48	48	48	48
Baltimore	40.0	40.0	40.0	45.8	62.5	80.0	80.0	90.0	48	48	48	48	44	44	44	44
Birmingham	55.0	55.0	50.0	50.0	65.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Boston	55.0	55.0	60.0	60.0	70.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	45.0	50.0	50.0	50.0	56.3	62.5	87.5	87.5	48	[79] 48	[79]48	[79] 48	[79] 48	44	44	44
Chicago	65.0	68.8	70.0	70.0	70.0	75.0	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	45.0	50.0	50.0	50.0	52.5	56.0	70.0	80.0	44	44	44	48	48	48	48	48
Cleveland	45.0	50.0	50 0	60.0	80.0	85.0	125.0	125.0	48	48	44	44	44	44	44	44
Dallas	50.0	62.5	62.5	68.8	75.0	87.5	100.0	100.0	48	44	44	44	44	44	44	44
Denver	56.3	56.3	56.3	62.5	75.0	87.5	100.0	100.0	44	44	44	44	44	44	44	44
Detroit	40.0	50.0	50.0	60.0	70.0	80.0	125.0	100.0	48	48	48	44	44	44	44	44
Fall River	.....	.....	37.5	43.8	50.0	62.5	100.0	100.0	.....	.....	44	44	44	44	44	44
Indianapolis	47.5	55.0	55.0	57.0	60.0	60.0	100.0	100.0	48	44	44	44	44	44	44	44
Kansas City, Mo	57.5	62.5	62.5	62.5	67.5	70.0	100.0	100.0	44	44	44	44	44	44	44	44
Little Rock	50.0	52.5	52.5	60.0	65.0	80.0	100.0	100.0	48	48	48	48	48	[84] 48	44	44
Los Angeles	56.3	56.3	56.3	56.3	68.5	68.5	100.0	112.5	44	44	44	44	44	44	44	44
Louisville	40.0	45.0	45.0	47.5	50.0	65.0	80.0	80.0	48	44	44	44	44	44	44	44
Manchester	34.4	34.4	34.4	34.4	37.5	44.3	100.0	90.0	48	48	48	48	44	44	44	44
Memphis	45.0	50.0	50.0	53.1	62.5	75.0	100.0	100.0	48	48	48	48	48	44	44	44
Milwaukee	42.5	47.5	50.0	52.5	60.0	60.0	67.5	100.0	48	[85] 48	[85] 48	[79] 48	[79] 48	[79] 48	44	44
Minneapolis	50.0	50.0	50.0	50 0	56.3	70.0	100.0	100.0	48	48	48	48	44	44	44	44
Newark, N. J	60.0	60.0	60.0	62.5	75.0	87.5	100.0	112.5	44	44	44	44	44	44	44	44
New Haven	47.7	47.7	50.0	54.5	59.1	75.0	87.5	100.0	44	44	44	44	44	44	44	44
New Orleans	.....	40.0	40.0	45.0	68.8	80.0	100.0	100.0	.....	48	48	44	44	44	44	44
New York	59.4	62.5	62.5	62.5	70.0	75.0	112.5	112.5	44	44	44	44	44	44	44	44
Omaha	42.5	42.5	42.5	50.0	68.0	75.0	112.5	112.5	44	44	44	44	44	44	44	44
Philadelphia	50.0	50.0	50.0	56.3	70.0	75.0	110.0	100.0	44	44	44	44	44	44	44	44
Pittsburgh	55.0	57.5	60.0	60.0	70.0	80.0	90.0	112.5	44	44	44	44	44	44	44	44
Portland, Oreg.	56.3	56.3	56.3	65.6	82.5	86.0	100.0	100.0	44	44	44	44	44	44	44	44
Providence	46.0	48.0	50.0	52.0	57.0	65.0	100.0	100.0	44	44	44	44	44	44	44	44
Richmond, Va.	.....	.....	.....	41.9	50.0	70.0	80.0	80.0	.....	.....	.....	48	48	48	48	48
St. Louis	60.0	60.0	60.0	62.5	65.0	75.0	85.0	125.0	44	44	44	44	44	44	44	44
St. Paul	50.0	50.0	50.0	50.0	56.3	70.0	100.0	100.0	48	48	48	44	44	44	44	44
Salt Lake City	57.5	62.5	62.5	62.5	62.5	87.5	100.0	90.0	44	44	44	44	44	44	44	44
San Francisco	68.8	68.8	68.8	75.0	82.5	100.0	112.5	125.0	44	44	44	44	44	44	44	44
Scranton	43.8	46.9	46.9	50.0	56.3	75.0	87.5	87.5	48	44	44	44	44	44	44	44
Seattle	56.3	62.5	62.5	68.8	82.5	90.0	100.0	100.0	44	44	44	44	44	44	44	44
Washington	50.0	50.0	50.0	56.3	70.0	75.0	92.5	100.0	44	44½	44½	44½	44	44	44	44

Stonecutters.

Atlanta	50.0	50.0	50.0	50.0	62.5	75.0	100.0	100.0	48	48	48	44	44	44	44	44
Baltimore	50.0	50.0	56.3	56.3	56.3	75.0	100.0	100.0	44½	44½	44	44	44	44	44	44
Boston	56.3	56.3	56.3	62.5	70.0	70.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	56.3	56.3	56.3	6.5	62.5	75.0	100.0	100.0	48	48	44	44	44	44	44	44
Chicago	62.5	62.5	62.5	70.0	70.0	81.3	125.0	125.0	44	44	44	44	44	44	44	44
Cincinnati	56.3	60.0	62.5	65.0	70.0	77.5	115.0	125.0	44½	44½	44½	44	44	44	44	44
Cleveland	60.0	62.5	62.5	70.0	77.5	80.0	112.5	125.0	44	44	44	44	44	44	44	44
Dallas	62.5	62.5	62.5	75.0	75.0	87.5	100.0	125.0	44	44	44	44	44	44	44	44
Denver	62.5	62.5	62.5	62.5	75.0	87.5	100.0	112.5	44	44	44	44	44	44	44	44
Detroit	62.5	62.5	65.0	70.0	70.0	80.0	125.0	112.5	44	44	44	44	44	44	44	44
Indianapolis	56.3	56.3	56.3	62.5	62.5	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Kansas City, Mo.	56.3	62.5	62.5	62.5	62.5	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Little Rock	55.0	55.0	55.0	55.0	60.0	65.0	100.0	100.0	44	44	44	44	44	44	44	44
Louisville	56.3	56.3	56.3	60.0	60.0	75.0	100.0	100.0	48	48	44	44	44	44	44	44
Memphis	65.0	65.0	65.0	65.0	75.0	75.0	100.0	112.5	44	44	44	44	44	44	44	44

[79] 44 hours per week, June to August, inclusive.
[83] 54 hours per week, July to August, inclusive.
[84] 44 hours per week, July to September, inclusive.
[85] 44 hours per week, June 15 to Sept. 15.

UNION SCALE OF WAGES AND HOURS OF LABOR, 1913 TO 1921, BY OCCUPATIONS—Con.

Stonecutters—Concluded.

City.	Rate per hour (cents).								Hours per week.							
	1913	1915	1916	1917	1918	1919	1920	1921	1913	1915	1916	1917	1918	1919	1920	1921
Minneapolis	56.3	62.5	62.5	62.5	62.5	75.0	87.5	112.5	44	44	44	44	44	44	44	44
Newark, N. J	68.8	68.8	68.8	68.8	68.8	84.4	112.5	112.5	44	44	44	44	44	44	44	44
New Haven	56.3	56.3	56.3	56.3	60.0	60.0	100.0	100.0	44	44	44	44	44	44	44	44
New York	68.8	68.8	68.8	68.8	68.8	84.4	100.0	112.5	44	44	44	44	44	44	44	44
Omaha	58.8	58.8	58.8	62.5	67.5	75.0	100.0	112.5	44	44	44	44	44	44	44	44
Philadelphia	50.0	56.3	56.3	65.0	65.0	82.5	135.0	135.0	44	44	44	44	44	44	44	44
Richmond, Va	54.5	54.5	54.5	54.5	62.5	75.0	87.5	100.0	44	44	44	44	44	44	44	44
St. Louis	56.3	62.5	62.5	62.5	70.0	85.0	100.0	100.0	44	44	44	44	44	44	44	44
St. Paul	56.3	60.0	60.0	62.5	62.5	75.0	87.5	112.5	44	44	44	44	44	44	44	44
San Francisco	70.0	70.0	70.0	70.0	70.0	100.0	100.0	112.5	44	44	44	44	44	44	44	44
Scranton	50.0	50.0	50.0	50.0	56.3	60.0	90.0	100.0	48	48	44	44	44	44	44	44
Washington	54.0	54.0	56.3	56.3	65.0	87.5	100.0	100.0	44	44	44	44	44	44	44	44

Structural iron workers.

Atlanta	62.5	62.5	62.5	62.5	75.0	80.0	95.0	95.0	44	44	44	44	44	44	44	44
Baltimore	56.3	56.3	62.5	62.5	75.0	100.0	125.0	125.0	44	44	44	44	44	44	44	44
Boston	62.5	62.5	62.5	68.8	80.0	80.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	60.0	62.5	62.5	62.5	70.0	85.0	100.0	125.0	48	[89] 48	[89] 48	[89] 48	44	44	44	44
Chicago	68.0	68.0	68.0	69.0	70.0	87.5	125.0	125.0	44	[90] 44	[90] 44	[90] 44	[90] 44	44	44	44
Cincinnati	62.5	62.5	62.5	65.0	75.0	75.0	100.0	90.0	44½	44½	44½	44	44	44	44	44
Cleveland	65.0	70.0	70.0	80.0	90.0	100.0	125.0	125.0	[91] 44	[92] 44	44	44	44	44	44	44
Dallas	62.5	67.5	67.5	67.5	75.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44
Denver	56.3	62.5	62.5	70.0	75.0	87.5	100.0	103.1	44	44	44	44	44	44	44	44
Detroit	60.0	65.0	65.0	65.0	80.0	90.0	125.0	125.0	[89] 48	48	44	44	44	44	44	44
Indianapolis	65.0	70.0	70.0	75.0	75.0	85.0	125.0	125.0	44	44	44	44	44	44	44	44
Kansas City, Mo.	62.5	68.8	68.8	68.8	75.0	90.0	110.0	110.0	44	44	44	44	44	44	44	44
Los Angeles	50.0	50.0	50.0	50.0	62.5	75.0	87.5	100.0	48	48	48	48	48	44	44	44
Louisville	50.0	50.0	50.0	60.0	70.0	80.0	100.0	100.0	48	44	44	44	44	44	44	44
Manchester	-----	-----	-----	-----	-----	-----	100.0	100.0	-----	-----	-----	-----	-----	-----	44	44
Milwaukee	56.3	62.5	62.5	62.5	70.0	80.0	100.0	100.0	[93] 44	[93] 44	[93] 44	[93] 44	[90] 44	44	44	44
Minneapolis	56.3	62.5	62.5	62.5	68.8	87.5	87.5	100.0	48	[94] 44	[94] 44	44	44	44	44	44
Newark, N. J	62.5	62.5	68.8	72.5	75.0	87.5	112.5	112.5	44	44	44	44	44	44	44	44
New Haven	62.5	62.5	62.5	62.5	80.0	92.5	106.3	106.3	44	44	44	44	44	44	44	44
New Orleans	62.5	62.5	62.5	62.5	75.0	75.0	100.0	100.0	44	44	44	44	44	44	44	44
New York	62.5	62.5	66.3	68.8	80.0	87.5	112.5	112.5	44	44	44	44	44	44	44	44
Omaha	58.8	62.5	65.0	68.8	75.0	90.0	115.0	112.5	48	[93] 44	[93] 44	[93] 44	44	44	44	44
Philadelphia	60.0	60.0	60.0	70.0	92.5	92.5	112.5	112.5	44	44	44	44	44	44	44	44
Pittsburgh	62.5	62.5	62.5	70.0	87.5	100.0	100.0	125.0	44	44	44	44	44	44	44	44
Portland, Oreg.	62.5	62.5	62.5	70.0	87.5	100.0	112.5	101.3	44	44	44	44	44	44	44	44
Providence	56.3	62.5	62.5	68.8	80.0	92.5	100.0	100.0	44	44	44	44	44	44	44	44
Richmond, Va	56.3	62.5	62.5	62.5	80.0	92.5	100.0	100.0	44	44	44	44	44	44	44	44
St. Louis	65.0	65.0	67.5	70.0	80.0	92.5	125.0	125.0	44	44	44	44	44	44	44	44
St. Paul	56.3	62.5	62.5	62.5	68.8	80.0	100.0	100.0	48	[99] 48	[89] 48	[89] 48	44	44	44	44
Salt Lake City	62.5	62.5	62.5	68.8	81.3	100.0	112.5	100.0	44	44	44	44	44	44	44	44
San Francisco	75.0	75.0	75.0	75.0	87.5	100.0	112.5	125.0	44	44	44	44	44	44	44	44
Scranton	56.3	56.3	62.5	62.5	68.8	87.5	100.0	112.5	48	48	[89] 48	[89] 48	[89] 48	44	44	44
Seattle	62.5	62.5	62.5	75.0	87.5	100.0	112.5	112.5	44	44	44	44	44	40	44	44
Washington	56.3	62.5	62.5	70.0	80.0	92.5	98.0	125.0	44	44	44	44	44	44	44	44

[89] 44 hours per week, June to September, inclusive.
[90] 48 hours per week, December to March, inclusive.
[91] 48 hours per week, October to April, inclusive.
[92] 48 hours per week, October to March, inclusive.
[93] 48 hours per week, November to April, inclusive.
[94] 48 hours per week, September to April, inclusive.

Wage Scales in the Building Trades.

Prevailing Hourly Scales, July 31, 1921, as Reported by the National Association of Building Trades.

THE following hourly wage scales in the building trades were compiled by the National Association of Builders' Exchanges and are reprinted in the American Contractor (Chicago) for August 6, 1921 (pp. 34–35). Where two rates are given they are the minimum and maximum wage, respectively.

HOURLY WAGE SCALES IN THE BUILDING TRADES, JULY 31, 1921.

City.	Carpenters.	Cement finishers.	Electricians.	Hod carriers.	Laborers.	Lathers.	Painters.	Plasterers.
Akron, Ohio	$0.65	$0.70	$0.80	$0.60	$0.25	$0.75	$0.75	.....
	.85	.80	1.00	.75	.40	1.00	.85	$1.04
Alliance, Ohio	.....	.....	.....	.....	.40	.....	.....	.....
	.90	.....	.90	.....	.50	.75	.85	1.00
Atlanta, Ga	.....	.....	.....	.30	.15	.....	.50	.....
	.70	.90	1.00	.40	.25	.90	.60	.90
Baltimore, Md	.....	.....	.....	.....	.30	.....	.....	.....
	.90	1.00	1.12½	.75	.40	1.00	.87½	1.25
Buffalo, N. Y	.80	.60	.....	.40	.30	.....	.75	.....
	.87½	.85	.90	.50	.40	1.00	.87½	1.00
Boston, Mass	.....	.....	.....	.....	.55	.....	.....	.....
	.90	.90	.90	.60	.60	.90	.90	.90
Chicago, Ill.[1]	.....	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ohio	.....	.....	.....	.....	.....	.....	.....	.....
	1.00	.90	.....	.85	.45	1.00	.87½	1.12½
Cleveland, Ohio	.....	.....	.....	.....	.....	.....	.....	.....
	1.04	1.04	1.10	.60	.57½	1.04	.93	1.04
Columbia, S. C	.45	.45	.....	.....	.....	[2] 3.00	.50	.....
	.60	.60	1.00	.25	.20		.60	.75
Columbus, Ohio	.....	.....	.70	.....	.....	.....	.....	.....
	.90	1.00	.90	.80	.35	1.10	.75	1.25
Dayton, Ohio	.....	.....	.....	.....	.....	.....	.....	.....
	.85	.80	.95	.....	.....	1.00	.80	1.10
Des Moines, Iowa	.....	.....	.....	.....	.....	.....	.....	.....
	.92	.90	.75	.65	.....	.....	.80	1.11¼
Detroit, Mich	.75	.....	.....	.....	.40	.....	.70	.....
	.80	.70	.87½	.....	.50	1.00	.80	1.00
Duluth, Minn	.....	.90	.....	.55	.55	.....	.....	.....
	.80	1.00	.90	.65	.65	1.00	.80	1.12½
Erie, Pa	.....	.....	.....	.50	.35	.....	.....	.....
	.85	.80	.85	.55	.40	1.12½	.75	1.12½
Flint, Mich	.75	.50	.87½	.....	.44	.....	.70	.....
	.80	.70	1.00	.....	.50	.....	.80	1.00
Fairmont, W. Va	1.00	1.25	1.00	.75	.55	1.25	1.00	1.25
Grand Rapids, Mich	.75	.50	.87½	.....	.44	.....	.70	.....
	.80	.70	1.00	.....	.50	.....	.80	1.00
Indianapolis, Ind	.....	.....	.....	.67½	.....	.....	.....	.....
	.92½	.90	1.00	.70	.35	.90	.....	1.12½
Kent, Ohio	.....	.....	.....	.....	.25	[4] 1.20	.....	.....
	.75	1.00	.90	.60	.50		.80	1.00
Lansing, Mich	.....	.....	.....	.....	.45	.80	.....	.90
	.75	.....	1.00	.....	.50	1.00	.70	1.00
Little Rock, Ark	.65	.....	.....	.....	.....	1.00	.....	.....
	.80	1.00	.92	.40	.30	1.25	.90	1.12
Los Angeles, Calif	[3] 7.00	.....	.....	.....	[3] 4.00	.....	[3] 7.00	.....
	[3] 8.00	[3] 8.00	[3] 8.00	[3] 9.00	[3] 5.00	[3] 8.00	[3] 9.00	[3] 10.00
Louisville, Ky	.....	.60	.75	.....	.30	[3] 7.90	.50	.....
	.80	1.00	.87½	.80	.40		.87½	1.12½
Memphis, Tenn	.60	.60	.....	.....	.....	.75	.....	.....
	.80	.80	.80	.62½	.25	1.00	.87½	1.12½
Milwaukee, Wis	.....	.....	.....	.....	[5] .40	.....	.....	.....
	.85	.65	1.00	.65	.....	1.00	.85	1.00
Newark, Ohio	.....	.....	.....	.....	.....	.....	.60	.....
	.75	.80	.75	.60	.40	.80	.70	1.00
New York, N. Y	1.12½	1.12½	1.12½	.87½	.81½	1.12½	1.12½	1.25
Norfolk, Va	.65	.50	.65	.50	.....	.....	.65	.87½
	.75	.65	.75	.60	.35	.75	.75	1.00

[1] Wage scales being arbitrated.
[2] Rate per thousand.
[3] Rate per day.
[4] Rate per bundle.
[5] And up.
[6] Rate per week.

HOURLY WAGE SCALES IN THE BUILDING TRADES, JULY 31, 1921—Continued.

City.	Carpenters.	Cement finishers.	Electricians.	Hod carriers.	Laborers.	Lathers.	Painters.	Plasterers.
Oklahoma City, Okla	[3] $7.00	[3] $8.00	[3] $7.00			[3] $8.00	[3] $7.00	[3] $9.00
Omaha Nebr	.75				$0.40			
Philadelphia, Pa	1.00	1.00	1.12½	$0.60	.50	1.00	1.00	1.25
Pittsburgh, Pa	.90	.80	.90			.90	.80	1.00
Raleigh, N. C	1.00	.87½	1.00	.80		.90	1.12½	1.00
Reading, Pa	.60	.75	1.00	.25 .30	.25	.50	.50	.80
Redfield, S. Dak	.75							
Richmond, Va	.85	.80	.90	.70	.50	1.00	.75	1.10
Rochester, N. Y	.80	1.00	1.10	.70	.50		.85	1.00
Saginaw, Mich	.85		.75	.70	.35		.75	1.12½
Savannah, Ga	1.00	1.25	1.10	.65	.65	.90	1.00	1.25
Sioux City, Iowa	.75	.50	.87½		.44		.70	
St. Joseph, Mo	.80	.70	1.00		.50		.80	1.00
St. Louis, Mo	.50				.25		[3] 6.00	[3] 6.00
St. Petersburg, Fla	.80	.50	.75		.30			
Shreveport, La	.90	.80	1.00	.50	.40	.80	.90	1.00
Toledo, Ohio	.75	.60	.75	.60 .85	.40	.87½	.75	1.00
Washington, D. C	1.25	1.25	1.25		.67½	1.25	1.25	1.37½
Warren, Ohio	.70				[3] 3.50		.80	
Youngstown, Ohio	.87½	1.12½	1.00	.50	[3] 4.00	.90	1.00	1.12½
				[3] 3.20	.30			
	[3] 8.00	[3] 10.00	[3] 8.00	[3] 4.80	.50	[3] 8.00	[3] 8.00	[3] 10.00
			.85	.40	.25		.75	
	.80	.65	1.00	.45	.35	.75	.80	1.00
				.62½				
	1.05	1.00	1.06¼	.75	.40	1.12½	1.00	1.25
					.38	[2] 7.50		[3] 15.00
	1.15	1.00	1.25		.45		.87½	
					.35			
	.92	.90	.92	.65	.40	1.00	.90	1.00

City.	Plasterers' tenders.	Bricklayers.	Elevator constructors.	Gas fitters.	Hoisting engineers.	Marble cutters.	Marble setters.	Masons.	Ornamental iron workers.	Pipe coverers.
Akron, Ohio				$0.75	$0.75				$0.85	
Alliance, Ohio		$1.04		1.00	.85				1.00	
Atlanta, Ga	$0.50									
Baltimore, Md	.60	1.12½		.75				$1.12½	.90	$0.80
Buffalo, N. Y	.30	.90	$1.00	1.00	.90		$1.00	.90	1.00	.90
Boston, Mass	.75	1.25	1.00	1.00	1.00	$1.00	1.00	1.25	.80 1.00	1.00
Chicago, Ill.[1]		1.00	1.12	.90	1.00	1.00	1.00	1.00	.75	1.00
Cincinnati, Ohio	.70	.90	.90	.90	.90	.90	.90	.90	.90	.90
Cleveland, Ohio	.85	1.25	1.00	1.00	1.12½	1.06	1.06	.90	.90	.95
Columbia, S. C	.60	1.04	1.06¼		1.04	1.06¼	1.06¼	1.04	1.04	.93
Columbus, Ohio		.75			.60				.70	
Dayton, Ohio	.25			.60	.75	1.00	1.25	1.25	.80	1.25
Des Moines, Iowa	.80	1.25	1.00	1.00	.90	1.00	1.00	1.15	.80 1.00	.90
Detroit, Mich		1.10			.90		.95			
Duluth, Minn		1.11½			.90					1.25
	.75	1.00				.80	1.00	1.00		.93¾
	.65	1.00		1.00	.65 .85		1.00	1.00	1.00	.85

[1] Wage scale being arbitrated. [2] Rate per thousand. [3] Rate per day.

HOURLY WAGE SCALES IN THE BUILDING TRADES, JULY 31, 1921—Continued.

City.	Plasterers' tenders.	Bricklayers.	Elevator constructors.	Gas fitters.	Hoisting engineers.	Marble cutters.	Marble setters.	Masons.	Ornamental iron workers.	Pipe coverers.
Erie, Pa.	$0.45	.....	$0.70	[2]$7.75	$0.70	.....	.....	.....	.....	.....
	.55	$1.12½	.90		.80	.....	.....	$1.12½	$0.80	.....
Flint, Mich.	.....	.....	.90	.....	.75	.....	.....	.....	.80	$0.90
	.....	1.00	1.00	.....	.90	.....	.....	1.00	.90	.93¾
Fairmont, W. Va.	.75	1.25	.....	1.00	1.00	.....	.....	1.00	.....	.....
Grand Rapids, Mich.	.....	.....	.90	.....	.75	.....	.....	.....	.80	.90
	.....	1.00	1.00	.....	.90	.....	.....	1.00	.90	.93¾
Indianapolis, Ind.	.....	.....	.....	.....	.92½	.....	.....	.....	.....	.....
	.70	1.15	1.00	1.15	1.15	$0.65	$1.00	1.15	1.15	.80
Kent, Ohio.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.60	1.00	.....	.90	.....	.....	.....	1.00	.....	.....
Lansing, Mich.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.60	1.10	.....	.....	.75	.....	.....	1.10	.....	.....
Little Rock, Ark.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	1.00	.....	1.00	.....	1.00	1.00	1.00	.....	.....
Los Angeles, Calif.	[2]9.00	[2]10.00	[2]7.00	[2]9.00	[2]8.00	[2]8.00	[2]8.00	[2]10.00	[2]8.00	[2]8.00
Louisville, Ky.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.80	1.25	.....	.....	.....	.....	.....	.....	.....	.....
Memphis, Tenn.	.....	.....	.....	.....	.75	.....	.....	.....	.75	.....
	.62½	1.12½	.95	.....	1.00	1.06¼	1.06¼	1.12½	1.00	1.00
Milwaukee, Wis.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	1.00	.....	1.00	.....	.....	.....	1.00	1.00	.....
Newark, Ohio.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.60	1.00	.....	.93	.80	.90	.90	.90	.....	.....
New York, N. Y.	.93¾	1.25	1.12½	1.12½	1.25	1.12½	1.12½	1.25	1.12½	1.12½
Norfolk, Va.	.50	.....	.....	.....	.....	.....	.....	.....	.75	.....
	.60	1.12½	.....	.....	.....	.....	.....	1.12½	.85	.....
Oklahoma City, Okla.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	[2]9.00	.....	.....	[2]7.00	.....	[2]8.50	.....	.....	.....
Omaha, Nebr.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.65	1.12½	.....	1.25	1.25	1.00	1.00	1.12½	1.12½	1.25
Philadelphia, Pa.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	1.00	.90	.....	.90	.....	.80	1.00	.....	.80
Pittsburgh, Pa.	.....	1.12½	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.....
Raleigh, N. C.	.40	.80	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reading, Pa.	.....	.....	.....	.....	.....	.....	.....	.....	.65	.....
	1.00	1.25	.90	1.00	1.25	1.10	1.10	1.00	.75	1.00
Redfield, S. Dak.	.60	1.25	.....	.....	.....	.....	.....	1.25	.....	.....
Richmond, Va.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.70	1.15	.....	.....	.....	.....	.....	.....	.....	.....
Rochester, N. Y.	.....	.....	.....	.....	[3]45.00	.....	.....	.....	.....	.....
	.....	1.25	1.00	1.10	[3]48.00	1.00	1.00	1.25	1.25	1.00
Saginaw, Mich.	.....	.....	.90	.....	.75	.....	.....	.....	.80	.90
	.....	1.00	1.00	.....	.90	.....	.....	1.00	.90	.93¾
Savannah, Ga.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.87½	.....	.....	.....	.....	1.00	.....	.....	.....
Sioux City, Iowa.	.50	1.12½	.....	1.00	.80	.80	.80	1.12½	.90	.....
St. Joseph, Mo.	.50	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.60	1.00	.....	1.00	.....	.....	.87½	1.00	.....	.....
St. Louis, Mo.	.....	.....	.....	.....	1.25	.....	.....	.....	.....	.....
	.85	1.25	1.25	.....	1.37½	.72½	1.06¼	1.00	1.25	1.00
St. Petersburg, Fla.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.50	1.12½	.....	.....	.....	.....	.....	.....	.....	.....
Shreveport, La.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	[2]4.80	[2]10.00	[2]8.00	[2]10.00	[2]8.00	[2]8.00	[2]8.00	[2]8.00	.....	.....
Toledo, Ohio.	.45	.....	.....	.....	.70	.....	.....	.....	.....	.....
	.50	1.00	.80	.75	.75	1.00	1.00	1.00	1.00	.75
Washington, D. C.	.62½	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.75	1.25	1.25	1.00	1.00	1.00	1.12½	1.12½	1.25	1.00
Warren, Ohio.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	1.25	.....	.....	.....	.....	.....	1.25	.....	.....
Youngstown, Ohio.	.65	.....	.....	.....	.85	.....	.....	.....	.....	.....
	.75	1.00	.....	1.00	.90	1.00	1.00	1.00	1.00	.90

[2] Rate per day. [3] Rate per week.

HOURLY WAGE SCALES IN THE BUILDING TRADES, JULY 31, 1921—Continued.

City.	Plumbers.	Roofers.	Sheet metal workers.	Steamfitters.	Steamfitters' helpers.	Stonecutters.	Structural iron workers.	Tile setters.
Akron, Ohio	$0.85	$0.75	$0.75	$0.85	.....	.....	$0.85	.....
	1.00	.85	.85	1.00	.....	.....	1.00	$1.00
Alliance, Ohio	.....	.80	.80	.....	.....	$0.75	.....	.....
	1.00	.85	.85	1.00	.....	1.00	.....	.....
Atlanta, Ga	.....	.80	.....	.....	.....	.....	.90	.....
	1.00	.90	1.00	1.00	$0.40	1.00	1.00	1.00
Baltimore, Md	.....	.75	.70	.....	.....	.....	.90	.....
	1.00	1.00	.90	1.00	.75	1.00	1.00	1.00
Buffalo, N. Y	.....	.....	.....	.....	.....	.....	.90	.85
	1.00	1.00	.87½	.90	.....	1.00	1.00	1.00
Boston, Mass	.....	.....	.....	.....	.....	.....	.....	.....
	.90	.90	.90	.90	.60	.90	.90	.90
Chicago, Ill.[1]	.....	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ohio	.....	.70	.....	.....	.....	.....	.....	.....
	1.00	1.00	.80	1.00	.60	1.15	.90	1.00
Cleveland, Ohio	.....	.83	.....	.....	.....	.....	.....	.....
	1.10	1.04	1.04	1.04	.62½	1.04	10.4	.....
Columbia, S. C	.....	.....	.....	.....	.....	.....	.70	.90
	1.25	.90	.90	1.25	.50	1.00	.80	1.00
Columbus, Ohio	.....	.75	.....	.....	.....	.....	.70	.....
	1.00	.80	.90	1.00	.40	1.10	.90	1.00
Dayton, Ohio	.....	.....	.....	.....	.....	.....	.....	.....
	1.00	.....	.85	.....	.....	1.00	.95	.95
Des Moines, Iowa	.....	.....	.....	.....	.....	.....	.....	.....
	1.25	.....	.93¾	1.25	.....	.....	.90	.....
Detroit, Mich	.....	.....	.....	.....	.....	.....	.....	.....
	1.00	.65	.80	1.00	.60	.90	.....	.....
Duluth, Minn	.....	.....	.....	.....	.65	.....	.....	.....
	1.00	.85	.85	1.00	.75	1.00	1.00	1.00
Erie, Pa	[2] 7.75	.....	.....	.....	.....	.....	.....	.....
	.....	.75	.90	.....	.....	.....	.80	1.00
Flint, Mich	.80	.65	.70	.90	.....	.90	.90	.....
	1.00	.85	.80	1.00	.....	1.00	1.00	1.00
Fairmont, W. Va	1.00	1.00	1.00	1.00	.80	1.00	.....	1.25
Grand Rapids, Mich	.80	.65	.70	.90	.....	.90	.90	.....
	1.00	.85	.80	1.00	.....	1.00	1.00	1.00
Indianapolis, Ind	.....	.....	.....	.....	.....	.....	.....	.....
	1.15	.60	.92½	1.15	.65	1.00	1.15	1.00
Kent, Ohio	.....	.....	.....	.....	.....	.....	.....	.....
	.90	.85	1.00	.....	.....	.....	.....	.....
Lansing, Mich	.....	.....	.....	.80	.60	.....	.....	.....
	1.00	.70	.70	1.00	.80	1.00	.....	1.00
Little Rock, Ark	1.00	.70	.....	.....	.....	.....	.....	.....
	1.25	.90	1.00	1.25	.....	1.00	.87	1.00
Los Angeles, Calif	.....	[2] 7.00	.....	.....	.....	.....	.....	.....
	[2] 9.00	[2] 8.00	[2] 8.00	[2] 9.00	[2] 7.00	.....	[2] 8.00	[2] 8.00
Louisville, Ky	.....	.....	.....	.....	.....	.....	.....	.....
	1.00	.80	.80	1.12½	.....	.....	.90	.....
Memphis, Tenn	.....	.....	.....	.....	.....	.....	.75	.....
	1.12½	.40	.87½	1.00	.50	1.00	1.00	1.00
Milwaukee, Wis	.....	.....	.....	.....	[2] 4.50	.....	.....	.....
	1.00	.70	.....	.90	.....	.90	1.00	1.00
Newark, Ohio	.....	.....	.....	.....	.....	.....	.....	.....
	.93	.75	.75	.93	.40	1.00	.....	.....
New York, N. Y	1.12½	1.12½	1.12½	1.12½	.87½	1.12½	1.12½	1.12½
Norfolk, Va	.....	.75	.75	.....	.....	.....	.75	.....
	1.00	.87½	.87½	1.00	.....	1.00	.85	.....
Oklahoma City, Okla	.....	.....	.....	.....	.....	.....	.....	.....
	.....	[2] 6.00	[2] 7.00	.....	.....	.....	.....	[2] 9.00
Omaha, Nebr	.....	.....	.....	.....	.....	.....	.....	.....
	1.25	.....	1.12½	1.25	.....	1.12½	1.12½	1.00
Philadelphia, Pa	.....	.60	.....	.....	.....	.....	.....	.....
	.90	.90	.90	.90	.....	.90	.....	.80
Pittsburgh, Pa	1.00	1.00	1.00	1.00	.60	1.00	1.00	1.00
Raleigh, N. C	.....	.....	.....	.....	.....	.....	.....	.....
	.90	.60	.60	1.00	.....	.....	.....	1.10
Reading, Pa	.....	.75	.75	.....	.55	.....	.....	.....
	1.00	.80	.80	1.00	.65	1.00	1.00	1.00
Redfield, S. Dak	1.00	.....	.80	1.00	.....	.....	.....	.....
Richmond, Va	.....	.....	.....	.....	.....	.....	.....	.....
	.90	.....	.90	.90	.....	.....	.....	.....
Rochester, N. Y	.....	.....	.....	.....	[2] 2.80	.....	.....	.....
	1.10	.90	1.00	1.10	[2] 3.80	1.00	1.25	1.00
Saginaw, Mich	.80	.65	.70	.90	.....	.90	.90	.....
	1.00	.85	.80	1.00	.....	1.00	1.00	1.00

[1] Wage scale being arbitrated.

[2] Rate per day.

HOURLY WAGE SCALES IN THE BUILDING TRADES, JULY 31, 1921—Concluded.

City.	Plumbers.	Roofers.	Sheet metal workers.	Steamfitters.	Steamfitters' helpers.	Stonecutters.	Structural iron workers.	Tile setters.
Savannah, Ga.			$0.75					
	$1.00		.82½			$1.00	$0.80	$1.00
Sioux City, Iowa	1.00	$0.75	.90	$1.00	$0.65		.90	.80
St. Joseph, Mo.								
	1.00	.60	.75	1.00				.87½
St. Louis, Mo.								
	1.25	1.00	1.25	1.25	.75	1.00	1.25	1.00
St. Petersburg, Fla.								
	1.12½							1.12½
Shreveport, La.					[2] 3.00			
	[2] 10.00		[2] 8.00	[2] 10.00	[2] 4.50	[2] 8.00		[2] 10.00
Toledo, Ohio.						.90		
	1.00	.60	.75	.75	.50	1.00	.75	.90
Washington, D. C.		.60						
	1.00	1.15	1.00	1.06¼	.65	1.00	1.25	1.00
Warren, Ohio.								
	1.17	1.00	1.00					
Youngstown, Ohio.		.90						
	1.00	.92	.90	1.00		1.00	1.00	1.00

[2] Rate per day.

Minimum Scale on 8-Hour Basis, June, 1921, as Reported by the Building Trades Department of the American Federation of Labor.

THE following table of minimum scale of wages on the 8-hour basis, payable in the building trades, was compiled in the office of the secretary-treasurer of the building trades department of the American Federation of Labor and included in his report at the fifteenth annual convention of the department held at Denver, Colo., June 8–11, 1921.[1] This information was furnished by the various local unions, and the wage scales given are those in effect at the time the report was submitted at the convention.

[1] Report of proceedings of the Fifteenth Annual Convention of the Building Trades Department, American Federation of Labor, held at Denver, Colo., June 8–11, 1921, pp. 68–71. [Washington, 1921.]

MINIMUM SCALE OF WAGES IN BUILDING TRADES, ON 8-HOUR BASIS.

City.	Asbestos workers.	Bricklayers.	Bridge and structural-iron workers.	Carpenters.	Cement finishers.	Electricians.	Elevator constructors.	Hoisting engineers.	Granite cutters.	Building laborers.	Lathers.	Marble workers and polishers.	Sheet-metal workers.	Painters.	Plasterers.	Plumbers.	Composition roofers.	Slate and tile roofers.	Steam fitters.	Stonecutters.	Tile layers.
Albuquerque, N. Mex.[1]	.....	$1.25	.....	$1.00	.....	$1.00	.....	.....	.....	.....	.....	.....	$1.00	$1.00	.....	$1.25	.....	.....	.....	.....	.....
Alexandria, La	.....	1.00	.....	.85	.....	.87½	.....	.....	.....	.....	.....	.....	.....	1.00	.....	1.00	.....	.....	$1.00	.....	.....
Ann Arbor, Mich.[1]	.....	1.00	.....	1.00	.....	1.00	.....	.....	.....	.....	$1.00	.....	1.00	.90	$1.00	1.00	.....	.....	1.00	.....	.....
Asheville, N. C	.....	1.00	.....	.87½	.....	1.00	.....	.....	.....	.....	1.00	.....	.87½	.75	1.00	1.12½	.....	.....	1.12½	.....	$1.00
Ashland, Ky	.....	1.25	.....	1.00	$1.12½	1.00	.....	.....	.....	.....	.....	.....	1.00	.75	1.12½	1.00	.....	.....	1.00	.....	.....
Astoria, Oreg.[1]	.....	1.25	$0.87½	1.00	1.12½	1.00	.....	$0.87½	.....	$0.65⅝	1.12½	.....	1.12½	1.00	1.25	1.12½	.....	.....	1.12½	.....	.....
Atchison, Kans.[1]	.....	1.25	.....	.87½	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.80	1.00	.....	.....	.....	.....	.....	.....
Atlanta, Ga.[1]	$1.00	1.12½	1.00	.80	1.00	1.00	$1.00	.....	$1.00	.45	1.00	$1.00	1.00	.75	1.00	1.12½	.....	.....	1.12½	$1.00	1.00
Atlantic County, N. J.[1]	.....	1.25	1.25	1.00	1.25	1.00	.....	.80	.....	.62½	1.00	.....	1.00	1.00	1.25	1.00	$0.75	$0.75	1.00	.....	1.25
Augusta, Me	.....	.85	.....	.80	.....	.75	.....	.....	.....	.65	.....	.....	.....	.80	.....	.85	.....	.....	.....	.....	.....
Aurora, Ill.[1]	1.25	1.25	1.25	1.25	1.00	1.25	.....	.....	.....	1.00	1.25	.....	1.25	1.00	1.25	1.25	1.25	.....	1.25	.....	1.25
Baltimore, Md.[1]	1.00	1.25	1.25	.90	1.00	1.12½	1.00	1.25	.....	.62½	1.00	.....	.90	.90	1.25	1.00	.....	1.00	1.00	.....	1.00
Bartlesville, Okla	.....	1.37½	.....	1.00	.....	1.00	.....	.....	.....	.75	1.30	.....	.....	1.00	1.30	1.25	.....	.....	.....	.....	.....
Battle Creek, Mich.[1]	.....	1.25	1.25	1.00	1.00	.80	.....	.....	.....	.....	.90	.....	.....	.80	.....	.90	.....	.....	.90	.....	1.25
Belleville, Ill.[1]	.....	.....	1.25	.....	1.50	1.25	1.25	.....	.....	.87½	1.10	.....	.90	.90	1.50	1.25	1.00	.....	.....	1.25	.....
Bergen County, N. J.[1]	.....	.....	.....	1.00	.....	1.00	.....	.....	.....	.85	1.25	.....	1.00	1.00	.....	1.00	1.00	1.00	1.00	.....	.....
Billings, Mont.[1]	.....	1.50	.....	1.00	.....	.87½	.....	.87½	.....	.68¾	1.12½	.....	1.00	.93¾	1.25	1.12½	.....	.....	1.12½	.....	.....
Binghamton, N. Y.[1]	.....	1.00	1.00	1.00	1.00	.90	.....	1.00	.....	.67½	.75	.....	.75	.90	1.00	1.00	.....	.....	1.00	.....	1.00
Bloomington, Ill.[1]	.....	1.50	.....	1.00	1.00	1.00	.....	.....	.....	.65	1.00	.....	.90	.90	1.25	1.00	.....	.....	.....	.....	1.00
Bridgeport, Conn.[1]	.....	1.12½	.....	1.00	.....	1.00	.....	.....	.....	.....	1.00	.....	1.00	1.00	1.12½	1.00	.....	.....	1.00	.....	.....
Boise, Idaho	.....	1.12½	.....	.87½	.....	1.00	.....	.....	.....	.87½	1.12½	.....	.....	1.00	1.12½	1.12½	.....	.....	.....	1.12½	.....
Boston, Mass.[1]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.....	.70	1.00	1.06¼	1.00	1.00	1.25	1.00	1.00	1.00	1.00	1.00	1.00
Butte, Mont.[1]	1.25	1.25	1.12½	1.12½	1.25	1.12½	1.12½	.75	.....	1.00	1.12½	.....	1.12½	1.12½	1.25	1.25	1.12½	1.12½	1.12½	.....	1.25
Canton, Ohio[1]	.....	.....	.....	.62½	.....	.60	.....	.....	.....	.....	1.25	.....	.....	1.00	.....	.70	.....	.....	.70	.....	.....
Carlinville, Ill	.....	1.00	.....	.90	1.00	1.00	.....	.....	.....	.75	1.00	.....	1.00	.85	1.00	.....	.....	.....	.....	.....	.....
Casper, Wyo.[1]	.....	1.50	1.12½	1.00	1.37½	1.12½	.....	.....	.....	1.06¼	1.37½	.....	1.00	1.00	1.37½	1.25	1.00	.....	1.25	.....	.....
Champaign-Urbana, Ill.[1]	.....	1.25	.....	1.00	1.00	1.00	.....	.75	.....	.75	1.00	.....	1.00	1.00	1.25	1.00	1.00	1.00	1.00	.....	1.25
Charleston, W. Va.[1]	.....	1.25	1.00	1.00	1.00	1.00	1.00	1.00	.....	.75	1.00	.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00	.....	.....
Chicago, Ill.[1]	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Cisco, Tex	.....	1.50	.....	1.25	1.25	1.25	.....	1.25	.....	.62½	1.25	.....	.....	1.25	1.50	1.37½	.....	.....	1.37½	.....	.....
Cincinnati, Ohio[1]	.90	1.25	1.25	1.00	.90	1.00	1.00	1.00	.....	.85	1.00	.....	.80	.87½	1.12½	1.00	.75	1.00	1.00	.....	.....
Cleveland, Ohio[1]	1.12½	1.25	1.25	1.25	1.25	1.37½	1.25	1.25	1.12½	.87½	1.25	.....	1.25	1.12½	1.25	1.37½	1.10	1.25	1.37½	1.12½	1.25
Clinton, Iowa	.....	1.00	.....	.75	.....	1.00	.....	.....	.....	.50	.....	.....	.75	.75	1.00	1.00	.....	.....	1.00	.....	.....
Columbus, Ohio[1]	.....	1.25	1.00	.90	1.00	1.00	1.00	1.00	1.12½	.80	1.00	1.12½	.90	.85	1.25	1.00	.80	.....	1.00	1.10	1.12½
Crawford County, Ohio[1]	.....	1.12½	.....	90	.....	.90	.....	.....	.....	.....	.....	.....	.....	.75	.90	.90	.....	.....	.90	.....	.....
Dayton, Ohio[1]	.....	1.25	1.10	1.00	1.00	1.10	.....	1.00	.....	.85	1.15	1.06¼	1.00	.85	1.25	1.15	.90	1.00	1.15	.....	1.00
Defiance, Ohio[1]	.....	1.00	.....	.75	.....	.....	.....	.....	.....	.....	.....	.....	.75	.80	1.00	1.00	.....	.....	.....	.....	.....

De Kalb, Ill.[1]		1.00		.87½	1.00					.75	1.25		1.00	80.	1.00	.87½			.87½					
Denver, Colo.[1]			1.12½	1.12½	1.12½	1.12½	1.00	1.12½		.75	1.12½		1.12½	1.12½	1.25	1.18¾	.87½	1.12½	1.18¾					
Des Moines, Iowa[1]	1.00	1.25	1.00	1.00	1.00	1.12½	1.00	1.00		.65	1.25	1.06¼	1.00	1.00	1.25	1.25	1.00	1.00	1.25	1.25	1.00			
Detroit, Mich.[1]	.93¾	1.00	1.25	1.00	1.10	1.00	1.25	1.15	.90	.65	1.25	1.06¼	1.00	1.00	1.25	1.00	1.00	1.00	1.00	1.12½	1.00			
Eau Claire, Wis		1.12½		.70		.75							.65	.65	1.00	.87½			.87½					
Elizabeth, N. J.[1]				1.00		1.12½		1.25		.75	1.00		1.12½	1.00		1.12½	.87½	1.25	1.12½					
Everett, Wash.[1]		1.25		1.00	1.00	1.12½				1.00	1.00		1.00	1.00	1.12½	1.12½			1.12½	1.25	1.25			
Fall River, Mass.[1]			1.00	1.00	1.15	1.00		1.00		.50	1.00		1.00	1.00		1.00			1.00					
Fond du Lac, Wis.[1]				.85		.80					.90		.80	.80		1.00			1.00					
Framingham, Mass.[1]				1.00		1.00		1.25		.85						1.00			1.00					
Galesburg, Ill.[1]		1.12½		1.00		.87½							.87½	.85	1.12½	1.00			1.00					
Galveston, Tex.[1]			1.00	1.00		1.00		1.00					1.00	1.00	1.12½	1.12½								
Gary, Ind.[1]		1.25	1.25	1.25	1.25	1.25				.85	1.25		1.25	1.25	1.25	1.25	1.15	1.25	1.25		1.25			
Grand Forks, N. Dak.		1.25		.80	.70	.75		.80		.60	.90		.80	.80	1.25	.85			.85					
Grand Rapids, Mich.[1]		1.10		.85	.80	1.00	.90	.90		.75			.75	.80	1.00	1.00			1.00					
Great Falls, Mont.[1]			1.12½	1.00	1.00	1.00		1.00		.87½	1.12½		1.00	1.12½	1.12½	1.12½					1.12½			
Greenfield, Mass.[1]		1.00		.85	1.00	.80				.80				.85	1.00				.86⅔					
Hagerstown, Md.[1]		.87½		.80	.87½								.70	.68	.87½	.65			.65					
Hamilton, Ontario, Canada[1]		1.12½	.85	.85		.85		1.05		.70	.90		.90	.67½	1.00	.90			.90	.87½				
Harrisburg, Pa.[1]		1.25	1.25	.80	.87½	.80	.75	.80			1.00	1.12½	.75	.70	.87½	.87½		.90	.87½		1.12½			
Hartford, Conn.[1]		1.12½	1.06¼	1.00	1.12½	1.00		1.00		.80	.60	1.05	1.00	1.00	1.12½	1.00			1.00		1.00			
Haverhill, Mass.[1]		1.25		1.00	1.25	1.00				.80			1.00	1.00	1.12½	1.00			1.00					
Hibbing, Minn		1.30		1.10	1.25	1.00		1.00			1.00			1.00		1.25								
Holyoke, Mass.[1]		1.05		.95	1.05	.95				.75	1.10		.95	.95	1.05	.95		1.10	.95					
Hudson County, N. J.[1]	1.12½		1.12½	1.12½	1.12½	1.12½		1.25		.81¼	1.12½	1.12½	1.12½	1.12½	1.18	1.12½	1.25	1.25	1.12½					
Indianapolis, Ind.[1]	1.00	1.25	1.25	1.00	1.00	1.00	1.00	1.25		.75	1.00	1.00	1.00	1.00	1.12½	1.25			1.25	1.00	1.00			
Jamestown, N. Y.[1]				.90						.60	1.10		.90	.87½	1.10									
Joliet, Ill.[1]	1.25	1.25	1.25	1.25	1.25	1.25		1.25		1.06¼	1.25		1.25	1.25	1.25	1.25	1.25		1.25					
Kansas City, Mo.[1]		1.12½	1.10	1.00	1.10	1.00	1.25	1.25		.90	1.00		1.00	1.00	1.20	1.25	1.00	1.00	1.25		1.12½			
Kingston, N. Y.		1.00	1.25	.86		.62½			.87½	.60			.87½	.65	1.00	.87½		.87½	.87½	.87½	1.00			
Kingston, Ontario, Canada[1]		1.00		.75		.70			1.00	.50			.80	.65	1.00	.80			.80	.75	1.00			
Lake County, Ill.[1]	1.25	1.25	1.25	1.25	1.25	1.25		1.25		1.00	1.25		1.25	1.25	1.25	1.25			1.25		1.25			
Livingston, Mont.		1.50		1.00	1.25	1.12½			1.12½	.87½	1.25	1.12½	1.00	1.00	1.25	1.00			1.00					
Lynn, Mass.		1.00		.93	1.00	1.00				.78	1.00		1.00	1.00	1.00	1.00			1.00					
Logansport, Ind.[1]				.75		.90								.75		1.00								
London, Ontario, Canada[1]		1.00		.75		.70				.55	.80			.70	.85	.75			.75	1.00				
Lynchburg, Va				.56									.70	.55		.78			.78					
Manitowoc, Wis.[1]		1.00		.80		.75		.80					.75	.80	1.00	.90			.90					
Mansfield, Ohio[1]		1.25		.95		1.00		1.00		.65	1.00		.95	.80		1.00								
Meriden, Conn.[1]		1.00		.87½		.85							.87½	.75	1.00	.90			.90					
Miami, Fla.[1]		1.12½	1.00	1.00	1.25	1.25		1.00		.43¾	1.12½		1.00	1.00	1.12½	1.25	1.00	1.00	1.25	1.25	1.25			
Middletown, Ohio[1]		1.12½		.90		.90		1.10			.90		.75	.85	.90	1.00			1.00					
Miles City, Mont.		1.25		1.00		.93¾				.68¾	1.12½		1.00	.87½	1.12½	1.12½								
Milwaukee, Wis[1]	.90	1.00	1.00	1.00	1.00	1.00	1.00	1.05		.70	1.00		1.00	.85	1.12½	1.00	.92½	.92½	1.00		1.00			
Montreal, Quebec, Canada[1]	.67½	1.00	1.00	.96	.75	.80		.85	.90			.75	.85	.85	.80	.90			.90	.75	.75			
Muncie, Ind.[1]			1.25		1.00	1.00		1.25			1.00		.85	.90	1.00	1.00			1.00					
Muskogee, Okla.[1]		1.50		1.12½	1.25	.93¾				.75	1.25		1.00	1.00	1.37½	1.25			1.25	1.50	1.75			
Nashville, Tenn.[1]		1.12½		.64	1.00	.75		.87½		.50	.87½		.75	.87½	1.00	1.12½			1.12½					
New Brunswick, N. J.[1]		1.25		1.00	1.25	1.00		1.25		.85	1.00		1.12½	1.00	1.25	1.00	1.00	1.00	1.00		1.25			
New Haven, Conn.[1]	1.00		1.06¼	1.00		.93¾		1.00			1.00		1.00	1.00		1.00		1.25	1.00					
New York, N. Y.[1]	1.12½	1.25	1.12½	1.12½	1.12½	1.12½	1.12½	1.25	1.12½	.87½	1.12½	1.12½	1.12½			1.12½	1.00	1.12½	1.12½	1.12½	1.12½			

[1] Saturday half holiday.

MINIMUM SCALE OF WAGES IN BUILDING TRADES, ON 8-HOUR BASIS—Concluded.

City.	Asbestos workers.	Bricklayers.	Bridge and structural-iron workers.	Carpenters.	Cement finishers.	Electricians.	Elevator constructors.	Hoisting engineers.	Granite cutters.	Building laborers.	Lathers.	Marble workers and polishers.	Sheet-metal workers.	Painters.	Plasterers.	Plumbers.	Composition roofers.	Slate and tile roofers.	Steam fitters.	Stonecutters.	Tile layers.
Niagara Falls, N. Y.[1]	.....	$1.10	$1.25	$1.00	$1.10	$1.00	.....	$1.00	.....	.....	$1.15	.....	$1.10	$1.00	$1.10	$1.10	.....	$1.10	$1.10	.....	.....
North Platte, Nebr	.....	1.12½	.....	.87½	.....	.....	.....	.....	.....	$0.60	.....	.....	.....	.87½	1.12½	1.00	.....	.....	.....	.....	.....
Ogden, Utah[1]	.....	1.12½	1.12½	1.00	1.00	1.00	.....	1.00	.....	.....	1.00	.....	1.12½	1.00	1.12½	1.00	.....	.....	1.00	.....	.....
Ottumwa, Iowa[1]	.....	.....	.....	1.00	.....	.85	.....	.....	.....	.60	.....	.....	.....	.85	.....	1.00	.....	.....	1.00	.....	.....
Passaic, N. J.[1]	.....	1.25	1.12½	1.00	1.25	1.00	.....	1.25	.....	.75	1.25	.....	1.12½	1.00	1.25	1.12½	.....	.....	1.12½	.....	.....
Pawtucket, R. I.[1]	.....	1.15	1.00	1.00	1.15	1.15	.....	.....	.....	.65	1.00	.....	1.00	.90	1.15	1.00	.....	.....	100	.....	.....
Philadelphia, Pa.[1]	$1.00	1.30	1.12½	1.12½	1.00	1.12½	$1.25	1.20	$1.00	.50	1.25	$1.30	1.10	1.00	1.25	.....	$0.90	1.10	1.10	$1.20	$1.00
Pinebluff, Ark	.....	1.12½	.....	.85	1.00	.75	.....	.....	.....	.....	.....	.....	.....	1.00	1.12½	.87½	.....	.....	.87½	.....	.....
Pittsburgh Pa.[1]	1.00	1.50	1.25	1.25	1.12½	1.25	1.25	1.12½	.....	.80	1.25	1.00	1.12½	1.12½	1.25	1.25	1.00	1.25	1.25	1.25	1.00
Plainfield, N. J.[1]	.....	.....	.....	1.00	.....	1.12½	.....	.....	.....	75	1.00	.....	1.12½	1.00	.....	1.00	1.12½	.....	1.00	.....	.....
Pocatello, Idaho[1]	.....	1.31¼	.....	1.00	1.00	1.00	.....	.....	.....	.68¾	1.00	.....	.....	1.00	1.31¼	1.12½	.....	.....	.....	.....	.....
Portland, Me.[1]	.....	1.10	1.00	1.00	1.00	.85	.....	.90	.....	.65	.....	.....	1.00	.85	1.12½	1.00	.80	.90	1.00	.....	.....
Portland, Oreg.[1]	1.00	1.25	1.12½	1.00	1.00	1.00	.....	1.12½	.....	.87½	1.00	.....	1.00	1.00	1.25	1.12½	.87½	.....	1.12½	.....	1.12½
Reno, Nev.[1]	.....	1.25	.....	1.00	1.25	1.00	.....	.....	.....	.62½	1.31¼	.....	.....	1.12½	1.43¾	1.25	.....	.....	1.25	.....	.....
Rochester, N. Y.[1]	1.00	1.25	1.25	1.00	1.25	1.10	1.09	1.09	.....	.65	1.00	.....	1.00	1.00	1.25	1.10	.90	1.00	1.10	.....	1.25
Rockford, Ill.[1]	.....	1.25	1.25	1.12½	.....	1.12½	.....	1.25	.....	.75	1.00	.....	1.00	1.00	1.25	1.25	.....	.....	1.25	.....	.....
Rome, N. Y.[1]	.....	1.12½	.....	.90	.....	.90	.....	.....	.....	.....	.....	.....	.80	.75	.....	.87½	.....	.....	.....	.....	.....
Salt Lake City, Utah[1]	.....	1.12½	1.00	1.00	1.00	1.12½	1.00	1.00	.....	.87½	1.00	.....	1.00	1.00	1.25	1.12½	.....	.....	1.12½	.....	1.00
San Antonio, Tex.[1]	.....	.....	1.00	.87½	.....	.87½	.....	1.00	.....	.40	.....	1.00	1.00	.87½	1.25	1.25	.....	.....	.....	.....	.....
Sandusky, Ohio[1]	.....	1.25	.....	.90	.....	1.00	.....	1.00	.....	.40	.....	.....	1.00	.80	1.00	1.00	.....	.....	1.00	.....	.....
San Francisco, Calif.[1]	1.06¼	1.25	1.25	1.12½	1.12½	1.25	1.06¼	1.12½	1.12½	.81¼	1.25	1.00	1.25	1.06¼	1.37½	1.25	1.12½	1.12½	1.25	1.00	1.12½
Schenectady, N. Y.[1]	.....	1.25	1.12½	1.00	1.25	1.00	1.00	1.00	1.25	.70	.....	1.25	1.00	1.00	1.25	1.00	1.00	1.00	1.00	1.25	1.25
Seattle, Wash.[1]	1.12½	.....	1.12½	.87½	1.00	1.12½	.....	1.12½	.....	.87½	1.12½	.....	1.00	1.00	1.25	1.12½	1.12½	1.12½	1.12½	.....	.....
Sharon, Pa	.....	1.25	.....	1.10	.....	1.10	.....	.....	.....	.....	1.25	.....	.90	1.00	1.25	1.25	.....	.....	.....	.....	.....
Sheboygan, Wis.[1]	.....	1.00	.....	.90	1.00	.90	.....	.....	.....	.80	.90	.....	.85	.80	1.00	.90	.....	.....	.90	.....	.....
Sioux City, Iowa[1]	.....	1.25	1.00	1.00	1.25	1.12½	1.10	1.00	1.00	.75	1.25	.....	1.00	1.00	1.25	1.25	.....	.....	1.25	.....	1.00
South Bend, Ind.[1]	.....	1.25	1.25	1.00	.....	1.00	.....	1.10	.....	.....	.....	.....	1.00	1.00	1.25	1.12½	.....	.....	1.12½	.....	.....
Spokane, Wash.[1]	1.00	1.12½	1.00	.93¾	1.12½	1.00	1.00	1.00	1.00	.75	1.00	1.12½	1.00	1.00	1.12½	1.12½	1.00	1.00	1.12½	1.00	1.00
Springfield, Mass.[1]	.....	1.05	1.00	.95	.95	.95	.95	1.00	.....	.75	.....	.....	.95	.95	.95	.95	.....	.....	.95	.....	1.05
St. Catharines, Ontario, Canada[1]	.....	.90	.....	.85	.....	.75	.....	.....	.....	.70	.....	.....	.....	.70	.....	.90	.....	.....	.....	.....	.....
St. Joseph and Benton Harbor, Mich.[1]	.....	1.25	.....	.90	.....	.75	.....	.....	.....	.....	.....	.....	.....	.75	1.25	1.00	.....	.....	1.00	.....	.....
St. Louis, Mo.[1]	1.00	1.25	1.25	1.25	1.25	1.25	1.25	1.37½	1.00	.67½	1.25	1.12½	1.25	1.25	1.25	1.25	1.00	1.25	1.25	1.00	1.12½
Superior, Wis.[1]	.....	1.25	1.12½	1.00	.....	1.00	.....	1.00	.....	.....	1.00	.....	1.00	1.00	1.25	1.00	.....	.....	1.00	.....	.....
Tacoma, Wash.[1]	1.00	1.25	1.12½	1.00	1.06¼	1.00	.....	1.00	.....	1.00	1.00	.....	1.00	1.00	1.12½	1.12½	.....	.....	1.12½	.....	1.12½
Taunton, Mass.[1]	.....	1.00	.....	1.00	.....	.85	.....	.....	.....	.....	.....	.....	.....	.85	1.00	1.00	.....	.....	1.00	.....	.....
Texarkana, Ark.-Tex.[1]	.....	1.25	.....	.87½	1.00	1.00	.....	.....	.....	.....	.....	.....	1.00	1.00	1.25	1.00	.87½	.87½	1.00	.....	.....
Toledo, Ohio[1]	1.25	1.25	1.10	.....	1.00	1.00	1.25	1.25	.....	.80	1.25	.....	.90	1.00	1.25	1.12½	.....	.....	.....	1.10	.....

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Toronto, Ontario, Canada [1]	.85	1.00	.85	.90	.85	.87½	.85	1.00	1.00	.60	1.00	.75	.90	.75	1.00	.90	.75	.....	.90	1.00	1.00
Trenton, N. J.[1]	.....	1.25	1.25	1.00	1.25	1.25	.....	1.25	1.25	.60	1.25	1.25	1.00	1.00	1.25	1.12½	.....	.....	1.12½	1.25	1.00
Tucson, Ariz.[1]	.....	1.25	.....	1.00	1.12½	1.12½	.....	.....	.....	.75	1.00	.....	.....	1.00	1.12½	1.12½	.....	.....	.....	.....	.....
Twin Falls, Idaho [1]	.....	1.25	.....	1.00	1.00	.93¾	.....	.....	.....	.87½	1.12½	.....	1.12½	1.00	1.25	1.12½	.....	.....	.....	.....	.....
Walla Walla, Wash.[1]	.....	1.25	.....	1.00	.87½	1.00	.....	.....	.....	.75	1.12½	.....	1.00	.93¾	1.25	1.12½	.....	.....	1.12½	.....	.....
Washington, D. C.[1]	1.00	.....	1.25	.....	.....	1.06¼	1.25	.....	1.00	.65	1.12½	.....	1.00	1.00	.....	1.00	.....	.....	1.06¼	1.00	.....
Waterbury, Conn.[1]	.....	1.12½	.....	1.00	1.12½	1.00	.....	.....	1.12½	.....	1.00	1.12½	1.00	1.00	1.12½	1.00	1.00	1.00	1.00	1.12½	1.12½
Watertown, N. Y.[1]	.....	1.25	1.00	1.00	1.25	.90	.....	1.00	.....	.60	.....	.....	.90	.75	1.25	.90	.....	.....	.....	.....	.....
West Essex, N. J.[1]	1.12½	1.25	.....	1.00	.....	1.12½	.....	.....	.....	.....	1.12½	.....	1.12½	1.00	1.25	1.12½	.....	1.25	1.12½	.....	.....
Wheeling, W. Va.[1]	.....	1.25	1.25	1.00	.....	.93¾	.....	1.25	.....	.....	1.25	.....	.93¾	.93¾	1.25	.93¾	.....	.....	.93¾	.....	.....
Wichita, Kans.[1]	.....	1.25	1.00	.87½	1.00	1.00	.....	1.00	.....	.62½	1.00	.....	1.00	.90	1 12½	1.00	.....	1.00	1.00	.....	1.25
York, Pa.[1]	.....	.87½	.....	.75	.....	.75	.....	.....	.....	.80	.....	.....	.75	.70	.90	.75	.....	.....	.75	.....	.....

[1] Saturday half holiday.

Revising Minimum Wage Rates in Massachusetts.[1]

ACTING under the authority of a measure passed last year permitting the minimum wage commission to reconvene wage boards whenever in its opinion such action is necessary to meet changes in the cost of living, the commission is reconvening the wage boards for six occupations. These are the brush, laundry, retail store, muslin underwear, and the men's clothing and women's clothing wage boards. This is the second time that the two boards last mentioned have been reconvened. The rates now in effect for these branches of the clothing trades, $15 and $15.25, respectively, were entered when the cost of living had nearly reached the peak. The rates for the other occupations, however, were entered several years ago and mean little at the present time. The decree for the brush industry was the first to be entered by the commission. It went into effect in August, 1914, and provided a minimum rate of 15½ cents per hour. The minimum rate for laundries, $8 per week, has been in effect since September, 1915; the $8 minimum for retail stores, since January, 1916; and the $9 minimum for muslin underwear, since August, 1918.

The wide difference in minimum rates, varying from the 15½ cents an hour for women in brush factories to 37 cents an hour for woman office cleaners, has caused dissatisfaction among both employers and employees. In fairness to all affected by the decrees there should be greater uniformity since the actual cost of living for working women in the State at a given time does not vary greatly from one occupation to another. By far the greater part of the existing difference is due to delay in reviewing decrees that are out of date. Prior to 1920 the commission could reconvene its wage boards only on petition from employers or employees in the occupation covered by the decree. As the provision of the law permitting such action on petition was not generally known, it was seldom exercised. During the eight years that the commission has been in operation only three of the fifteen wage boards have been reconvened on such petitions. These are the women's clothing, the men's clothing, and the men's furnishings wage boards. The last mentioned board is still in session. The wage board for office and other building cleaners was the first to be reconvened under the new law. The revised rate for this occupation became effective February 1 of the present year.

Average Earnings of New York State Factory Workers in June and July, 1921.

A REPORT recently received by this bureau from the New York Industrial Commissioner shows the changes in average earnings of New York State factory workers. The statements are based on June reports from 1,648 representative factories and cover over 450,000 workers and a weekly pay roll of over $11,500,000.

The decrease in the average weekly earnings of New York State factory workers from May to June was only 15 cents. The June average weekly earnings of employees

[1] Information received from the Massachusetts Department of Labor and Industries under date of Aug. 4, 1921.

in the manufacturing industries of the State was $25.71. The reduction in weekly earnings since the record average of last October now amounts to $3.22, or 11 per cent. This reduction, however, is due only to decreases in wage rates and in working time, but takes no account of the loss in earnings resulting from unemployment. In order to determine the loss in wages to factory workers which would include the factor of unemployment, it is necessary to compare the pay roll expenditures in the factories of the State in June with those of the month of highest employment—that is, in March, 1920. From March, 1920, to June, 1921, the drop in total amount of wages paid out to factory workers, as a result of all causes combined, equals 34 per cent.

Compared with a year ago, the drop in the average weekly earnings in the factories of the State amounts to $3.06. With the exception of railway equipment, fur goods, paints and dyes, printing, and beverages, every industry reported a smaller average in June than in the same month of the preceding year. In most cases the reductions during the year amount to a dollar or over. Industries in which the decrease in the average earnings during the year exceeds $5 are cement and plaster, jewelry and silverware, iron and steel, cooking and heating apparatus, shipbuilding, paper manufacture, and cotton goods. Although a considerable number of reductions in wage rates have already been reported by the manufacturers of the State, the larger part of the decreases in some of the industries is the result of reduced working time per week.

The June average weekly earnings of factory employees in New York City and up State were, respectively, $27.42 and $24.62. New York City plants show a reduction of only 3 cents from the average of the previous month, while the decrease in up-State factories amounts to 23 cents. The total reductions in weekly earnings from the high points in 1920 now amount to $1.81, or 6 per cent, in New York City, and to $4.28, or 15 per cent, up-State.

Most of the decreases in average earnings from May to June were due to further reductions in working time and in wage rates. A few plants, however, reported increases in working time during the month, following part-time work in previous months. The industries in which a considerable number of employees were affected by reductions in wage rates during June are machinery and electrical apparatus, water meters, leather, carpets and rugs, men's clothing, coffee roasting, bakery goods, and beverages. In some plants greater earnings appear in June, because the less skilled workers were laid off and the higher paid employees were retained.

Reductions in average earnings of $1 or more from May to June occurred in jewelry and silverware, sheet-metal work and hardware, cooking and heating apparatus, fur goods, men's furnishings, canning, and meat and dairy products. The decreases in the jewelry and silverware and men's furnishings divisions are largely the result of part-time operations in a few large plants. The reduction in average earnings in the canning industry is due to the hiring of many unskilled workers and to part-time work during the week when several plants reopened for the season.

The railway equipment, rubber goods, paper boxes, and millinery industries each showed important gains in average earnings from May to June.

The June average weekly earnings for the 10 chief industry groups of the State are as follows:

Stone, clay and glass	$26.04
Metals and machinery	27.79
Wood manufactures	24.85
Furs, leather, and rubber goods	25.22
Chemicals, oils, and paints	26.61
Paper manufacture	26.47
Printing and paper goods	30.33
Textiles	20.78
Clothing	23.28
Food, beverages, and tobacco	24.48
Total—all industries	25.71

A later report issued by the industrial commissioner shows that the average weekly earning of State factory workers declined 45 cents from June to July. The July average weekly earnings in the factories of the State as a whole was $25.26, which is $3.67, or 13 per cent, less than the record average earning of last October. These figures are based on the tabulation of 1,648 July reports from repre-

sentative manufacturers received by the chief statistician of the department.

A special inquiry was made by the department as to the extent to which reductions in wage rates have been put into effect in factories. Replies were received from nearly 700 plants which normally employ more than 300,000 workers. About 500 factories with more than 230,000 workers reported, having made reductions in wage rates of various amounts, while 200 factories with about 75,000 workers reported no reductions. The reductions in wage rates affected workers in nearly every manufacturing industry of the State. Most of the reductions ranged from 10 to 25 per cent, and none of them exceeded 40 per cent. A number of plants have already made more than one reduction since last autumn, when the movement for the downward revision of wage rates was first started.

A considerable part of the decrease in average earnings in July was due to reductions in wage rates in many plants during the month. The industries which were most affected in July are those engaged in the manufacture of graphite, cement and plaster, brass and copper goods, sheet metal work, machinery and electrical goods, railway equipment, soap, bookbinding, men's clothing, sugar, meat products, and beverages. In the railway equipment, bookbinding, clothing, and beverages industries the reduction in rates was of a general character. In the railway equipment industry an average reduction of 12 per cent, granted by the Railroad Labor Board, went into effect in July, while in the men's clothing industry in New York City wage rates were reduced from 10 to 15 per cent following the settlement of the strike. The reductions in rates in the bookbinding and beverages industries of New York City, in July, average 13 per cent and 7.5 per cent, respectively.

Reductions in working time were again responsible for a large part of the decrease in average earnings from June to July. In a number of plants working time was reduced as a result of annual vacations, inventories, and repairs. In some plants less time was worked on account of the excessive heat during July. In some cases, however, the reductions in working time during the month were the result of lack of demand, although in some plants the number of working hours was increased in July in order to meet a seasonal or a temporary demand for goods.

The drop in weekly earnings from June to July was entirely in up-State plants, where the average was reduced by 76 cents during the month. The New York City average in July shows a gain of 4 cents over the preceding month. The July average weekly earnings for New York City and up-State workers were, respectively, $27.46 and $23.86. The total reduction in weekly earnings in up-State plants since last September now amounts to $5.04, or 17 per cent, while the decrease in New York City since the high point of last November is only $1.77, or 6 per cent.

The important decreases in average earnings in July appear in the cement and plaster, brick and pottery, glass, brass and copper, structural and architectural iron, firearms and cutlery, cooking and heating apparatus, railway equipment, instruments and appliances—especially in typewriters and cameras—paints and dyes, knit goods, men's furnishings, and flour and cereals industries. The largest reductions reported are $5.68 in railway equipment, $5.03 in glass manufacture, and $4.28 in cooking and heating apparatus. In the other industries the July reductions in average earnings varied from one to two dollars. The decrease in weekly earnings in the glass industry is mainly due to the loss of time on account of annual vacations. The decrease in the railway equipment industry may be largely attributed to the reductions in wage rates, while the decrease in the cooking and heating apparatus industry is mostly the result of reduced working time. Most of the other industries reported considerable part-time work and some of them were affected by reductions in wage rates.

The largest gains in average earnings in July were reported in the iron and steel and women's clothing industries. In the steel industry large reductions in earnings occurred prior to July on account of part-time work. The gain in the average in July follows a heavy reduction in employment during the month and is due to an increase in the working time of the small number of employees who are still at work. In the women's clothing industry the July increase in average earnings is the result of greater activity in the manufacture of cloaks and suits.

Hours of Labor in Argentina.[1]

AN INVESTIGATION of 66,869 workers in Argentina during the month of August, 1920, showed that the working-day averaged 8 hours and 1 minute. In February, 1919, a similar investigation of 44,865 workers showed an average working-day of 8 hours and 12 minutes. The table following shows the decrease in hours of labor since 1914:

Average time worked per day.

	Hours.	Minutes.
1914	8	42
1915	8	58
1916	8	56
1917	8	46
1918	8	28
1919	8	12
1920	8	1

The table showing the number of workers and the average hours worked in each industry is reproduced below. It will be noted that by far the largest number of those covered by the investigation were employed in the clothing and transport industries.

NUMBER OF WORKERS AND AVERAGE TIME WORKED PER DAY IN AUGUST, 1920, BY INDUSTRY.

Industry.	Number of workers.	Average time worked per day.	
		Hours.	Minutes.
Clothing	19,146	8	1
Chemicals	1,521	8	4
Commerce	583	8	6
Construction	97	8	.....
Electrical	4,442	8	1
Food	3,053	8	11
Glassware and ceramics	1,455	7	51
Hides and leather	1,476	8	7
Lumber	1,805	8	.....
Metallurgy	3,218	8	2
Paper and pasteboard	81	8	14
Polygraphic	3,391	8	1
Textiles	1,685	8	.....
Tobacco	1,653	8	.....
Transport	22,702	8	.....
Miscellaneous	561	8	11
Total	66,869	8	1

The investigation showed that the 44-hour week has not as yet been adopted very extensively, only 1,917 of the 66,869 workers enjoying the Saturday half holiday.

[1] Crónica Mensual del Departamento Nacional del Trabajo, Buenos Aires, April, 1921.

The table following gives the number of persons working each specified number of hours per day:

NUMBER OF PERSONS WORKING EACH SPECIFIED NUMBER OF HOURS PER DAY, IN AUGUST, 1920.

Workers.	Hours.	Workers.	Hours.
24	5	822	8½
382	7	55	8¾
220	7½	1,110	9
55	7¾	20	9¼
63,669	8	7	9½
367	8¼	138	10

Thus it will be seen that 95 per cent of the workmen included in the investigation worked the 8-hour day.

Eight-Hour Day in Belgium.[1]

ON May 14, 1921, the Belgian Senate passed the bill for the 8-hour day, accepting practically all the amendments which had been made by the Chamber of Deputies and which had been the cause for the delay of several months in the passage of the bill by the Senate. Practically the only changes in the bill as passed by the Chamber were the addition by the Senate of a provision which would allow the King to suspend the operation of the law in case of war or in case of danger to the national security or when the Superior Labor Council and the Council of Industry and Commerce should consider it necessary, in order to insure by the development of exports the exchange of indispensable articles of import. Also, the Senate delayed the putting into effect of the law from July 1, 1921, as fixed by the Chamber of Deputies to October 1, 1921.

All industries come under the law except retail stores, hotels, restaurants, and employees in commercial establishments except clerks, these enterprises to be controlled by a subsequent royal decree. The law does not cover work which is carried on by members of a family unless it is work which is classed as dangerous or unhealthy or in which steam boilers or machinery are used.

The law makes the usual provision that in seasonal industries or on work undertaken in view of an emergency, present or imminent, or in cases of force majeure the hours may exceed the 8-hour limit, although the maximum time which may be worked is fixed at 10 hours. It is specially provided that the reduction in hours shall not carry with it any reduction in wages. With the exception of industries which are forced to do night work, the day of work must be completed between the hours of 6 a. m. and 8 p. m., and, subject to future action taken by the International Labor Conference, night work is forbidden for all women and for boys under the age of 18. In some industries and under certain conditions the King may authorize the work at night of women and of boys between the ages of 16 and 18.

[1] Comité Central Industriel de Belgique. Bulletin 29, June, 1921, pp. 529–547.

The royal decree dated June 14 rescinded the article providing that the law should not go into effect until October and stated that it was to enter into force on the day of the publication of the text of the law in the "Moniteur."

Wages in Czechoslovakia, 1920.

THE annual report for the year 1920 of the Central Federation of Czechoslovak Industrial Employers [1] contains comparative statistics as to wages and output per worker in Czechoslovakia in 1914, 1920, and 1921. These statistics are reproduced below in part.

In the following table are shown the average daily wages in Prague and near-by towns of skilled workers in various industries and of skilled and unskilled workers in a soap factory in November, 1920, as compared with 1914.

AVERAGE DAILY WAGE RATES IN PRAGUE, CZECHOSLOVAKIA, 1914 AND 1920.

[1 krone at par=20.3 cents.]

Industry group.	Average daily wages.	
	1914	Nov. 1, 1920.
Skilled workers in—	*Kronen.*	*Kronen.*
Flour mills	2.98	50.00
Transportation	3.40	51.50
Smelters	4.55	66.00
Potteries	3.29	35.00
Foundries (piece rates)	5.25	84.00
Machinery works	4.37	50.00
Gas works	4.15	44.00
Textile industry	2.65	38.00
Tanneries	5.02	62.00
Rubber goods factories	3.10	62.50
Furniture factories	3.25	47.00
Upholstering	3.46	49.50
Woodworking	3.31	52.80
Lingerie factories	2.60	16.60
Building trades	3.10	45.00
Alcohol distilleries	2.65	61.00
Silk mills	3.00	40.00
Soap factory:		
Yard foremen	3.20	40.00
Yard laborers	3.00	37.60
Engineers	5.00	50.00
Foremen in factory	5.00	44.80
Coopers	4.00	44.80
Women	1.70	24.00

Wages of woman workers seem to be much lower than those of men, for in a soap factory male workers are being paid from 37.60 to 50 kronen ($7.63 to $10.15, par) per day, while women average only 24 kronen ($4.87, par).

[1] Zentralverband der Čechoslovakischen Industriellen. Bericht für das Jahr 1920. Prague, 1921.

In the following two tables are shown the earnings and output of miners and other workers of two coal mining companies:

EARNINGS AND OUTPUT OF MINE WORKERS OF THE BRÜX COAL MINING CO., 1914 AND NOVEMBER, 1920.

[1 krone at par=20.3 cents; 1 metric centner=220.46 pounds.]

Occupation.	1914			November, 1920.		
	Earnings inclusive of all bonuses and allowances.					
	Daily.	Monthly.	Hourly.	Daily.	Monthly.	Hourly.
	Kronen.	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*
Pick miners	5.49	124.58	0.61	78.29	2,090.29	9.79
Mine laborers, below ground	3.64	87.41	.40	47.81	1,276.61	5.98
Auxiliary workers, male, adult	4.00	98.12	.40	51.19	1,566.72	6.40
Auxiliary workers, male, juvenile	1.92	40.69	.17	25.44	679.30	3.18
Women and girls	2.03	55.80	.20	32.95	879.66	4.12

Item.	1914	1920
Output per pick miner per shift	45.75 metric centners	33.03 metric centners.
Output of the entire working force per capita per shift	21.79 metric centners	13.71 metric centners.
Food bonus per shift		5 kronen.
Coal allowance for married workers	82 metric centners	82 metric centners.
Value of coal allowance	57.07 kronen	87.25 kronen.

EARNINGS AND OUTPUT OF MINE WORKERS OF THE NORTH BOHEMIAN LIGNITE MINING CO. AT BRÜX, 1914 AND 1921.

[1 krone at par=20.3 cents; 1 metric ton=2,204.6 pounds. No explanation is given in the original report as to what occupations, other than contract miners, are included in the figures for total output.]

Occupation.	1914					1921				
	Output (metric tons).		Earnings (kronen).			Output (metric tons).		Earnings (kronen).		
	Per shift.	Per hour.	Per shift.	Per hour.	Per ton.	Per shift.	Per hour.	Per shift.[1]	Per hour.	Per ton.
Miners, contract	7.42	0.82	5.94	0.66	0.80	4.88	0.61	84.20	10.53	17.25
Miners, consideration	.....	.....	4.35	.48	.....	.....	.....	69.00	8.63	21.56
Mine laborers	.....	.....	3.80	.42	.....	.....	.....	54.00	6.75	.....
Carpenters and masons	.....	.....	4.80	.53	.....	.....	.....	71.80	8.98	.....
Engineers, firemen, blacksmiths, and machinists	.....	.....	4.42	.49	.....	.....	.....	68.20	8.53	.....
Day laborers	.....	.....	3.70	.41	.....	.....	.....	55.00	6.88	.....
Women	.....	.....	1.81	.20	.....	.....	.....	42.50	5.31	.....
Inspectors	.....	.....	5.51	.61	.....	.....	.....	64.50	8.06	.....
Total and average	2.57	.82	4.62	.51	1.68	1.67	.21	66.50	8.31	23.70

[1] The earnings per shift for the year 1921 shown in the above table are made up of the following items:

Occupation.	Wages.	Various allowances.[a]	Food subsidy.	Total earnings.
	Kronen.	*Kronen.*	*Kronen.*	*Kronen.*
Miners, contract	67.23	11.97	5	84.20
Miners, consideration	52.36	11.64	5	69.00
Mine laborers	41.64	7.36	5	54.00
Carpenters and masons	54.18	12.62	5	71.80
Engineers, firemen, blacksmiths, and machinists	51.40	11.80	5	68.20
Day laborers	41.30	8.70	5	55.00
Women	29.50	8.00	5	42.50
Inspectors	43.00	16.50	5	64.50
Total and average	51.06	10.44	5	66.50

[a] Includes family subsidy for each child, bonus for Sunday work, allowances for tools, powder, etc., bread bonus, and seniority bonus.

The preceding two tables make it evident that the upward tendency of wages in the coal-mining industry in Czechoslovakia was as pronounced as in the manufacturing industries. These tables show also that while wages had risen phenomenally the output per miner per shift had decreased in the case of one mining company from 45.75 to 33.03 metric centners and in that of another company from 7.42 to 4.88 metric tons. The report ascribes this large decrease in output to the legal reduction of the shift from 8 to 6 hours, the obligatory granting of vacations to workers, and to strikes. The output of all coal mines in Czechoslovakia was 26,729,781 metric tons in 1920 as against 23,907,073 metric tons in 1919. This increase by nearly 3,000,000 metric tons was, however, not due to increased output per miner but to an increase in the number of miners employed.

A report of the Slovakian section of the federation contains the following table showing the average hourly earnings of workers in various industries in Slovakia in January, 1920 and 1921, as compared with 1914:

AVERAGE HOURLY EARNINGS OF INDUSTRIAL WORKERS IN SLOVAKIA, BY INDUSTRY GROUPS, JANUARY, 1914, 1920, AND 1921.

[1 krone at par=20.3 cents.]

Industry group.	January, 1914.			January, 1920.			January, 1921.		
	Average hourly wage.	Bonuses, allowances, etc., per hour.	Total hourly earnings.	Average hourly wage.	Bonuses, allowances, etc., per hour.	Total hourly earnings.	Average hourly wage.	Bonuses, allowances, etc., per hour.	Total hourly earnings.
Mining:	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*	*Kronen.*
Magnesite	0.30	.....	0.30	1.74	.....	1.74	5.82	.....	5.82
Coal	.49	0.01	.50	3.79	1.87	5.66	6.46	2.48	8.94
Iron ore	.35	.....	.35	2.07	1.10	3.17	4.06	1.14	5.20
Pyrite	.52	.....	.52	3.63	.66	4.29	6.67	.65	7.33
Smelters	.33	.....	.33	2.38	.42	2.80	4.85	.68	5.53
Metal working:									
Machinery works	.30	.....	.30	4.38	.....	4.38	4.80	.....	4.80
Do	.52	.....	.52	3.48	.....	3.48	8.74	.....	8.74
Do	.40	.....	.40	2.85	.30	3.15	3.93	.68	4.61
Do	.52	.....	.52	3.58	.....	3.58	6.74	.11	6.85
Enamel-ware factory	.36	.04	.40	3.00	1.28	4.28	3.65	1.30	4.95
Munitions factory	.26	.....	.26	2.69	.....	2.69	4.74	.61	5.35
Chemical industry:									
Fertilizer factory	.....	.....	.....	2.09	.....	2.09	5.98	.....	5.98
Copper sulphate factory	.....	.....	.....	2.30	.14	2.44	3.21	.20	3.41
Mineral oil factory	.38	.....	.38	2.32	.....	2.32	4.83	.....	4.83
Match factory	.67	.....	.67	1.31	.....	1.31	3.95	.....	3.95
Textile industry:									
Textile factory	1.30	.60	1.90	1.70	.90	2.60	4.20	1.30	5.50
Do	.36	.01	.37	3.06	.30	3.36	4.20	.30	4.50
Do	.25 to .30	.....	.25 to .30	2.50	.50	3.00	3.30	.70	4.00
Do	.30	.....	.30	1.80	.20	2.00	2.65	.30	2.95
Do	.21	.02	.23	1.98	.12	2.10	3.83	.10	3.93
Leather industry:									
Leather factory	.....	.....	.....	2.49	.....	2.49	3.10	.....	3.10
Do	.41	.....	.41	2.80	.....	2.80	5.68	.....	5.68
Woodworking industry:									
Sawmill	.....	.....	.....	3.48	.....	3.48	4.62	.....	4.62
Do	.40	.10	.50	2.20	.80	3.00	4.30	.80	5.10
Furniture factory	.20	.....	.20	1.93	.....	1.93	3.37	.....	3.37
Ceramic and brick industry:									
Pottery	.35	.....	.35	1.60	.04	1.64	3.25	.04	3.29
Brick kiln	.50	.04	.54	1.84	.11	1.95	3.80	.18	3.98
Food industries:									
Confectionery	.20	.....	.20	.92	.....	.92	2.59	.....	2.59
Cordial factory	.28	.....	.28	1.43	.....	1.43	3.25	.....	2.25
Flour mill	.39	.....	.39	2.38	.....	2.38	5.72	.....	5.72
Sugar factory	.23	.....	.23	2.50	.65	3.15	3.08	2.10	3.08
Paper industry:									
Cellulose factory	.18	.....	.18	2.15	.20	2.35	4.95	.33	5.28
Glass industry:									
Glass works	.30	.06	.36	2.44	.67	3.11	3.92	.83	4.75

The report of the Slovakian section of the Czechoslovakian Industrial Employers' Federation states that compared with Jaunary 1, 1920, wages in Slovakia had risen 100 to 200 per cent on January 1, 1921. Wages are now 14 to 18 times as high as in prewar times. The wages shown in the preceding table are average wages of the entire working force (skilled, unskilled, juvenile, and female workers). The highest wages were earned by skilled pieceworkers in the machinery industry, whose earnings in some instances reached 13 kronen ($2.64, par) per hour. Wages vary greatly in Slovakia from locality to locality, the highest rates being paid in Kaschau.

If the increases in wage rates in Czechoslovakia are compared with the increases in retail prices shown on page 64 of the present issue of the MONTHLY LABOR REVIEW, it will be seen that wages have fairly well kept step with food prices but not with those of clothing.

Changes in Rates of Wages in Great Britain, January to June, 1921.

THE following statement showing changes in rates of wages in Great Britain during the first half of 1921 is taken from the British Labor Gazette for July, 1921, pages 342 and 343. It should be noted that the statistics relate in the main to changes arranged by organized groups of employers and workpeople, and many changes arranged by individual firms are not reported. Government employees, agricultural laborers, domestic servants, and clerical and salaried employees are not included.

From 1914 until the end of 1920 there was a continuous upward movement in rates of wages. Early in 1921, however, a decline began, and from the beginning of the year until the end of June reductions were reported to the department affecting over 4,300,000 workpeople, the aggregate reduction in weekly full-time wage rates amounting to nearly £1,770,000 [$8,613,705, par]. On the other hand, in certain trades further increases in wages have been reported, 350,000 workpeople having received advances amounting to about £83,000 [$403,920, par] in full-time weekly wages.

In the following table the statistics relating to the changes which were reported as taking effect in the months January–June, 1921, are given for various groups of trades:

NUMBER OF WORKPEOPLE AFFECTED BY CHANGES IN WAGE RATES IN GREAT BRITAIN AND AMOUNT OF NET CHANGE PER WEEK, JANUARY TO JUNE, 1921.

[1 pound at par=$4.8665.]

Group of trades.	Number of workpeople affected by—		Amount of net change per week.	
	Increases.	Decreases.	Increases.	Decreases.
Building and allied trades (including works of construction)	10,000	424,000	£2,500	£160,300
Mining and quarrying	3,000	1,260,000	700	583,600
Iron and steel smelting and manufacture	11,000	164,000	2,900	130,500
Engineering, shipbuilding, and other metal	15,000	449,000	3,800	154,800
Textile	7,000	849,000	500	433,700
Clothing	241,000	34,000	56,000	10,900
Transport (excluding tramways)	21,000	726,000	5,000	163,500
Chemical, glass, brick, pottery, etc	1,000	185,000	300	52,900
Other	42,000	233,000	11,100	78,300
Total	351,000	4,324,000	82,800	1,768,500

Particulars of the principal changes in each of the above groups of trades are given below:

Building.—The rates of wages of building trade operatives in the principal centers (with the exception of painters in Scotland) were reduced by 2d. [4.1 cents, par] per hour in May or June. A further reduction of 1d. [2 cents, par] per hour for laborers was also arranged, to operate from July 1, but the effect of this further reduction is not included in the figures given in the table.

Mining and quarrying.—Under the arrangements made at the end of the dispute in October–November, 1920, whereby wages were to rise and fall in accordance with variations in the output of coal, an increase of 1s. 6d. [36.5 cents, par] a shift for adult workers (with smaller amounts for youths and boys) was granted early in January but was followed by reductions of 2s. [48.7 cents, par] and 1s. 6d. a shift (for adults) at the end of January and the end of February respectively, which left wages at the same level as in October last, and 2s. a shift (in the case of adults) below the level of January 1. Under the terms of settlement of the recent dispute, wages are to be regulated in future on the basis of the proceeds of the industry in each of 13 districts. This settlement will involve a further fall in wages, but it is subject to the provision that the reduction for adults shall not exceed 2s. a shift in July, 2s. 6d. [60.8 cents, par] in August, and 3s. [73 cents, par] in September. Iron miners in Cumberland, Furness, Lincolnshire, Leicestershire, and Northamptonshire, and limestone quarrymen in West Cumberland and Northamptonshire, have had their rates of wages reduced in accordance with sliding scale agreements based on the selling prices of pig iron.

Iron and steel smelting and manufacture.—The rates of wages of workpeople engaged in the smelting and manufacture of iron and steel are in most cases regulated by sliding scale arrangements based on the selling prices of pig iron or manufactured iron and steel. In some districts the sliding scales resulted in slight increases in wages early in the year, but the subsequent fall in selling prices has been followed by considerable reductions in wages. The workpeople in these industries who have sustained a net decrease in rates of wages include blast furnace men in Cleveland, Durham, Cumberland, and Scotland, iron puddlers and iron and steel mill men in the north of England, the Midlands and Scotland, and steel smelters in the principal centers, the amount of reduction ranging from 19½ to 70 per cent on standard rates, or from 7½ to 20½ per cent on rates current at the end of December. Blast furnace men and iron and steel workers in South Wales have received net increases.

Engineering, shipbuilding, and other metal trades.—In the shipbuilding and ship-repairing industry rates of wages have been reduced by 6s. [$1.46, par] a week and 15 per cent in the case of adult male time workers and pieceworkers, respectively, the reduction taking effect in two equal installments in May and June. In the engineering industry no general reduction in the rates of wages of adult males had occurred up to the end of June, but it has since been agreed that wages shall be reduced in July and August by the same amounts as in the shipbuilding industry; in the case of females wages were generally reduced in May, following the adoption of a new uniform schedule of wages in all federated districts. Other classes of metal workers whose rates of wages have been reduced include brass workers, nut, bolt and screw workers, lock, latch and key makers, metallic bedstead makers, cast and wrought iron hollow-ware workers, and edge tool makers in the Midlands; tube makers in Scotland; gold, silver, and allied workers at London and Sheffield; and tinplate workers in South Wales and Monmouthshire.

The increases in rates of wages recorded in the metal trades resulted from the raising of the minimum rates fixed under the trade boards acts for the stamped and pressed metal wares, and the pin, hook and eye, and snap fastener trades.

Textile trades.—In the cotton industry rates of wages were reduced in June generally by 60 per cent on list prices, equivalent to a reduction of about 19 per cent on current wages for most of the workers. A further reduction of 10 per cent on list prices has been arranged to take effect in December.

Workpeople in the wool textile industry have sustained four reductions, under a cost of living sliding scale, amounting in all to 40 per cent on basic rates (14½ per cent on wages current at January 1) in the case of time workers, and to 33.04 per cent (13½ per cent on the rates of January 1), and 34.78 per cent (nearly 14 per cent on the January rates) in the case of male and female pieceworkers, respectively. Further reductions, amounting to about 14 per cent on wages current at the end of December, have been arranged to take effect in July.

In the textile bleaching, dyeing, printing, and finishing trades in Yorkshire, Lancashire, and Cheshire, and Scotland, small increases took effect early in the year under

cost of living sliding scales, but later in the year there were substantial reductions. In Yorkshire the net effect was a reduction of nearly 12 per cent on the rates of wages current at the beginning of the year. In Lancashire, Cheshire, and Scotland there were net reductions of 9s. 4d. [$2.27, par] and 5s. 7d. [$1.36 par] a week for adult males and females, respectively.

Hosiery workers in the Midlands have had their bonus reduced, under a cost of living sliding scale, from 1s. 3d. [30.4 cents, par] to 1s. [24.3 cents, par] in the shilling on earnings, and under similar arrangements there have been reductions in the case of carpet workers and of silk workers at Leek, Macclesfield, and Brighouse.

Clothing trades.—The increases in rates of wages indicated by the statistics for the clothing trades mainly resulted from the raising of the minimum rates fixed under the trade boards acts for the various branches of the tailoring, mantle and costume, and dressmaking trades, and for female laundry workers. The principal reductions affected glovemakers and dyers and dry cleaners generally, and bespoke tailors in London and Liverpool.

Transport.—In the case of railway servants engaged in the manipulation of traffic, an increase of 1s. a week in January, under a cost of living sliding scale, was followed by a decrease of 4s. [97.3 cents, par] a week in April. A further reduction of 5s. [$1.22, par] a week took effect from July 1, but the effects of this are not included in the statistics given above. The standard rates of wages of all ranks and ratings in the merchant shipping service were reduced in May by £2 10s. [$12.17, par] a month. In the road transport industry the rates of wages of carters and motor drivers have been reduced in London and at Nottingham and Leicester, and several important towns in Yorkshire, Lancashire, and Scotland, the amount of reduction ranging from 3s. [73 cents, par] to 7s. [$1.70, par] per week.

Chemical, glass, brick, pottery, etc., trades.—In the heavy chemical trades male workers had their wages reduced in April by 2d. [4.1 cents, par] per hour, in the majority of cases, in England, and by 6s. 9d. [$1.64, par] a week in Scotland. Soap and candle workers sustained reductions of 6s. [$1.46, par] and 4s. [97.3 cents, par] a week in the case of adult males and females, respectively. Glass bottle makers sustained a reduction, also in April, of 5 per cent on total earnings. Brickmakers in all the principal centers other than Peterborough had their rates of wages reduced in May by 6s. and 3s. [$1.46 and 73 cents, par] a week in the case of adult males and females, respectively.

Other trades.—In the furniture making trade there have been reductions of 1d. [2 cents, par] to 3d. [6.1 cents, par] per hour in the case of male workers at London, High Wycombe, Birmingham, Liverpool, and certain towns in Yorkshire and Scotland. Female workers in the same districts usually sustained smaller reductions. Vehicle builders generally have had their wages reduced by 2½d. [5.1 cents, par] per hour. In the food trades there have been reductions varying from 4s. [97.3 cents, par] to 7s. 6d. [$1.83, par] a week for adult male bakers in London and various towns in Yorkshire, Lancashire, and Scotland; whilst cocoa and chocolate confectionery workers have had their wages reduced by amounts ranging from 1s. [24.3 cents, par] to 5s. [$1.22, par] a week.

The principal industries in which no reduction had taken place up to the end of June include engineering, dock labor, agriculture, printing and bookbinding, pottery manufacture (England), linen and jute manufacture (except at Kirkcaldy), boot and shoe manufacture, tanning and currying, coopering, and tram and omnibus service. In the case of engineering a reduction has since been arranged to take effect in July, and in some other cases reductions are being proposed.

Methods of Settlement.

Of the workpeople, numbering over 4,300,000, whose rates of wages were reduced, 2,170,000 sustained the reductions as a result of the operation of sliding scale agreements based on the index number of retail prices published in this Gazette; 165,000 under sliding scales based on the selling price of pig iron or manufactured iron and steel; 1,225,000 coal miners had their wages reduced under the output arrangement described above; and the remaining 760,000 workpeople had their changes arranged either by arbitration or conciliation, or by negotiation between representatives of the employers and workpeople. In the case of 525,000 workers the reductions were preceded by disputes, causing stoppages of work.

Of the 350,000 workpeople whose rates of wages were increased, the majority obtained the advances under settlements negotiated between employers and workpeople or by the operation of orders under the trade boards acts.

Adjusting British Railway Wages by Cost-of-Living Index.

ACCORDING to a report and press notice from the American consul at Stoke-on-Trent, England, forwarded under date of June 30, 1921, the British Government saves approximately £10,000,000 ($48,665,000, par) in the recent quarterly revision of railway wages based on cost of living figures. The sliding scale agreement provides that wages rise or fall "1s. (24.3 cents, par) per week for every five points variation in the cost of living figures." The Board of Trade's cost of living index is 25 points lower than at the last quarterly revision, which fall automatically reduces railway wages 5s. ($1.32, par) per week.

Wages in the Almond Industry in Spain.

REPORTS regarding the almond industry, received from the American consuls at Valencia and Malaga, Spain, under date of July 6 and 11, 1921, respectively, give certain data concerning the industry in these districts. In the Malaga district the almonds are all shelled by hand on the farm where they grow. They are cracked on a flat stone held between the knees of the sheller, who is seated, and who uses a small iron bar or a small stone for a hammer.

There are practically no paper-shelled almonds produced in this region. The almond trees are found both along the coast and in the interior. The tree blossoms in January and February and the nuts are ripe by July. They are then knocked off the trees with sticks or poles and left on the ground in order to dry the husk and kernel, preparatory to shelling.

The almonds are ordinarily gathered by the farmer or his family during "off hours" of the day in July and August, and the women and children of the family do the shelling.

Where labor is employed to gather the almonds it is usual for a squad composed of one man and three women working together to gather about 20 arrobas or 230 kilos [about 506 pounds] of almonds in the shell per day. The women who usually do the shelling shell from 40 to 50 kilos [about 88 to 110 pounds] of almonds, which produce about 10 to 15 kilos [approximately 22 to 33 pounds] of kernels.

One hundred kilos [about 220 pounds] of almonds in the shell produce approximately 25 kilos [about 55 pounds] of kernels.

The wages paid to adult male laborers in this district are as follows: "Expert peon," men who have some practical knowledge of agriculture and can be used as foremen, from 5 to 6 pesetas [96½ cents to $1.16, par] per day, with quarters but no meals. Ordinary labor, 3.50 to 4 pesetas [67½ to 77.2 cents, par] per day, without meals, or 2 pesetas [38.6 cents, par] per day and found.

Women, 2.50 pesetas [48¼ cents, par] per day, without meals; children [supposed to be over 14 years of age], 1 to 1.50 pesetas [19.3 to 28.9 cents, par] per day. The women are sometimes paid by piecework for shelling; the rate is 4 pesetas [77.2 cents, par] per 100 kilos [about 220 pounds] of almonds in the shell.

In the Valencia district, the wages paid for an 8-hour day are, men, 5 pesetas (96½ cents, par): women, 2.50 pesetas (48¼ cents, par); and children, 2.50 pesetas (48¼ cents, par).

Eight hours constitute the legal working-day, but according to the report from Malaga, the laborers are very deliberate in that district. Excluding time for meals, cigarettes, and repeated rests, they generally work only about 5 hours a day.

The village bakers use almond shells for fuel and pay 4 to 5 pesetas (77 to 96½ cents, par) for 100 kilos (220 pounds).

Agricultural wages are practically the same at all seasons. The agricultural laborer, however, gets more money at harvest time because the women and children of his family are also at work.

It is declared that because of the sweatshop methods in harvesting these almonds it is next to impossible to determine the cost of production. It has been estimated, however, that each arroba (11½ kilos, or approximately 25⅓ pounds) costs the producer from 15 to 20 pesetas ($2.90 to $3.86, par), "taking into consideration all overhead charges, taxes, interest on investment, exhaustion of soil, labor," etc. The producers sell the kernels in bulk in unassorted sizes. The 1920 crop of shelled "Jordans" sold for from 65 to 70 pesetas ($12.55 to $13.51, par) per arroba (11½ kilos, or about 25⅓ pounds); "Valencias" for from 35 to 45 pesetas ($6.76 to $8.69, par).

The farm laborer, assisted by his wife and children, earns about 1,000 to 1,500 pesetas ($193 to $289.50, par) annually, but both the small agricultural proprietor and the farm laborer have a very low standard of living.

Skilled woman assorters are paid 3 pesetas (57.9 cents, par) a day of eight hours by one of the largest almond exporting firms in Malaga. Novices at assorting are paid 1.50 to 2 pesetas (28.9 to 38.6 cents, par). A woman experienced in this work can usually assort 30 kilos (66 pounds) of kernels a day. "Jordan" almonds, on account of their elongated form, have to be assorted by hand. Mechanical devices are made use of in assorting the "Valencias."

AGREEMENTS.

Recent Labor Agreements and Decisions.

Railroads.

DECISION No. 217 of the Railroad Labor Board, effective August 1, decreases the rates of wages of employees engaged in railway express service. The decision provides that the American Railway Express Co. shall make deductions from rates of wages heretofore established by the authority of the board in its decision No. 3 (Aug. 10, 1920) for the following specific classes of employees in amounts per hour hereinafter specified for such classes:

	Cents.
SEC. 1. Agents, storekeepers, assistant storekeepers, chief clerks, foremen, subforemen, and other supervisory forces	6
SEC. 2. Clerks	6
SEC. 3. Wagon, automobile, stable, garage, and platform service employees	6
SEC. 4. Messengers and helpers, messengers handling baggage and helpers, guards, and other train service employees	6
SEC. 5. All other employees whose wages were increased by section 5, Article II, of Decision No. 3	6

The general regulations governing the application of this decision are as follows:

SECTION 1. Decreases in wages specified in this decision are to be deducted from the daily, weekly, or monthly rates, as the case may be, in the following manner:

(*a*) For employees paid by the day, deduct eight times the hourly decrease established from the daily rate.

(*b*) For employees paid by the week, deduct forty-eight times the hourly decrease established from the weekly rate.

(*c*) For employees paid by the month (except train service employees), deduct two hundred and four times the hourly decrease established from the monthly rate.

(*d*) For train service employees paid by the month, deduct two hundred and forty times the hourly decrease established from the monthly rate.

These rates, so far as they apply to officials, are to affect only such classes of subordinate officials as are so classified by the Interstate Commerce Commission.

Decision No. 218, issued by the Railroad Labor Board on July 26, declares illegal both elections of representatives to the system conference on rules recently conducted on the Pennsylvania system. One election was conducted by the management and one by the Federated Shop Crafts affiliated with the Railway Employees' Department of the American Federation of Labor. The rules negotiated by the alleged representatives selected by either ballot are declared void and a new election ordered. Specific regulations as to employees' eligibility to vote and the form of ballot to be used in the new election are made in this decision. For the purpose of deciding upon the specific manner of the distribution, casting, counting, and tabulation of the ballots in such election, a conference was

ordered on or before August 10 between duly authorized representatives of the carrier and all railroad organizations or unorganized employees meeting the requirements of the transportation act and the rules of the board. Addendum No. 1 to this decision provides that the election shall be by secret ballot.

A similar decision (No. 220) affecting the Brotherhood of Railway and Steamship Clerks, Freight Handlers, and Expressman and the Pennsylvania system was made on August 3. This decision provides for a conference on or before August 15 to arrange details of the new election.

Clothing and Textiles.

Chicago Cloak and Suit Industry.

THE agreement between the Chicago Cloak and Suit Manufacturers' Association, the North West Cloak and Suit Manufacturers' Association, and the Joint Board of the Cloak and Skirt Makers' Union of Chicago, which expired on June 21, has been extended until December 1. The old agreement provided for the 44-hour week, time and one-half for overtime, and the following minimum wage scale.

All workers shall work by the week. The minimum wage scale shall be as follows:

Cutters	$40.00
Trimmers	33.00
Sample makers	32.00
Jacket and dress operators	44.00
Skirt operators	42.00
Jacket and dress pressers	40.00
Jacket and dress underpressers	36.50
Skirt pressers	37.50
Finishers who can do all hand sewing on a garment, to include lining basters	32.00
Edge basters, who are also competent to do other hand tailoring	28.00
Edge basters, who are incompetent to do other hand tailoring	23.50
Feller hands, not including first-season apprentices	23.50
Button sewers, hook-and-eye sewers, and skirt-bottom basters (not including first two-months apprentices)	18.00

Montreal Clothing Trade.

The labor situation in the Montreal clothing trade was clarified by an agreement reached June 16 between the local unions of the Amalgamated Clothing Workers of America and the Clothing Manufacturers' Association of Montreal. The agreement, which provides for a tripartite arbitration board with an impartial chairman, is practically the same as last year's, except that the installation of production standards is provided for. The contract clause dealing with standards of production reads as follows:

In each separate shop an agreement shall be reached between the representative of the union and the representative of the employer as to standards of production with respect to each separate operation. A memorandum thereof shall be made and signed and then the said agreement thus reached becomes automatically a part of this contract. If any difference of any kind arises under this clause, including as to what shall constitute a proper standard, it shall be submitted to the impartial chairman and his decision shall be final. If the production falls below the standard agreed upon, and this be due to the fault of the workers, then the compensation shall be readjusted accordingly and any difference arising from such readjustment shall also

be submitted to the impartial chairman. Rules governing standards of production and safeguards to the parties in regard to same shall be mutually worked out, and when so worked out and mutually agreed upon they shall become a part of this agreement.

Cincinnati Cloak Trade.

The official organ of the International Ladies' Garment Workers' Union reports a settlement effected June 20 in the Cincinnati cloak trade. Wages and conditions of work remain unchanged in the local industry, the report states, the new feature of the agreement being the guaranty by the employers of 24 weeks of uninterrupted work during the coming season.

Textiles, New York City.

The Daily News Record (New York) for July 8, 1921, reports that—

The Textile Finishers' Association (of New York) and the Cloth Examiners and Shrinkers' Union have signed a two-year agreement to take the place of the agreement recently expired. The scale of wages is the same as that existing at the present time. The minimum weekly rate for examiners is $50; spongers and decators, $45; takers-off, $33; and helpers, $20.

Silk Ribbon Industry.

An agreement for the training of apprentices in the silk-ribbon weaving trade has been compiled and adopted by the trade council of the silk-ribbon industry of greater New York. This plan, dated July 9, follows in full:

Preamble.

The parties to the collective bargaining agreement in the silk-ribbon industry of Greater New York realize that the responsibility for the training of new workers in the weaving trade lies equally with the employers and the employees. In order to maintain the continuous welfare of the industry, workers must be trained to replace those who normally leave the industry as well as to provide for its growth. This is especially true in a skilled trade like the manufacture of silk ribbons, which requires well-trained workers.

The training of textile workers generally, and especially of silk-ribbon weavers, has been carried to a higher degree of efficiency in Europe than in this country. Methods of training with us have been rather indefinite and as a rule not enough attention has been given to the young worker who desired to learn the trade. The consequence has been that our silk-ribbon industry has very largely relied for the better quality of work upon the weavers with European training.

For some time prior to the outbreak of the World War, the supply of European weavers coming to this country was dwindling and the war practically cut it off. This means that the industry must depend at present and in the future upon home-trained weavers. It means that the silk-ribbon industry in this country must develop methods of training equal to those of Europe. In order that the American silk-ribbon industry may hold its own in all markets, workers must be trained who will be able to turn out the most highly skilled workmanship. Workers must be trained so that they will be capable of weaving not only the highest class of goods but also skilled in the efficient production of all the medium and lower grades.

Therefore, the parties to this agreement, in order to discharge in the best possible way their responsibility for the training of weavers, have jointly agreed through their trade council upon the following plan for the training of apprentices in the silk-ribbon weaving trade.

Plan.

SECTION 1. *Requirements for apprentices.*—Age: The minimum age shall be 16 years. Education: Every apprentice shall know enough English to understand directions and be able to figure sufficiently to keep necessary records. This requirement will not be taken to bar an apprentice who at the time of entering is deficient in English, providing he is at the time studying the language.

Physical: The eyesight of every apprentice shall, if possible, be tested at the expense of the firm, such examination to include test for color blindness. Attention shall be given also to the general physical condition.

SEC. 2. *Period of training.*—The period of training shall be three years. But the joint committee shall have the authority to grant an examination to a specially qualified apprentice after the completion of two years' training if such apprentice shall have shown exceptional ability, provided the apprentice submits a written application to the joint committee, requesting such examination.

Apprentices taken in any mill shall serve out their apprenticeship period in that mill, and are not to be taken in as employees in the weaving departments of any other silk-ribbon mill coming under the agreement, or under union control, except as apprentices, and upon the consent of the impartial chairman.

SEC. 3. *Probationary period.*—There shall be a probationary period for apprentices of not less than three months nor more than six months. During this period the management shall determine the fitness of the apprentice for the trade, and during this period the apprentice may be discharged without review. At the expiration of the probationary period the apprentice may be admitted to the union as an apprentice weaver member.

SEC. 4. *Preliminary training.*—Before entering as a weaving apprentice, the apprentice must have at least six months' experience in the preparatory or weaving departments. Six months after entering as an apprentice weaver, the joint committee must decide the amount of credit for such preparatory experience, but the credit shall not be for less than six months.

Where a broad-silk weaver desires to take up ribbon weaving, he must show that he has had at least three years' experience as a broad-silk weaver. In that case he can be taken in as an apprentice and shall serve for at least three months, receiving the pay of an apprentice in the last six months' period. At the end of his training period the weaver shall receive an examination by the joint committee before he may be classed as a third-class weaver. In cases where a broad-silk weaver has not worked for three years at such occupation, the joint committee shall, after three months' probationary period, decide the amount of time credit he shall receive for whatever period he may have worked on broad silk.

SEC. 5. *Wages.*—The initial wages for apprentices shall be 40 per cent of the minimum wage paid the third-class weavers. Every six months the wages shall be increased 10 per cent on the basis of the third-class weavers' wages. These increases shall be made automatically every six months, unless on account of poor production, irregular attendance, lack of interest, etc., it is not considered justified. In such cases the apprentice shall have the right to have the matter considered by the joint committee, with the further right of appeal to the impartial chairman.

If changes occur in the weavers' guaranteed minimum or in the hours of work, the compensation of apprentices will vary accordingly.

SEC. 6. *Number of apprentices.*—In all the mills coming under the agreement, 1 apprentice may be employed for every 10 weavers or major fraction thereof. This number will be based at any one time on the average number of weavers employed during the previous six months' manufacturing period. It is understood that during a period in which weavers are being laid off for lack of work no new apprentices may be taken on. The proportion of 1 apprentice to 10 weavers is to hold good for a period of 2 years from the date of this apprenticeship plan, unless some emergency arises which in the opinion of the impartial chairman justifies the opening of the matter. At the end of the two-year period either party to the agreement can at any time bring before the trade council the necessity of a change.

SEC. 7. *Training.*—All apprentices shall have the opportunity to work on the different looms in the mills, on wide and narrow ribbons and on different weaves, and in all ways shall be afforded an opportunity to get as wide and as all-round an experience as the mills in which they are working afford.

SEC. 8. *Progress records.*—Records shall be kept by the management of the progress of each apprentice, with the experience on the loom, twisting, interest shown, punctuality, etc. The progress records shall also include all reports of seconds turned out by the apprentice, so that the management may use this both for criticism and commendation. The average daily production shall be calculated at frequent intervals, preferably every month, to show both the management and the apprentice how much progress has been made. These records at the proper time shall be open to the joint committee, the apprentice, and others who are lawfully interested in the matter. In the training of apprentices the initial emphasis must be on method and quality of work rather than on yardage. Future all-round efficiency must not be sacrificed to present production. Not until the apprentice has thoroughly grasped the nature of

the work and the accurate way of doing it should quantity be sought. But at the same time the apprentice must learn how to combine quantity and quality in production so as to become a first-class weaver.

SEC. 9. *Examination.*—After the period of training has been completed, the apprentice shall be given an examination by the joint committee for entrance in the third class of weavers. This committee shall determine the details of the examination, and such examination shall cover the following points, rated as follows:

	Total credit (per cent).	Passing mark (per cent).
Starting up loom	10	5
Twisting	10	5
Skill	40	30
Quality of goods turned out	25	20
Speed	15	10
	100	70

The standard must be based upon the work of an experienced weaver, and the apprentice must have at least 70 per cent as a total before he can pass.

If the apprentice fails to meet the requirements, the joint committee shall have the authority to extend the period of apprenticeship, but for not longer than a period of six months after the examination. At any time within this six months the joint committee shall have the authority to hold an examination finally to determine the apprentice's standing. After satisfactory completion of the term of apprenticeship and examination, the apprentice shall be given a certificate to that effect, signed by the members of the joint committee. In order to facilitate better cooperation between the union and the management and to insure apprentices receiving their full period of training, the apprentice may receive an apprentice card from the union after the probationary period is ended. When an apprentice has received his certificate, this card may then be exchanged for the regular union card designating him as a full-fledged weaver.

SEC. 10. *Appointment of joint committee.*—A joint committee representing the management and the workers in the shop shall be appointed for the purpose of carrying out the details of this apprenticeship plan, holding examinations, etc. Said joint committee shall consist of two members from each side, to be selected or appointed as the different parties may decide.

Shipping.

WORKING rules and wages governing employment of masters and mates for transatlantic, transpacific, Atlantic, Pacific, and Gulf coast service have been adopted after conference between the representatives of the United States Shipping Board and the representatives of the National Association of Masters, Mates, and Pilots of America and the Neptune Association, representing licensed deck officers.

Following is the agreement in full:

Vessels are to be classed according to their "power-tonnage," represented by gross tonnage plus indicated horsepower as given in the "List of Merchant Vessels of the United States," as compiled by the Commissioner of Navigation, or in other recognized maritime lists.

Class.	Single screw.	Twin screw.
Class A	Over 20,001	Over 15,001.
Class B	12,001 to 20,000	9,001 to 15,000.
Class C	7,501 to 12,000	5,501 to 9,000.
Class D	5,001 to 7,500	3,501 to 5,500.
Class E	Below 5,001	Below 3,501.

WAGE SCALE.

Occupation.	Class.				
	A	B	C	D	E
Master	$370	$335	$320	$310	$295
First mate	205	200	195	190	185
Second mate	180	175	170	165	160
Third mate	160	155	150	145	140
Fourth mate	[1] 140	[1] 135	.....	.....	.....

[1] When carried.

Working Rules.

RULE 1. Watch and watch to be maintained on sailing day or at any outside port or ports of call. No mate shall be required or permitted to take charge of a watch upon leaving or immediately after leaving port, unless he shall have had at least six hours off duty within the 12 hours immediately preceding time of sailing.

RULE 2. A working-day at any port where watches are broken shall be from 8 a. m. to 5 p. m., during which time one hour shall be allowed for dinner.

NOTE.—In tropical or other ports where conditions make it desirable to make special arrangements about working hours on account of climatic conditions, a special arrangement may be made which is mutually satisfactory to meet the situation.

RULE 3. When a ship arrives in home port the mate standing the night watch shall have the next day off.

NOTE.—For the purpose of these rules a "home port" shall be considered the port at which shipping articles are opened or the port at which crew is paid off upon completion of the voyage.

RULE 4. If a mate is required to stay on board in any port on Sundays or on New Year's Day, July 4, Labor Day, Thanksgiving Day, or Christmas Day, he shall have one full day off with pay, or be paid one day's additional pay, but this shall not apply to a vessel sailing on or ready to proceed on her voyage.

It is the intention of this rule that no work shall be performed by the mates except that which is necessary for the safety of the vessel.

RULE 5. In all ports of call and foreign ports, one mate shall be required to stay aboard at night. Mates shall alternate and shall receive no extra compensation for this work.

It is the intention of this rule that no night work shall be performed by the mates except for the safety of the vessel.

RULE 6. No overtime shall be performed at sea except for the safety of the vessel.

RULE 7. A working-day in port in excess of eight hours shall not be performed or paid for unless the work is done by written order of the master, owner, or agent of the vessel. An entry shall be made in the log book every time a mate is required to perform overtime service, covering kind of work, reason for same, and time started and finished. Authorized overtime to be paid at the pro rata rate.

RULE 8. No mate shall be laid off Sundays or holidays, but at the option of the master the mates shall be granted shore liberty with pay.

RULE 9. When in port and board is not furnished, $3 per day shall be allowed for subsistence and $2.50 per day shall be allowed for lodging when no room is provided.

RULE 10. Final discharge of mates to be at ports designated in ship's articles except when impracticable or through no fault of his own, or in case of sale or abandonment of vessel by owner at other port, in which event members are to be reimbursed for all time and travel expenses incurred incident to return to port designated.

In the event any question arises concerning the discharge of any mate he shall have the right of appeal to the marine superintendent before final decision is rendered.

RULE 11. These wages and conditions do not apply to vessels not in active operation.

RULE 12. There shall be no discrimination in the employment of any master or mate on account of affiliation or nonaffiliation with any organization.

RULE 13. The wage scale and working conditions promulgated herein shall remain in effect until January 1, 1922, and thereafter until such time as 30 days' notice shall have been given by either party to discontinue.

Packing-House Industries.

TWO awards were handed down on July 14 by Mr. Samuel Alschuler, United States administrator for adjustment of labor differences arising in certain packing-house industries. One concerns the demand of employers for a general reduction of 5 cents per hour and for certain changes in application of the basic 8-hour day. This decision, denying the request for wage reduction and directing certain changes in the computation of overtime, is as follows:

A. For the present the employers' requested further reduction of 5 cents per hour in all wage rates is denied.

B. Employers may at their option upon three days of each week work their employees nine hours before being required to pay overtime rates for such days, or, if they prefer, they may work them one day of each week 10 hours, and one other day of that week 9 hours before being required to pay overtime rates for such days, the overtime rate as to the other days of the week to remain as heretofore. If, during any such week, more than 48 hours be worked, overtime rate shall apply to the week's time worked in excess of 48 hours. Holiday rates are not affected.

C. In computing "guaranteed time" any overtime or holiday work during the week shall be figured at the number of hours represented by the pay rate therefor, i. e., time and one-half for an overtime hour shall be considered as 1½ hours of work applicable on the 40-hour guaranty. This and the prior section of the award shall be effective July 17, 1921.

D. The administrator retains jurisdiction of this proceeding, and the right to make further reductions in wages, and changes in the matters and things above awarded, as during the administration from time to time may by the administrator be deemed necessary and for the best interest of all concerned.

With respect to the rates of wages extended by this award, the decision states:

Computation of the hourly pay rates of all the plant employees as of June 1 in one plant (Swift's, at Chicago) shows those receiving under 45 cents to be 11 per cent of the whole; those receiving 45 cents, 30.7 per cent; those above 45 cents, up to and including 47 cents, 27.3 per cent; those above 47 cents up to and including 50 cents, 12 per cent; making 81 per cent of all these employees who are paid 50 cents and under. Of the remaining 19 per cent I think it would be safe to say that two-thirds are receiving under 60 cents, and that the number now receiving over 70 cents is quite negligible. This is fairly typical of all plants in the administration, save that the common labor rate at Fort Worth and Oklahoma City has been and is 3 cents lower than elsewhere.

In another award of the same date Mr. Alschuler directed that the cut of 8 cents an hour put in effect by the Union Stock Yards and the Transit Co. on May 1, to which the employees objected, should stand for the time being "subject to such change as conditions in the future may require during the existence of the administration."

New York.[1]

A new agreement providing average wage reductions of 10 per cent for 5,000 slaughterhouse and packing workers in the New York district has been signed by employing packers and the Amalgamated Meat Cutters and Butchers Workmen of North America.

The new contract also provides for continuation of the preferential union shop; the basic 48-hour week for miscellaneous and common labor; a basic 10-hour day for drivers and chauffeurs, and an 8-hour day for all other labor.

The agreement was signed by Armour & Co., Swift & Co., Wilson & Co., Morris & Co., and smaller concerns.

[1] The Wilmington Labor Herald, June 25, 1921, p. 3.

Printing.

IN the proceeding between the Typographical Union and the closed-shop division of the Typothetæ, of Washington, D. C., Arbitrator Judge W. W. Warwick handed down his decision on July 29. The decision, which will be effective from July 30, 1921, to April 30, 1922, provides that the scale in effect since January 23, 1920, is a reasonable minimum scale and shall continue for the period above specified as follows:

Hand men, daywork, per week of 44 hours	$40.00
Hand men, night work, per week of 44 hours	45.00
Machine men, daywork, per week of 44 hours	42.00
Machine men, night work, per week of 44 hours	47.25

Stove Industry.

THE 1921 conference between the International Molders' Union of North America and the Stove Founders' National Defense Association agreed upon a 15 per cent reduction on piecework earnings and a 5 per cent reduction on day workers' minimum. Certain clauses of the conference agreements in force between these two organizations have been in force since 1891. Clause 28, amended at the 1921 conference, now reads as follows:

Six dollars shall be the established minimum day's wage for all day work molders and molders working by the day at core making in the shops of the members of the Stove Founders' National Defense Association.

Beginning May 2, 1921, the prevailing day rate as established by the International Molders' Union of North America in the district shall apply.

Where members have employed molders during the last six months of 1920, at the minimum of $6.32½ per day, the above shall not apply, but where the members now paying a rate less than the prevailing day rate as established by the International Molders' Union of North America in the district, no reduction shall be made.

NOTE.—The local union shall allow an old or physically incapacitated molder to work for such wage as may be mutually agreed upon between him, his employer, and the local union.

Beginning May 2, 1921, the molding prices of all work in shops of the Stove Founders' National Defense Association shall be reduced 15 per cent on the prices paid at the present time. Where the percentage is at present 125 per cent on list, this reduction will make the percentage 91¼ per cent on its equivalent.

Street Railways.

THE Massachusetts Board of Conciliation and Arbitration issued on May 14 an award in the matter of the joint application for arbitration of the controversy between the Eastern Massachusetts Street Railway Co. and its employees, members of the Amalgamated Association of Street and Electric Railway Employees of America. Twelve specific issues were presented on which the board has ruled as follows:

1. There shall be a reduction in the basic wage now in force of 12½ per cent.
2. There shall be no change in the differential of 5 cents per hour paid to operators of the one-man car.
3. Seniority shall be abolished in the shops, car houses, power plants, and in the track and line departments.

4. In case of a curtailment of force, employees are not to hold their seniority rights for a period of six months.
5. The computation of time for runs of conductors and motormen shall not be changed from computation to 15-minute and half-hour periods to computation to 10-minute periods.
6. Relief for 30 minutes or less is to be paid for.
7. Employees in the mechanical and miscellaneous departments are not to be allowed 10 minutes under pay to wash up.
8. Men in the mechanical and miscellaneous departments who work 8 hours on Sundays and holidays and 9 on week days are not to be paid 9 hours' pay for the 8 hours' work on Sundays and holidays.
9. The request for pay at the rate of time and one-half for work done on Sundays and holidays in shops, in car houses, in power plants, and in the track and line departments is denied.
10. Employees in the mechanical and miscellaneous departments when doing overtime work shall be paid compensation at the rate of time and one-half.
11. The request for Saturday half holiday with pay for employees in the rolling-stock shops is denied.
12. Employees' request that regular workers of the mechanical and miscellaneous departments, who have worked one continuous year or two consecutive 4-track seasons, shall not have their wages reduced by reason of occasional rainy or inclement weather, is denied by the board.

About 1,860 employees will be affected by this award.

Building Trades.

ACCORDING to the August 6, 1921, issue of The American Contractor, in August, 1920, the Building Trades Employers' Association and the Building Trades Council of Westchester County, N. Y., came to an agreement on wages and conditions which became effective in October, 1920, and was to continue until the end of 1921, unless certain specified steps were taken to change it. In the early part of 1921 the employers felt that in view of the fall in prices and wages elsewhere, the building trades should consent to a reduction of the wages agreed upon. The Building Trades Council did not share this view and a controversy arose which was finally submitted to Mr. Samuel Untermeyer as arbitrator, both sides agreeing to accept his decision. His award, which was given out on June 30, is more than a mere wage decision, since it includes a discussion of several matters of much importance both to the building industry and the public. The question submitted to him, according to his understanding of the matter, was, What is a fair wage for the several classes of building artisans in Westchester County? Should they continue to receive $9 a day, according to the terms of the agreement, or should their wages be reduced $1 a day, as the employers contended?

If the answer depended merely upon the relation between wages and cost of living, then, Mr. Untermeyer stated, the reduction in the cost of living since the wage scale was agreed upon justified the cut the employers wished to make. But the situation was not so simple as that. The Building Trades Council had objected to the proposed cut on the grounds—

1. That there was an implied understanding that the wage scale should be governed by that prevailing in New York City, and should not fall unless that did.

2. That the employers had an arrangement by which large profits on labor were added to the estimates furnished their customers, and

that any reduction of wages would merely increase these profits, not inure to the general good.

3. That contractors were exploiting labor by charging the public exorbitant profits over and above the wages they paid their men, and that on this account a demand for lower wages came with bad grace from them.

4. That the employers' association had not given the notice of their intention to demand a change in wages which the contract called for, and that therefore the agreed wages should stand throughout the period covered by the contract.

The first of these contentions Mr. Untermeyer dismisses summarily, pointing out that although there had been some discussion of the point, no agreement or understanding of the kind mentioned had been reached, and that there was no reason, in logic or equity, for making the wage scale of New York City govern that of Westchester County.

The second point, as involving a serious charge, was dealt with at greater length. A firm of chartered accountants, of unquestionable standing, was engaged to "make such investigation of the accounts of two of the largest builders as the limited time at my disposal would permit." The conclusions drawn from their report are as follows:

> It will be observed that in so far as they were able to investigate, the charges are not sustained. I am satisfied also from independent investigations that the contractors are not earning excessive, or even reasonable, profits on the volume of their business. They are entitled to earn at least 7½ per cent, year in and out on their volume of business, including subcontracts for which they are responsible. I am satisfied also, that the charge made against them that in their estimates they have been adding $3 a day to the cost of labor, is not sustained, but I am not satisfied and am unable to find that in their estimates they have figured only the prices they are paying for labor before adding their percentages of overhead and profits. It is impossible to determine this important factor from their estimates made. The burden is upon them in that respect, and they have not borne it.

On the third charge, that labor was being exploited by the contractors, the findings were of a different character.

> There is no question that labor in Westchester County as elsewhere is being exploited and that the high cost of living is more vitally and directly affected by this form of profiteering than by the increase in wages that go to the wage earner. As above stated, the charge made by the unions that the contractors add $3 per day to the cost of their labor is not proven. It is, on the contrary, disproven. The vicious form of profiteering to which I refer is practiced mainly by the jobber and retailer on day's work.
>
> Illuminating illustrations of the practice, which has unfortunately become general, and which must be corrected if the construction and repair costs on buildings are again to become normal, will be found in bills such as that of:
>
> (a) ——— Co., where 91½ hours' labor was charged a customer, at $1.75 per hour, or $14 a day, in addition to extortionate profits on the material used on the job. This has of late years become a standing charge of this and other equipment companies, but it is none the less unconscionable on that account.
>
> (b) ———, who charged his customer for 42 hours' labor of a plumber at the rate of $14 a day, and 9 hours for a laborer at $1.06 per hour, in addition to exorbitant profits on the materials used on the job.
>
> (c) ———, a plumber whose charges for material on the job represents a profit of over 200 per cent.
>
> (d) ———, who furnished labor (no material) consisting of a steamfitter and helper, and a plumber and helper, for 2½ days each, to whom he paid in all $80 in wages, and who were charged by Mr. ——— to the customer at $166.30 for the same labor, which charge Mr. ——— afterwards "graciously reduced to $140, equal to 75 per cent profit on the labor, when the payment of his bill was refused as excessive." I quite under-

stand that these charges include the use of tools and compensation insurance, but they are unjustifiable.

It has not been possible to ascertain at this distance whether any, and if so, which of these jobbers is also a contractor or member of the Building Trades Association. I must therefore assume that none of them are, since there is no evidence before me that any of the members of that association are engaged in this vicious form of exploiting labor. The fact remains, however, that labor is being unjustly held responsible by the public at large for this character of extortion. * * * An addition of 20 per cent by these jobbers to the cost of labor and materials to cover the overhead and profit would be ample, and as far as labor is concerned, the union should see to it that 20 per cent is the limit of charge, by refusing to furnish labor to jobbers who charge in excess of that amount. * * *

Summarizing the conclusion reached on this point, I accordingly find (a) that while the builders have not successfully borne the burden of proof as to the basis of labor costs, as between $8 and $9 a day, on which their present estimates are based, I can not find, as charged, that they add an improper or excessive amount to the cost of labor, and (b) that labor is being outrageously exploited by the jobbers, and that a reduction in labor costs lies in the hands of the unions, through limiting profits that may be charged on such labor.

Taking up the fourth point, the arbitrator finds that the employers did not give a clear and definite statement of their intention to demand a change of wage rates within the time fixed by the agreement, and that on the score of this failure to observe the terms of the contract the men are entitled to some consideration. At this point Mr. Untermyer digresses from the strict consideration of the men's charges in the order given to another point bearing upon the wage question, namely, the action of a painters' union in Yonkers in insisting upon a five-day week and forbidding its members to work over that limit. This is denounced as "a vicious precedent detrimental alike to the welfare and efficiency of the men and to the prosperity of the country if it were to become a universal rule."

The award itself is a compromise, fixing the lower wage—$8 a day—for which the employers contended, but decreeing that it shall not become effective till September 1, and that meanwhile the men shall be paid at the rate of $9 a day "and correspondingly for other classes of labor included within this arbitration that are receiving lesser sums." The going into effect of the lower rate is made conditional upon the observance of the following stipulations:

1. That the contract shall be modified by striking out the provision giving the employers' association preference over other employers in securing union labor. The attempted justification of this provision does not appeal to me; no such discrimination should be asked by the employers or made by the unions in favor of any class of employers for any reason. It is liable to great abuse and tends to discredit the cause of organized labor.

2. Every contractor and builder in Westchester County employing union labor, whether or not he be a member of the Building Trades Employers' Association, must, in order to secure the benefit of the reduced wage hereby conditionally directed from and after September 1, on and after August 1, 1921, figure his labor based on actual cost in all estimates. To the amount so determined he will add whatever percentage of profit he may see fit, provided the profit thus added is plainly shown on the estimate and in his books of account. On and after that date all estimates that result in contracts must separate the figures on the various classes of labor involved and the prices at which they are figured from the other items of the estimate, and all such estimates must be filed with the secretary of the Building Trades Employers' Association within 10 days after the contract has been closed, there to remain for 60 days, subject to the confidential inspection of the accredited officials of the union, but to none others.

In this way the unions will be able to learn, as they are entitled to know, whether the wages they are receiving fairly represent their contribution to the enterprise. Such disclosure should go a long way toward inaugurating an era of understanding and good will between the men and their employers. It may appear arduous and

inquisitorial in the beginning, but in the end it will pay, and the public will be the gainer.

It is through the working of this latter condition—the filing of the exact profits made by the contractor or builder—that the arbitrator expects the unions to enforce the rule of refusing to furnish labor to contractors charging more than a profit of 20 per cent over and above the cost of labor and material. In thus enforcing a limitation of profits, the unions have an opportunity to perform "a signal public service that should have a substantial effect on the cost of living, and that would be greatly appreciated by the suffering public."

Boot and Shoe Industry.

An employer in the boot and shoe industry requested a reduction of 30 per cent on all piecework prices and on all day and week work wages. When the formal hearing was opened by the board of arbitration the request was modified by the employer asking for a reduction that would average 20 per cent of the pay roll. The arbitration board decided not to permit a reduction and in a letter bearing date of July 20, 1921, and addressed to the Secretary of Labor, gives the reasons for its decision:

The undersigned, all of them commissioners of conciliation, Department of Labor, were selected as a board of arbitration on a case in which the employer asked for a cut in wages. Oscar F. Nelson was selected by the employees and the union; Herbert J. Friedman by the employer; and E. T. Gundlach was chosen by both parties as third arbitrator.

While the three commissioners were named in the case as individuals and not as Government representatives, they believe that some of the points in this decision may serve as precedents in other arbitration cases in so far as the Government may approve these points. It was, therefore, deemed best by the board to state to the Government its reasons for its decision.

The evidence showed:

That the employer was the largest of four large concerns engaged in a similar line of industry in the same city, being the only one in that line employing organized labor in that city.

That none of the other three factories had brought about a wage reduction, there being furthermore no evidence that these others had reduced the number of hands.

That reductions of 10 to 22.5 per cent had been made by posting of factory notices, by mutual agreement, and by arbitration in some 25 other factories manufacturing the same kind of product in other parts of the United States; such factories, however, manufacturing mostly cheaper grades than those of this employer.

That no wage reduction had been made in any large factory making a grade of product that might be said to be in the most direct competition with that of employer.

That in one particular district of the country, where a large number of factories engaged in making a product in direct competition with that of employer are situated, the employers had just petitioned for a 20 per cent reduction in wages, and that hearings under a State board proceeding were about to be held; and that in other factories in that district many hands were at present out of employment.

That the employer had greatly reduced the wholesale price of his product and that he was not at this moment making a reasonable return upon his investment, in fact, no profit at all. However, the figures, on investigation, showed that the selling price had been set with a view to a close and yet not entirely unreasonable percentage of profit on volume; and that during the latter part of May and for a few weeks thereafter, these profits had been destroyed by a sudden increase in the cost of raw materials which cost, as the board learned, fluctuates continuously. Other figures to show the employer could not make profits were based on losses due to shipments in the abnormal preceding period and to estimates as to future credit losses and future selling expenses, with some evidence, however, as to continuous increased costs of selling.

The employer urged as a basis for a wage reduction:

(*a*) That the general economic conditions prevailing throughout the country required a reduction in wages.

(*b*) That the reduction in the cost of living meant that the employer was asking not for a wage reduction but rather for a wage adjustment.

(*c*) That the employer would not be able to go on manufacturing his product unless a wage reduction were granted speedily.

The employees urged:

(*a*) That reductions had not taken place in factories under the most direct competition with the employer and that in the entire industry the wage cut had been only 3 per cent.

(*b*) That wages had not been raised in this industry as much as in some others and reductions in the cost of living did not necessarily justify a wage cut in this industry.

(*c*) That the profits or losses of the employer had no bearing on the question of wage cuts unless it could be shown that the losses were due to labor costs.

The board believed:

1. A board called in to arbitrate a wage scale, unless the agreement to submit to arbitration specifically provides for the setting of a scale for a definite period, is not required to render a decision awarding a wage scale binding for the balance of the period in which the arbitration agreement is in force. Where the board feels that a change in wages, whether upward or downward, is not due at the time the board is sitting, it does not follow that such a change may not be due any time thereafter. Therefore, such a board may either continue holding itself ready for further sessions on call from either party, or may leave the matter open for other boards to act.

2. General economic conditions may be taken as a background, or possibly as one reason for adjustment of a wage scale, but can not be accepted as *the* reason while doubt still remains as to *when* and *how* these general conditions will apply in individual industries or individual factories. If general conditions were to be so accepted, then all employers and wage workers operating under an arbitration agreement would automatically reduce or raise wages, as the case may be, whenever the general trend was in that direction. The employer who had agreed to arbitration would be in the forefront of those immediately forced to advance wages during a period of rising prices or of increased demand for labor; and when wages were tending downward, the worker who had signed an agreement to arbitrate would not even have occasion to present an argument regarding conditions in his factory or in his industry, but would automatically follow (or possibly in some measure lead) those economic forces. Such a theory, in the judgment of the board, would destroy the purpose of arbitration, and in fact would result in the refusal of many employers and employees to agree to arbitration in the future.

3. Caution in making any changes in an existing wage scale is necessary if arbitration agreements are to be lasting. In a specific industry, where evidence shows that wages are being readjusted upward or downward, neither employers nor employees in an individual factory operating under arbitration should be put to a disadvantage as against those in other factories not bound by arbitration. While adjustment when evidently necessary should be made in a reasonably early period and not necessarily after a majority of those free from arbitration have already acted, yet such speed in readjustment must not be carried so far that those under arbitration are forced to readjustment while only a small portion of the entire industry has made any changes and while doubt still remains as to *when* and *how* these changes will become more general in this specific industry. Especially is this true where numerous factories in direct competition as to product or as to labor market would be able to make adjustments by mere factory notice and have not done so.

4. In so far as numerous factories directly competing, as in this case, are each or all under separate arbitration agreements, one or another of such factories has a perfect right to expect adjustments to be initiated in its factory in advance of all others. It would be manifestly unjust in such cases to ask one factory or group operating under arbitration to wait until others also bound by arbitration have secured an award. But in such case the employer or employers desiring readjustment, while unable under such circumstances to show the need of readjustment from competitive wage figures, must show the need of such readjustment from other figures drawn perhaps from the factory's own financial statement or from figures indicating the condition of the industry as a whole.

5. The fact that the cost of living had gone down 20 per cent would warrant a reduction if other causes indicate the need of a reduction. But the mere fact that the cost of living has gone down is no reason whatsoever for the cutting of wages. If this were in itself accepted as a reason, it would mean that we are operating on the

theory that the workmen of the United States should remain in a static and not in a continuously improving condition.

6. Figures regarding current continuous operating costs, whether they be labor costs, selling costs, or any other form of costs, provided they are continuous and current and necessary in the operation of the business, are at all times proper figures for an employer to introduce in evidence where a wage cut is contemplated. In the event the current and continuous cost of operation (including the labor cost as one and not as the only item) is such as to leave not a reasonable return on the factory's investment considering the price at which it is forced to sell its goods, then the period for readjustment of wages has arrived: *Provided, however:*

(*a*) That any adjustment of the wage scale is conditioned upon a living wage for all workers.

(*b*) That the figures given by such a factory are clearly indicative of general conditions in that industry and not individual conditions of that factory.

(*c*) That figures (if differing from figures of previous seasons) can be accepted only when there are sound reasons to believe that these figures represent costs that are not temporary, and that estimates as to future losses or increased costs must be in line with figures already well established, and that losses incurred now but due to operations of a past period during which the now contested wage scale was not questioned, can not be taken as figures at all.

Respectfully submitted,

HERBERT J. FRIEDMAN.
OSCAR F. NELSON.
E. T. GUNDLACH.

Wage Agreement in the Wool Textile Trade, Great Britain.

THE American consul at Bradford, England, reported, under date of June 28, 1921, that the joint secretaries of the National Wool (and Allied) Textile Industrial Council made the following statement relative to the wage agreement recently reached in the wool textile trade:

Payment under the new agreement is to be made on the pay day in the week ending July 9 for the week preceding that date, and the agreement is to continue in operation until the full pay day in the week ending June 3, 1922. Between now and the agreement coming into operation no changes in wages are to take place.

The original proposals of the employers were that gross wages should be reduced by about 22 per cent, but the terms of the new agreement are that the reduction shall be only 16½ per cent, which includes 5 per cent off the base rate.

The employers have agreed not to take advantage of the recent fall of 10 points in the cost-of-living figure, which in the ordinary way would have involved a further reduction in the cost-of-living wage of 10 points a week before the new agreement is timed to operate. No further change is to take place in the rate of wages until the cost-of-living index figure falls below 95.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in July, 1921.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in July, 1921, from representative establishments in 13 manufacturing industries and in bituminous coal mining.

Comparing the figures of July, 1921, with those for identical establishments for July, 1920, it appears that in 12 of the 14 industries there were decreases in the number of persons employed, while in only two industries were there increases. The two increases are 105.8 per cent in woolen and 0.7 per cent in cigar manufacturing. The great increase reported for the woolen industry for July, 1921, over July, 1920, is due to the recovery from short-time operations of all mills last year. The largest decrease reported, 46.4 per cent, appears in iron and steel. Automobile manufacturing, paper making, and car building and repairing show respective decreases of 36.9, 35.3, and 32.3 per cent.

Thirteen of the fourteen industries show a decrease in the total amount of the pay roll for July, 1921, as compared with July, 1920. The one increase reported, 76.8 per cent, appears in the woolen industry. The most important percentage decrease is 71.4 per cent, which appears in iron and steel. Paper making shows a decrease of 46.4 per cent, and automobile manufacturing shows a decrease of 38.7 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JULY, 1920, AND JULY, 1921.

Industry.	Establishments reporting for July, both years.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			July, 1920.	July, 1921.	Per cent of increase (+) or decrease (−).	July, 1920.	July, 1921.	Per cent of increase (+) or decrease (−).
Iron and steel	118	½ month.	189,770	101,638	− 46.4	$13,683,927	$3,909,739	−71.4
Automobile manufacturing	49	1 week..	126,997	80,188	− 36.9	4,335,639	2,656,000	−38.7
Car building and repairing	62	½ month.	65,386	44,282	− 32.3	4,082,301	2,627,286	−35.6
Cotton manufacturing	61	1 week..	59,818	59,574	− 0.4	1,396,375	1,006,377	−27.9
Cotton finishing	16	...do.....	12,339	12,266	− 0.6	328,436	271,837	−17.2
Hosiery and underwear	63	...do.....	31,664	25,691	− 18.9	601,577	396,282	−34.1
Woolen	51	...do.....	24,647	50,713	+105.8	645,963	1,142,135	+76.8
Silk	47	2 weeks.	19,840	19,272	− 2.9	868,098	820,785	− 5.5
Men's ready-made clothing	45	1 week..	31,070	29,732	− 4.3	995,111	932,001	− 6.3
Leather manufacturing	35	...do.....	14,909	12,138	− 18.6	399,181	267,933	−32.9
Boots and shoes	82	...do.....	60,578	59,253	− 2.2	1,449,344	1,332,222	− 8.1
Paper making	57	...do.....	33,564	21,725	− 35.3	983,809	527,031	−46.4
Cigar manufacturing	57	...do.....	16,226	16,335	+ .7	342,053	303,966	−11.1
Coal mining (bituminous)	99	½ month.	25,796	23,043	− 10.7	1,906,439	1,303,632	−31.6

Comparative data for July, 1921, and June, 1921, appear in the following table. The figures show that in eight industries there was an increase in the number of persons on the pay roll in July, as compared with June, and in six a decrease. The largest increase reported, 8.9 per cent, appears in men's ready-made clothing. Leather manufacturing shows an increase of 3.7 per cent, boots and shoes an increase of 3.1 per cent and automobile manufacturing an increase of 3 per cent. Iron and steel shows the most important decrease—12.7 per cent; while in hosiery and underwear and cigar manufacturing, respective decreases of 3.4 per cent and 3.1 per cent appear.

In comparing July, 1921, and June, 1921, four industries show an increase in the amount of money paid to employees and 10 show a decrease. The most important increase is 13.8 per cent, which appears in men's ready-made clothing. Iron and steel shows a decrease of 24.4 per cent, and car building and repairing a decrease of 14.9 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JUNE AND JULY, 1921.

Industry.	Establishments reporting for June and July.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			June, 1921.	July, 1921.	Per cent of increase (+) or decrease (−).	June, 1921.	July, 1921.	Per cent of increase (+) or decrease (−).
Iron and steel	118	½ month.	115,411	100,778	−12.7	$5,088,831	$3,846,541	−24.4
Automobile manufacturing	45	1 week..	76,734	79,064	+ 3.0	2,620,084	2,622,596	+ 0.1
Car building and repairing	59	½ month.	39,335	38,378	− 2.4	2,670,021	2,272,954	−14.9
Cotton manufacturing	60	1 week..	58,313	59,254	+ 1.6	1,015,987	1,002,694	− 1.3
Cotton finishing	16	...do.....	12,389	12,266	− 1.0	276,758	271,837	− 1.8
Hosiery and underwear	64	...do.....	27,628	26,677	− 3.4	459,385	415,550	− 9.5
Woolen	51	...do.....	50,609	50,713	+ 0.2	1,184,555	1,142,135	− 3.6
Silk	47	2 weeks.	18,965	19,272	+ 1.6	844,175	820,785	− 2.8
Men's ready-made clothing	45	1 week..	25,998	28,314	+ 8.9	788,813	897,371	+13.8
Leather manufacturing	35	...do.....	11,701	12,138	+ 3.7	267,708	267,933	+ 0.1
Boots and shoes	83	...do.....	57,600	59,385	+ 3.1	1,336,420	1,330,255	− 0.5
Paper making	56	...do.....	20,344	20,810	+ 2.3	497,126	508,628	+ 2.3
Cigar manufacturing	57	...do.....	16,434	15,918	− 3.1	319,214	299,737	− 6.1
Coal mining (bituminous)	96	½ month.	23,353	22,989	− 1.6	1,422,446	1,298,064	− 8.7

In addition to the data presented in the above tables as to the number of employees on the pay roll, 101 plants in the iron and steel industry reported 75,321 employees as actually working on the last full day of the pay period reported for July, 1921, as against 155,828 for the reported pay-roll period in July, 1920, a decrease of 51.7 per cent. Figures given for 92 establishments in the iron and steel industry show that 74,374 were actually working on the last full day of the pay period reported for July, 1921, as against 85,118 for the period in June, 1921, a decrease of 12.6 per cent.

Changes in Wage Rates and Per Capita Earnings.

DURING the period June 15 to July 15, 1921, there were wage changes made by establishments reporting to the bureau in 11 of the 14 industries.

Iron and steel: In one mill 75 per cent of the men were reduced approximately 18 per cent in wages. Four establishments report wage rate decreases of 15 per cent, affecting the entire force in two establishments, 38 per cent in the third establishment, and salaried foremen and rollers only in the fourth establishment. A wage rate decrease of approximately 10 per cent affecting the entire force was reported by four plants. One firm cut the wages of 10 per cent of the force 9 per cent. About 2 per cent of the men in another mill were reduced 7 per cent in wages.

Business depression is reported throughout the industry, causing part-time employment and general reduction in the number of employees. The per capita earnings for July are 13.4 per cent less than the per capita earnings for June.

Automobile manufacturing: The entire force of one establishment was reduced 20 per cent in wages. One plant reported a wage rate decrease of approximately 11 per cent, affecting 5 per cent of the employees, while another plant reduced the wages of all employees 10 per cent. Although more time is being worked in this industry, the per capita earnings show a decrease of 2.9 per cent when comparing June and July.

Car building and repairing: A large number of car-building employees were affected by the decision handed down by the United States Railroad Labor Board. The exact effect of this decision can not be estimated, but it is doubtless the greatest factor in the changes in wage rates noted by this report, which shows a decrease of approximately 12 per cent in the general wage level. The per capita earnings for July are 12.7 per cent less than for June.

Cotton manufacturing: The entire forces of two establishments had respective wage rate decreases of 30 per cent and 10 per cent. When comparing per capita earnings for June and July, a decrease of 2.9 per cent is shown.

Cotton finishing: Employment remained much the same as during the previous month. The per capita earnings show a decrease of 0.8 per cent when June and July earnings are compared.

Hosiery and underwear: Three mills reported a decrease of 10 per cent in wage rates which affected 99 per cent of the force in the first mill, and 90 per cent of the force in the second mill; the number affected in the third mill was not stated. Several establishments were partly closed during this period and the per capita earnings show a decrease of 6.3 per cent, when comparing June and July.

Woolen: No changes were reported in rates of wages in this industry; but the per capita earnings are 3.8 per cent less for July than for June.

Silk: A decrease of 10 per cent in wage rates was made to practically all employees in one mill. The per capita earnings for July, when compared with those for June, show a decrease of 4.3 per cent.

Men's ready-made clothing: One establishment made a decrease of 15 per cent to 68 per cent of the force. In two concerns a 10 per cent decrease was made in rates of wages, affecting all employees in one concern, but the number affected in the second concern was not stated. Increased production was reported, and the per capita earnings for July show an increase of 4.4 per cent over those for June.

Leather manufacturing: A wage rate decrease of 10 per cent was made to all employees in one tannery. The per capita earnings for July, when compared with those for June, show a decrease of 3.5 per cent.

Boots and shoes: An increase of 5 per cent was granted to 3 per cent of the men in one factory, while in another factory an increase was made, but no specific data were given. Comparing per capita ings for June and July, a decrease of 3.4 per cent is noted.

Paper making: One mill made a 15 per cent wage decrease to 62 per cent of the men. Decreases in wage rates ranging from 13 to 30 per cent were made to the entire force in two plants. One establishment reported a decrease of 13 per cent in wage rates, which affected all employees, while another establishment reported a decrease of 12.5 per cent, affecting 71 per cent of the employees. In two concerns, a decrease of 10 per cent in rates of wages was reported. In the first concern, about 95 per cent of the force were affected, but the percentage of employees affected in the second concern was not stated. One plant reported an increase of 5 per cent to 12 per cent of the force and decreases ranging from 1 to 10 per cent, to 50 per cent of the force. The per capita earnings for July show no change when compared with those for June.

Cigar manufacturing: One-third of the force in one plant were granted an increase in wage rates of 10 per cent. One establishment reported a decrease of 7.5 per cent in rates of wages, affecting 75 per cent of the employees. Another establishment made a 6 per cent decrease but the number of employees affected was not stated. Decreased production, due to curtailed operations was reported, and the per capita earnings for July show a decrease of 3 per cent when compared with the per capita earnings for June.

Bituminous-coal mining: Less time was worked during this period, as market conditions were dull. The per capita earnings are 7.3 per cent less for July than for June.

Employment in New York State Factories in July, 1921.

THE number of workers employed in New York State factories was further reduced by 2 per cent between June and July, according to a report issued by the industrial commissioner of the State Department of Labor. The total decline in employment in the factories of the State since March, 1920, is very nearly 30 per cent, which would indicate that the number of factory workers laid off since the beginning of the depression is approximately 450,000.

July is usually a month of low activity in manufacturing, owing to annual shutdowns during the month for vacations, repairs, and inventories. Although a few industries were affected by these shutdowns in July, lack of orders still constitute the outstanding factor in the decrease in employment since June. A number of factories were closed in July as a result of lack of demand. Curtailment of production continued in most of the industries where decreases in employment were reported during recent months. This was particularly the case in the majority of the metal industries. In some of the other industries, notably in textile manufacturing, reductions in working

forces occurred in July after one or more months of improvement in activity. In a few instances seasonal inactivity contributed to the reduction in employment during the month.

There were, however, several counteracting tendencies in July, which partly offset the above decreases. One of these was the factor of seasonal activity, which resulted in greater employment in a number of industries, especially in those manufacturing food products. Another, though less important factor, was the partial or full recovery in working forces in plants which were affected by strikes. Finally, a few industries reported increased employment in July as a result of improved demand. Owing to the present unsteady demand for products, however, it is uncertain whether or not the July increases in these industries signify a permanent revival in activity.

The largest reductions in employment in July again occurred in the metal industries. Activity in the iron and steel mills of the State was practically at a standstill during the month, as most plants were either closed entirely or were operating with minimum forces. The number of workers employed in the steel industry in July was 76 per cent less than that reported last September. Heavy curtailment in working forces in July also appeared in the production of agricultural machinery and implements, due largely to the slack season.

The only metal industry to show a considerable gain in employment in July was the railway repair and equipment industry. This gain was due to the reopening of a few car-repairing shops which were closed in May and to increased activity in locomotive shops. Minor gains in July also occurred in the manufacture of automobiles, aluminum goods, and speedometers.

Among the branches of the textile industries small reductions in activity from June to July occurred in silk gloves and hosiery, cotton goods, knit goods, rope and twine, and embroideries. In some of these products there was a considerable revival in manufacturing activity during the past few months. There was little change in employment in July in worsted and felt goods factories. Plants manufacturing laces and trimmings reported a minor gain during the month.

Most of the clothing industries reported less activity in July than in the previous months. The closing of several plants for vacations and inventories was partly responsible for the July decrease in employment in the shirt and collar and women's furnishings industries. The millinery industry showed a further seasonal drop in employment in July. In the women's clothing industry lessened activity occurred during the month in the manufacture of waists and dresses, but plants manufacturing cloaks and suits reported a considerable gain in working forces. A small seasonal gain in employment appeared in July in the men's clothing industry as a whole, although a curtailment in production was noted in the manufacture of raincoats. The laundering industry also reported an increase in activity in July.

Substantial gains in employment in the food products industries, as a result of seasonal activity, occurred from June to July in flour and cereals, canning, and beverages. The bakery products industry showed an increase during the month as a result of greater activity in one large plant. A small gain in employment in the meat-products industry was the result of the termination of a strike in one plant.

Sugar refineries and plants engaged in the preparation of cocoa and chocolate, dairy products, and confections reported less activity in July than in June. A small reduction in working forces from June to July also occurred in the tobacco industry, where an increase in activity appeared during the preceding three months.

Other reductions in employment from June to July were reported in stone products, glass, pianos, caskets, barrels, brooms, pipes, and pencils, fur goods, hose and belting, brushes, drugs and chemicals, soap and perfumes, glue, matches, fireworks, and photographic materials. A few of these decreases were due to vacations and the taking of inventories. The most conspicuous reduction occurred in the piano industry, where a number of plants closed during the month.

Gains in employment occurred in July in cement and plaster, brick, house trim, leather, boots and shoes, starch, paper manufacture, and paper boxes. The gains in the brick, paper manufacture, and paper bags industries were due largely to recovery from strikes, although in the paper industry the strike was still in progress in most of the plants affected. The increase in cement and plaster and house trim is seasonal. The July gains in the leather and boots and shoes industries are important in view of the improvement shown in these industries during May and June. Several tanneries reported greater activity in July than in any month during 1920.

Changes in Employment in the United States, July 31, 1921.

THE United States Employment Service recently published the result of its monthly industrial survey covering the month of July, 1921. The data are based on telegraphic reports from special agents in 65 large industrial centers, the figures being taken from pay rolls of firms usually employing more than 500 workers.

At the end of July the 1,428 firms included employed 1,510,210 persons, a reduction of 16,914, or 1.1 per cent, compared with June 30, and of 117,924, or 7.3 per cent, compared with the number employed by the same establishments on January 31, 1921.

The only industries showing an increase in employment since June 30 are vehicles for land transportation, railroad repair shops, leather and its finished products, textiles and their products, lumber and its manufactures, tobacco manufactures, and paper and printing. All other industries show a decrease during the month. Widespread gains are reported in the building trades. In metals and metal products, from mining to manufacturing, there is serious and widespread unemployment.

Of the 65 cities included, 27 show increases in employment during the month and 38 show decreases. The returns seem to indicate that in the majority of cases where there has been an improvement in the employment situation it is the result of seasonal agricultural activities and to some extent to gains in railroad occupations, especially those engaged in making repairs to rolling stock and roadbeds.

The tables which follow show the decrease or increase in employment on July 31, compared with June 30, 1921, by industry groups and by cities.

CHANGES IN EMPLOYMENT JUNE 30 TO JULY 31, 1921.

Industries reporting a DECREASE in employment in July, 1921.

Industry group.	Change in number.	Per cent of change from June 30, 1921.	Relative weight (per cent employed July 31, to total employed in 14 groups).
Stone, clay, and glass	3,486	23.9	0.7
Liquors and beverages	207	11.8	.1
Iron and steel and their products	24,816	7.6	21.0
Chemicals and allied products	1,355	1.9	4.6
Metals and metal products other than iron and steel	1,300	1.8	4.7
Miscellaneous industries	4,651	1.7	18.2
Food and kindred products	1,840	1.5	8.0
Total decrease, 7 industries	37,655	.....	.....

Industries reporting an INCREASE in employment in July, 1921.

Railroad repair shops	5,515	10.1	3.9
Leather and its finished products	2,845	5.7	3.5
Vehicles for land transportation	7,266	4.2	11.9
Tobacco manufactures	841	2.8	2.0
Textiles and their products	4,141	1.6	16.9
Lumber and its manufacture	57	.25	1.5
Paper and printing	76	.15	3.3
Total increase, 7 industries	20,741	.....	.....

Cities reporting a DECREASE in employment in July, 1921.

City.	Change in number.	Per cent of change from June 30, 1921.	Relative weight (per cent employed to total employed in 65 cities July 31).
Youngstown, Ohio	4,927	22.8	1.1
Chattanooga, Tenn	971	15.6	.35
Yonkers, N. Y	1,687	12.8	.8
Indianapolis, Ind	1,352	10.6	.8
San Francisco, Calif	597	8.46	.43
Grand Rapids, Mich	313	8.7	.3
Toledo, Ohio	1,130	8.2	.8
Camden, N. J	2,123	7.5	1.7
Cincinnati, Ohio	945	7.5	.8
Perth Amboy, N. J	989	7.3	.8
Bridgeport, Conn	1,173	7	1.0
St. Louis, Mo	998	6.09	1
Cleveland, Ohio	4,324	6.6	4.1
Birmingham, Ala	1,415	6.5	1.3
Pittsburgh, Pa	3,926	5.9	4.2
Kansas City, Kans	726	5.57	.82
Newark, N. J	1,877	5.2	2.3
Trenton, N. J	544	4.5	.8
Providence, R. I	554	4	.8
Peoria, Ill	82	3.9	.13
Johnstown, Pa	335	3.3	.6
New Haven, Conn	369	3.3	.7
Worcester, Mass	563	3.27	1.1
Boston, Mass	1,408	2.58	3.5
Columbus, Ohio	100	1.7	.4
Waterbury, Conn	144	1.5	.6
Baltimore, Md	433	1.5	1.8
Louisville, Ky	100	1.5	.42
New York, N. Y	1,914	1.32	9.5
Jersey City, N. J	153	1.2	.8
Paterson, N. J	93	1.18	.5

CHANGES IN EMPLOYMENT JUNE 30 TO JULY 31, 1921—Concluded.

Cities reporting a DECREASE in employment in July, 1921—Concluded.

City.	Change in number.	Per cent of change from June 30, 1921.	Relative weight (per cent employed to total employed in 65 cities July 31).
Reading, Pa.	171	1.05	11.1
Rochester, N. Y.	308	1.04	1.9
Chicago, Ill.	1,229	.77	10.5
Omaha, Nebr.	49	.48	.7
Atlanta, Ga.	36	.45	.53
Passaic, N. J.	6	.04	.9
Fall River, Mass.	2	.007	1.8
Total decrease, 38 cities	38,066		

Cities reporting an INCREASE in employment in July, 1921.

Denver, Colo.	258	16.5	0.1
Portland, Oreg.	794	14.7	.4
Brockton, Mass.	1,374	12.6	.8
Lawrence, Mass.	2,678	11.5	1.7
St. Paul, Minn.	809	9.4	.6
Buffalo, N. Y.	1,352	6.34	1.5
Detroit, Mich.	7,905	6.07	9.1
Milwaukee, Wis.	1,695	5	2.4
Niagara Falls, N. Y.	175	4.8	.3
Manchester, N. H.	738	3.35	1.5
Kansas City, Mo.	224	3.1	.5
Richmond, Va.	318	3.05	.7
Los Angeles, Calif.	677	2.97	1.6
Syracuse, N. Y.	202	2.34	.6
Seattle, Wash.	45	2.3	.1
Flint, Mich.	395	2	1.4
New Orleans, La.	129	1.8	.5
Albany-Schenectady, N. Y.	282	1.5	1.2
Bayonne, N. J.	135	1.3	.7
Dayton, Ohio	126	1.3	.6
Sioux City, Iowa	29	1.19	.2
New Bedford, Mass.	239	.75	2.2
Minneapolis, Minn.	83	.7	.8
Lowell, Mass.	72	.58	.8
Philadelphia, Pa.	175	.18	6.5
Springfield, Mass.	15	.07	1.4
Total increase, 27 cities	[1] 21,152		

[1] This total is not the sum of the items shown, but is as given in the report.

Study of Unemployment by the Ohio Council on Women and Children in Industry.

A NEW YORK organization called attention in a bulletin recently discussed in this REVIEW[1] to the fact that unemployment was more general in New York last winter than it was in 1914, but that whereas seven years ago the whole community was aroused, relief measures were instituted, and a committee appointed by the mayor to report on methods of preventing the recurrence of such a situation, this year public interest has been scarcely stirred, and little or no effort has been made to cope with the condition. Struck by a similar lack of public concern in a similar unemployment situation in their own part of the country, the Ohio Council on Women

[1] Formation of Coordinating Committee on Employment, MONTHLY LABOR REVIEW, July, 1921, p. 170

and Children in Industry made a survey which, although based primarily on the unemployment of women, deals with the whole question.[2] Such a survey is necessarily incomplete, and the importance of the report lies less in the data presented than in its insistence upon the seriousness for the whole community of a situation in which a man willing and able to work is unable to find work by which to support himself.

As a preliminary, letters were sent out in February, 1921, to the department of labor of each State in the Union, asking information as to the unemployment situation, and as to what was being done, either by the State or any of its municipalities, to relieve or prevent unemployment. Replies were received from 35 States, which for the most part were of rather an optimistic nature; it was true, they admitted, that there was considerable unemployment, but it was hoped that matters would soon improve, and in most places it seemed to be felt that the situation might be left to work itself out, especially where there were charitable societies which could be called on to aid the sufferers.

One reply is quoted as saying, "So far the unemployed situation is not serious," and adding, "There of course has been a great call upon charity associations, but up to this time these associations have been able to take reasonable care of the situation." To the mind of the council, such a statement reveals a dangerous indifference to the true welfare of the community.

> Is not a situation serious the moment there is any call upon charitable associations because an individual has no opportunity to work? Is it not only serious for the present but also for the future? The effect of aid given even in the most constructive way is well known, and unfortunately, as most associations testify, great care at times of emergency is not shown. But the effect is there, and every family that is forced to accept such assistance represents a "serious situation."

Eleven answers reported some effort, either on the part of the State or of municipalities, to supply public work. This effort was hampered by the fact that most forms of public work require special legislation, so that they can not be undertaken offhand. When an emergency arises and legislation to provide public work is considered, there is usually a feeling that the need will have passed before the preparations for such work can be completed, and so the matter is apt to be dealt with superficially. Twenty-one of the States reporting had some forms of public employment service available for the crisis, and emergency employment offices had been established in some cities by chambers of commerce and other organizations. Two dangers were seen in the attempts to supply work—wage cutting and the treatment of work itself as a form of charitable relief. Thus, one city reported that it was "taking on all the men it can possibly use for city work at the rate of 30 cents an hour, which is only an emergency measure," concerning which the council comments:

> The employment of labor by the city at a rate so far below the cost of living is very serious. The city is here encouraging one of the worst features attendant upon unemployment, the very serious drop in wage below a decent living standard.

The other danger, the council considers, is even worse, and is especially apt to appear in connection with emergency work.

[2] Ohio Council on Women and Children in Industry. Ohio and Unemployment in 1920-21. Toledo, 1921. 40 pp.

The grave danger is that work itself becomes charity—the receiver of a job under such a campaign must qualify as to the need for work. One hundred dollars in the bank means no job, just as it means that the holder of $100 can not ask for relief. Such work has much the same effect upon the worker as the acceptance of charity. The single man or the man without children has not the right to work. The superintendent of one employment office states that the single men were willing to accept the proposition that married men must be given work first. It is a splendid spirit, and yet something is certainly wrong where the opportunity to work for an existence must be given up by one individual so that another individual may have such an opportunity.

The most constructive plan reported came from Wisconsin, where a bill for unemployment insurance had been introduced into the legislature. Arguing from the experience with accident insurance, its promoters held that the expense of meeting unemployment payments would furnish a powerful incentive to employers to study their industrial needs, to do their best to regularize employment, to supplement seasonal industries with others whose seasons fell at different times, and generally to place their establishments, as far as possible, upon a basis of steady employment for steady workers. A bill along somewhat similar lines has since been introduced in New York.

Data as to Unemployment.

DATA were secured only from employers listed as employing 25 or more women. Returns were received from 181 such establishments, covering a wide diversity of manufactures, and giving comparative data for February, 1920, and February, 1921. The average number of employees for these two months was as follows:

	February, 1920.	February, 1921.	Percentage of decrease.
Men	91,083	56,281	38.2
Women	23,663	12,631	46.6
Total	114,746	68,912	39.9

The forces of the establishments reporting, then, were smaller by almost two-fifths in February, 1921, than they were in February, 1920. But this does not show the full extent of unemployment, since many of those still on the pay roll were working only part time. Reports on this point were received from 155 establishments. Of 60,496 employees in these establishments in February, 1921, 27.7 per cent were working full time, 22.8 per cent from 75 to 90 per cent of full time, 47.2 per cent from 50 to 75 per cent of full time, and 2.1 per cent from 3 up to 50 per cent of full time.

At this date the establishments in tobacco, pottery, printing and food products industries had laid off comparatively few or no workers, and were for the most part working full time; while establishments handling other lines had laid off percentages of their force varying from 10 to 77, and showed a relatively large decrease in time of operation. A significant fact brought out by this inquiry is that large establishments showed a greater tendency to reduce forces than did the smaller concerns.

If we divide the establishments reporting into those employing 200 or more persons in 1920 and those employing less than 200 in 1920 we find that the establishments with more than 200 employees had laid off 43.85 per cent of their workers in February, 1921, whereas the establishments employing less than 200 had laid off only 15.2 per cent of their workers.

Either those industries showing the greatest tendency to concentrate for purposes of production were the industries which have felt the greatest decrease in demand for their products or the managers of these organizations have felt that it would pay greatly to reduce production and thus diminish the supply of goods in their field to a point where an adequate price might be obtained, rather than to pursue the policy of earlier years when it was customary for the larger establishment to continue production at very little or no profit, until such time as the weaker establishments were bankrupted and forced out of business, and the supply had thus become adjusted to the demand.

Summing up the results of the survey, the council finds that unemployment was very general in Ohio in February, 1921; that most industries were affected, the percentage of decrease in the number of workers ranging from 5.2 for printing and publishing to 77.6 for rubber; that in addition to unemployment, there was a considerable amount of partial employment; that large establishments showed a greater percentage of decrease in their force than small establishments, a fact of importance since concentration in industry is rapidly increasing, and therefore this would indicate that "each recurring period of unemployment will be more severe than the one that preceded it"; that a conservative estimate would place the number of unemployed in Ohio in February, 1921, at over 300,000; and that in June, 1921, the chief statistician of the industrial commission published his opinion that the situation was growing more serious.

As to what should be done in such a situation, the report indorses the recommendations of the mayor's committee of New York City which stress the necessity first, of preventing the periodic depressions which lead to widespread unemployment, and advocate, if such come notwithstanding, a carefully thought-out program for increasing activity at every point and for keeping up the demand for products, without permitting any lowering of the workers' standards, either as to wage or as to quality of work.

The report contains also a study of 762 families who had been obliged to apply for relief, owing to the inability of the father of the family to find work. The largest group of these men, 31 per cent, had been employed in the automobile industry, 19 per cent in foundries and machine shops, 8 per cent by the railroads, 10 per cent in building and construction, 5 per cent in the glass industry, while the remaining 27 per cent had been scattered through a variety of industries. The families came close to the so-called typical family, averaging 4.1 persons. The men had normal wage-earning capacity, many of them being unskilled. The time between the loss of steady employment and the application for relief varied from one week to a year and a half, the period being four months for the largest, and three months for the next largest group.

The families have "managed" by using savings, having boarders and lodgers, through benefits and securing credit with the grocer and landlord, by receiving help from relatives, friends, and neighbors, and by borrowing on future earnings, and finally by assistance from the Social Service Federation and the city.

HOUSING.

Building in the First Half of 1921.

AT THE beginning of the year building was stagnant, even beyond what is usual in January, and there was much anxiety as to its probable course in 1921. All agreed that there was a tremendous need for building, but as to whether that need would be transmuted into an effective demand there was much difference of opinion. One group held that the cost of building was still prohibitive. Money was too high and too hard to get, freight rates were too high, fuel was too high, building materials were too high, wages were too high, and until some or all of these should come down there was no hope for a revival of building. Another group declared that the price of building materials had already reached a reasonable level, that wages were coming down and the efficiency of labor increasing, that the situation was as favorable as could be anticipated for some considerable time to come, and that there was hope for a marked increase in building activity.

The data for the first half of the year, which are now in hand, do not entirely justify either group in its forecasts. The industry has partially revived, but the volume of building has been materially less than was hoped for. The Dodge Co.'s reports cover 27 States in the northern and eastern part of the country. According to these reports, the value of the building contracts let during the first six months in 1921 is in round numbers $1,067,000,000, which is 9½ per cent greater than the average for the same period of the preceding five years. As these five years include 1918, when, owing to war conditions, ordinary building was almost suspended, it is doubtful whether the 1921 volume of building can be taken as even approaching normal, while it is quite evident that arrearages are not being made up. The value of the contracts let month by month has been as follows:

Value of building contracts, January–June, 1921.

January, 1921	$111,806,900
February	100,789,200
March	164,193,800
April	220,886,300
May	242,093,500
June	227,710,900
Total	1,067,480,600

As compared with 1920, this shows a falling off of about 31 per cent, but such a comparison is of little significance, owing to the slump in building, which began about May, 1920, and owing to which the industry was generally spoken of as "dead" during the second half of the year. Optimists hoped that this year would resemble, instead, 1919, in which some 60 per cent of the total year's valuation

in building contracts was let in the second six months. So far this seems unlikely to be the case, as the falling off from the previous month, shown in the June figures, was continued in July, for which month the total valuation of contracts let is $212,491,000.

The prosperity of the industry in 1921, as compared with the average for the same six months of the preceding five years, varies considerably in different districts, as shown by the following figures:

VALUE OF CONTRACTS LET DURING FIRST HALF OF 1921 AND PER CENT OF CHANGE AS COMPARED WITH PRECEDING FIVE YEARS, BY DISTRICTS.

District.	Value of contracts let during first half of 1921.	Per cent increase or decrease as compared with preceding five years.
New England district	$81,419,000	−24.0
New York and northern New Jersey	244,253,000	−35.0
Middle Atlantic district	160,333,000	+ 2.5
Pittsburgh district	215,568,000	+26.0
Central West	325,929,000	+ 1.0
Northwest	38,755,000	+23.9
Total	[1] 1,066,257,000	+ 9.5

[1] In making this calculation apparently the numbers have been taken only to the nearest thousand, the total therefore differing somewhat from that given on p. 160.

Labor troubles are held partly responsible for the marked falling off in the New England district, while in the New York district residential building seems largely responsible for the increase, as it accounts for $135,083,000, or 55 per cent of the total.

Taking the whole region covered by the Dodge statistics, there has been an actual increase in the value of the housing work contracted for in 1921 as compared with 1920, and a much larger increase in its relative value. In the first half of 1920 the value of contracts for residential building was $348,580,000, which was 22.5 per cent of the total value; in 1921 the corresponding figures are $360,828,000 and 34 per cent. The relative increase is mainly a result of the falling off in business and industrial building which naturally comes with periods of business depression; few care to build stores and factories when there is little present demand for them and no clear evidence that such a demand will soon be felt. But the fact that the actual increase in the amount devoted to housing work is only 3.5 per cent greater [1] in 1921 than in 1920 is a strong indication that the public does not believe that costs have yet reached rock bottom. At the beginning of 1921 it was estimated that the country was suffering from a shortage of from a million and a half to two million homes, and that over 4,000,000 people were improperly housed, owing to lack of dwellings. In view of such a situation the small increase in value of housing contracts let during the first half of the present year as compared with the last can not be looked upon as in any way meeting the need. Some observers feel that the increase is practically negligible, that housing work is almost at a standstill, and that there is

[1] As there has been some reduction in building costs the actual difference in the value of housing contracted for is greater than shown by the above figures, but the precise extent of the difference can hardly be calculated.

little chance for an improvement until costs come down, or rather, since there has already been a fall, until they come down to a point which will establish the "confidence of the buying public in the stability and logicality of prices quoted by the building industry." [2]

Trend of Building Costs During the Present Year.

BUILDING costs are made up of a number of factors, and the trend of these varies considerably. Several can be dismissed rather summarily. There has been no material and general decrease in freight rates on building materials. An appeal for such a reduction is being argued now before the Interstate Commerce Commission, but at present the rates are practically what they were at the beginning of the year. Nor has it become noticeably easier to finance building operations. Interest rates are usually fixed by law, so these have not shown much increase, but the practice of charging a bonus for a loan, which brings up its cost materially, still prevails. Even more serious is the difficulty of obtaining money for building loans at all. Tax-exempt securities and commercial ventures have proved more attractive than long-time real estate or building investments, and there is general complaint of the difficulty of securing money for the latter under any conditions. There is a tendency, which is apparently growing, to hold banks, insurance companies, and other savings depositaries to blame for not allotting more of their funds to building purposes. Secretary Hoover declares his belief that "we should have a very much more stable economic system if we had a more regular proportion of our savings available to home building." Senator Calder, while urging the establishment of home loan banks, declares plainly that the already existing institutions for savings ought to devote a materially larger proportion of their resources to long-term building loans, and Postmaster General Hays, arguing for improvements in the postal savings system which he thinks will bring out huge sums of hoarded money, intimates clearly that a considerable part of this ought to go for building loans. The financial institutions themselves show signs of uneasiness lest some legal compulsion be laid upon them to utilize a certain portion of their funds for building loans. As yet no steps in this direction have been taken, and the question of how to finance a building enterprise still presents serious difficulties.

Neither has the situation in regard to fuel improved since the beginning of the year. Rightly or wrongly, the public is convinced that prices are too high and people are simply not buying. In response to this policy the operators are reducing not prices but production, and are giving warning that no decrease in prices is to be expected.

> It is apparent to any unbiased minded individual that coal can not be purchased any cheaper within the next twelve months than it can be bought now. * * * Coal consumers are deceiving themselves if they expect to buy cheaper coal as a result of a reduction in wages or a reduction in freight rates on coal shipments. Neither reduction will take place this year and are not likely to take place until April 1, 1922.[3]

[2] See Economic Problems of the Building Industry, in Proceedings of 54th Annual Convention of the American Institute of Architects, p. 71.
[3] Coal Mining Review, Aug. 1, 1921, p. 1.

This leaves building materials and labor for consideration, and both of these have shown reductions. At the beginning of the year it was definitely declared that building materials had come down to the lowest probable point and that any demand for building would be apt to start them upward again.

> In the opinion of many authorities construction costs are now on a level justified by prevailing conditions. Some are convinced that these costs are now lower than they will be by May 1. The evidence that they bear a reasonable relationship to the cost of production is quite convincing. * * * If the consumer builds now he will be assured of ample materials and at bargain prices. If the consumer builds next spring he will have to take his chance of securing adequate supplies, and prices are very likely to be higher when the demand is active.[4]

But demand failed to become active and wholesale prices continued to fall. The index figure of wholesale prices, based on the prices of 1913, shows that building materials reached their highest point by April, 1920, when they stood at 341, and that by June they were falling. In December, 1920, at which time the above quotation was written, they stood at 266, and by May, 1921, they had sunk to 202. This shows a fall of practically 41 per cent from their peak price of 1920, which sounds impressively large. Nevertheless, they still stood at more than 100 per cent over the figures of 1913, while the index for prices of farm products had fallen to only 15 per cent above 1913, of food to 33, of metal products to 38, and of all commodities combined to 51 per cent above the 1913 prices. There has certainly been a marked fall, but the public is evidently sceptical as to whether the fall is as great as it should be.

With regard to wages, the situation is mixed. At the beginning of the year, employers made a determined drive for a reduction of building-trade wages of from 20 to 30 per cent, the general argument being that costs of living had fallen, and the prices of building materials had fallen, and labor, also, must accept deflation. To this labor replied that wages had not risen so far nor so fast as cost of living, so that they would have to remain stationary for a time before the falling cost of living would reach their level, and that as for material costs, they were in spite of their fall still considerably higher, as compared with prewar figures, than wages had ever been, and that therefore they afforded no argument for a reduction of wages. Over this difference of attitude, serious and protracted labor troubles have arisen, which are still in some localities interfering with building operations. In a number of cases arbitration has been accepted by both sides, resulting, as usual, in the establishment of a wage scale lower than the unions demanded, but higher than the employers had expected to pay. In other cases, apparently, neither side has been wholly victorious nor wholly defeated. The unions and the employers have each set their wage scale, and neither has accepted the other's. Under such circumstances, general scales seem to have gone by the board. Each employer pays what he must and each worker gets what he can, so that the rate may vary from shop to shop or from job to job. Where definite scales still prevail, they seem on the whole to be distinctly lower than in 1920, the reduction having been effected sometimes by arbitration, sometimes by agree ment. An exception appears in some places where agreements

[4] American Contractor, Jan. 1, 1921, p. 28.

running until the end of the year or some other specified period had been adopted before the fall in wages began. Some of the employing group have lately begun to declare that the reduction of wages has gone as far as it should.

In so far as the building trades are concerned, there is very convincing evidence that labor costs have been deflated and that further recessions in that field can not reasonably be expected. There are several sectional exceptions to this: Chicago, Pittsburgh, and New York are the notable ones. The liquidation process is now being worked out in Chicago and Pittsburgh, and it is doubtful if New York will have lower wages until after December of this year. But in the main, building trades labor costs are on a reasonable level.[5]

At the beginning of the second half of 1921, then, the building situation still presented an unsolved problem. Cost of materials and cost of labor had fallen; but fuel, freight rates, and money presented as many difficulties as at the opening of the year. The outcome is by no means clear. Apparently costs must fall considerably further before building experiences a real revival, but how this is to be accomplished is still uncertain. Two recent developments seem to hold a promise for the future. The investigations into the building industry still being carried on in New York, Chicago, and elsewhere have, it is claimed, shown the existence of unlawful combinations between employers and workers, and between the producers and manufacturers of building materials to keep up costs and prices. If these charges are true, the dissolution of such combinations which will presumably be enforced should do much toward restoring free competition and reducing costs. Perhaps even more favorable results may be hoped from the studies of waste in industry and methods of eliminating it which are being made by engineering committees, labor bodies, and building organizations. A situation in which the cost of building is so high that the industry itself is languishing and an appreciable proportion of the population is underhoused, while at the same time this cost is being increased by sheer waste running, according to the estimate of the engineers' committee, into hundreds of millions annually, is too absurd to be maintained when once the facts are recognized.

Cooperative Effort Needed in the Building Industry.[1]

THE convention of the American Institute of Architects recently held in Washington, D. C., was naturally devoted in the main to professional topics, but one matter of wide general interest was brought forward by several of the speakers, who dwelt upon the growing necessity of a cooperative effort to find out what is the real situation in the building industry and how it can be improved. This was stressed in the report on the Congress of the Building and Construction Industry presented by Mr. Robert D. Kohn. The congress, he stated, is intended to be a national movement for bringing together all the workers in the building industry from architect to laborer and giving them a chance to get each other's point of view, so that they

[5] American Contractor, Aug. 6, 1921, p. 29.
[1] Based on proceedings of the Fifty-fourth Annual Convention of the American Institute of Architects, May 11, 12, and 13, 1921. Published by the board of directors, American Institute of Architects. 161 pp.

may unite their efforts to avoid or set right misunderstandings of any kind. As an instance of the need for such getting together he cited the usual tendency to look upon building wages as extortionate because the wage rates are high, whereas familiarity with the worker's side of the case might show that earnings were only moderate or even poor owing to irregular and seasonal employment. As long as such misapprehensions as to the status of the various elements persist it is difficult or impossible to avoid hindrances, friction, and serious injury to the industry as a whole.

The effort has been to bring all the elements of the industry together to find out what is the matter with the industry, not to profit us as individuals by reason of the betterment of the business of building any particular housing, desirable as that might be, so much as to get the elements together; to get the architects, the contractors, the engineers, the subcontractors, the dealers, and producers in building materials and laborers to realize that each of these groups is, after all, only one functioning element of the industry; that the architect can not improve his status unless the laboring man improves his, and that the contractor is at the mercy of all the others; that each element has got to bring all the others along with it if we are to get anywhere at all in approaching what should be the aim of the industry.

The particular kind of work done by the congress varies with local conditions, and results are exchanged, the general idea being to get all the knowledge possible concerning the industry as a whole. In Boston it is making a study of the seasonal nature of building work and the possibility of lengthening the working period. In New York it is considering a study of the situation as regards building materials.

In New York the president of the brick manufacturers' association said at our recent meeting, "We want you to know whether we are telling you the truth or not. Come and investigate." If we accept the invitation the investigation should be a complete technical and social investigation of the brick industry on the Hudson River. Is efficient machinery used? What is the policy of labor employment? What is the labor turnover? What is labor earning and what are the housing conditions at the brickyards?

It may be that the turnout at the poorest yard makes the prices of the entire product. Perhaps the yards do not really compete one with another, and there may be other financial, social, and technical features that surround this branch of our industry in New York, and there are hundreds of branches of our industry.

Mr. D. Knickerbacker Boyd reported on a somewhat similar project attempted on a local scale by the building trades workers of Philadelphia. When cooperation had been urged upon employers, upon architects and building engineers, he said, they had been uninterested.

When, however, the message was carried to the laboring men in Philadelphia they really took hold of this problem of studying the building industry as it has never been studied before in Philadelphia, and in some respects as it has never been studied before in this country.

The Council of the Associated Building Trades in Philadelphia, representing about 60,000 organized workers, asked Mr. Boyd to be their spokesman in this matter, to which he consented on condition that he should speak also for unorganized labor.

We carried forward the work which we had been doing there on educational and informative lines for the council, and the unions in the respective trades cooperated to the fullest extent possible. We put forth what is called the Philadelphia plan, and presented it to the industrial relations committee of the Philadelphia Chamber of Commerce. The purpose of the plan was to create a congress, a tribunal, or whatever it might be called, of the building industry in Philadelphia, and composed of everyone connected with the building industry, from the realtor, as he is called, who first sells

the land, to the final occupant of the building, whether tenant or owner. The chamber of commerce did not act upon that program, which included the formation of a number of committees, with in every case an architect, an engineer, or a responsible building authority as chairman. Labor went around knocking, so to speak, on the doors of the employers and building contractors and subcontractors, but did not get collectively any action. But, nevertheless, we went on with our program. In the various unions committees were formed on education and information, on efficiency and production, on apprentices, on information for journeymen, on living and working conditions, on statistics concerning unemployment, and on other subjects.

One of the most important of these committees dealt with the loss of time through irregular or seasonal employment. Data were collected showing the actual time lost by building workers, and the proportion of this due to different causes. Such data had not been compiled before, and the results are as yet put forward tentatively, but for the workers in 27 trades it appeared that the time lost varied from one-quarter to one-half of the working year. Most of this loss, it is believed, could be avoided by the combined efforts of employers, workers, contractors, and the public.

Part of the idea would be to get the public educated to a consideration of the requirements of each trade, and to have all work done on a basis that would carry construction through the entire calendar year, notwithstanding apparent obstacles and notwithstanding the losses seemingly due to seasons, nearly all of which could be overcome. It would be possible to eliminate much of this by coordinating repairs, interior work, and maintenance with new work, and not have the old or inside work treading on the heels of the new or outside work all the time. Public officials, building owners, managers, and others could arrange their painting, their carpentry work, and everything else indoors at times when the working men in the various trades now have considerable lost time.

Secretary Hoover also dwelt upon the possibility of reducing the waste due to irregular employment, if the various elements of the building industry would unite in the effort, emphasizing the waste due to unnecessary equipment which our present system of seasonal production demands. Our equipment capacity for production of building materials, he estimated, is probably nearly 30 per cent higher than would be necessary if the demand could be spread throughout the year.

Mr. Ethelbert Stewart, Commissioner of the United States Bureau of Labor Statistics, presented another angle of the question by pointing out the necessity of learning what is really a fair day's work before it is possible to say what a man should do in return for a fair day's wage. The amount which can reasonably be expected, he stated, varies according to conditions of which those outside a trade are often ignorant, and public opinion is formed without taking these conditions into account.

The papers will say that bricklayers used to lay 1,500 brick a day, and now they lay 400. Well, what kind of bricklayers? A man on a 16-inch line wall could lay 1,400 brick in a day, and the same man would be doing a good day's work if he lays 400 face brick. There is too much chance for misrepresentation and unfair statement there.

Abandonment of the English Housing Program.

ON JULY 14, 1921, Sir A. Mond, the recently appointed minister of health, announced in the House of Commons the new policy of the Government in regard to housing. Its salient points are thus summarized by the Manchester Guardian of July 15:

1. The houses built, building, and contracted for by local authorities, utility societies, and private builders will be subsidized, 175,000 by the two first named at a cost of £10,000,000, and 23,000 by the last named at a cost of £5,000.
2. No other houses will be subsidized except those which have been already contracted for, and on which work is begun within six weeks.
3. A sum of £200,000 will be set aside toward the deficiency on local authorities' accounts for the improvement of slum areas.

When after the armistice the program for building was first got under way, it was estimated that a minimum of 200,000 houses would be needed to make up the shortage that had accumulated during the war. Later, after investigation of the situation in the various districts into which, for housing purposes, the country was divided, it was estimated that 500,000 would be needed. In addition to these it is stated by Dr. Addison, former minister of health, that there are at least 180,000 inhabited houses "which are unfit for human habitation and which there is no prospect of rendering fit." Under these circumstances the Government's decision to set 175,000 as the maximum of new dwellings, and to limit expenditure on insanitary areas to £200,000 comes as a severe disappointment.

The decision is directly due to the growing feeling in England against the volume of Government expenditures. Taxes are heavy, business is depressed, and the antiwaste campaign has shown unmistakable signs of political strength. The housing program has been attacked from various quarters as uneconomic and extravagant, and in the search for means of reducing expenditures it was selected for abandonment.

Criticism of the decision is made on three grounds: First, that it is a direct violation of the pledges given at the close of the war; second, that it is a breach of faith with the local authorities, who as agents of the Government and at the Government's urgent behest, undertook heavy obligations which they are now left to meet or to get out of as best they may; and, finally, that, considering the effect of underhousing upon the health and efficiency of a nation, this is a wasteful and extravagant way of saving a few million pounds, while hundreds of millions are being wasted on military commitments which lead nowhere and become continually more expensive.

Progress of the Government Housing Program in Scotland.[1]

THE Scottish Board of Health has issued a report for the year 1920, in which it reviews, among other things, the work of the year in the Government's program of State-aided housing. In the main, the developments were much the same as those in England, the program being administered in the same manner in both coun-

[1] Second annual report of the Scottish Board of Health. Edinburgh, 1921. 437 pp. Cmd. 1319.

tries. Estimates obtained from the local authorities as to the number of houses needed in the various districts showed a total of 131,057 houses required, of which the local authorities proposed to provide 115,530, the remainder being taken care of by private builders or public utility societies. By the end of 1920, plans providing for 112,961 houses had been approved, bids had been approved for 18,290, just 574 had been completed, and 6,737 were in process of construction. The delay is ascribed partly to the inevitable slowness of inaugurating a large and expensive program of building, partly to the scarcity of labor, and, in some cases, partly to a scarcity of materials. The scarcity of workers, however, is regarded as more serious than the lack of materials.

> At the close of the year 6,737 permanent houses were in course of construction, and on these 6,357 men were employed. If these houses were to be completed within, say, a year, it is estimated that more than double this number of men should be employed on them. At the present rate of progress there is no hope of providing even sufficient houses to meet the ordinary yearly normal needs, with the result that the estimate of total shortage of 131,057 houses instead of being gradually reduced will be steadily increased.

The majority of the houses planned for are rather small, 47.7 per cent of those for which plans have been approved having but three rooms, 43 per cent having four, and only 8 per cent having five. The board is anxious to have a larger proportion of four and five room houses, but the additional cost makes the local authorities reluctant to undertake them.

As in England, the increasing cost of materials and labor has made the building program far more expensive than was originally contemplated. A majority of the plans for which bids were approved during 1919 were estimated to cost under £800. During 1920, only about 10 per cent of the houses covered by approved bids were estimated to cost as low as this. "Indeed, not less than 47 per cent of these houses are estimated to cost over £1,000 each." The average cost of the 18,290 houses for which, up to December 31, 1920, bids had been approved, is approximately £938, or, if the necessary street work, grading and the like be included, £975.

In the United States building materials reached their highest point in the first half of 1920, and by the end of the year there had been a considerable decline. In Scotland, the rise continued throughout the year, though the report notes that "there was some indication that high-water mark had been reached by the end of the year." The following table shows the increase in cost of the main building materials during the year:

Material.	Estimated percentage increase during 1920.
Bricks	26
Cement	15
Drainage goods	15
Slates	33
Cast iron goods	61½
Sanitary fittings	17½

These increases, it is estimated, added approximately £72 to the cost of each house, while the increase in wages during the year was estimated to add £80.

The guild system of building is approved by the board, but apparently the movement was rather slow in getting started in Scotland, and at the time the report was written, only one small contract with a building guild had been approved. The board declares, however, that its members "are prepared to consider favorably any proposal submitted to us by the local authorities for the erection of houses by building guilds," and that they approve of the system on the ground that it "gives labor a real and personal interest in carrying out the work economically and expeditiously." The "direct labor" system, under which the local authorities dispense with contractors, employing the workers themselves and placing them under the supervision of their own officials, has been approved in a number of cases for the street work connected with housing plans, but in only one case has it been authorized in the erection of houses. In this case, at the time the report was prepared, "satisfactory progress is being made, but it still remains to be seen whether any saving will be effected."

INDUSTRIAL ACCIDENTS AND HYGIENE.

Occupational Skin Diseases in the Insect Powder Industry.[1]

AN EXTENSIVE industry has grown up around the manufacture of pyrethrum (Dalmatian or Persian insect powder, or buhach) which, both because of its efficacy and low cost, has become the most commonly used household insecticide. The extent of its use is shown by the fact that in 1917, 1,504,000 pounds of the crude material were imported. An investigation made by the authors in a plant manufacturing insect powders as to the cause of a skin disease of long-standing occurrence soon developed the fact that the condition was present only in those departments which handled pyrethrum.

The powder is made from the flowers of different varieties of chrysanthemum or pyrethrum and the principal sources of supply are the Caucasus, Persia, Dalmatia, Japan, Montenegro, and, in recent years, California. While formerly there was much adulteration with a variety of similar plants or weight-giving chemicals such as lead salts, which were constant hazards, adulteration is now infrequent and the health hazards center around the pure pyrethrum flowers. The processes which constitute occupational risks are the grinding of the flowers to a fine powder, weighing, and boxing the product.

Chemical analyses of pyrethrum have established various constituents as having irritating properties, and the action of the powder on the skin of workers, particularly in the summer months when the perspiration seems to increase the solubility of the toxic properties, results in a dermatitis which was found to vary in type and severity. About 30 per cent of the workers were found to have erythema venenatum, and although this is a mild form of the trouble the itching is very annoying and the dermatitis continually reappears in many workers as long as they are exposed to the dust.

There were three more severe types of dermatitis present, all of which were accompanied with intense itching. Removal from the irritant is followed by a speedy clearing up of the trouble but re-exposure is likely to bring back the eruption.

The plant under observation had removed all the dermatitis-producing hazards through the installation of dust-proof grinding and automatic filling and weighing devices which prevented all contact of the workers with the pyrethrum materials. In the absence of such safeguards, however, the preventive measures recommended are scrupulous personal cleanliness of the worker, use of cold cream or petrolatum on the exposed surfaces of the body before starting work in the morning and at noon, and bathing the arms, hands, and face after work with sodium bicarbonate, approximately 1 teaspoonful to one gallon of water.

[1] The Journal of the American Medical Association. Pyrethrum dermatitis, by Carey P. McCord, M. D., C. H. Kilker, M. D., and Dorothy K. Minster. Aug. 6, 1921, pp. 448,449.

Industrial Cataract.

AN ARTICLE in the May issue of the British Journal of Ophthalmology on the causation of certain forms of cataract was reviewed in The Lancet, June 25, 1921 (p. 1372). The fact that bottle makers were particularly subject to cataract was recognized in England in 1903 and bottle-makers' cataract was shortly after made one of the compensable diseases under the workmen's compensation act. A committee was appointed at about the same time to investigate the cause of the disease and researches were conducted upon the absorption of various radiations by the eye. In 1915, however, the theory that the heat factor was of primary importance was advanced and evidence has since been brought forward to prove it. Records of cases have been collected among men who work at iron smelting furnaces and among chain makers, whose work requires them to look at the white-hot metal practically the whole time, either in the fire to judge whether the links are hot enough to weld or while hammering the white-hot metal on the anvil.

An investigation among tinplate millmen in mills at Llanelly, where the work was said to be unusually heavy and the heat intense with exposure to infra-red rays from the red-hot tinplates, showed a startling number of cases among men over 35 years of age who had been employed at that work for as much as 15 years. Cases were rare among men who had been at work for shorter periods of time but, of 354 men of 15 years' employment or more, 144 were found to have lenticular opacities which could be detected without dilatation of the pupils. This was considered conclusive evidence that continuous exposure to excessive heat over a long period is a cause of cataract. It is not easy, it is stated, to devise methods of prevention since although wearing standardized triplex goggles would prevent the heat rays entering the eyes no way has yet been found to prevent the collection of moisture and dust on the glasses. The article urges the inclusion of workers suffering from cataract induced by excessive heat with glassworkers in the benefits of the British compensation act

Workers' Health Bureau in New York City.[1]

THE Workers' Health Bureau, recently organized in New York City, proposes—

1. To conduct a scientific industrial study of the health needs of any trade union.
2. To recommend a complete health program for that trade union based on such a study.
3. To recommend an educational program completely covering the subject of workers' health.
4. To establish health departments within trade union locals, such departments to specialize in preventive work including thorough medical and dental examinations.
5. To train workers' health committees to carry out the health program in the workshop.
6. To select with scrupulous care trained doctors, nurses, and teachers required in conducting the union health work.

[1] Descriptive pamphlet issued by the Workers' Health Bureau (Inc.). New York, Saint Denis Offices [1921]. 7 pp.

It is suggested that each union organize its own health work and control such work with the health bureau's counsel. The necessity of union control arises from the fact that the workers in a particular industry know its problems better than outsiders. In organizing a union health department consideration should be given to the language, age, and sex of the workers, the kind of work, location and size of the factory, work seasons, special trade risks, and hours and wages.

Accidents in Mines and Quarries of the United Kingdom in 1920.

THE report of the Mines Department of the British Board of Trade (Part I.—Divisional Statistics) gives detailed statistics of accidents in mines and quarries of Great Britain and Ireland (in the case of metalliferous mines and quarries, including also the Isle of Man) during 1920. A summary of these figures is given in the following table:

ACCIDENTS IN MINES AND QUARRIES OF GREAT BRITIAN AND IRELAND IN 1920, AND FATALITY RATES, 1919 AND 1920.

Place and cause of accident.	Number of accidents in 1920.		Fatality rate per 1,000 employed.	
	Fatal.	Nonfatal.	1919	1920
Coal mines:				
Explosions of fire damp or coal dust	26	105	0.03	0.03
Falls of ground	544	41,358	.62	.55
Shaft	40	486	.05	.04
Miscellaneous underground	355	64,781	.36	.36
Surface	138	10,572	.47	.54
Total	1,103	117,302	.94	.88
Metalliferous mines:				
Explosions of fire damp	.....	2	.....	.....
Falls of ground	15	204	1.46	1.22
Shaft	2	40	2.68	.16
Miscellaneous underground	8	630	.73	.57
Surface	2	312	.54	.22
Total	27	1,188	3.00	1.22
Quarries:				
Falls of ground	20	281	.38	.46
Blasting	8	59	.11	.18
During descent or ascent	.....	168	.....	.....
Miscellaneous	17	1,951	.43	.39
Surface	9	1,112	.59	.37
Total	54	3,571	.81	.80
Grand total	1,184	122,071	.97	.89

The fatality rates of 1920 are computed on the basis of 1,248,224 employees in coal mines, 21,323 in metalliferous mines, and 67,750 in quarries. Only those nonfatal accidents causing more than 7 days' disability are included in the above table.

Industrial Diseases in British Factories.

A CHAPTER on Industrial diseases, by T. M. Legge, medical inspector of factories, published in the report of the chief inspector of factories and workshops for the year 1920, shows the extent of the more important diseases caused by industrial poisons in Great Britain and the number of deaths resulting, 1900 to 1920, inclusive.

NUMBER OF CASES OF, AND DEATHS FROM, SPECIFIED INDUSTRIAL DISEASES, IN GREAT BRITAIN, 1900 TO 1920.

Disease.	1900	1901	1902	Average, 1903–1905.	Average, 1906–1908.	Average, 1909–1911.	Average, 1912–1914.	Average, 1915–1917.	1918	1919	1920
Lead poisoning:											
Cases	1,058	863	629	601	619	576	522	349	144	207	243
Deaths	38	34	14	23	30	35	33	21	11	26	23
Phosphorus poisoning:											
Cases	3	4	1	1	1	1	.....	3	3	1	.....
Deaths	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....
Arsenic poisoning:											
Cases	22	1	4	4	12	7	4	11	3	4	3
Deaths	3	.....	.....	.....	1	.....	.....	2	1	.....	.....
Mercurial poisoning:											
Cases	9	18	8	6	7	10	14	14	9	7	5
Deaths	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toxic jaundice:											
Cases	.....	.....	.....	.....	.....	.....	.....	132	34	3	6
Deaths	.....	.....	.....	.....	.....	.....	.....	34	10	3	3
Anthrax:											
Cases	37	39	38	52	57	57	57	83	72	57	48
Deaths	7	10	9	13	13	11	7	12	8	9	11

The report includes only such diseases as employers are required by law to report, lead poisoning being the most important both as to the number of cases and the number of deaths. Of the 243 cases reported in 1920, 47 are charged to electric accumulators, 45 to smelting of metals, and 24 to china and earthen ware, the latter industry showing the highest mortality rate—13 deaths in 24 cases. While the figures indicate a decreasing number of cases of lead poisoning the mortality rate seems to be increasing.

The next in importance is anthrax. Of the 48 cases of anthrax reported in 1920, 11 were fatal. While the number of cases reported shows a decrease since 1917 the mortality rate has increased considerably. Of the 48 cases of anthrax, wool is responsible for 24, hides and skins for 17, and horsehair for 6. The report states that little or no progress has been made with practical methods for disinfecting hides and skins which will not affect the quality of the leather.

An interesting table is given showing the results of different kinds of treatment of 800 cases of cutaneous anthrax; that is, excluding internal anthrax and erysipelatous anthrax, which are said to be practically always fatal. According to the report the best treatment is physiological rest of the part affected, combined with intravenous injection of antianthrax serum.

RESULTS OF DIFFERENT KINDS OF TREATMENT OF ANTHRAX.

Treatment.	Cases.	Deaths.	Mortality per cent.
Serum alone	200	8	4.0
Excision alone	397	44	11.1
Excision and serum	174	25	14.4
No special treatment	29	14	48.3
Total	800	91	11.4

Of the 6 cases of toxic jaundice reported, 5 cases (3 fatal) were due to arseniuretted hydrogen gas evolved, owing to the presence of arsenic as an impurity in zinc or hydrochloric acid. The other case occurred in the manufacture of intermediate dyes.

British Manufacturers' Argument for Use of White Lead in Painting.

SOME controversy having arisen between the London Chamber of Commerce and the International Labor Office over the introductory memorandum to the questionnaire on the prohibition of the use of white lead in painting, which is in the agenda of the 1921 session of the International Labor Conference, the views of British white lead makers were published in the Official Bulletin of the International Labor Office, June 22, 1921 (pp. 6–10). Exception was taken by the White Lead Corroders' Section of the London Chamber of Commerce, which comprises all the white lead manufacturers in the United Kingdom, to the alleged lack of impartiality in the memorandum and questionnaire and especially to the statement that "it is now technically possible to replace white lead in painting by effective substitutes."[1]

The lead manufacturers' statement says that "in view of the complexity of the subject, the diversity of evidence, both medical and technical, the absence of reliable statistics, and the widespread economic consequences of a prohibition of the use of white lead, the subject is precisely one which, before being submitted to the conference, requires consideration by the advisory committee which the Washington conference resolved should be established to deal with just such questions of industrial hygiene."

It is asserted that the statistics of lead poisoning do not warrant prohibition, and various authorities are cited to show that it is difficult to diagnose lead poisoning without special experience; that in England the workmen's compensation act has tended to attribute to lead poisoning all possible symptoms of disease among lead workers, and that the general health of painters compares favorably with that of other occupations. A comparison of painters (1,851 persons) with a general group (32,033 persons) of an English benefit society showed that of the general group 18 per cent claimed benefits, with an average of 5.8 days of sickness per member, while among the painters but 11.1 per cent claimed benefits, with an average of 4.1 days of sickness for each member. The last census for which

[1] International Labor Office. Official Bulletin, May 25, 1921, p. 55.

figures were available (1901) showed the death rate among painters to be lower at every age period than those of the group "occupied males of industrial districts."

No effective all-round substitute for white lead in painting, it is contended, has as yet been provided. The greater durability and hiding power and consequent economy are evidenced by the results of tests. The fact that painters prefer white lead paints, that patents and advertisements take white lead as the standard, and that substitutes of long standing have been unable to displace white lead is considered as additional proof of its superiority.

The prohibition of white lead would remove but one of the chief causes of painter's sickness, since much of the poisoning among painters has been shown to be due to the volatile thinners such as turpentine, benzol, methyl alcohol, etc., which are used equally with lead or zinc bases. As it has been generally accepted that the risk from lead lies in the inhalation of dust or fumes, elimination of these causes and enforcement of standards of personal cleanliness may be relied upon practically to remove the danger. Cases of lead poisoning in England through the introduction of regulations to prevent the inhalation of lead dust show great decreases. In white lead factories the number of cases fell from 399 in 1899 to 19 in 1919, or a 97 per cent decrease, and in potteries from 200 in 1900 to 21 in 1919, or a decrease of 90 per cent.

Prohibition of the use of white lead, moreover, would be very costly since the inferior hiding power and lesser durability of substitutes would necessitate more frequent repainting, thus increasing cost of material and of labor, and the reduction in the demand for lead would cause the closing down of many lead mines and a great reduction consequently in the production of zinc ores, since many of the mines work deposits of mixed ores of lead and zinc. If the use of plumbous zinc oxide should be allowed as proposed, a system of inspection would be necessary, since it would be difficult to prevent the use of white lead for undercoats and regulation would still be necessary since plumbous zinc oxide is also poisonous, although to a less degree than white lead.

Finally, it is argued that the following regulations would be as effective in eliminating paint poisoning among painters as similar regulations have been among white lead workers in England:

(*a*) Regulations to avoid dust, the main source of danger, not only by the prohibition of dry rubbing down and dry scraping, but also by the prohibition of the sale to painters of dry (i. e., powder) white lead; (*b*) regulations to insure cleanliness; (*c*) general regulations such as for periodical medical inspection and blood tests and compulsory notification of paint poisoning.

Accidents in New South Wales Mines.

THE report for 1920 of the Department of Mines of New South Wales[1] shows an estimated total of 29,163 persons employed in and about the mines during 1920, a decrease of 3,296 as compared with the previous year. Of these, 9,198 were employed in connection with the metalliferous mines and 19,965 in the coal and shale mines.

[1] New South Wales. Department of Mines. Annual report, 1920. Sydney, 1921.

The table following shows the number of persons killed and injured in 1920 in the mining industry and also the ratio per 1,000 persons employed:

NUMBER OF MINING ACCIDENTS AND RATIO PER 1,000 PERSONS EMPLOYED, 1920.

Class of mining.	Number killed.		Number injured.		Number killed per 1,000 persons employed.		Number injured per 1,000 persons employed.	
Coal and shale		20		113		1.002		5.660
Gold	-------		1		-------		.584	
Silver, lead, and zinc	-------		5		-------		2.589	
Copper	-------	4	1	12	-------	0.435	1.715	1.305
Tin	2		2		1.098		1.098	
Other minerals	2		3		.635		.952	
Total		24		125		.823		4.286

WORKMEN'S COMPENSATION REPORTS.

Illinois, 1919.

THE Third Annual Report of the Illinois Department of Labor covers the year ending June 30, 1920. Included therein is the report of the Industrial Commission administering the compensation law. The number of compensable accidents reported during the calendar year 1919 was 38,289, but 42 in excess of the number for the preceding year. Of these, 535 were fatal, 94 less than for 1918. On account of these cases $3,683,918 was paid out in compensation, unpaid balances amounting to $2,556,631. Medical and funeral expenses amounted to $544,649 additional, making the total cost for the year $6,785,198.

Accidents are reported by industries, coal mining leading in both number and average cost, the number of accidents reported for this industry being 7,797 and the average cost $2,394. Metal products come next with 4,123 accidents, while foods, beverages, and tobacco are charged with 3,792 and machinery and instruments with 3,499. The severity of coal mining accidents as compared with others is indicated by the fact that the next highest average cost is $399 for accidents in public utilities (not transportation), oil and gas well operating coming next with an average cost of $374.

Objects being handled caused the greatest number of accidents, machinery coming next. The most numerous injuries are cuts, punctures, and lacerations, though fractures caused the loss of the greatest number of working days per case, with dislocations second.

Besides 535 deaths there are 27 cases of permanent total disability and 121 of permanent partial disability. Specific loss of parts occurred in 4,873 cases and disfigurements in 613 others. The number of temporary total disability cases was 32,042, there being 78 cases also of temporary partial disability.

Of the 535 death cases, 47 left no dependents, while 400 left total dependents. The number of total dependents was 1,023, there being besides 137 partial dependents. The average total benefit in all cases was $3,051, the average where there were total dependents being $3,661.

The cost of permanent total disabilities amounted to $9,334 as an average. Permanent partial disabilities averaged $861, specific loss $544, temporary partial disabilities $279, disfigurements $196, and temporary total disabilities $62.

The commission is engaged in an important undertaking under authority granted by the legislature of 1919 to examine into the financial condition and method of settling claims of the various companies writing workmen's compensation insurance. The commission has authority to revoke the license of any company found in unsound financial condition or guilty of unfairness in settling claims. Lack of funds has caused delay in this matter, but the work is progressing,

and when completed a full report will be published. Unsatisfactory conditions have been found, but the companies have promptly responded to the suggestions of the commission, and the standard of settlement by adjusters has been raised. The difficulty has been the assumption on the part of the doctors employed by the insurance companies of the function of adjusting claims. "The sooner the individual companies realize that doctors should confine themselves to the medical end and leave the claim settlement to the adjuster, it will be better for all concerned." The Illinois commission is fortunate in having an active medical division for the impartial examination of injured workmen. This should be done at the request of the commission or arbitrators or by stipulation between the employer and the employee. During the year 1,201 cases were submitted to the medical director, more than one-half (608) being submitted by stipulation; 329 were referred by arbitrators, 159 by the commissioners, 97 by some other official, and 8 by request from other States.

Kansas, 1920.

THE annual report of the Department of Labor and Industry of Kansas for the calendar year 1920 shows the number of industrial accidents reported by employers under the compensation law, the number for which compensation or damages was paid by employers, and the compensation cost to employers of these accidents.

The total number of industrial accidents reported for each industry during the year is shown by result of the accident in the table following. Only those employers who are affected by the compensation law, which is very limited in scope, are required to report accidents.

NUMBER OF INDUSTRIAL ACCIDENTS REPORTED DURING 1920.

Industry.	Total accidents.	Fatal.	Permanent disability.	Temporary disability.	
				1 week and under.	Over 1 week.
Steam railroads	1,709	48	41	858	762
Coal mining	873	19	18	195	641
Slaughtering and meat packing	358	2	9	172	175
Cement plants	292	2	4	145	141
Brick, tile, and clay works	103	1	3	42	57
Foundries and machine shops, other than railway	863	4	12	578	269
Flour and cereal mills and grain elevators	194	1	10	106	77
Salt industries	442	2	6	322	112
Oil and natural gas industries	1,242	13	24	758	447
Planing mills and furniture factories	47	.....	18	9	20
Smelting and refining lead and zinc ores	115	.....	4	68	43
Lead and zinc mines, stone quarries, etc	235	2	6	125	102
Electric lines, power plants, gas, water, etc	235	9	2	143	81
Miscellaneous accidents	301	15	10	162	114
Total	7,009	118	167	3,683	3,041

The next table shows for each class of accidents the number of cases settled during the year, the total cost to the employers of the compensation or damages paid, and the average cost per case, the cases coming under the compensation law and those not under the law being shown separately.

CASES OF INDUSTRIAL ACCIDENTS SETTLED IN 1920 AND COMPENSATION COST TO EMPLOYERS UNDER COMPENSATION LAW AND NOT UNDER THE LAW.

Class of accidents.	Under compensation law.			Not under compensation law.		
	Cases settled.	Compensation cost.		Cases settled.	Compensation cost.	
		Total.	Per case.		Total.	Per case.
Fatal:						
Leaving total dependents	35	$117,060	$3,345	10	$26,131	$2,613
Leaving partial dependents	8	10,800	1,350	3	2,900	967
Leaving no dependents	5	222	44	2	900	450
Total	48	128,082	2,668	15	29,931	1,995
Temporary total disability	2,032	146,603	72	303	15,967	53

Besides the accident cases shown in the foregoing table there were 125 cases of permanent disability settled during the year, the total cost in compensation and damages being $90,752, or $726 per case. For this class of accidents the report does not show separately those coming under the compensation law.

At the end of the year there were 802 cases remaining unsettled, 55 of these being fatal cases and 41 being cases of permanent partial disability.

Rhode Island, 1916 to 1919.

THE report of the commissioner of labor of Rhode Island for the years 1916, 1917, 1918, and 1919, includes a section covering the operations of the workmen's compensation law of that State. This section contains the following statistics for 1918 and 1919:

OPERATIONS UNDER WORKMEN'S COMPENSATION LAW OF RHODE ISLAND, 1918 AND 1919.

Item.	1918	1919
Insured establishments:		
Number of establishments	2,937	3,153
Number of wage earners covered	102,312	128,074
Amount of pay roll covered	$97,196,456	$124,872,182
Premiums paid	$989,212.85	$1,128,022.28
Fatal accidents—		
Number reported	49	28
Death benefits paid	$19,173.50	$10,013.01
Compensable nonfatal accidents—		
Number reported	2,161	1,665
Compensation paid	$142,407.74	$114,337.15
Amount paid for medical service	$44,993.72	$51,997.32
Noncompensable accidents—		
Number reported	16,261	14,148
Amount paid for medical service	$72,192.80	$67,544.20
Claims in course of settlement—		
Fatal accidents	39	21
Nonfatal accidents	1,118	1,694
Self-insurers:		
Number of establishments	96	97
Number of wage earners	37,489	36,552
Fatal accidents—		
Number reported	11	9
Death benefits paid	$4,644.68	$6,023.45
Compensable nonfatal accidents—		
Number reported	569	365
Compensation paid	$26,702.42	$23,362.46
Amount paid for medical service	[1] $14,234.15	[1] $14,547.23

[1] Includes also medical service provided in fatal cases.

OPERATIONS UNDER WORKMEN'S COMPENSATION LAW OF RHODE ISLAND, 1918 AND 1919—Concluded.

Item.	1918	1919
Self-insurers—Continued.		
Noncompensable accidents—		
Number reported	3,890	5,406
Amount paid for medical service	$12,063.96	$15,336.03
Claims in course of settlement—		
Fatal accidents	5	2
Nonfatal accidents	8	58

The number of cases and the amount of compensation paid during the years ending September 30, 1918 and 1919, respectively, on account of cases which occurred during the preceding year were as follows:

	1918	1919
Insured establishments:		
Fatal accidents—		
Number	59	85
Amount of compensation	$24,733.80	$43,643.08
Nonfatal accidents—		
Number	514	458
Amount of compensation	$62,509.15	$69,286.29
Self-insurers:		
Fatal accidents—		
Number	18	19
Amount of compensation	$6,546.24	$6,495.43
Nonfatal accidents—		
Number	85	93
Amount of compensation	$8,323.97	$7,558.05

LABOR ORGANIZATIONS.

Educational Work of the International Ladies' Garment Workers' Union.[1]

THE educational work undertaken by the International Ladies' Garment Workers' Union of New York City, an account of which was given in Bulletin No. 271 of the United States Bureau of Labor Statistics, has been successfully continued. Starting in 1917 with two unity centers and a workers' university having a limited curriculum, this movement for workers' education has developed until in April of the present year there were seven unity centers and the workers' university, which now has a much more comprehensive program, and an extension division.

The cooperation of the city board of education is seen in the fact that the unity centers are held in the public school buildings located in parts of the city convenient to groups of members. Each center has a supervisor appointed by the department of community and recreation centers of the board of education, and 40 teachers of English are assigned by the evening school department of the city schools to instruct the various classes in English, of which there is a considerable number owing to the fact that many of the garment workers are of foreign birth.

Special emphasis is also placed upon the subject of health, one evening each week being devoted to instruction in this important science. For the first hour on these evenings physicians from the bureau of industrial hygiene of the board of health lecture on health topics relating to the home and factory conditions of the workers; the second hour the classes spend in the gymnasiums, where physical training is given by competent instructors.

The workers' university, in which the more advanced activities of this movement are concentrated, holds its classes in the Washington Irving High School. Courses given during 1920–21 included trade-union policies, labor problems, current economic literature, current economic opinion, economic geography, logic, literature, sociology, recent developments and events in the labor movement, study of the cooperative movement, public speaking, problems of the International Ladies' Garment Workers' Union, applied psychology, and other subjects.

Subjects such as are enumerated above naturally interest the more serious-minded students. The educational committee also strives to reach the mass of the members, and to this end an extension department has been established, which not only provides special lectures to which all of the members are invited, but arranges concerts and other entertainments that have proven popular.

[1] Cohn, Fannia M. The educational work of the International Ladies' Garment Workers' Union. Report submitted to the conference of the Workers' Education Bureau of America, held in New York City Apr. 2, 1921. New York, International Ladies' Garment Workers' Union, 31 Union Square [1921]. 12 pp.

For the convenience of the members both lectures and classes are given at the offices of the local unions. The educational work is under the general control and management of the educational department, which is in turn responsible to a special educational committee consisting of five vice presidents of the international. It is financed by the workers themselves, a specified sum being set apart for this purpose at the biennial convention of the union. The last convention, held in Chicago, 1920, voted $15,000 a year for 1921 and 1922.

Out-of-town branches of the unity centers and workers' university have been established in Cleveland and Philadelphia, while in Boston special arrangements have been made whereby members of the union may attend the classes at the Boston Trade-Union College. Furthermore, three unity summer homes are maintained by individual locals where members of the unions may spend their vacations among beautiful and comfortable surroundings.

Both the individual and the social development of the workers concerned are aimed at in these activities.

The work of the educational department of the I. L. G. W. U. is based on a conviction that the aims and aspirations of the workers can be realized only through their own efforts on the economic and educational fields. While organization gives them power, education gives them the ability to use that power intelligently and effectively.

The courses offered by the educational department are planned to accomplish this aim. While some of them are intended to satisfy the intellectual and the emotional needs of workers, the main emphasis is laid on those which meet their practical needs. The problems of the labor movement are analyzed and clarified by the study of general principles underlying them. In this way it is possible to train fresh energy, new experience and power for the service of the international and of the entire labor movement of America, and to help our members to achieve their purposes with the ultimate goal of living a full, rich, and happy life.

Labor Unionism in China.[1]

DOCTOR John C. Ferguson, educator and political adviser to the President of China, at the commencement exercises of 1921 at Boston University, spoke of the great changes in the national activities of China.

In labor matters China is assimilating western ideas and western methods with remarkable rapidity, the population, however, being 400,000,000, the vast majority have not yet been brought in close contact with the Occident.

The increase of export trade during the war, resulting in a larger demand for labor, and the boycott of Japanese goods tended to develop the home industries of China, and incidentally stimulated a movement for better labor conditions. Western machinery and western systems of various kinds brought about the demand for western trade-unionism.

Among the most important of these newer types of labor organization are the National Labor Union and the Chinese Returned Laborers Union. Both of these organizations reject any political connection. They refuse to take part in the vast student movement against Japan. These labor unions aim primarily to secure mutual

[1] Christian Science Monitor, July 23, 1921.

aid among wage earners, which the unions feel can be accomplished only through educating the workers. Besides these large unions and others of a similar character, there are many recently formed local organizations and for some time past the strike has been regarded as a valuable "industrial weapon." The Chinese social system as a whole, however, tends to ameliorate the bitterness and suffering of labor controversies.

Conferences of Labor and of Cooperative Organizations in Great Britain.[1]

Labor Party Conference.

FROM June 21 to 24, 1921, the British Labor Party held its twenty-first annual conference at Brighton. The conference was attended by 1,000 delegates representing an affiliated membership of 4,257,994 as compared with 380,000 in 1900. The annual income of the party 21 years ago was about £250 ($1,216.63); it is now between £40,000 and £50,000 ($194,660 and $243,325). In 1900 there were 2 labor members in Parliament; now the parliamentary party numbers 70.

The resolutions adopted were as usual indicative of the party's attitude upon a variety of subjects of immediate interest to labor generally. The conference expressed itself in favor of continued financial aid to the striking miners. It refused by a vote of 4,515,000 to 224,000 an application from the Communist Party for affiliation with the Labor Party; it opposed the abolition of the agricultural wages bill whereby agricultural workers have been protected as regards wages; it condemned the Government's Irish policy, demanded the revision of the peace treaties and the repeal of the emergency powers act, protested against an Anglo-French alliance, and denounced any sort of alliance between "the Labor Party and any section of the Liberal and Conservative parties." A resolution regarding unemployment called for work or maintenance and advocated schemes for industrial training.

The memorandum on the further coordination of the action or policy of the Labor Party and the Trades-Union Congress prepared by a joint committee representing both organizations was considered and ratified. This scheme, providing for a closer working arrangement among the national labor bodies, was approved by the Trades-Union Congress at its annual meeting in 1920, and proposes a national joint council representing the general council of the Trades-Union Congress, the executive committee of the Labor Party, and the Parliamentary Party.

It shall be the duty of the council, among others, to consider "all questions affecting the labor movement as a whole and make provision for taking immediate and united action on all questions of national emergency" and to "endeavor to secure a common policy and joint action, whether by legislation or otherwise, on all questions affecting the workers as producers, consumers, and citizens."

[1] Labor Gazette (London), July, 1921, pp. 340, 341; Manchester Guardian, June 21, 1921, p. 6.

The scheme further provides for the setting up of four central "common service" departments dealing with research and information, international affairs, publicity, and legal advice. Other desirable common services will be established as needed.

National Transport Workers' Federation.

THE two most important subjects which came up for consideration at the annual meeting of the general council of the National Transport Workers' Federation, held at Edinburgh, June 12, 1921, were the recent mining crisis and the reduction in wages of workers on seagoing vessels.

In explanation of the action, or rather lack of action, on the part of the railway men and transport workers in support of the miners, the special report of the executive committee upon this subject pointed out the weakness of the Triple Alliance as regards united action, which lies in the fact that the three labor organizations composing it never meet as one body, but each section decides upon its own course. Joint movement and sectional autonomy, the report maintained, are incompatible, and a resolution was passed "calling for adequate machinery to give effect to decisions of the Triple Alliance and providing that on a decision of any section the Triple Alliance should immediately become a consultative body with full executive powers." The Miners' Federation was charged with either unwillingness or incapacity to appreciate the position in which the two other members of the alliance found themselves.

The question of the reduction in wages of seagoing workers centered around a lack of trade-union unity in the federation itself. The executives of the federation had indorsed the policy of the National Union of Ships' Stewards, Cooks, Butchers, and Bakers in refusing to accept reductions in wages. But the members of certain other unions catering for seagoing workers not only declined to assist the striking union but in some cases took the places of men who had refused to accept a reduction of wages. This was termed the most "flagrant" case of difference in policy which the federation had ever had within its ranks. The council agreed to support the ship stewards in their effort to secure the reinstatement of their members. A resolution was adopted authorizing negotiations with other organizations "for the purpose of enlarging the federation so as to cover all forms of transport and distribution."

Women's Cooperative Guild.

THE month of June, 1921, seems to have been prolific of labor conferences so far as Great Britain is concerned, for, in addition to the two of which brief accounts have already been given, the Women's Cooperative Guild held its 38th annual congress at Manchester on the 14th of that month. Delegates to the congress numbered 1,360 persons, representing 629 branches, 25 districts, and 8 sectional councils. There were also in attendance representatives from other cooperative societies.

Questions relating to the Irish situation, education, child welfare, housing, maternity benefits, and unemployment were discussed. A resolution declaring "that the only hope for a new world for the workers lay in cooperation and labor coming into power, with women as well as men represented in Parliament and the Government," and calling "upon the cooperative party to support the candidature of cooperative women" was considered at length. Those opposed to it based their opposition on the grounds that the congress was composed of employers as well as employees, that politics had no place in the congress, and could not in any event effect all the reforms the cooperators desired. The resolution was, nevertheless, passed by a large majority. The congress condemned the practical failure of the British housing program.

LABOR LAWS AND DECISIONS.

Status of Employees on Strike.

THE question of the status of employees who have left service collectively for the purpose of securing better conditions of employment is one on which varying opinions have been expressed. Strictly speaking, strikers have severed their employment relation, whether it was under contract for a fixed period or terminable at will. However, the courts have quite generally recognized a middle status effective within certain limits, giving striking employees a position differing from both those in employment and the public at large. "The relationship is an anomalous one, yet distinctive, and of such nature as to secure to the parties certain correlative rights under which acts may be performed that would assume a different aspect if done by absolute strangers or in different circumstances" (Iron Molders' Union *v.* Allis-Chalmers Co., 166 Fed. 45, 91 C. C. A. 631). Thus organizers from the outside may be enjoined from interfering with labor conditions, being in no wise agents of the employees, as was held in a case before the Supreme Court of the United States (Hitchman Coal & Coke Co. *v.* Mitchell, 245 U. S. 229, 38 Sup. Ct. 65). But former employees in association with others have been held to retain such an interest in the affairs of their former employer as to make it lawful for them to picket and persuade in a peaceable manner, though incidentally interfering thereby with the employer's free and unrestrained control of his business (Tri-City Central Trades Council *v.* American Steel Foundries (C. C. A.), 238 Fed. 728). This is on the ground that though strikers are not on the pay roll of the employer, and so are not actual employees, the relation of employer and employee is not fully terminated by either a strike or a lockout.

However, where a strike has failed and the employer refuses to recognize former employees, their places having been filled and normal production continuing, the temporary anomalous condition is said to have terminated, and striking employees can not be regarded as any further interested, and whatever rights to be recognized they may have had at one time are extinguished (Dail-Overland Co. *v.* Willys-Overland Co., 263 Fed. 171). A recent illustration of this phase of the question is found in a case decided March 26, 1921, by the United States District Court for the Northern District of Georgia (Birmingham Trust & Savings Co. *v.* Atlanta B. & A. R. Co., 271 Fed. 743). Here the railroad named was in the hands of a receiver, being operated under the direction of the court. A reduction in wages had been announced, in pursuance of an order of the court, but without due regard to the provisions of the Newlands Act (Compiled Stats. sec. 8674), which required 20 days' notice and a hearing before wages could be reduced. The court held that the Newlands

Act applied only to such employees as were "employed upon or in cars," usually known as "train operators," and "train service men." As to the other workmen, the order was valid, while as to the excepted classes the status was said to be analogized to the condition which would exist under a definite contract to serve for the 20-day period named in the law at the fixed wage. Though they were entitled to this protection, they might waive it as they might the benefits of a contract; or they might continue at work and claim the wages secured to them by the law, but they could not break the contract and abandon the service and at the same time claim the protection of the law as to the wages.

The men in fact continued at work for a time under protest, but later refused to render further services, terminating employment both before the expiration of the 20-day period and before the arrival of the next pay day. The places of the striking employees were filled in so far as the needs of the service required and the revenue of the road permitted. The strikers came before the court demanding to be heard as employees and asking for their reemployment in a body. The strike had been orderly and without personal bitterness between the strikers and the receiver, and the receiver expressed his readiness to reemploy the strikers in so far as employment was available. "We do not, however, think it right to direct him to reemploy them in a body, not only because he has not now sufficient business, but also because it would not be right to discharge those who have taken some of the places and are proving acceptable and contented employees." The refusal to work when called upon by the receiver to continue to render the service necessary for the operation of the road, "no matter what the reason or justification, terminated the employment."

This principle is applied in another recent case (In re Division 132 of Amalgamated Association of Street & Electric Ry. Employees of America, 188 N. Y. Supp., 353). This case was decided by the appellate division of the Supreme Court of New York on May 17, 1921. It involved the construction of a contract between the labor union named and the United Traction Co. of the city of Troy. The contract contained provisions to the effect that the company would "through its properly accredited officers treat with the properly accredited officers and committees of the association on all grievances that may arise." The agreement was to continue in force for one year ending June 30, 1921. A supplemental agreement provided for an increase in wages to continue during this year on condition that the company be granted permission to charge increased fares on or before November 1, 1920. This permission was not granted, and the increase was withdrawn in accordance with the terms of the contract. However, the members of the employees' union protested this action, which was announced on January 22, 1921, and on the 28th of that month, when the change was to be made, the employees members of the association walked out, "leaving the traction company incapable of immediate performance of its obligations to the public."

There was an agreement to arbitrate controversies arising as to the rate of wages within 30 days prior to the expiration of the agreement. Obviously this was a limited agreement as to arbitration,

but the employees demanded that their protests against the reduction of wages be referred to arbitrators. The court held that in leaving employment as they had on January 28 "they committed a breach of the contract, and if there had been a valid agreement for the arbitration of all controversies they would have relieved the traction company of the obligation to perform." The court pointed out further that in view of the limitation upon the subject matter of the agreement there was no obligation on the part of the employer to submit the question arising in January to arbitrators supposed to function only on questions arising in June following. "The election on the part of the employees to abandon their employment in disregard of the contract made in their behalf by the petitioners [the labor union] could not impose an obligation which was not provided in the contract." However, "the former employees, represented by the petitioners, have abandoned the contract; they have committed an anticipatory breach of the provision for arbitration by destroying its consideration before it had an opportunity to come into operation, and they have no ground for complaint, because they are no longer employees, and because the time fixed by the contract for its operation in any event has not yet arrived."

In view of these conclusions the order issued by the supreme court in special term directing the company to submit to a trial before a jury on the issues presented was reversed, and the petition of the labor organization dismissed on the ground that the petitioners had no standing under their violated agreement.

New Workmen's Compensation Law of Arizona Void.

AT THE session of the Legislature of Arizona for the current year a new compensation law was enacted. The earlier law enacted in 1912 permitted an injured workman to elect subsequent to his injury whether he would claim compensation under the law or sue the employer under the principles of the employers' liability statute. The new law undertook to make more certain the rights of the employer and employee, making election by the employer presumptive and leaving to the employee the right to reject the terms of the act by notice only prior to the injury.

The constitution of this State (Art. XVIII, sec. 6) declares that "the right of action to recover damages for injuries shall never be abrogated, and the amount recovered shall not be subject to any statutory limitation." Succeeding sections direct the legislature to enact an employers' liability law for hazardous occupations, and also a compulsory compensation law applicable to "such employments as the legislature may determine to be especially dangerous." The provision is added that "it shall be optional with said employee to settle for such compensation or retain the right to sue said employer as provided by this constitution."

Following the enactment of the law of 1921 (ch. 103, approved Mar. 17), a permanent injunction was issued by a court of first instance directed against the commission created by the act, forbidding it to proceed with the enforcement of the act. This case was taken on appeal to the supreme court, which has recently announced

its unanimous opinion that the law is invalid because it conflicts with the provisions of the constitution guaranteeing to injured workmen the right to sue for personal injuries. The statute violates this provision by requiring the employee to elect his remedy prior to the injury, and is therefore void (Industrial Commission *v.* Crisman, 199 Pac. 390.) It is apparent, therefore, that in the absence of an amendment to the constitution it would be impossible for the legislature to enact a law making compensation in fixed amounts the satisfaction for industrial injuries.

The act being unconstitutional in its entirety, the compensation law of 1912, which has been adjudicated as constitutional, is regarded as in force, the act of 1921 having never come into operation.

New Child-Labor Legislation in Massachusetts.[1]

FOUR important child-labor measures will become effective in Massachusetts July 30 and 31, and August 18 and 25, 1921. These acts extend the scope of educational and employment certificates, raise the educational qualifications for children leaving school to go to work, and regulate street trades for minors.

The employment certification act corrects a great inconsistency between the present certificate and school attendance laws, which require every child "under 16 years of age to attend school unless regularly employed under the authorization of an employment certificate or home permit, at the same time restricting employment certificates to certain specific occupations."

The new law requires certificates for all children 14 to 16 years of age who are gainfully employed. This means that if they meet the requirements for certification they may be released for any form of gainful occupation outside of the employments specifically prohibited for minors below the age of 16. It also means that for work outside of school hours, as well as that during school sessions, children must first secure authorization from the certifying office. Work on farms and in private domestic service is covered by the new statute—a special certificate being required for this kind of employment. Formerly, there were many occupations in which children could engage outside of school hours for which no certificate was required and consequently little protection afforded. Under the new law, boys may not be employed in the morning on milk wagons or at night in private bowling alleys, or girls employed as ushers in theaters, if under 16 years of age, unless they have first secured an employment certificate. This brings under the protection of the child labor law a number of children that have previously been in a twilight zone as far as labor legislation was concerned.

By means of the employment certificate school officials may locate the child who has left school and if he is not regularly employed may return him to school or if regularly employed may require him to attend a continuation school.

The employment certificate is also an aid to the Massachusetts Department of Labor and Industries in determining child-labor law violations by furnishing definite proof of the age of minors who are employed. The most significant service of such certificates, however, is the protection of children about to go to work by the assurance these documents offer of such children's meeting certain minimum age, education, and physical standards.

[1] Mimeographed reports from the Massachusetts Department of Labor and Industries of Massachusetts.

The new law also extends protection as to hours and night work to all working children 14 to 16 years of age, whereas previously such protection was restricted to children in certain specific occupations.

The corresponding measure regarding educational certificates applies to minors 16 to 21 years of age and adds to the list of occupations for which such certificates are now required, public and private bowling alleys, pool and billiard rooms, bootblack stands and establishments, barber shops, employment in the construction and repair of buildings, and employment by express and transportation companies.

According to the new act raising the educational requirement for children who desire to leave school to go to work, instead of having merely to meet "the tests of reading, writing and spelling in the English language equivalent to completing the sixth grade in these subjects, these children will have to be able "to meet requirements for completing all of the subjects in the sixth grade." In connection with this legal change the department of labor and industries has made the following ruling:

The educational requirements for working children are not retroactive; they therefore do not apply to minors certified under previous laws in so far as their present employment is concerned; they do apply, however, to all minors hereafter certified whether for initial or subsequent employment; and irrespective of the form of certificate previously issued to any minor, the form hereafter issued should be determined by the minor's ability to meet the present requirements.

Far reaching in its application is the new street trades law which becomes effective August 18, 1921. This provides that all minors under 16 before they may engage or be employed in any street trades must first secure a badge from the officer authorized to issue employment certificates. Condition for securing a badge is proof that the minor is 12 years of age or over. The issuing officer may refuse to issue a badge in the case of minors that are physically or mentally unable to do the work in question in addition to the regular school attendance required by law.

The new law removes a number of inconsistencies between the child labor law and the street trades regulations. Prior to its enactment, the State regulations as to licensing and minimum age for street trades applied only to places of over 50,000 inhabitants. In smaller communities boys of any age could engage in the work. No badge was required and consequently little protection afforded. Minors under 14, however, could not in any city or town be employed in this work. For example, boys under 14 could not be employed by newspaper offices or newsdealers in the sale or distribution of papers on the streets or on a newspaper route. They could and did accomplish the same result, however, by purchasing the papers and engaging in the sale and distribution for themselves. It was a legal distinction, but without material difference so far as child labor was concerned.

This inconsistency is removed by a provision of the new law that a boy over 12 may engage or be employed in any city or town in the sale or distribution of newspapers, magazines, or other periodicals in a street or on a newspaper route provided he meets the requirements as to licensing, hours of employment, and school attendance. Licenses are extended to cover all forms of street trades and all cities and towns irrespective of size. The age limit is fixed as 12 years for all boys; and the hour limits outside of school hours, from 6 a. m. to 8 p. m. for all minors 12 to 14 years of age.

Representation of Women in the Department of Labor and Industries of Massachusetts.[1]

OF ESPECIAL interest to women's organizations is a measure which went into effect on the 25th of July providing for representation of women in the Department of Labor and Industries. The act establishing the department placed the work under five commissioners—the commissioner of labor and industries, three associate commissioners, and an assistant commissioner. Appointment of a woman to the last-mentioned position was made permissive. The amendment passed this year makes such appointment mandatory by requiring that the assistant commissioner shall be a woman. Under the original law no duties or authority were conferred upon the position, all of the administrative functions being definitely assigned to the commissioner, the associate commissioners, or to the commissioner and the associate commissioners acting jointly. The new law, while it gives no specific duties to the position, authorizes the assistant commissioner to vote with the other members in all matters requiring joint action; appointing and fixing salaries of directors, determining how many inspectors in the department shall be women, naming committees, and adopting rules and regulations for the protection of employees. One of the most important provisions of the act is that permitting the assistant commissioner to inspect industrial establishments to determine compliance with the labor laws and to make investigations concerning the conditions of employment of women and children. Previously this authority was limited to the commissioner, the director of the division of industrial safety, and the inspectors.

Extraterritoriality Under the Michigan Workmen's Compensation Law.

THE Supreme Court of Michigan recently had before it for the first time the question of the construction of the workmen's compensation law of the State with regard to its application to workmen injured outside the State. At an earlier date the industrial accident board had construed the law as limited by the State boundaries, but in the present instance had awarded compensation. The case was carried to the supreme court and the award there affirmed (Crane *v.* Leonard, Crosette & Riley, 183 N. W. 204.)

The fact that the court was for the first time determining the point in issue led to a rather detailed consideration of the subject. Texts were cited, and also the decisions of a number of State courts of last resort. Thus the earliest American decision, that of the Supreme Court of Massachusetts, was found to follow the English cases in denying the application of the law where the employee was beyond the territorial boundaries of the jurisdiction. The Illinois Supreme Court likewise takes this position; while the law of California, after considerable discussion and some amendatory legislation, is now on the side of extraterritorial application, though a compulsory law. The final decision to this effect was not before the court in the present

[1] Source: Information from the Massachusetts Department of Labor and Industries received July 26, 1921.

case, so that the State of California was classed by it with Massachusetts and Illinois. As a matter of fact, it now stands with those cited by the Supreme Court of Michigan in favor of the more liberal construction, i. e., Colorado, Connecticut, Iowa, Minnesota, New Jersey, New York, Rhode Island, West Virginia, and Wisconsin.

In most of these cases the statute under consideration was elective, and the decision turned chiefly upon this point, the court saying that in accepting the statute voluntarily the parties wrote into their contract the provisions of the compensation law regardless of the place where the contract is fulfilled. However, the laws of California and New York are compulsory in their operation, so that the argument of voluntary agreement is not the sole dependence in upholding the extraterritoriality of such legislation.

In the present case an elective law was under consideration and acceptance of it by the parties was said to establish contractual rights which "accompanied the employee wherever he went within the ambit of his employment." The employee in question was employed by a shipper of produce and accompanied carloads of potatoes beyond the borders of the State in the course of his employment, suffering a fatal injury while so doing. The widow's claim on this account was therefore sustained.

Workmen's Compensation Law of Missouri Held Up by Referendum.

THE efforts of the Legislature of Missouri to enact a workmen's compensation law for that State continue to meet with obstruction. The MONTHLY LABOR REVIEW for January, 1921 (pp. 175, 176), gave an account of the rejection on November 2, 1920, of a law passed by the legislature at its session of 1919. As forecast in this account, a new measure was presented to the legislature of 1921, being finally enacted into law to become effective September 1, 1921. In the meantime opponents, either to this particular law or to any compensation law, set about securing signatures calling for the submission of the act of 1921 to a referendum vote. It is reported that 85,000 signatures have been secured; at any rate the number is sufficient to suspend operation of the law until it shall be voted upon. This will take place at the time of the regular election in November, 1922.

Hours of Labor on Public Works, New York.

THE labor laws of New York prescribe the 8-hour day for work done for or by the State or a municipal corporation or by contractors or subcontractors therewith. The same section also prescribes that the prevailing rate of wages in the community shall be paid for such work. The application of this law has been questioned in cases where a third party is involved. In the present instance a grade crossing of a railroad was being eliminated, the State and city and the railroad company contributing proportionate shares to the cost of the work. The construction company which was engaged in the work contended that in view of the fact that the

railroad was its employer, the fact that the city and the State were involved could not operate to restrict the work to the 8-hour day, nor regulate rates of wages. The identical question was before the courts in 1913, the court of appeals without an opinion affirming an order of the court below directing the payment of a city's share even though the 8-hour law had been disregarded. The case in hand was passed upon by the attorney general of the State, and the view was adopted that "where a private corporation contributed to the cost, the 8-hour law can not be enforced unless the city provides some fund to reimburse the private corporation for the excess cost resulting from the enforcement of the 8-hour law." This follows the earlier decision, the attorney general saying: "I consider this case as precedent upon the point you raise, and that it would be useless to litigate the question again."

The obvious result of this opinion is to remove all works of a public or quasi public nature from the operation of these provisions of law where a private corporation or individual is a contributor to the expense involved.

Warehousing as a Hazardous Employment Under the Workmen's Compensation Law of Washington.

THE workmen's compensation law of the State of Washington is declared to be applicable only to employments classifiable as "extrahazardous," the original act enumerating the occupations covered by it. The law provided further that "if there be or arise any extrahazardous occupation or work other than those here enumerated, it shall come under this act," the premium rates to be fixed by the industrial insurance commission. The commission acted on the theory that this statute authorized it to classify employments not enumerated, and declared on May 3, 1915, that it had been demonstrated that the operation of mercantile and storage warehouses and the occupations of teamsters, truck drivers, handlers of freight, auto truck drivers and helpers are extrahazardous. The commission therefore undertook to enforce by action at law a contribution to the State fund from a warehousing corporation which resisted, and the court held that the commission had acted without authority (State *v.* Powles & Co., 94 Wash. 416, 162 Pac. 569).

Subsequent to this decision the legislature of 1919 undertook to change the law so as to authorize acts of classification by the commission, saying "the commission shall have power after hearing had upon its own motion or upon the application of any party interested to declare any such extrahazardous occupation or work to be under this act." The commission acted upon this provision in a recent case (State *v.* Eyres Storage & Distribution Co., 198 Pac. 390), but again the supreme court ruled against the commission, saying that the only power given was that of declaring any extrahazardous occupation or work to be under the act and not to declare an employment not enumerated as extrahazardous to be such. It was held that the business of the defendant company "was not plainly extrahazardous within the purview of the assumption" on which the Powles case was based, nor did the amendment of 1919 confer additional power

sufficient for such classification. The judgment of the lower court against the commission was therefore affirmed.

It may be added that the legislature of 1921 made a second attempt, and presumably an effectual one, to authorize classification by the newly created agency to which the administration of the compensation law has been transferred. The law authorizes the director of labor and industries through and by means of the division of industrial insurance "to declare any occupation or work to be extrahazardous and to be under this act." Action may be taken either upon application or voluntarily, the order to issue after hearing had. The particular occupation in question above is by legislative enactment placed in the list of employments classed as extrahazardous, so that assurance is now made doubly sure as to the coverage of warehousing, which was involved in the Powles and Eyres cases.

Amendment of Belgian Trade-Union Law[1]

ARTICLE 310 of the Belgian Penal Code, which imposed severe penalties on persons who, "with the object of bringing about an increase or decrease in wages should interfere with the free exercise of industry or labor by means of violence, threats, fines, prohibitions, interdictions or proscriptions, or by meetings or by acts of intimidation directed against those who work themselves or cause work to be done," was rescinded by an overwhelming vote of the Senate on May 18. At the same time a bill guaranteeing freedom of association was passed, both of which measures had passed the Chamber of Deputies in March, 1921. The abrogation of article 310 is considered a great victory for the Belgian working class as it had been a serious obstacle in the development of trade association and in the effective use of the strike. Employers and the Christian unions had urged the enactment of the law guaranteeing freedom of association to offset in a measure the abrogation of article 310, although the law does not interfere with the trade-union activities unless the unions attempt to prevent workers from joining other organizations.

French Government Bill on Social Insurance.[2]

ON MARCH 2, 1921, the French cabinet approved a social insurance bill drafted by the minister of labor. The French Chamber of Deputies and the Senate will discuss this bill within the next few months.

Through the annexation of Alsace-Lorraine France, as regards social legislation, found herself in a somewhat peculiar position. She had either to deprive the workers in these Provinces of the benefits of the German social insurance system, or extend to all the rest of France the insurance system which hitherto was in force in Alsace-Lorraine. The French Government has decided to do the

[1] Le Mouvement Syndical Belge, Bruxelles, Juin 4, 1921, p. 91. The Labor Gazette, London, June, 1921, p. 286

[2] France. Document Parlementaires—Chambre, Annexe No. 2369, Paris, 1921, and Reichs-Arbeitsblatt, vol. 1 (new series), No. 18, Berlin, June 30, 1921.

latter. Even before arriving at this decision it decreed that the German social insurance laws shall temporarily remain in force in Alsace-Lorraine. The bill drafted by the minister of labor owes its origin to these conditions. If the bill is enacted into law, France will have a comprehensive social insurance system for which under other conditions its citizens would perhaps have had to wait for decades. France has had since 1898 a law on industrial accident insurance and since 1910 an old-age insurance law, but State sickness, invalidity, and maternity insurance are nonexistent. The workers of Alsace-Lorraine would thus have fared considerably worse if they had been subject to existing French social insurance legislation.

Scope of the Insurance.

THE present bill is based on compulsory insurance. All French wage workers and salaried employees as well as small tenant farmers (*métayers*) whose annual income does not exceed 10,000 francs ($1,930, par) are compulsorily subject to insurance. Farmers and small independent tradesmen below 30 years of age whose annual income does not exceed 10,000 francs may insure themselves voluntarily. Both compulsorily and voluntarily insured persons are to enjoy the same benefits under the law.

The insurance grants medical aid in case of sickness or confinement, pecuniary benefits to sick persons or women in confinement, birth allowances, pensions for invalids and persons over 60 years of age, and death benefits to survivors.

Contributions.

THE funds for paying benefits are to be raised through equal contributions of the insured persons and their employers supplemented by State subsidies. The insured persons are divided into 6 classes, according to their annual income, as follows:

Class 1, annual income under 1,200 francs.
Class 2, annual income 1,200 and less than 2,400 francs.
Class 3, annual income 2,400 and less than 4,000 francs.
Class 4, annual income 4,000 and less than 6,000 francs.
Class 5, annual income 6,000 and less than 8,000 francs.
Class 6, annual income 8,000 and less than 10,000 francs.

The combined annual contributions of the insured persons and the employers have been fixed at 5 per cent of the average annual income of each class of insured persons, i. e., the following amounts:

For class 1, 45 francs; class 2, 90 francs; class 3, 160 francs; class 4, 250 francs; class 5, 350 francs; class 6, 450 francs.

The contributions are the same for single and married persons. The employer is to deduct the worker's share of the contribution from the latter's wages and to transmit it to the insurance fund together with his own share of the contribution.

Benefits.

THE benefits accruing to insured persons are considerable. In case of sickness insured persons are entitled to free medical aid, medicines and a daily pecuniary benefit for the duration of 26 weeks. The

amount of the pecuniary benefit is governed by the contributory class of the insured person. Six benefit classes have been fixed corresponding to the six contributory classes which provide a daily sick benefit and an allowance for each child under 16 years of age dependent upon the beneficiary. After sickness in excess of 26 weeks the daily sick benefit is changed to a monthly sick benefit and in case of resulting total or partial invalidity a permanent invalidity pension is determined after five years. The rates of the pecuniary sick benefit have been determined as follows:

AMOUNT OF SICK BENEFIT PAID TO EACH CLASS.

Contributory class.	First 26 weeks.		After 26 weeks.	
	Daily sick benefit.	Additional allowance for each child.	Monthly sick benefit.	Additional allowance for each child.
	Francs.	*Francs.*	*Francs.*	*Francs.*
Class 1	1.50	0.50	45.00	10.00
Class 2	3.00	.50	75.00	10.00
Class 3	5.25	.50	110.00	10.00
Class 4	8.25	.50	140.00	10.00
Class 5	11.50	.50	195.00	10.00
Class 6	15.00	.50	250.00	10.00

In case of hospital treatment the pecuniary sick benefit is to be reduced by two-thirds and if the insured person has dependent children by only one-third.

The wife of an insured person and the children under 16 years of age are entitled to medical treatment and medicines without paying any contributions to the insurance.

In case of death of the insured person his family receives a death benefit. The amount of this benefit varies according to the contributory class of the insured person. In the first class the death benefit is 150 francs ($28.95, par) and in the sixth class 1,500 francs ($289.50, par) with an additional allowance in all six classes of 100 francs ($19.30, par) for each dependent child under 16 years of age.

The invalidity pensions also vary in amount according to the contributory class of the insured person. In case of total invalidity the pension amounts to 500 francs ($96.50, par) in the first class and 3,000 francs ($579, par) in the sixth class, with an additional allowance of 100 francs for each child under 16 years.

Women in confinement receive a maternity benefit varying between 1.50 and 15 francs (29 cents and $2.90, par) per day during the 6 weeks before and the 6 weeks after confinement. In addition they are entitled to free medical aid and medicines. They also receive a monthly nursing benefit of from 15 to 60 francs ($2.90 to $11.58, par) for a period of 12 months.

The insurance also grants so-called birth allowances (*allocations de naissance*). This allowance amounts to 200 francs ($38.60, par) for each child, of which 100 francs ($19.30, par) are paid at the birth of the child, 50 francs ($9.65, par) at the end of the sixth month, and 50 francs at the end of the twelfth month. If both father and mother of the child are insured the allowance is doubled.

For the old-age insurance the bill provides the granting of a pension after the insured person has completed his sixtieth year of age. The amount of the pension varies according to the contributory class of the insured person. In the first class the old-age pension amounts to 500 francs ($96.50, par) per year and in the sixth class to 3,000 francs ($579, par). In order to have a valid claim to an old-age pension the insured person must have paid 9,000 daily or 360 monthly contributions. If he has complied with this condition he may begin drawing a pension after the completed fifty-fifth year of age but in such a case the pension is reduced by an amount specified in the law. If the insured person does not make a claim for an old-age pension until after he has completed his sixty-fifth year of age the legal minimum pension is increased by the excess contributions and the accumulated compound interest.

Organization.

THE bill provides for the following organization of the insurance system.

France is to be divided into 20 to 25 insurance districts. In each district there is to be established an autonomous insurance fund, which in turn shall establish branch offices in each rural district or in each city with more than 10,000 inhabitants. In addition to the State insurance funds, mutual insurance funds, funds founded by employers' or workers' organizations, and establishment funds may be admitted as carriers of the sickness and old-age insurance, provided they conform to the provisions of the present bill. The State insurance funds are, however, to be the exclusive carriers of the invalidity insurance, because, as the preamble to the bill says, "private insurance institutions have hitherto neglected this branch of social insurance."

A general guaranty fund (*caisse générale de garantie*) is to be created as compensation and reinsurance carrier for all the State insurance funds and private admitted funds.

An insurance office is to be created in each of the insurance districts. This office shall exercise supervision over all the insurance funds in the district. Disputes arising from the insurance procedure are to be decided by administrative courts to be created at each county seat and at the headquarters of each insurance district. A superior administrative court to be created at Paris is to decide appeals from the lower courts.

State Subsidies.

THE financial burden borne by the State in the operation of the proposed social insurance system is very considerable. According to the bill the entire costs of administration of the insurance funds and of the insurance offices are to be borne by the State. In addition the State assumes the entire cost of the birth allowances and grants subsidies to the sickness, invalidity, old-age, and maternity insurance. The bill also provides State subsidies for the erection of sanatoriums and convalescent homes.

The cost to the State of the proposed insurance system during the first year of operation has been estimated at 376,000,000 francs

($72,568,000, par) by the minister of labor.[2] It has been further estimated that during the first 11 years the annual cost to the State would rise to 578,000,000 francs ($111,554,000, par) and fall to 475,000,000 francs ($91,675,000, par) after 45 years.

The cost of changing from the old-age insurance law of 1910 to the new insurance system, which has been estimated at 123,000,000 francs ($23,739,000, par), is also to be borne by the State.

Criticisms of the Bill.

THE attitude of French organized labor toward the above bill permits the presumption that there will not be a repetition of the opposition manifested by the French General Federation of Labor in 1910 on the occasion of the discussion in Parliament of the old-age insurance law. An opposition on principle against the present bill is nonexistent among French labor unions. On the contrary the bill has been viewed very favorably. The French Metal Workers' Journal,[3] for instance, says "the bill offers indisputable advantages." Another labor paper, L'Atelier,[4] expresses its gratification at the submission of the bill, and only regrets that unemployment insurance has not been included in the proposed insurance system. Various amendments have been suggested by workmen's organizations, but on the whole labor is of the opinion that the basic principles of the bill deserve the support of organized labor. A noteworthy fact is that no representatives of the French General Federation of Labor were called in by the Government to take part in the preliminary discussions of the bill. The Government consulted only representatives of the trade-unions of Alsace-Lorraine. Opposition against the bill has been voiced in the daily press by various interests. Much of this opposition comes from the mutual insurance funds, which have a large membership and fear a State monopoly of insurance. The congress of these mutual funds (*caisses de mutualite*), which was in session in April, declared the bill unacceptable in its present form.[5] The congress stated that it did not oppose compulsory insurance, but that this principle should harmonize as much as possible with the principles of voluntary mutual aid of the mutual funds, and that these funds themselves should be assured greater freedom of action, as has been done by the English law. But even in these circles the opposition lacks the character of solidarity. At its congress in May the federation of mutual insurance funds of the northern departments passed a resolution[6] which approved the Government bill with only four reservations, which demanded that the further existence of the funds under their present form of administration should be guaranteed by the new law.

As has been said, the mutual insurance funds have a very large membership, and for this reason far-going concessions had to be made to them in the enactment of the old-age insurance law of 1910. It seems very likely that the present bill will also be amended in a manner to overcome the opposition of the mutual funds.

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[2] L'Information Sociale, No. 24. Paris, Mar. 27, 1921.
[3] L'Union des Metaux, No. 88. Paris, May, 1921.
[4] L'Atelier, No. 61. Paris, Apr. 7, 1921.
[5] L'Information Sociale, No. 45. Paris, June 12, 1921.
[6] Idem, June 21, 1921.

British Unemployment Insurance Act.

THE steps taken by the Government of Great Britain to provide for unemployment insurance have received attention in earlier issues of the MONTHLY LABOR REVIEW. The legislation is of recent enactment, receiving royal assent on August 9, 1920, to be operative November 8, 1920. An account of the provisions of the act is given in the LABOR REVIEW for September, 1920, pages 165–169. See also MONTHLY LABOR REVIEW for January, 1921, pages 185, 186.

Though the act had been under discussion for several months, it was, of course, impossible to forecast its exact results, and particularly in view of the unusual disorganization of industry resulting in abnormal unemployment. The result of the initial experience under the act and of the conditions under which it was required to operate was outlined in the course of a debate on unemployment in the House of Commons on the 16th of February, 1921, after the act had been in effect a little more than three months. At that time the minister of labor announced the purpose of the Government to amend the unemployment insurance act by advancing the weekly benefits for men from 15s. ($3.65 par) to 18s ($4.38 par), the amount for women being likewise advanced from 12s. ($2.92 par) to 15s. ($3.65 par). The amounts for boys and girls (16 to 18 years of age) would be correspondingly advanced, being one-half the rates prescribed for adults. The period of benefit payments was to be extended from 15 weeks in each insurance year to 26 weeks, while the joint contribution from employers and employees would also be advanced, the grant from the national treasurer being likewise enlarged. However, when Parliament took action the suggested amounts were increased, for men to 20s. ($4.87 par) and for women to 16s. ($3.89 par), while the amounts of contributions were also made larger than had been forecast by the minister of labor, the increase to date from July 4, 1921, while the benefits were effective from March 3. The period of benefit payments was made 16 weeks between March 3 and November 2, 1921, and a like term between November 3 and July 2, 1922. After July, 1922, the maximum will be 26 weeks in any insurance year. Other provisions relate to qualifications of different classes of applicants, etc., providing, however, that contributors may receive benefits if their contributions have not been exhausted, the ratio being 1 week's benefit for every 6 unexhausted contributions. Applicants who have paid at least 4 contributions may receive as much as 8 weeks' benefits during the year; while applicants who were employed in insurable work for at least 10 weeks since December 31, 1919, or at least 4 weeks since July 4, 1920, may draw 8 weeks' benefits up to March 31, 1921.

The act embodying these provisions is known as the unemployment insurance act, 1921, and came into effect March 3. On the 8th of June following, the minister of labor introduced a new bill, explaining that the act of March 3 had been based on the assumption that the rate of unemployment would not exceed an average of 9½ per cent for the period ending July, 1922. It had been estimated that on this basis the unemployment fund would have carried itself and been free of debt on the date named. However, inasmuch as the rate of unemployment among insured persons was 23 per cent, or 2½ times

greater than the estimate, it was apparent that the earlier calculations could not be depended upon. Payments were going out at the rate of £2,000,000 per week ($9,733,000 par), while the income from contributions was less than £350,000 ($1,703,275 par). The unemployment fund which amounted in March to £22,500,000 was in June £8,500,000, with a practical exhaustion in sight at the end of the month. To meet this situation the minister proposed a reduction of the benefits back to the rates originally provided for (15s. for men and 12s. for women, with half rates for boys and girls). The rates of contributions were also to be increased from 11d. (22.3 cents par) to 1s. and 3d. (30.4 cents par) for men and from 9d. (18.3 cents par) to 1s. 1d. (26.4 cents par) for women, these being the joint contributions of employers and employed. No benefits should be paid for the first 6 days, instead of 3 as formerly, while the borrowing powers of the fund were to be doubled. This gave a possible maximum of £20,000,000 ($97,330,000 par), and it was anticipated that up to July 22 the borrowing power would be exercised up to a maximum of £16,000,000 ($77,864,000 par). The forecast was made that with the restoration of normal conditions the fund would be clear of debt by July, 1923.

The bill as outlined above was enacted, receiving the royal assent on July 1, becoming unemployment insurance (No. 2) act, 1921. The changes indicated by the minister of labor were made, and in addition thereto the provision allowing 8 weeks' benefits to be paid the persons who had made at least 4 contributions was repealed. A new condition for the receipt of benefits was imposed, providing that no person in respect of whom less than 20 contributions have been paid since the beginning of the last preceding insurance year shall be entitled to receive benefits unless he proves that he is normally in insurable employment and is genuinely seeking whole time employment, but is unable to obtain it. The purpose of these amendments is twofold, one to provide for a moderate support for unemployed persons, and the other to secure its longer continuance for the individual than would have been possible without the amendments.

Polish Order in re Reporting of Strikes and Lockouts.

THE International Labor Office in its Legislative Series, 1921, Pol. 1, publishes the following order of the Polish Council of Ministers, dated February 8, 1921, with reference to the reporting of strikes and lockouts:

1. The authorities specified in section 2 of this order shall notify the central statistical office (*Głównemu Urzędowi Statystycznemu*) on the form issued by the said office for this purpose of all cases of collective stoppage of work proclaimed either by the workers (strike), or by the employers (lockout); the forms duly filled up shall be sent direct to the central statistical office not later than 20 days after the termination of the strike or lockout.

2. It shall be the duty of the following to notify strikes and lockouts:

(a) Inspectors of labor, or in parts of the country which were formerly Prussian, the industrial inspection officials, in the case of strikes and lockouts in private establishments and undertakings of all kinds (agricultural, industrial, commercial, transport, etc.), and also in the case of strikes in other establishments and undertakings if the inspector of labor has taken part in the settlement of the dispute in question, as arbitration judge, or as conciliator.

(b) Mining officials in the case of strikes in the mining industry.

(c) The competent officials of the Ministry of Public Works, in the case of strikes in the State shipping industry and State harbor works.

(d) The competent railway management, in the case of strikes on the State railways.

(e) The competent military authorities in the case of strikes in State military workplaces.

(f) The competent communal authority in the case of strikes in communal undertakings.

(g) The State authorities and officials not mentioned under (b), (c), (d), and (e), in the case of strikes in establishments or undertakings directly under their control.

3. All private establishments and undertakings which employ not less than five wage-earning employees shall forward the following notifications to the competent inspector of labor in respect of every case of a strike or lockout:

(a) A first notification immediately after the beginning of the strike or lockout, giving the date of the outbreak of the dispute, and the number of workers who have ceased work (men, women, and young persons).

(b) A second notification immediately after the end of the dispute, giving the date of resumption of work or the date on which the dispute is to be deemed to have ended.

If the workers have not ceased work simultaneously, or have not resumed it simultaneously after the end of the dispute, the dates of cessation or resumption of work by separate groups of workers shall be given in the second notification, together with the number of workers who have not yet returned to work at the given dates.

4. The occupiers or managers of the businesses, establishments, and undertakings referred to in section 3, paragraph 1 on the request of the inspector of labor or the industrial inspection authorities, shall give any information required concerning any strike or lockout in the establishments under their control, and in particular shall furnish copies of the written demands of the workers and of any agreements concluded in consequence of the dispute.

5. The occupiers or managers of the businesses, establishments, and undertakings referred to in section 3, paragraph 1, shall be liable to a fine not exceeding the amount specified in section 5 of the act of October 21, 1919, respecting the compilation of administrative statistics, if they fail to comply with the provisions of sections 3 and 4 of this order or knowingly make false statements. The fine shall be imposed by the Starosta. An appeal may be made against the decision of the Starosta in accordance with the provisions in force; in particular, in parts of the country which were formerly Prussian, the provisions of the Prussian act of April 23, 1883, respecting the issue of police penal verdicts in case of prosecutions for misdemeanor, shall apply, with the exception of the provisions of section 1, paragraph 3, of that act.

6. The director of the central statistical office shall be responsible for the execution of this order.

7. This order shall apply to the whole territory of the Polish Republic, and shall come into operation on the date of its promulgation.

STRIKES AND LOCKOUTS.

British Cotton Textile Strike.[1]

THE strike in the British cotton textile industry which had been in progress since June 6, 1921, came to an end on the 24th of that month. For several weeks previous to the actual stoppage of work a wages committee composed of eight representatives each of the employers and the operatives had been negotiating a readjustment of the wage rates agreed upon a year previous. It was generally understood that wages must fall, but the amount of the reduction was naturally the crux of the matter.

The employers' associations originally proposed a cut of 95 per cent on the standard piece lists of wages (equivalent to 30 per cent on the prevailing actual rates). This proposal the operatives refused to consider, stating that they could not recommend their members to accept a reduction greater than 25 per cent on standard list rates. In the conferences which followed each side played for position, the employers gradually reducing their original offer, and the operatives as gradually increasing theirs. On June 3, however, negotiations broke down. The employers proposed a reduction of 80 per cent on list rates, while the operatives were willing to accept only 50 per cent on the same basis.

At the invitation of the minister of labor negotiations were again resumed and on June 15 a provisional settlement was reached which was accepted by the operatives June 24. According to the final terms a 70 per cent reduction on standard list rates—equal to 4s. 5d. ($1.07) on the pound ($4.87)—was agreed to. Of this reduction 60 per cent was to come into operation at once, and the remaining 10 per cent at the end of six months. In the case of employees who had had only 55 per cent advance in wages in May, 1920, proportionate reductions totaling 55 per cent were to be made. The agreement may be altered at the end of six months on a three months' notice from either side.

As a consequence of the strike practically all the cotton mills were closed, 60,000,000 spindles and 800,000 power looms being idle. Through the excessive unemployment which has existed in the cotton trade for some time and the strike 500,000 operatives were affected. The owners' position was more favorable, since the closing down of the industry gave them opportunity to dispose of surplus stocks and tided them over difficulties arising from the prolonged coal strike.

[1] Labor Gazette (London), June and July, 1921. Recent issues of the Manchester Guardian.

WHAT STATE LABOR BUREAUS ARE DOING.

Connecticut.

THE twenty-ninth report of the Bureau of Labor Statistics of Connecticut for the two years ending November 30, 1920, includes sections on building operations of manufacturers, erection of tenements, public and private employment offices, and strikes and lockouts. A directory of labor organizations takes up 20 pages of this document.

Although the actual number of manufacturers' building operations during the two years covered by the report was 531 or 199 less than in the previous two years, the value of the building was $23,645,847, or $9,804,045 greater in the later period. There were 583 tenement houses built, of which 211 were brick and 372 frame. The number of tenements was 3,549, an increase of 2,147 over the preceding two years.

Operation of Free Employment Offices.

The following figures summarize the results of the operation of the free employment offices in Hartford, New Haven, Bridgeport, Waterbury, and Norwich for the year ending June 30, 1920.

	Male.	Female.	Total.
Applications for employment	37,868	22,027	59,895
Applications for help	35,269	24,544	59,813
Situations secured	27,673	19,759	47,432

Of the male applicants for employment 73 per cent were supplied with situations, against 66.4 per cent during the preceding 12 months.

Of the female applicants for employment 89.7 per cent were supplied with situations, against 80.9 per cent during the preceding 12 months.

Of all applicants for employment 79.1 per cent were supplied with situations, against 72.4 per cent during the preceding 12 months.

Of the total number applying 79.3 per cent were furnished with help, against 83.9 per cent during the preceding 12 months.

Strikes and Lockouts.

The section of the report relating to strikes covers 19 months ending June 30, 1920. Data are given in detail and are summarized as follows:

Notwithstanding the high wages paid and the constant demand for workers, there were 280 strikes during the period covered by this report. These strikes affected 75,943 employees with an approximate loss of 4,155 days to employers and approximately 1,307,508 days to the employees. In 19 instances the demands of the employees were granted in full, in 81 cases the result was a compromise, and the remaining 180 cases were unsuccessful.

Georgia.

THE ninth annual report of the commissioner of commerce and labor for the fiscal year ending December 31, 1920, discusses

the State's climate, manufactures, mineral resources, school of technology, railroads, and population, and lists the commercial organizations and industrial plants of Georgia. The document also contains a list of the various State labor bureaus of the country. The letter transmitting the report states that—

> The first part of 1920 was a profitable one to both employers and employees. For the first half of the year the wages paid were much better than at any previous time in the history of the State. All of the industrial plants ran on full time. There was a constant demand for employees. During the latter part of the year conditions were reversed, manufacturing plants either shut down altogether or ran part time only. In a very few instances were employees given full time work. There soon became an abundance of labor and in many instances it was exceedingly difficult for employees to secure full paying positions.

Legislation passed in 1920 made the commissioner of commerce and labor a member of the Georgia Securities Commission and the chairman of the industrial commission, administering the Georgia workmen's compensation act, which went into effect in March, 1921.

The work of the free State employment offices is reported as "rather negligible" for the year 1920 because of the lack of funds, the combined placements for the year in Atlanta, Augusta, and Macon being only 2,873, while the 15 private employment offices of the State placed 3,374.

The private employment agencies charge fees from $3 to 20 per cent of the first month's salary, exclusive of fee for registration, which ranges from $2 to $5. The registration fee must be paid whether or not a position is obtained.

Georgia's great industrial development is declared to have been due to a considerable extent to the State School of Technology. A recent campaign has been launched to raise $5,000,000 for a research department for this institution. In the scholastic year 1919–20 there was an enrollment of 2,209 students. The textile department is of special interest, as it is "equipped for performing every process and operation from cotton ginning to the finished fabric."

Industrial Statistics.

The report includes various tables giving statistics for the industries of the State, including in many instances capital, cost of raw material, value of manufactured product, number of employees, and amount of wages. Textile mills, cotton-oil mills, fertilizer factories and mixing plants, foundry, machine, and general repair shops, marble and granite quarries, marble yards, and electric power and light plants are among the leading industrial undertakings covered in the report. The following figures summarize some of the important data published relative to the textile mills in Georgia for the year ending December 31, 1920:

Number of mills	184
Total capital	$102,778,238.15
Total cost of raw material	$134,589,558.20
Total value of manufactured product	$238,519,782.27
Total amount paid in salaries to officers and clerks	$3,775,526.48
Total amount paid to wage earners	$32,651,267.06
Total amount paid for repairs to machinery	$5,186,186.41
Total number of white operatives	39,559
Total number of Negro operatives	3,209

Of the 39,559 white operatives in the textile mills, 37,988 were over 16 years of age, and of these 22,548 were males and 15,440 females. Of the 3,209 Negro employees, 2,279 were males and only 930 females.

Weekly ranges of wages are shown for various occupations in the textile mills. Similar data are also given for fertilizer factories, brick and tile plants, foundry and machine shops, marble and granite quarries, carriage factories, and other manufactories and public utilities. No details of wages paid are given, and no averages can be computed.

Illinois.

Employment Offices.

THE section on the work of public employment offices takes up more than one-third of the report of the Department of Labor of Illinois for the year ending June 30, 1920. The following table shows the placement work done by the 11 State offices from February to June, 1920. Prior to February the reports were not comparable:

WORK OF THE 11 STATE EMPLOYMENT OFFICES OF ILLINOIS FOR THE FIRST FIVE MONTHS OF 1920.

	February.			March.			April.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Registrations	14,519	3,999	18,518	20,970	5,341	26,311	18,193	4,532	22,725
Help wanted	19,385	5,975	25,360	26,389	7,146	33,535	22,343	6,077	28,420
Referred	13,861	4,060	17,921	19,446	5,418	24,864	16,525	4,519	21,044
Placed	11,243	3,409	14,652	16,180	4,630	20,810	13,874	3,891	17,765
Number registered per 100 help wanted	65	68	73	80	75	78	72	75	80
Number placed per 100 registered	101	85	79	78	87	79	76	86	78
Number placed per 100 help wanted	57	57	58	61	65	62	76	86	63
Number placed per 100 referred	81	84	82	83	85	84	87	86	84

	May.			June.		
	Male.	Female.	Total.	Male.	Female.	Total.
Registrations	18,830	4,688	23,518	24,704	5,535	30,239
Help wanted	22,811	6,340	29,151	26,963	6,618	33,581
Referred	17,835	4,716	22,551	23,278	5,765	29,043
Placed	15,873	3,970	19,843	20,730	4,371	25,101
Number registered per 100 help wanted	83	74	81	91	79	89
Number placed per 100 registered	84	85	84	84	81	83
Number placed per 100 help wanted	70	63	65	77	63	74
Number placed per 100 referred	89	84	88	89	82	87

The chief inspector of private employment offices reports that his division "has passed through its third year without having to cause any arrests or occupy the time of the courts with its business."

The law enacted for the purpose of regulating private employment agencies has brought a wonderful change in the conduct of these concerns. Previous to the act

the office of the chief inspector each morning would find 50 to 100 complaints. The inspectors were kept busy serving warrants and the time of the courts was taken up in hearing cases pertaining to labor charges against the agencies. * * *

A few amendments might be made to the law, one of which would be to define when a person applying for employment to private employment agencies is liable to pay the fee. Without a law we hold that the applicant is liable only when he physically takes hold of the position. This is one of the questions that gives us a great deal of trouble.

Another cause for complaint is the taking of judgment notes from the applicants by agencies previous to acceptance of positions.

With these two questions settled we would have no difficulty in managing the affairs of the private employment agencies and applicants for positions under the present law.

Another question that might be given consideration is the subject of public information pertaining to the business of private employment agencies for the instruction of those interested in labor problems and legislation, namely:

A law compelling the agencies to furnish the State Department of Labor with a monthly report of the number of all applicants applying for positions, their ages, etc., and also the number of all persons brought into the State and sent out of the State and where sent, the kind of employment for which they were engaged, etc.

Factory Inspection.

The following table shows the number of establishments visited and the number of inspections made under the direction of the division of factory inspection:

SUMMARY OF INSPECTIONS, JULY 1, 1919, TO JUNE 30, 1920.

Laws enforced.	Number of establishments visited.	Number of inspections.
Under the provisions of the—		
Child labor law, Cook County	45,237	51,010
Child labor law, outside Cook County	23,020	23,020
Entire State	68,257	74,030
Women's 10-hour law, Cook County	17,134	20,053
Women's 10-hour law, outside Cook County	10,444	10,444
Entire State	27,578	30,497
Structural-iron law, entire State	200	271
Blower law, entire State	495	1,088
Washroom law, entire State	299	299
Health, safety and comfort law, Cook County	5,053	5,053
Health, safety and comfort law, outside Cook County	2,284	2,284
Entire State	7,337	7,337
Total for entire State	104,166	113,522

The number of violations found under the child labor law for the period covered by the report is 3,538.

A digest of the section of the report relating to workmen's compensation is given on pages 177 and 178 of this issue of the MONTHLY LABOR REVIEW.

Labor Disputes.

The State mediators were exceedingly busy during the year closing June 30, 1920, having handled 125 controversies. Many of these disputes were settled so quietly that the public knew nothing of them. Upon learning of a threatened trouble the mediators take up the

matter immediately without waiting for an invitation from the parties to the controversy.

The number of actual strikes handled was 75. In 48 of these the strikes were settled after a very short duration, others after a longer duration, and some were never settled. During the steel strike and other strikes the mediators kept in close touch with the situation, were frequently on the ground, and assisted in preventing trouble.

Massachusetts.

THE first annual report of the Massachusetts Department of Labor and Industries, for the year ending November 30, 1920, includes the reports of the commissioner, the director of industrial safety, the board of conciliation and arbitration, the minimum wage commission, the director of standards, and the director of statistics.

The commissioners held 32 regular meetings during the year in addition to conducting the hearings on several matters, among them the granting of seasonal exemption to the tobacco industry and to the fresh fish canning industry, which resulted in the petition being granted in the former and denied in the latter industry.

Five of the inspectors of the division of industrial safety, through the courtesy of the Harvard Medical School, attended the lecture course on industrial toxicology given by Harvard University and the Massachusetts Institute of Technology, October 28 to November 30, 1920.

The division of industrial safety made a special investigation of health hazards in the tobacco industry, covering 56 establishments employing more than 2,000 men and women, and in the granite industry in Quincy and of working conditions in laundries.

It is stated that the weekly payment of wages law "has proved to be a helpful instrument in securing wages for many workmen without an outlay of expense on their part."

There has been a great increase in the arbitration work of the department, due in part to the fact that "both employer and employee more and more recognize that arbitration offers a just and equitable method of adjusting differences."

The report contains a section relating to the work of the Massachusetts Minimum Wage Commission during 1920. [1]

A study of working conditions in mattress factories with especial reference to the health of employees has recently been made by the department. Insanitary conditions were found in many establishments. No case of industrial disease arising from the work has been discovered.

Because of frequent complaints regarding violation of the 8-hour law, the citizens' preference act, and customary prevailing rate of wages law in connection with the construction of State highways, the department is making a special study of the problem. This work will be done chiefly by the building inspectors.

Although the placements made by the public employment offices show a steady increase from month to month, the number is still much below that for the corresponding period last year. On the other hand, the number of persons applying for work is greater than

[1] Reviewed in the MONTHLY LABOR REVIEW for March, 1921, pp. 111 to 115.

at any time since the offices were established. For the first six months of the present year there have been 285,853 applications, as compared with 125,791 for the corresponding months in 1920. The number of placements, however, during the first six months in 1921 was only 14,367, or 5,911 less than the number (20,278) placed during the first six months in 1920. This decrease is due to the reduction in the number of persons called for by employers.

A handbook of the labor laws enforced by the department is now in press. This will include the principal laws relating to labor with the exception of the workmen's compensation law.

Bulletins giving the laws relating to the employment of women and children and the certification of working children are also in press.

Montana.

IN HIS letter transmitting to the governor the fourth biennial report of the Montana Department of Labor and Industry, 1919–1920, the commissioner recommends that the authority conferred upon the industrial accident board and the department of labor and industry "should be combined and enlarged under the scope of the labor department, the labor commissioner being made responsible for the inspection of safety and sanitary conditions as well as the enforcement of all labor laws."

The sixteenth assembly enacted a semimonthly pay day law the penalty to which the commissioner declares is so small as to have little effect on those disposed to evade the provisions of the act. Moreover, the present method of procedure is through civil action involving the expense of delayed litigation. "A law making the penalty a misdemeanor with an adequate fine for failure to pay help is recommended."

The commissioner also states that—

> Private employment offices conducted for profit are still a serious menace to the working people of the State. Frauds perpetrated by dishonest employment offices show no decrease during the past two years. Regardless of the fact that other States have enacted laws designed to regulate the business of private employment agencies for the benefit and protection of the laboring people, Montana legislatures have repeatedly and consistently refused to afford through legislative enactment protection from private profit-seeking employment agencies, although persistently urged to do so by this department for the past eight years. This department believes the best method to correct abuses of this character is to abolish all fee employment offices conducted for profit, although the passage of an act giving the State labor department general supervision over private employment offices, with authority to prescribe rules and regulations for the conduct of the business along equitable lines would be a step in the right direction and would eliminate a great deal of the swindling and abuses which occur under the system now in vogue.

Labor Disturbances.

The report gives a brief history of every important strike in Montana in 1919 and 1920, which was a period of severe labor disturbances in the State. Many of these controversies were attended with a great deal of excitement and in two cases, the strike of the Butte copper miners in February, 1919, and the strike of coal miners in various districts of the State in the latter part of 1919, Federal troops were called out.

The Domestic Labor Problem.

The attitude of the department of labor and industry on the matter of domestic help is shown by the following excerpt from this latest biennial report:

> The household worker is on duty practically all the time, and even in this democratic country the social status of a domestic is far different from that of the typewriter or the store clerk. It should not be, but it is, and it will continue to be until domestic service is placed in the important place where it belongs. Domestic assistants must be paid by the hour with specified hours of labor. Housekeepers who need longer hours of service must either hire more help or do part of the work themselves; there is no other way. Neither should the "servant in the house" be contented with a narrow, ill-ventilated room in the attic, but she should, if worthy and of good character, receive the same consideration, socially, as the stenographer, store clerk, or the school-teacher serving us in a professional way.
>
> During the past year ordinary domestic servants have been demanding in Montana as high as $40 and even $50 and $60 per month. That many of these girls hired for domestic duties are careless, indolent, and incompetent is doubtless a fact. With the work considered degrading and the stamp of inferiority placed upon the word servant, this is but a natural consequence. It is not to be wondered at that the more intelligent and ambitious girls are driven into other pursuits. This leaves the demand so great that the few who condescend to perform the work have a perfect monopoly on this branch of the labor market, and can therefore afford to be independent.

Other Subjects.

The report includes tables showing number of males, skilled and unskilled, and number of females, together with average daily wages for these classes of employees, in various industries of the State. It is not clear from the tables themselves whether the average daily wages are for the period covered by the report, but in the absence of such statement in the headings it may be assumed that these averages are for 1919 and 1920. Other tables also give retail prices of groceries, with percentages of increase or decrease, at various dates from 1910 to 1920, and wholesale prices of groceries and retail prices of meats, with percentages of increase or decrease, for 1914, 1916, 1918, and 1920.

New York.[1]

Industrial Disputes in the First Quarter of 1921.

THE acting chief mediator of the New York State Bureau of Mediation and Arbitration reports that in the first quarter of 1921 the time loss to workers on account of strikes or lockouts in the State amounted to 272,112 days. Most of the 110,300 days' loss in transportation controversies was due to the Albany and Troy street car strike. Of the 26 strikes and lockouts reported, 6 were insignificant and 5 were found to be threatened. The causes or objects of these industrial disputes were as follows:

	Number of disputes.
Increase in wages	1
Reduction in wages	15
Shorter hours	1
Trade-unionism	5
Particular person	3
Working arrangements	1

[1] The Bulletin. Issued by the New York State Industrial Commisssioner, Albany, May and June, 1921, pp. 145, 146.

Four of the strikes were successful; 5 partially successful; 12 lost, and 5 pending. Of the strikes won or compromised, 3 were settled by direct negotiations of the parties and 6 by mediation of the State bureau.

The number of employees directly involved in these controversies was 36,677; the number indirectly involved, 77.

New Regulations for Women Working in Canneries.

A formal hearing was recently held at Albany by the New York State Industrial Board on the following permanent rule submitted by the State industrial commission:

RULE 1. Pursuant to section 173 of the labor law and upon application to be made by the employer to the industrial commissioner, women eighteen years of age and upward may be employed or permitted to work in canning or preserving perishable products in fruit and canning establishments between the 25th day of June and the 5th day of August, in any year, in excess of 10 hours in any one day and 60 hours in any one week, but not in excess of 12 hours in any one day nor 66 hours in any one week, nor 6 days in any one week, upon compliance with the following regulations:

A woman may be so employed:

1. At any process or part of the work, which does not require continuous standing while at work, except that she shall not be so employed in the process of labeling or packing cans;

2. Provided that every floor on which such woman is employed be drained free of liquids; but whenever any such floor can not be kept entirely free from liquids, slate platforms shall also be furnished upon which such woman may rest her feet while at work;

3. Permits granting exemption under these rules and regulations shall be revocable by the industrial commissioner for violation of any of the above regulations.

The board has approved the rule.

Oklahoma.

Attack on the Eight-Hour Law.[1]

CONTRACTORS in Oklahoma have attacked one section of the eight-hour law of the State, providing that "no less than the current rate of per diem wages in the locality where the work is performed shall be paid to laborers, workmen, mechanics, etc., doing public work." A demurrer of the defendant contractors has been sustained by the county court at Pawhuska in Osage County, "on the ground that the current rate of wages provision of the law related only to time worked in excess of 8 hours, the judge holding that the law was passed for the purpose of regulating hours and not the price of labor in the State." The courts of Oklahoma have never passed upon this section of the labor law.

The above-mentioned case is being prepared for presentation to the criminal court of appeals for determination.

Industrial Safety.

The following report from the Bureau of Factory Inspection of the Oklahoma Department of Labor was received July 16, 1921, at the United States Bureau of Labor Statistics:

Of 83 industrial and manufacturing establishments reporting to the Department of Labor on the amount of money expended for the installation of safety appliances

[1] Information given in letter from the Oklahoma commissioner of labor, dated July 13, 1921.

around dangerous machinery and with reference to the attitude of the superintendents and foremen of such plants toward the use of mechanical safety appliances in these establishments, 82 of the 83 reports received were favorable and one was opposed. Sixty-two plants report an expenditure of $71,003.28 for the installation of safety appliances for the years 1919–20. The reports also show that when properly constructed and applied the mechanical guards do not hinder the operation of machinery. This is due to the fact that the method used in the construction of safety appliances has developed within the last few years to almost an exact science. Aside from the humane features incident to the accident prevention movement, the employer can, by carrying out the recommendation of the factory inspector and equipping the machinery in his plant with guards of approved type and construction, reduce his liability insurance rates very materially. Thus the expenditure of money for properly guarding his machinery, which at first may seem burdensome, becomes a permanent investment because safety appliances when once installed are considered as being a part of the machinery in the plant.

A number of those reporting indicate that the State should make more frequent investigation into safety conditions in industrial establishments as that would encourage the employees and foremen in keeping guards in proper repair and in position around machinery. The Oklahoma law forbids the removal or making ineffective any guard that is placed around machinery for the protection of workmen.

There are a large number of industrial injuries caused by defective or unguarded machinery, many of which result in death, which are easily preventable with safety appliances. During the year 1920 three factory inspectors issued 12,555 safety orders which caused employers to expend many thousands of dollars as indicated above. The proper enforcement of compliance with these orders should not be left to haphazard methods. The department receives a great many calls from employers for information as to the proper method for safeguarding machinery and these requests receive the immediate attention of the department in so far as the present force of inspectors will allow.

Oklahoma is lagging by comparison with other States in the matter of making a study of the problem of the prevention of occupational diseases in industry. This is due, however, to no dereliction on the part of the department of labor or its employees. It is due to the fact that the legislature has failed to provide sufficient funds to conduct the necessary investigations and formulate standards having for this purpose the elimination of the causes of occupational disease. Among the most important industries in Oklahoma which produce occupational diseases may be mentioned the following: Cottonseed oil mills, cement plants, grain elevators, glass manufacturing plants, printing establishments, stone and marble cutting, coal mining, lead and zinc mining and smelters.

Rhode Island.

THE 1916, 1917, 1918, and 1919 reports of the commissioner of labor of Rhode Island are published in one volume, in the introduction to which it is explained that the printing of the 1916 report was deferred because of certain corrections to be made. It was intended for economic reasons to combine it with the 1917 report. Preparation, however, for the State's work in the war, and later on the closing up of war work, interfered greatly with the regular activities of the commissioner's office and account for the final combination of the reports in a single publication.

The coal report and the food report of the Rhode Island Cost of Living Commission, January, 1917, are included in the volume.

According to the findings of the Rhode Island Bureau of Labor, retail prices for 55 of 56 articles of food in 125 stores of the State showed an average increase of 86 per cent for the years 1915–1919, while for the period under consideration the average rate of increase in minimum wages was 114.5 per cent and in maximum wages 96 per cent.

The hours of labor for the wage earners in the 317 occupations considered vary from 39 to 70, although the number working 48 hours per week predominates, with 118 listed in this class. The occupations in the 54-hour per week class number 94, the 44-hour week 48, the 50-hour week 51, the 56-hour week 31, and the 60-hour week 16.

There were 86 strikes in 1916, 54 in 1917, 37 in 1918, and 38 in 1919, a total of 215 for the four years. The commissioner of labor urges the enactment of a law making compulsory the reporting of all strikes and lockouts to the State labor commission by employers in whose establishments such strikes and lockouts occur. These reports should be made on special blanks prepared for this purpose and should give, among other items, the cause, duration, and result of the strikes or lockout, including loss in wages and production.

There were 3,652 placements made by the State free employment office in 1916, as compared with 3,231 in 1917 and 3,133 in 1918. In 1919 the State and Federal service combined and the placements reached 16,823, of which 4,851 were placements of discharged soldiers and sailors. The number of what may be called normal placements for 1919 was 11,972, "an increase of 9,206 over the average for the past 11 years." This unusual increase is a strong argument for the continuation of the employment service in those industrial centers where it was established and "run most successfully in 1918 and 1919 only to be closed in December, 1919, for lack of funds."

It is true that these offices were established primarily to assist in the placement of returning soldiers and sailors, but the educational campaign which was conducted for the purpose of proving to employers that free employment offices could be made of great assistance in the solution of employment questions, proved so efficient that the five offices in the State became real labor exchanges, regardless of the question of returning service men.

The following figures show the growth of trade-union membership in the State from 1916 to 1919, inclusive:

	Membership.
1916	24,273
1917	24,749
1918	26,996
1919	38,026

It will be noted that the increase in membership in 1919 over 1918 is 40.8 per cent.

Nearly 14 per cent of the 275,000 wage earners of Rhode Island are affiliated with labor unions.

The section of the report of the commissioner of labor dealing with workmen's compensation is summarized on pages 179 and 180 of this issue of the MONTHLY LABOR REVIEW.

Factory Inspection Report.

Among the data given in the 27th annual report of factory inspection of Rhode Island for the year ending December 31, 1920, are the following:

	1920.	Increase or decrease in 1920 compared with 1919.
Total number of establishments inspected	7,425	+ 267
Bakeshops, stores, etc., employing less than 5 persons	4,510	+ 181
Establishments employing 5 or more persons	2,915	+ 86
Total number of persons employed in various establishments	196,205	+4,475
Adults	188,962	+4,827
Males of 16 years and over	124,525	+4,421
Females of 16 years and over	64,437	+ 406
Children	7,243	− 352
Males under 16 years of age	3,630	− 17
Females under 16 years of age	3,613	− 335

The percentage of child labor was 3.69 in 1920 compared with 3.96 in 1919.

There have been 27 prosecutions for violation of the law before the district courts of the State during the past year, 26 for employing children under 16 years of age without having on file in the office of the employer the age and employment certificate required by law and 1 for employing a child under 16 years of age after 8 o'clock p. m. All were sustained and resulted in fines amounting to $450.

The number of accidents, caused by machinery, reported by various establishments in the State was 823, of which 7 resulted fatally. The chief factory inspector again makes recommendation that "immediate attention be given to the question of providing adequate means of egress from factories and workshops in case of fire."

A tabular statement giving a list of various establishments in the State, their location, nature of business and goods manufactured or sold, the number employed—men, women, and boys and girls under 16—together with the sanitary condition of each establishment, takes up 69 of the 83 pages of the report on factory inspection.

West Virginia.

THE fifteenth biennial report of the Bureau of Labor of West Virginia, 1919–1920, discusses factory inspection and factory legislation for the period covered, classifies the industries of the State, and gives their financial statistics. The document also gives the number of children's work permits and age certificates, a list of the factories and workshops, their location, the goods manufactured, and the number of employees.

The work of the four factory inspectors is reported as follows:

Number of plants visited	1,065
Revisits	750
Number of plants in which orders were issued	603
Number of orders issued	1,185

There were 75,563 employees in these plants, of whom 66,396 were males and 9,167 females. The four industries employing the greatest number were:

	Number employed.	Yearly wages paid.
Metal working	19,131	$23,025,467
Glass and glassware	13,638	8,535,942
Lumber and woodworking plants	8,729	5,185,309
Railway repair shops	6,615	(not given.)

From May 11, 1919, to November 30, 1920, the following permits and age certificates were filed in the Bureau of Labor:

Work permits	2,512
Special work permits	995
Vacation work permits	2,366
Age certificates	3,842
Total	9,715

The commissioner emphasizes the need of a woman's work law and a mothers' pension law.

Wide distribution has been given by the Bureau of Labor to a compilation of the West Virginia labor laws and to a recently published industrial directory.

CURRENT NOTES OF INTEREST TO LABOR.

Training Employees in the Paper Industry.

THE Industrial-Arts Magazine of August, 1921, announces that employees are to be trained for promotion in the paper industry in the United States and Canada.

The work is already under way in the Fox River Valley as a part of the paper mill welfare work done by the Wisconsin paper manufacturers. The American Paper and Pulp Association has spent three years in preparing for this kind of work which is to be introduced in all paper mills. The sum of $30,000 has been expended for the preparation of textbooks; and of a series of five projected books, two are now ready for use. The three additional volumes will be completed before the students now enrolled in the course have completed the first two of the group.

At a recent convention of the American Paper and Pulp Association a survey of the industry was submitted, including plans for possible promotions. It was suggested in the report of the survey that certain information be given workers to indicate the lines of advancement and the kind of preparation required to make such advancement more rapid. The survey showed that although there are a large number of occupations which are considered to require little skill, there are opportunities for the promotion of the better workers to more responsible jobs.

Foreign-Language Information Service.[1]

THE Foreign-Language Information Service was organized in March, 1918, as a division of the committee on public information to get the war message and purpose of America to the millions of foreign-tongued people in the United States and to point out what they were expected to do regarding the draft, registration, liberty loans, and the supply of ammunition and ships. It was recognized, after the armistice, by Government officials and those earnestly working for the constructive assimilation of the immigrant peoples that the contacts established by such service in wartime should be kept up during the trying reconstruction period. Moreover, the foreign born themselves vigorously protested the discontinuance of the service. As a result of the strong demand for the service the Carnegie Corporation, the Community Service (Inc.), and the American Red Cross have in turn supported the foreign-language information organization, which, however, is now an independent service. The report on its work states that:

There are 3,000,000 people in the United States who can not speak, read, or write English. There are 3,000,000 more who are best reached in the medium of their own tongue. They will learn English and become citizens only if their individual experiences square with our ideal of American fair play. * * * At the same time the native born must be fully informed concerning the 14,000,000 aliens of America, so that they may function together understandingly.

[1] The work of the Foreign-Language Information Service: A summary and survey. New York, Foreign-Language Information Service, 15 West Thirty-seventh Street [1921]. 78 pp.

The Foreign-Language Information Service, which declares itself as "strictly and literally nonpartisan," informs the alien in his own language about the Government and the laws of this country. It explains what the Government expects of him and what it offers him. It clears up his misconceptions and adjusts his difficulties.

It also keeps in close and constant touch with the large body of the American press through bulletins, clip sheets, special stories and articles, in the effort to break down the wall of misunderstanding between the native and the foreign born.

The Foreign-Language Information Service works through 795 papers of the foreign-language press and 35,000 foreign-language organizations, and adjusts more than 2,000 personal cases a month. It has sent out 95,000 pamphlets in Russian, Ukrainian, Hungarian, and Polish, and has stimulated lecture service in several languages. On the other hand it furnishes 30,000 words of foreign-language editorial matter to 100 American papers monthly; sends 5,000 words of general news concerning the alien to 400 papers, and makes accessible authentic data concerning our foreign born to about 9,000 other American periodicals.

Stimulating Employees to Make Suggestions.

THE June 15, 1921, issue of the Bulletin of the Youngstown Sheet & Tube Co. states that the company's suggestion committee is "still active," and reminds readers that prizes are offered monthly for worth-while suggestions. The following list indicates the lines along which the company would like to encourage thinking:

1. Regarding new fields for the use of the company's products or fields not sufficiently covered at present.
2. Regarding improvements on present products.
3. Regarding stimulating interest of employees in their work.
4. Regarding economics of every description (especially office supplies).
5. Regarding prevention of waste of all kinds.
6. Regarding the simplification of office systems, stock keeping, records, etc.
7. Regarding safety, fire hazards, and kindred subjects.
8. Regarding the elimination of complaints.
9. Regarding anything expediting the company's business.
10. Suggestions for safety cartoons.

Institute on Immigrant Problems.[1]

AS AN outcome of a revived and augmented realization of the importance of immigration problems the New York University, in cooperation with the New York State Department of Education, conducted from July 5 to August 13, inclusive, an institute for the study of such problems and for the training of workers in immigration fields. The following were the subjects of the courses:

Social forces and principles.
Immigration and immigrant backgrounds.
Principles and institutions of American Government.
Governmental systems and current political theories and movements of Europe and America.
Methods of teaching English.
Organization and direction of immigrant work.

In addition to the courses, special conferences were held on the most important aspects of immigration, which were led by experts in their respective lines. First-hand studies were made of immigrant neighborhoods, agencies, and activities.

[1] Prospectus issued by New York University. [New York, 1921.]

Apprenticeship in Canada.

APPRENTICESHIP in Canada is the title of an especially pertinent and illuminating survey of the prevailing practice in regard to apprenticeship in Canada, published in the July issue of the Canadian Labor Gazette (pp. 892–899). The apprenticeship question, the article quotes from the president of the Montreal Metal Trades Council, "has hitherto been approached only from the standpoint of immediate economic results to the workers or employers, the former desiring a 'square deal' for apprentices only in so far that their own wages and conditions are not lowered thereby, and the latter tending to regard apprentices merely as cheap workers and as a source of new labor supply." Under most industrial agreements, the article further states, "The welfare of the apprentice, instead of being the main consideration of both sides, is subject to compromises between contracting parties whose chief concern lies in their own more immediate interests. In limiting the age of admission to a trade to 16 years, for instance, no provision is made under many agreements for boys between 14 and 16, who are thus allowed after leaving school to drift into 'blind alley' occupations, and are given little direction as to their future career during their most formative years."

But there is renewed interest in the training of young workers. The State has, in recent years, extended its educational work by providing facilities for technical training after the school age has been passed, and in several Provinces legislation has been enacted making similar provision. The labor organizations are evincing a desire to recover at least a partial control and responsibility for the welfare of young workers. This attitude is evident in the proposal for apprentice councils to be composed of representatives of employers and workers in a particular industry in each district, supported ultimately by a Dominion-wide council, similarly representative. Existing elements for such an apprentice council are perhaps already to be found in such organizations as the joint apprenticeship committee created under an agreement in the bookbinding trade at Toronto last year, and which makes recommendations as to training.

The most promising recent development, however, according to the Gazette, is the national apprenticeship system of the building industry, which was approved by the National Joint Conference Board at a meeting held last January in Montreal, and was also approved by the Association of Canadian Building and Construction Industries at its annual conference at Winnipeg in the same month.

"The highest actual development in regard to the training of apprentices in Canada which has up to the present time been attained within the limits of a single industry may perhaps be found in the engineering trades." In support of this statement, the apprenticeship system which has been developed in the shops of the Grand Trunk Railway is discussed in detail.

The article concludes with summaries of apprenticeship clauses contained in constitutions of international unions and in recent industrial agreements. Such summaries include apprenticeship arrangements in the following industries: Building; clothing; clay, glass, and stone; food, drink, and tobacco; metals, machinery, and conveyances; printing and publishing; pulp and paper; public utilities; and electric railways.

Group Insurance for Manitoba Civil Employees.

THE Canadian Labor Gazette of July, 1921, announces that the Government of Manitoba is to inaugurate group insurance for the benefit of its employees. Four Canadian companies have taken the contract for the insurance, which amounts to $1,750,000 distributed among 1,200 of the Province's civil servants. The annual cost to the Government will approximate $32,000. Any employee who has been in the service more than six months will benefit under the plan. The insurance is arranged according to a graduated scale dependent upon length of service, 10 years or more of employment calling for the maximum, $3,000.

School for Glove Apprentices at Grenoble, France.[1]

TO RELIEVE the shortage of apprentices in the glove industry, the Syndical Chamber of Glove Manufacturers of Grenoble, France, established in December, 1920, a professional school for apprentices.

French and arithmetic lessons are given in addition to the attractive courses in glove making. In order to encourage young men to become experts in glove manufacture, this first trade school of its kind in France offers free instruction, wages, and premiums.

Student apprentices are compensated in proportion to their acquired trade skill. "They receive three francs [58 cents, par] per day during the first four months of training; 4 francs [77 cents, par] per day for the ensuing four months; 5 francs [97 cents, par] per day during the final seven months of the course. In addition, a premium of 100 francs [$19.30, par] is given each apprentice upon graduation, together with an individual set of tools—valued at 80 francs [$15.44, par]. The period of study and manual training in the various departments of glove manufacture gradually increases from 12 hours to 18 hours per day."

While the support of this school is a considerable financial burden to the glove manufacturers of Grenoble, it is felt that the expenditure is warranted in view of the large number of apprentices who, it is expected, will take the courses.

Child Labor in Cotton and Woolen Mills in Peru.

ACCORDING to the August, 1921, Bulletin of the Pan American Union (p. 199), the Peruvian department of promotion has sent out instructions to the cotton and woolen mills concerning the employment of children, protective devices, and sanitation. The orders were issued following the report of the special investigation committee on the cotton and woolen mills of Lima, and are as follows:

> Mills shall immediately dismiss children who do not fulfill the requirements of law No. 2851, and shall employ only those who prove their physical fitness and exhibit labor certificates from the bureau of labor; day nurseries shall be installed within 45 days; and all women employees shall be provided with seats. Factories shall provide individual masks to protect the respiratory organs of those working in places where there are many particles of cotton, dust, or wool, if there is no mechanism to provide for disposing of these particles. Special employees shall be provided to care for the cleanliness of the building, and a sufficient supply of drinking water in hygienic containers shall be at hand.

[1] Report from vice consul at Lyon, France, dated June 28, 1921.

PUBLICATIONS RELATING TO LABOR.

Official—United States.

ARIZONA.—*State board for the control of vocational education. Suggestions and outlines for evening trade extension classes. Phoenix, March, 1921. 48 pp. Bulletin No. 8.*

CONNECTICUT.—*Bureau of Labor Statistics. Twenty-ninth report, for the two years ending November 30, 1920. Hartford, 1920.*

This report is summarized on page 203 of this issue of the REVIEW.

GEORGIA.—*Department of Commerce and Labor. Ninth annual report, 1920. Atlanta, 1921. 108 pp.*

This report is summarized on pages 203 to 205 of this issue of the REVIEW.

ILLINOIS.—*Department of Labor. Third annual report, July 1, 1919, to June 30, 1920. Springfield, 1921. 91 pp.*

This report is summarized on pages 205 to 207 of this issue of the REVIEW.

KANSAS.—*Department of Labor and Industry. Thirty-fifth annual report, 1920. Topeka, 1921. 67 pp.*

Data relative to industrial accidents in the State, as reported during 1920 by employers and published in this report appear on pages 178 and 179 of this issue of the REVIEW.

MASSACHUSETTS.—*Department of Labor and Industries. Annual report for the year ending November 30, 1920. Boston [1921]. 132 pp.*

Data from this report are given on pages 207 and 208 of this issue of the MONTHLY LABOR REVIEW.

MONTANA.—*Department of Labor and Industry. Fourth biennial report, 1919–1920. Helena [1920]. 83 pp.*

A summary of this report is given on pages 208 and 209 of this issue of the MONTHLY LABOR REVIEW.

NEW YORK.—*Industrial Commission. Proceedings of the Industrial Safety Congress of New York State, held at Syracuse, December 6–9, 1920. Albany [1921]. 239 pp.*

PENNSYLVANIA.—*Commission on Old Age Pensions. Report, February, 1921. Harrisburg, 1921. 6 pp.*

This is to supplement the comprehensive report made in 1919 and present the conclusions reached by the commission as to the most desirable form of old-age pensions.

RHODE ISLAND.—*Bureau of Labor. Report for the years 1916–1919. Providence, 1921. 287 pp.*

Summaries of sections of this report are given on pages 211 to 213 of this issue of the MONTHLY LABOR REVIEW.

—— *Office of Factory Inspectors. Twenty-seventh annual report of factory inspection, 1920. Providence, 1921. 83 pp.*

Data from this report appear on pages 212 and 213 of this issue of the REVIEW.

WEST VIRGINIA.—*Bureau of Labor. Fifteenth biennial report, 1919–1920. Charleston, 1920. 94 pp.*

A summary of this report is given on page 213 of this issue of the MONTHLY LABOR REVIEW.

UNITED STATES.—*Department of Labor. Bureau of Labor Statistics. Proceedings of the seventh annual meeting of the International Association of Industrial Accident Boards and Commissions, held at San Francisco, Calif., September 20-24, 1921. Washington, 1921. 447 pp. Workmen's insurance and compensation series. Bulletin No. 281.*

An account of this meeting was given in the MONTHLY LABOR REVIEW for November, 1920, pages 10 to 19.

—— —— *Women's Bureau. Preliminary report of a survey of wages, hours, and conditions of work of the women in industry in Georgia. Washington, 1921. 63 pp.*

Gives the results of a survey made at the request of prominent citizens of Atlanta, Ga., of the working conditions of women in that city, and of a further investigation which in 1921, at the request of various organizations, was made along similar lines in 15 other cities and towns of the State. Only a summary of the latter investigation is given, the detailed tables not yet having been published. The report deals with women employed in department and 5 and 10 cent stores, in the manufacture of textiles, knit goods, garments, cigars, food and miscellaneous products, and in laundries.

—— *Federal Board for Vocational Education. Bibliography on vocational guidance. A selected list of vocational guidance references for teachers. Washington, June, 1921. 35 pp. Bulletin No. 66. Trade and industrial series, No. 19.*

—— —— *Foremanship courses v. instructor-training courses. Washington, June, 1921. 15 pp. Bulletin No. 60. Trade and industrial series, No. 16.*

A discussion of the distinction between foremanship courses and instructor-training courses.

—— —— *Improving foremanship. Washington, June, 1921. 42 pp. Bulletin No. 61. Trade and industrial series, No. 17.*

Trade extension courses for foremen.

—— —— *Instructor training. Washington, June, 1921. 43 pp. Bulletin No. 62. Trade and industrial series, No. 18.*

Instructor training courses for trade teachers and for foremen having an instructional responsibility.

Official—Foreign Countries.

AUSTRALIA (NEW SOUTH WALES).—*Department of Mines. Annual report, 1920. Sydney, 1921. 130 pp.*

This report is briefly noted on page — of this issue of the MONTHLY LABOR REVIEW.

CANADA (MANITOBA).—*Mothers' Allowance Commission. Fourth annual report, 1919–20. Winnipeg, 1921. 20 pp.*

—— (QUEBEC).—*Bureau of Statistics. Statistical yearbook, 1920. 7th year. Quebec [1921]. ix, 552 pp.*

Part 6 of this report is devoted to organized labor. A tabular statement shows that in 1919 there were 428 trade-unions with a membership of 61,097, as compared with 366 unions and 48,570 members in 1918. The strike statistics for the years 1901 to 1919, inclusive, show 81 strikes, 39,153 strikers, and 859,943 working days lost in 1919. Other tables show the work of the employment bureaus, and fatal accidents by occupation or trade. There were 144 fatal accidents in 1919, the largest number (25) being in the steam railway service. Falls were responsible for the largest number of fatal accidents (28).

FINLAND.—*Socialministeriet och Socialstyrelsen. Yrkesinspektionen i Finland år 1919. Helsingfors, 1921. 75 pp. Illustrated. Årsberättelser. Serie B. III.*

Report of factory inspection in Finland for the year 1919.

GREAT BRITAIN.—*Board of Trade. Mines Department. Mines and quarries: General report, with statistics, for 1920. Part I.—Divisional statistics. London, 1921. 27 pp. 115.*

Statistics of accidents in mines and quarries of the United Kingdom are given on page 172 of this issue of the MONTHLY LABOR REVIEW.

—— *Home Office. Chief inspector of factories and workshops. Annual report, 1920. London, 1921. 173 pp. Cmd. 1403.*

Among the subjects treated in this report are: Safety; Dangerous trades; Use of electricity in factories (accidents); Health and sanitation; Welfare in factories and workshops; First aid and ambulance; Lighting in factories and workshops; Industrial diseases; Dust in printers' workrooms; and Employment (hours of work). A brief review of the chapter on industrial diseases appears on pages 173 and 174 of this issue of the MONTHLY LABOR REVIEW.

—— —— *Inspectors of explosives. Annual report, 1920. London, 1921. 29 pp. Cmd. 1324.*

During 1920 the total number of accidents reported was 438, causing 50 deaths and injuries to 455 persons. It is stated that 91 per cent of the accidents causing death or personal injury occurred in the use of explosives and under miscellaneous conditions not covered by the explosives act.

—— *Ministry of Health. Fifty-seventh annual report on alkali, etc., works, by the chief inspectors. Proceedings during the year 1920. London, 1921. 64 pp.*

This report includes an account of the accidents occurring in chemical works in Great Britain during the year 1920.

—— —— *Chief medical officer. Annual report, 1920, on the state of the public health. London, 1921. 180 pp. Cmd. 1397.*

Besides the usual report on health, sanitation, and vital statistics, there are chapters dealing with maternity and child welfare, and the insurance medical service.

—— *Registrar of Friendly Societies. Friendly societies, industrial and provident societies, building societies, trade-unions, workmen's compensation schemes, loan societies, scientific and literary societies, post office, trustee and railway savings banks. Reports . . . 1920. Part A, general report. London, 1921. v, 95 pp. Appendixes. 140.*

—— (SCOTLAND).—*Board of Health. Second annual report, 1920. Edinburgh, 1921. 437 pp. Cmd. 1319.*

In addition to strictly health data, the report discusses housing and town planning (see p. — of this issue of the REVIEW), national health insurance, the poor law, old-age pensions, and sundry matters concerning local government and prevention of distress. Tables given show that the poor, including in that term those who received help from public authorities, either directly or through the heads of their families, fell from 104,124 in 1914 to 81,714 in 1919, but that in 1920 there was an increase, the number rising to 87,868. The falling off during the war seems to have been due to the demand for workers, which insured employment even for those deemed physically unfit or inefficient. The growing extent of unemployment has naturally driven this class out of work, and the tendency is for pauperism to increase.

INTERNATIONAL LABOR OFFICE.—*Governing body. Législation ouvrière et prévoyance sociale en Suède. Bref résumé publié par ordre du Gouvernement Suédois à l'occasion de la VIII^e session du Conseil d'Administration du Bureau International du Travail à Stockholm en juillet 1921.* [*Stockholm, 1921.*] *146 pp.*

This report, prepared at the direction of the Swedish Government for the 8th meeting of the Governing Body of the International Labor Office contains a general account of the country, its resources, climate, industrial development and labor and employers' organizations. The main part of the book is given up to a discussion of social legislation and there is a chapter on the cooperative movement and one on social education and benevolent organizations. A list of the various bureaus and departments having to do with social affairs is included.

NETHERLANDS.—*Centraal Bureau voor de Statistiek. * * * Statistique des salaries et de la durée du travail des ouvriers dans les imprimeries typographiques et lithographiques assurés selon la loi sur les accidents du travail pendant le premier semestre de 1919. 's-Gravenhage, 1921. xiv, 9 pp. Bijdragen. Nieuwe volgreeks, No. 310.*

Survey of wages and hours in the printing industries in Netherlands during the first half of 1919.

NORWAY.—*Riksforsikringsanstalten. Ulykkesforsikringen for industriarbeidere m. v. 1918. Christiania, 1921. 22*, 99 pp. Norges Offisielle Statistik VII. 15.*

Annual report showing operation of the State industrial accident insurance system of Norway during 1918.

—— *Statistiske Centralbyrå. Lønninger 1920. Christiania, 1921. 8*, 56 pp. Norges Offisielle Statistik VII. 9.*

A statistical report of wages in Norway during 1920. The report states that since 1914 wages have increased from 200 and 300 per cent in most occupations. Wage increases in general have been greatest for lowest incomes and least for the highest incomes. The total wage increase, 1914–1920, for most of the large groups of workers seems to have been as much or a little more than the price increase.

—— —— *Norges sparebanker 1919. Christiania, 1921. 12*, 42 pp. Norges Offisielle Statistik VII. 6.*

Statistical report of the operations of Norwegian savings banks during 1919. There were 555 authorized savings banks. The total number of depositors was 1,626,202, or about 623 out of every 1,000 of the population of Norway.

—— —— *Statistisk årbok for kongeriket Norge. 40de årgang. 1920. Christiania, 1921. 261 pp.*

Statistical yearbook of the Kingdom of Norway for the year 1920. Contains statistics on social insurance, unemployment in trade unions, employment agencies, Norwegian employers' association, average wages during 1920, prices, household budgets, co-operative societies, etc.

SWEDEN.—*Socialstyrelsen. Kollektivavtal i Sverige år 1920. Stockholm, 1921. xi, 38 pp. Sveriges Officiella Statistik. Socialstatistik.*

Report of collective agreements in Sweden during 1920. The number of agreements and the number of workers affected by them is the largest number reported for any year up to this time. In 1920 there were 1,583 new collective agreements concluded affecting directly or through labor organizations 259,760 workers. The total number of workers affected by collective agreements at the end of 1920 was 424,366.

—— —— *Olycksfall i arbete år 1917. Stockholm, 1921. 67 pp. Sveriges Officiella Statistik. Socialstatistik.*

A report showing statistics of labor accidents in Sweden in 1917.

—— —— *Statens förlikningsmäns för medling i arbetstvister. Verksamhet år 1920. Stockholm, 1921. 116 pp.*

Report on conciliation in labor controversies in Sweden during 1920. The number of disputes in 1920 was 319 as against an average of 155 during the years 1915–1919.

UNION OF SOUTH AFRICA—*Office of Census and Statistics. Statistics of population, No. 3, 1918. Pretoria, 1921. vi, 82 pp.*

Statistics in regard to miners' phthisis are given on pages 68 and 69 of the report.

Unofficial.

AMERICAN FEDERATION OF LABOR. *Building trades department. Proceedings, 1921. Washington, D. C., 1921. 139 pp.*

Data on wages in the building trades taken from this report appear on page 117 to 121 of this issue of the MONTHLY LABOR REVIEW.

—— *Proceedings, 1921. Washington, D. C., 1921. 473 pp.*

An account of this convention appeared in the MONTHLY LABOR REVIEW for August, 1921, pp. 151–154.

—— *Railway employees' department. Exhibits on the wage case before the United States Railroad Labor Board on behalf of the railway employees represented by 12 unions. 2 mimeographed pamphlets. Washington, D. C. [1921].*

These pamphlets are entitled, respectively, Causes of the present industrial depression and The living wage.

—— *Iowa branch. Proceedings, 1921. Sioux City, Earl C. Willey, secretary-treasurer, 1921. 93 pp.*

—— *Virginia branch. Proceedings, 1921. Newport News, John Gribben, secretary-treasurer, 1921. 97 pp.*

BLACHLY, CLARENCE DAN. *The treatment of the problem of capital and labor in social study courses in the churches. Chicago, The University of Chicago Press, 1920. viii, 90 pp.*

This pamphlet summarizes the result of a study of the social study courses of the principal Protestant churches, particularly in relation to the question of capital and labor, and shows the official attitude of the churches toward social questions as evidenced in various statements of officials, church boards, etc., as well as in the programs outlined.

BOWLEY, ARTHUR L. *Official statistics. What they contain and how to use them. London, Humphrey Milford, 1921. 63 pp.*

The way to use official statistics is demonstrated by discussion of statistics issued by various British departments on the subjects of population; industry, trade, and prices; income and wages, and social conditions, and the author shows how to correlate accounts from different sources and different points of view in order to get a comprehensive view of the subjects.

BULMAN, H. F., AND MILLS, FREDERICK P. *Mine rescue work and organization. London, Crosby Lockwood & Son, 1921. 171 pp.*

A handbook of information on the use of self-contained breathing apparatus and other rescue appliances, the training of rescue brigades, and Government regulations concerning rescue work.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. *Division of economics and history. Economic effects of the World War upon women and children in Great Britain, by Irene Osgood Andrews and Margaret A. Hobbs. Second (revised) edition. New York, Oxford University Press, 1921. ix, 255 pp. Preliminary economic studies of the war, No. 4.*

The first edition of this study, made during the war, is noted in the MONTHLY LABOR REVIEW for April, 1918 (p. 313). The present edition is revised in the light of a visit to England made in the early part of 1920, and is extended to include a discussion of how women and children fared in the period immediately following the armistice. The preface is dated April, 1920; at that time the trend of events in England was still so uncertain that only tentative conclusions could be reached regarding the permanent status of woman and child workers. Many occupations open to women during the war have more recently been closed to them. Some protection, it is true, has been given war-time wage rates through the extension of the minimum-wage act. Although the war doubtless had an unfortunate effect upon part of the juvenile workers, it did develop a greater national sense of their future value as citizens. This is

shown in the passing of the Fisher education act, which when, and if, it becomes fully effective will raise the school age to 14 years and require attendance at continuation schools for eight hours a week up to 18 years, on employers' time. Considering such recent developments as the attacks upon the wages boards, the postponement on the score of economy of the most important parts of the new education act, and the breaking down in the present period of industrial depression of the standards and safeguards won by the workers during the war, it seems probable that if formulated to-day the author's conclusions would be advanced even more tentatively.

COMITÉ CENTRAL DES HOUILLÈRES DE FRANCE. *Législation minière et législation ouvrière. Texte des principales lois et répertoire méthodique des lois, décrets, etc. Quatrième édition (supplément). Paris, 1921. 76 pp.*

This supplement to the legislative section of the yearbook of the central society of mine operators contains the text of laws relating to operation of mines and those affecting the workers which were passed between March and October, 1920.

DOWNEY, E. H. *The uses and abuses of schedule Z. New York, National Council on Workmen's Compensation Insurance [n. d.]. 12 pp.*

FOREIGN-LANGUAGE INFORMATION SERVICE. *The work of the Foreign-Language Information Service. A summary and survey. New York, 15 West 37th St. [1921]. 78 pp.*

For a brief summary of this report see page 214 of this issue of the MONTHLY LABOR REVIEW.

GENERAL FEDERATION OF TRADE UNIONS (GREAT BRITAIN). *Twenty-second annual report and balance sheet. London, 1921. 47 pp.*

The report shows 134 societies affiliated to the federation, with an aggregate membership of 1,583,058 in 1921, as compared with 1,480,108 in 1920.

GILLIN, JOHN LEWIS. *Poverty and dependency. Their relief and prevention. New York, The Century Co., 1921. 707 pp.*

A study of the urgent problems of poverty and dependency, including such phases as the relief of aged dependents, the disabled, and the unemployed, and mothers' pensions. The book is designed primarily as a university textbook and includes extensive quotations from various sources.

HALDANE, RICHARD BURDON. *The problem of nationalization. London, The Labor Publishing Co. (Ltd.), 1921. 48 pp.*

This pamphlet is a reprint of the evidence offered by Lord Haldane before the royal commission on the coal mines, with an introduction by R. H. Tawney and H. J. Laski.

HOWARD, STANLEY E. *The movement of wages in the cotton manufacturing industry of New England since 1860. Boston, National Council of American Cotton Manufacturers, 1920. 99 pp.*

The period covered by this investigation includes the two important war periods, that of 1861–1865 and that of 1914–1919, and both the period of declining price movements preceding 1897 and that of rising prices since that year. The purely statistical part of the study is in three main divisions, as follows: That which relates to changes of rates of wages rather than to changes of earnings; that which relates to changes of full-time earnings; and that concerning the "occurrence, regularly or irregularly, of conditions of employment." A summary table gives the relative full-time earnings, the relative wholesale prices of commodities in general, and relative weaving rates at Fall River for the period 1860 to 1918.

INTERNATIONAL LADIES' GARMENT WORKERS' UNION. *Educational department. The educational work of the International Ladies' Garment Workers' Union. Report submitted to the conference of the Workers' Education Bureau of America, April 2, 1921, by Fannia M. Cohn. New York, 31 Union Square [1921]. 12 pp.*

A summary of this pamphlet appears on pages 181 and 182 of this issue of the MONTHLY LABOR REVIEW.

JUVENILE PROTECTIVE ASSOCIATION OF CHICAGO. *Annual report, 1919–20. Chicago, 816 South Halsted St. [1921]. 39 pp.*

A portion of this report deals with the work of the juvenile occupations department in investigating and preventing illegal child labor.

LABOR INTERNATIONAL HANDBOOK. *Edited by R. Palme Dutt. London, The Labor Publishing Co., Ltd., 1921. x, 320 pp.*

This handbook reviews international affairs from a labor standpoint. The peace treaties and the League of Nations and other international organizations are discussed. The review of postwar economic conditions includes Europe after the war, economic effects of the treaties and statistical tables as to national debts and budgets, currency and prices, and production and trade, while the special problems of Russia, Ireland, India, and Egypt are given separate treatment. Problems of racial conflict, and the foreign policy of Great Britain complete the first part of the book. The subject of Part II is "International labor" and covers the subjects of international socialism, trade-unionism, and cooperation, and also gives a sketch of socialist and trade-union movements in each country with the parliamentary representation of the various parties. A directory of socialist and political labor organizations, of central trade-union and cooperative organizations, and of the socialist and labor press is appended.

LAYTON, WALTER T. *An introduction to the study of prices, with special reference to the history of the nineteenth century. London, Macmillan & Co., Ltd., 1920. xiii, 194 pp.*

A revision of the 1914 edition. Both the theoretical and historical side of prices are reviewed in an attempt to determine the causes of the upward trend in prices during the last fifteen years, which the author states has been too general all over the world to be satisfactorily accounted for by any special causes operating in different countries. The general causes which determine the purchasing power of money and the economic effects of price changes, therefore, are the two problems dealt with. Much statistical information is contained in the appendixes.

LONDON SCHOOLMASTERS' ASSOCIATION. *Equal pay and the teaching profession. London, Evans Bros. (Ltd.) [1921]. 112 pp.*

MARSHALL, LEON C. AND LYON, LEVERETT S. *Our economic organization. New York, The Macmillan Co., 1921. x, 503 pp.*

This book, intended as a textbook for beginners in the study of economics, gives a general survey of economic problems, a historical summary of industrial development, and a detailed study of the present economic organization.

MUSCIO, BERNARD (EDITOR). *Lectures on industrial administration. London, Sir Isaac Pitman & Sons (Ltd.), 1920. 276 pp.*

This series of lectures delivered at a course in industrial management at Cambridge covers a number of the phases of industrial relations such as scientific management, vocational diagnosis and application of psychological principles to industry, industrial overstrain and unrest and other health problems, and measures for developing and standardizing industrial research and statistics.

NATIONAL AMALGAMATED UNION OF LABOR. *Thirty-first annual report and financial statement, 1919. Newcastle-upon-Tyne, Cooperative Printing Society (Ltd.), 1921. 48 pp.*

SAINT-PIERRE, ARTHUR. *La question ouvière au Canada. Montreal, 1920. 63 pp.*

This study of the Canadian industrial situation is largely devoted to union and employer organizations and a résumé of labor legislation. There is a chapter also on wages and cost of living and one on strikes and unemployment. Most of the statistical information relates to the years 1916 to 1919.

SPEEK, PETER A. *A stake in the land. New York, Harper & Bros., 1921. xxx, 266 pp.*

The purpose of this report, it is stated, is to give as clear a notion as possible of the methods of the agencies actually at work in putting the immigrant upon the land and helping to make him a good American citizen, and not to propose theories for dealing with the complicated questions involved.

TRAVELERS INSURANCE CO. *Safety in building construction. (Second edition, revised.) Hartford, Conn. [1921]. 175 pp. Illustrated.*

Much new material has been included in this revision of the 1916 edition. The authors believe that if their suggestions are carried out the number of accidents in the building industry will surely be very materially decreased.

UNITED STATES LEAGUE OF LOCAL BUILDING AND LOAN ASSOCIATIONS. *Proceedings, 1921. Cincinnati, H. F. Cellarius, secretary [1921]. 194 pp.*

VAN DEVENTER, JOHN H. (EDITOR). *More work per man. Tested and selected methods of managing men. New York, The Engineering Magazine Co., 1921. x, 440 pp.*

This is a compilation of articles which have appeared in Industrial Management on personnel problems. The articles are classified and the subjects covered are: How to pick the man for the job; Solving the labor turnover; Training and education of labor; The foreman; Employment management and labor maintenance; Industrial relations and the shop committee; Wage systems and other incentives; The human element in industry, and The reduction of waste and fatigue.

WEBB, SYDNEY. *The story of the Durham miners (1662–1921). London, The Fabian Society, 1921. ix, 154 pp.*

Traces the history of the Durham miners from the time when trade-unions were unknown, through the period of the growth of trade-unionism to present day conditions.

ZENTRALVERBAND DER ČECHOSLOVAKISCHEN INDUSTRIELLEN. *Bericht für die generalversammlung für das Jahr 1920. Prague, 1921. 56 pp.*

The annual report of the Central Federation of Czechoslovakian Industrial Employers for the year 1920. Those parts of the report which deal with retail prices and wages have been used in the compilation for the MONTHLY LABOR REVIEW of two articles, the first appearing on pages 64 to 66 and the second on pages 127 to 130 of the present issue.

ZIMAND, SAVEL. *Modern social movements. Descriptive summaries and bibliographies. New York, H. W. Wilson Co., 1921. 260 pp.*