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MAY, 1918

WOMAN STREET RAILWAY EMPLOYEES.

BY BENJAMIN M. SQUIRES.

In the present world crisis women must do some of the work heretofore done by men. Already many of the occupations previously restricted to male employees have been opened to women, and as the War progresses the need will become more imperative and the practice probably more prevalent. Women are eager to do their share in the War and for that very reason are likely to accept, without weighing the consequences, any new employment offered, especially when appeal is made to their patriotism to take up the burdens dropped by the drafted men. It is important, therefore, that careful inquiry be made to determine the suitability of such employment for women workers as to (1) shop and work conditions, (2) the nature of the work, (3) the hours of work, and (4) the wages paid women and men in the employment. It is also desirable to ascertain whether women are being employed because men can not be had or because women will accept a lower wage than men.

In this country woman car cleaners and ticket agents and choppers have been employed by street railway companies in some cities even in normal times, but the car crews have always heretofore been men. Quite recently, however, perhaps inspired in part by the accounts from other warring countries, women have been taken on as street car conductors. Information is not available as to the total number of women thus employed throughout the country or the number of cities in which the experiment is being tried. In New York City and Brooklyn, however, women have been employed as conductors in the operation of surface street cars since December, 1917, and as subway guards in Brooklyn since October, 1917. The Hudson & Manhattan Railway Co. employs a number of woman guards on its subway trains, as well as woman porters and ticket agents at the stations, and the Second Avenue and Queens surface lines have recently placed woman conductors on their cars.

The plan to increase the number of women on the surface lines of New York City and Brooklyn "as rapidly as housing accommoda-

[1049]

tions for women can be provided at the various depots," together with the large number of woman applicants for this work, emphasizes the need of a careful consideration of this particular problem in "dilution of labor." In this article are given the first findings of an investigation which has just been made by the United States Bureau of Labor Statistics into the hours and working conditions of women employed by the New York Railways Co. and the Brooklyn Rapid Transit Co. in the operation of their lines.

On February 15, 1918, the New York Railways Co. had in its employ 452 woman conductors,¹ or approximately 30 per cent of all conductors employed. The Brooklyn Rapid Transit Co. on the same date had 138 woman conductors² on its surface cars and 297 woman guards,³ or carmen, and conductors on its subway trains. These were 5.6 and 21.7 per cent, respectively, of the total number of conductors and guards employed.

In addition to the above, the Brooklyn Rapid Transit Co. employed at its subway-elevated stations 929 woman ticket agents out of a total of 1,002 in this occupation and 50 woman porters out of a total of 180. As stated previously, however, the use of woman ticket agents is not an innovation. Woman porters are virtually cleaners about the stations, and in neither position does the employment of women present any unusual difficulties.

Obviously it will be impossible within the scope of this article to discuss all of the many ramifications of street railway or rapid transit operation which, in a greater or less degree, affect employees. It is necessary, however, to keep a number of points in mind.

The regular lines of any large city must operate continuously day and night, with the familiar rush hours and high peaks in the number of cars and passengers followed by low levels in the number of passengers carried and of cars operated. The problems of the operating department are twofold: First, so to arrange schedules as to have cars out at the proper time, yet to avoid moving empty cars unnecessarily; second, to arrange car schedules into what is familiarly known as "runs" (day's work) for employees. These runs may be "straight"—that is, with no intermission between the beginning and the end of the day's work—or they may be "swing" runs, on which an employee has one or more intervals of time between periods of duty. In addition to these regular runs it is usually necessary to have a number of regularly scheduled "trippers" of a few hours' duration to take care of rush periods.

¹ Not including 35 students.

² Not including 41 students.

³ Not including women employed regularly in other occupations who worked a portion of their time as guards.

To provide for this variable service and at the same time to replace employees absent from all or portions of their regular runs and those leaving the service, it is necessary to maintain an extra list of employees not assigned to regular runs. The number of extras employed depends upon traffic conditions, the percentage of daily absences, and the general policy of the company. In normal times, in Greater New York approximately 20 to 25 per cent of all conductors and slightly less of all motormen are extras.

Regular runs are usually chosen by seniority of service, those oldest in the service having the first choice of vacant runs. The extra list is also on a seniority basis. When vacancies occur in the regular list by resignation, discharge, or other cause, those at the head of the extra list go to the foot of the regular list and take their turn in the choice of runs.

Without going further into modifications of the above procedure, it will be apparent that the extras get what is left. If employees with regular runs are to be absent the following day, the runs are posted and employees on the extra list sign up for these runs in order of seniority. When thus assigned, the extras acquire the status of regulars for this day and know definitely what their hours are to be. However, in case extra service is required or some one does not put in an appearance, it may become necessary, even for those assigned to regular runs, to work portions of other runs or trippers. Those on the extra list not assigned to runs for the following day are required to report and "cover the list" for unforeseen absences or emergency service, unless and until released by the dispatcher.

The above explanation has seemed necessary in order to make clear the conditions under which woman conductors now work or may be expected to work. All of them begin, of course, as extras, after a short period of instruction. On February 15, 1918, practically all of the 138 woman conductors employed on the surface lines of the Brooklyn Rapid Transit Co. were extras. Of the 297 women employed as guards and conductors on the subway lines of the same company, 40 were extras. Of the 452 woman conductors employed by the New York Railways Co., 119 were extras. All of the male conductors employed by the New York Railways Co. had regular runs.

Both of the above companies emphasize their impartial treatment of woman employees. The women take their turn with male employees both as extras and as regulars. As regulars some women must have afternoon and night runs, some must have "night hawks" or "owls" running into the morning hours, and some will draw day runs, either "straights" or "swings." As extras, through their position on the extra list, they may be able to choose for each day's work runs

fairly uniform as to duration or as to time of beginning and ending. But it is inevitable that a considerable number of those on the extra list will not be thus favorably situated. Even if the list rotates, that is, those at the bottom one week being at the top the next, much of the work must be irregular, at least in the arrangement of hours from week to week. It will be apparent, too, that women must be in the service for some time before their position on the list of regulars will entitle them to much choice in the selection of runs.

A better idea of the hours of service of woman conductors and guards may be had from the following examples of hours actually worked during a period of seven days. These are not intended to be averages nor to represent the worst or the best of hours, but are types selected more or less at random to show the variety of hours making up a week's work.

HOURS OF SERVICE OF FOUR WOMAN STREET RAILWAY CONDUCTORS EMPLOYED BY THE NEW YORK RAILWAYS CO. DURING SEVEN DAYS ENDING FEB. 16, 1918.

Day.	Duration of periods of work on each specified day.						Time worked.	Time within which work was completed.
	On at—	Off at—	On at—	Off at—	On at—	Off at—		
Sunday.....	12. 56p.	3. 32p.					<i>H. m.</i> 2 36	<i>H. m.</i> 2 36
Monday.....	12. 58p.	3. 25p.	5. 13p.	11. 35p.			8 49	10 37
Tuesday.....	12. 30p.	3. 21p.					2 51	2 51
Wednesday.....	6. 22a.	9. 11a.	11. 52a.	3. 11p.	5. 41p.	8. 00p.	8 27	13 38
Thursday.....	6. 18a.	8. 59a.	11. 52a.	3. 11p.	5. 41p.	8. 10p.	8 29	13 52
Friday.....	11. 05a.	12. 14p.	1. 12p.	2. 51p.	4. 52p.	7. 39p.	5 35	8 34
Saturday.....	6. 20a.	9. 07a.	11. 28a.	3. 00p.	5. 41p.	8. 12p.	*8 50	13 52
Total.....							45 37	66 00
Sunday.....	1. 50p.	4. 30p.	6. 34p.	1. 43a.			9 49	11 53
Monday.....	1. 52p.	5. 02p.	6. 51p.	1. 33a.			9 52	11 41
Tuesday.....	12. 49p.	3. 46p.	5. 44p.	1. 11a.			10 24	12 22
Wednesday.....	12. 48p.	4. 22p.	6. 19p.	1. 18a.			10 33	12 30
Thursday.....	12. 48p.	4. 05p.	5. 46p.	1. 27a.			10 58	12 39
Friday.....	12. 45p.	4. 05p.	5. 56p.	1. 05a.			10 29	12 20
Saturday.....	12. 44p.	3. 09p.	5. 44p.	2. 07a.			10 48	13 23
Total.....							72 53	86 48
Sunday.....								
Monday.....	11. 48a.	3. 45p.	5. 47p.	12. 26a.			10 36	12 38
Tuesday.....	1. 48p.	4. 35p.	6. 19p.	1. 39a.			10 07	11 51
Wednesday.....	2. 30p.	6. 43p.					4 13	4 13
Thursday.....								
Friday.....	6. 53p.	12. 11a.					5 18	5 18
Saturday.....	12. 47p.	4. 14p.	5. 23p.	12. 55a.			10 59	12 08
Total.....							41 13	46 08
Sunday.....	5. 32p.	7. 18p.	8. 26p.	1. 16a.	1. 28a.	5. 45a.	10 53	12 13
Monday.....	5. 45p.	11. 34p.	2. 00a.	6. 13a.			10 02	12 28
Tuesday.....	12. 48p.	5. 11p.	7. 10p.	12. 57a.			10 10	12 09
Wednesday.....	5. 50p.	12. 04a.	2. 25a.	7. 09a.			10 58	13 19
Thursday.....	5. 22p.	11. 27p.	1. 04a.	5. 22a.			10 23	12 00
Friday.....	12. 31p.	3. 38p.	6. 13p.	2. 02a.			10 56	13 31
Saturday.....	11. 34a.	4. 45p.	7. 19p.	1. 07a.			10 59	13 33
Total.....							74 21	89 13

HOURS OF SERVICE OF WOMAN EMPLOYEES OF THE BROOKLYN RAPID TRANSIT CO. DURING SEVEN DAYS ENDING FEB. 14, 1918.

Two guards—subway-elevated lines.

Day.	Duration of periods of work on each specified day.						Time worked. ¹	Time within which work was completed.
	On at—	Off at—	On at—	Off at—	On at—	Off at—		
Friday.....	2. 20p.	12. 08a.					H. m.	H. m.
Saturday.....	2. 20p.	1. 40a.					9 48	9 48
Sunday.....	2. 28p.	12. 24a.					11 20	11 20
Monday.....	2. 30p.	12. 30a.					9 56	9 56
Tuesday.....	2. 20p.	12. 08a.					10 00	10 00
Wednesday.....	2. 20p.	12. 08a.					9 48	9 48
Thursday.....	2. 20p.	12. 08a.					9 48	9 48
Total.....							70 28	70 28
Friday.....	6. 00a.	9. 20a.	9. 25a.	7. 21p.			13 16	13 21
Saturday.....	6. 00a.	9. 20a.	9. 25a.	8. 25p.			14 20	14 25
Sunday.....	9. 41a.			8. 05p.			10 24	10 24
Monday.....	5. 54a.	3. 54p.	4. 30p.	7. 45p.			13 15	13 51
Tuesday.....	6. 45a.	9. 00a.	9. 25a.	7. 21p.			12 11	12 36
Wednesday.....	6. 15a.	9. 20a.	9. 25a.	7. 21p.			13 01	13 06
Thursday.....	6. 00a.	9. 20a.	9. 25a.	3. 55p.			9 50	9 55
Total.....							86 17	87 38

Four conductors—surface lines.

Friday.....	5. 50a.	12. 20p.	3. 30p.	7. 00p.			10 00	13 10
Saturday.....	5. 42a.	9. 37a.	11. 42a.	5. 46p.			9 59	12 04
Sunday.....	12. 04p.	3. 40p.	5. 52p.	12. 09a.			9 53	12 05
Monday.....	1. 42p.	3. 20p.	4. 35p.	12. 44a.			9 47	11 02
Tuesday.....	1. 42p.	3. 20p.	4. 35p.	12. 44a.			9 47	11 02
Wednesday.....	4. 12p.	7. 17p.	7. 54p.	2. 51a.			10 02	10 39
Thursday.....	4. 12p.	7. 17p.	7. 54p.	2. 51a.			10 02	10 39
Total.....							69 30	80 41
Friday.....	7. 02a.	1. 26p.	4. 12p.	7. 02p.			9 14	12 00
Saturday.....	11. 55a.	3. 14p.	5. 54p.	1. 35a.			11 00	13 40
Sunday.....	12. 14p.	3. 34p.	5. 34p.	12. 59a.			10 45	12 45
Monday.....	2. 17p.	4. 03p.	4. 40p.	12. 59a.			9 59	10 36
Tuesday.....	4. 05p.	12. 15a.					8 10	8 10
Wednesday.....	10. 34a.	2. 08p.	4. 29p.	6. 29p.			5 34	7 55
Thursday.....	6. 53a.	1. 43p.	4. 51p.	9. 25p.			11 24	14 32
Total.....							66 06	79 38
Friday.....	7. 30a.	2. 50p.	5. 28p.	8. 29p.			10 12	12 50
Saturday.....	6. 50a.	9. 21a.	11. 46a.	7. 32p.			10 08	12 33
Sunday.....								
Monday.....	8. 05p.	10. 24p.	1. 45a.	7. 13a.			7 47	11 08
Tuesday.....	8. 05p.	10. 24p.	1. 45a.	7. 13a.			7 47	11 08
Wednesday.....	7. 30a.	2. 10p.	4. 11p.	7. 41p.			10 10	12 11
Thursday.....	7. 44a.	2. 50p.	5. 04p.	8. 37p.			10 39	12 53
Total.....							56 43	72 43
Friday.....	2. 14p.	6. 59p.	7. 34p.	1. 03a.			10 14	10 49
Saturday.....	1. 02p.	5. 12p.	7. 34p.	1. 03a.			9 39	12 01
Sunday.....	12. 15p.	6. 15p.	8. 18p.	12. 32a.			10 14	12 17
Monday.....	2. 14p.	6. 59p.	7. 34p.	1. 03a.			10 14	10 49
Tuesday.....	2. 14p.	6. 59p.	7. 34p.	1. 03a.			10 14	10 49
Wednesday.....	2. 14p.	6. 59p.	7. 34p.	1. 03a.			10 14	10 49
Thursday.....	2. 14p.	6. 59p.	7. 34p.	1. 03a.			10 14	10 49
Total.....							71 03	78 23

¹ Thirty to forty minutes are allowed off duty for meals on straight runs. This time is paid for and the period is not shown on the daily record of work performed.

The hours that employees are actually engaged in operating the cars give but little notion of the suitability of the employment for women. The "within" time, or the period between the time of reporting at the barn and the time when they are released for the day gives a much better idea of the demands of the occupation upon the time of the employees. For the most part the time between "swings" or portions of the day's work is simply dead time with the choice of loafing about the car barn or on the street. If suitable waiting and rest rooms and comfort stations were provided a working day for woman employees of nine hours' actual work to be completed within 10 hours could be regarded with some degree of complacency as not being necessarily injurious to health. That such an ideal arrangement of hours does not prevail is evident from the following table, which shows the "completed within" time of the day's work during a period of seven days.

TIME WITHIN WHICH THE DAY'S WORK OF WOMAN EMPLOYEES WAS COMPLETED DURING A PERIOD OF SEVEN DAYS.

Number of hours within which day's work was completed.	Brooklyn Rapid Transit Co.				New York Railways Co.		Total.	
	Surface lines.		Subway lines.		Number of runs.	Per cent.	Number of runs.	Per cent.
	Number of runs.	Per cent.	Number of runs.	Per cent.				
Under 6.....	55	8.2	227	14.9	139	6.5	421	9.7
6 and under 6½.....	9	1.3	25	1.6	12	.6	46	1.1
6½ and under 7.....	4	.6	9	.6	11	.5	24	.6
7 and under 7½.....	5	.7	19	1.2	17	.8	41	.9
7½ and under 8.....	4	.6	22	1.4	20	.9	46	1.1
8 and under 8½.....	3	.4	66	4.3	20	.9	89	2.1
8½ and under 9.....	5	.7	38	2.5	23	1.1	66	1.5
9 and under 9½.....	8	1.2	89	5.8	22	1.0	119	2.8
9½ and under 10.....	16	2.4	64	4.2	26	1.2	106	2.5
10 and under 10½.....	36	5.4	60	3.9	34	1.6	130	3.0
10½ and under 11.....	75	11.2	26	1.7	55	2.6	156	3.6
11 and under 11½.....	63	9.4	58	3.8	134	6.3	255	5.9
11½ and under 12.....	60	9.0	65	4.3	270	12.7	395	9.1
12 and under 12½.....	90	13.4	120	7.9	413	19.4	623	14.4
12½ and under 13.....	103	15.4	180	11.8	392	18.4	675	15.6
13 and under 13½.....	75	11.2	210	13.8	255	12.0	540	12.5
13½ and under 14.....	42	6.3	122	8.0	192	9.0	356	8.2
14 and under 14½.....	5	.7	53	3.5	72	3.4	130	3.0
14½ and under 15.....	4	.6	31	2.0	12	.6	47	1.1
15 and under 15½.....	.....	.....	12	.8	1	(1)	13	.3
15½ and under 16.....	.....	.....	7	.5	.....	.....	7	.2
16 and under 16½.....	.....	.....	4	.3	.....	(1)	5	.1
16½ and under 17.....	1	.1	4	.3	1	(1)	6	.1
17 and under 17½.....	1	.1	3	.2	1	(1)	5	.1
17½ and under 18.....	1	.1	1	.1	2	.1	4	.1
18 and under 18½.....	1	.1	4	.3	.....	.....	5	.1
18½ and under 19.....	.....	.....	2	.1	1	(1)	3	.1
19 and under 19½.....	.....	.....	1	.1	.....	.....	1	(1)
19½ and under 20.....	.....	.....	1	.1	.....	.....	1	(1)
20 and under 20½.....	.....	.....	1	.1	.....	.....	1	(1)
20½ and under 21.....	1	.1	.....	.....	.....	.....	1	(1)
21½ and under 22.....	.....	.....	.....	.....	.....	.....	.....	(1)
22 and under 22½.....	2	.3	.....	.....	.....	.....	2	(1)
22½ and under 23.....	1	.1	.....	.....	.....	.....	1	(1)
23 and over.....	.....	.....	2	.1	1	(1)	3	.1
Total.....	670	100.0	1,526	100.0	2,127	100.0	4,323	100.0

¹ Less than one-tenth of 1 per cent.

Thus, on the New York Railways Co.'s lines, 13.5 per cent of the total days worked by woman conductors during a period of seven days were completed in less than 10 hours, whereas 62.9 per cent required 12 hours and over within which to complete the day's work. On the surface lines of the Brooklyn Rapid Transit Co., 16.1 per cent of the total days worked by woman conductors during a period of seven days required less than 10 hours within which to complete the day's work, and 48.5 per cent required 12 hours and over. On the subway-elevated lines of the Brooklyn Rapid Transit Co. 36.5 per cent of the total days worked by woman guards and conductors required less than 10 hours within which to complete the day's work, and 50 per cent required 12 hours and over.

The duration and time of occurrence of the waiting periods in the day's work are summarized in the following table:

TIME OF OCCURRENCE AND DURATION OF WAITING PERIODS IN THE DAY'S WORK OF WOMAN EMPLOYEES DURING A PERIOD OF SEVEN DAYS.

New York Railways Co.

Time of occurrence of waiting period (time off duty between parts of day's work).	Number of workdays with a waiting period (time off duty between parts of day's work) of—											Total.	
	Under 1 hr.	1 and under 2 hrs.	2 and under 3 hrs.	3 and under 4 hrs.	4 and under 5 hrs.	5 and under 6 hrs.	6 and under 7 hrs.	7 and under 8 hrs.	8 and under 9 hrs.	9 and under 10 hrs.	10 and under 11 hrs.		11 and under 12 hrs.
7 a. m. and before 8 a. m.	1	1			1								3
8 a. m. and before 9 a. m.	2	12	18	38	25		1	8	7				111
9 a. m. and before 10 a. m.	19	43	73	56	19	3	15	29	4				261
10 a. m. and before 11 a. m.	2	22	30	6	2	6	6	3					77
11 a. m. and before 12 m.	4	43	44	7	1	1	1	2					103
12 m. and before 1 p. m.	12	84	120	26	10	1							253
1 p. m. and before 2 p. m.	7	102	75	24	2								210
2 d. m. and before 3 p. m.	23	90	188	37	8								346
3 p. m. and before 4 p. m.	14	196	165	44	3								422
4 p. m. and before 5 p. m.	25	155	86	8	1								275
5 p. m. and before 6 p. m.	18	50	7	4									80
6 p. m. and before 7 p. m.	6	25	6		1								38
7 p. m. and before 8 p. m.	5	10	2										17
8 p. m. and before 9 p. m.	2	3	2										7
9 p. m. and before 10 p. m.	1	1	3		3								8
10 p. m. and before 11 p. m.	1	1	5	2									9
11 p. m. and before 12 p. m.		22	16										38
1 a. m. and before 2 a. m.	5	13											18
2 a. m. and before 3 a. m.	2	1	1		2				4				4
			1										3
Total.....	149	873	843	254	77	11	23	42	11				2,283

TIME OF OCCURRENCE AND DURATION OF WAITING PERIODS IN THE DAY'S WORK OF WOMAN EMPLOYEES DURING A PERIOD OF SEVEN DAYS—Concluded.

Brooklyn Rapid Transit Co. (subway-elevated lines).

Time of occurrence of waiting period (time off duty between parts of day's work).	Number of workdays with a waiting period (time off duty between parts of day's work) of—											Total.	
	Under 1 hr.	1 and under 2 hrs.	2 and under 3 hrs.	3 and under 4 hrs.	4 and under 5 hrs.	5 and under 6 hrs.	6 and under 7 hrs.	7 and under 8 hrs.	8 and under 9 hrs.	9 and under 10 hrs.	10 and under 11 hrs.		11 and under 12 hrs.
6 a. m. and before 7 a. m.	4	3											7
7 a. m. and before 8 a. m.	1												1
8 a. m. and before 9 a. m.	1		2	1	7	2	16	56	16	3	2	1	107
9 a. m. and before 10 a. m.	8	3	31	9	1	23	195	148	8				429
10 a. m. and before 11 a. m.	1	18	11		15	100	62				1		216
11 a. m. and before 12 m.	1			10	19	15		8					45
12 m. and before 1 p. m.			1	4	2								7
1 p. m. and before 2 p. m.		1											1
2 p. m. and before 3 p. m.				5	10								15
3 p. m. and before 4 p. m.	4	5	3		2			1					15
4 p. m. and before 5 p. m.	5	1	1	2									9
5 p. m. and before 6 p. m.		1	1										2
6 p. m. and before 7 p. m.		1											1
7 p. m. and before 8 p. m.	1	1											2
8 p. m. and before 9 p. m.	1												1
12 p. m. and before 1 a. m.			1				1						2
1 a. m. and before 2 a. m.		1											1
4 a. m. and before 5 a. m.										1			1
Total	27	35	51	31	56	140	274	213	24	3	7	1	862

Brooklyn Rapid Transit Co. (surface lines).

7 a. m. and before 8 a. m.	3	1											4
8 a. m. and before 9 a. m.	3		2	4	2		1						13
9 a. m. and before 10 a. m.		4	26	16	1								47
10 a. m. and before 11 a. m.	5	3	28	8	2								46
11 a. m. and before 12 m.	1	6	21	3	6								39
12 m. and before 1 p. m.	5	9	14	23	6	1	1						57
1 p. m. and before 2 p. m.	1	8	45	32	4								90
2 p. m. and before 3 p. m.	1	32	44	12									89
3 p. m. and before 4 p. m.	7	27	21	2									57
4 p. m. and before 5 p. m.	15	7	16										38
5 p. m. and before 6 p. m.	8	13	14	1									36
6 p. m. and before 7 p. m.	15	16	4	1									36
7 p. m. and before 8 p. m.	8	9	1										18
8 p. m. and before 9 p. m.	3	3											6
9 p. m. and before 10 p. m.	2	1											3
10 p. m. and before 11 p. m.	2	4		3									9
11 p. m. and before 12 p. m.			2										2
12 p. m. and before 1 a. m.	3	2	1	1									7
1 a. m. and before 2 a. m.	1												1
3 a. m. and before 4 a. m.				1									1
Total	83	146	239	107	21	1	2						599

Neither "completed within" time nor waiting periods show the arrangement of hours with reference to night work. This can be brought out only by considering the hours of beginning and ending work. The following table classifies the working days of all woman employees during a period of seven days by hours of beginning and ending work.

NUMBER OF WORKDAYS OF WOMAN EMPLOYEES WHICH BEGAN AND

New York Railways Co. (surface lines.)

Beginning time.	Number with ending time—A. M.											
	12 and before 1.	1 and before 2.	2 and before 3.	3 and before 4.	4 and before 5.	5 and before 6.	6 and before 7.	7 and before 8.	8 and before 9.	9 and before 10.	10 and before 11.	11 and before 12.
2 and before 3 a. m.						1	2					
4 and before 5 a. m.						1						
5 and before 6 a. m.						1	2	1	3	3		2
6 and before 7 a. m.									12	11	6	7
7 and before 8 a. m.	2	1								1	1	2
8 and before 9 a. m.											2	
9 and before 10 a. m.												1
10 and before 11 a. m.	9	1				1						
11 and before 12 m.	59	24	5	1								
12 m. and before 1 p. m.	147	173	43	3								
1 and before 2 p. m.	51	128	38	3								
2 and before 3 p. m.	8	19	2									
3 and before 4 p. m.	4	5	2									
4 and before 5 p. m.	4	7	1									
5 and before 6 p. m.	2	5				5	3	1				
6 and before 7 p. m.	2	2	2			8	5	2				
7 and before 8 p. m.	1	5				5	12	5	6	2		
8 and before 9 p. m.							1	1	6	6		
9 and before 10 p. m.	1								6	1		
12 and before 1 a. m.						1						
Total.....	290	370	93	7		20	25	12	27	24	9	12

Brooklyn Rapid Transit Co. (surface lines.)

2 and before 3 a. m.							1					
4 and before 5 a. m.												
5 and before 6 a. m.												
6 and before 7 a. m.				2 ¹		2 ¹		1 ³	3	6	1	
7 and before 8 a. m.		2 ²					2 ¹	2	1	1	1	
8 and before 9 a. m.												
9 and before 10 a. m.												
10 and before 11 a. m.												
11 and before 12 m.	10	5										
12 m. and before 1 p. m.	27	6										
1 and before 2 p. m.	15	14	8									
2 and before 3 p. m.	14	18	1									
3 and before 4 p. m.	3	10	20	1								
4 and before 5 p. m.	3	3	16	6	1				1			
5 and before 6 p. m.												
6 and before 7 p. m.	2											
7 and before 8 p. m.	1		1			1			1			
8 and before 9 p. m.								3		2		
9 and before 10 p. m.							1					
10 and before 11 p. m.							1		2	1		
12 and before 1 a. m.							1					
Total.....	75	58	46	8	1	2	5	3	8	8	7	2

Brooklyn Rapid Transit Co. (subway-elevated lines.)

1 and before 2 a. m.												
2 and before 3 a. m.												1
3 and before 4 a. m.										3		
4 and before 5 a. m.							2	3	2	3		
5 and before 6 a. m.	1							1	4	2	5	1
6 and before 7 a. m.	3	2						1 ³	16	23	1	3
7 and before 8 a. m.	2	1							19	17	4	3
8 and before 9 a. m.												
9 and before 10 a. m.												
10 and before 11 a. m.	13	3										
11 and before 12 m.												
12 m. and before 1 p. m.												
1 and before 2 p. m.	2	1	2									
2 and before 3 p. m.	23	9	4									
3 and before 4 p. m.	45	21	13	2								
4 and before 5 p. m.	26	16	5	2								
5 and before 6 p. m.	5	9	1	1								
6 and before 7 p. m.					1				1			
7 and before 8 p. m.				1					2			
Total.....	120	62	25	6	1		2	7	44	48	10	8

¹ Including 1 workday which ended the morning of the following day.

ENDED AT EACH CLASSIFIED TIME DURING A PERIOD OF SEVEN DAYS.

New York Railways Co. (surface lines.)

Number with ending time—P. M.													Total.
12 and before 1.	1 and before 2.	2 and before 3.	3 and before 4.	4 and before 5.	5 and before 6.	6 and before 7.	7 and before 8.	8 and before 9.	9 and before 10.	10 and before 11.	11 and before 12.		
				1			1						3
1			1	5	33	36	98	3					4
	2		6	12	27	214	217	89			1		189
		1	2	1	3	30	88	40					609
2			2		1	1	1	18	13				186
	1					3	7	2	2				33
						1	6	1	3				15
2		1			3	3	3	2	2				15
						1	2	1	1				51
	1		2	2	1	3	3	2	2		5		137
			8	1	4	5	8	7	9		8		24
		3				6	5	5	5		6		450
			2	2	4	2	4	5	5		2		263
			1	1		4	1	1	3		1		44
						1	1	3	1		1		24
							5	2			1		19
							1						18
											1		25
											1		38
											1		15
													2
													1
5	4	8	22	25	79	305	447	172	44	26	101		2,127

Brooklyn Rapid Transit Co. (surface lines.)

			1	2	1	1							1
			1	4	10	23	6						6
2			3	3	37	47	28	6					45
	1		1	1	17	29	65	9					142
	2				1	5	11	4					131
							6	8					24
	1					1	3	5			1		15
							3	5		6			18
2			2	1	1		3	3		8			48
		1	1			2	2	2		3			10
						1	1	2					56
						2	3						44
						1	1	1		1			40
						1	1	2		1			39
						1	1	2		2			39
							1	1					3
							1						4
													4
													4
													1
4	5	2	7	9	17	86	97	123	42	21	34		670

Brooklyn Rapid Transit Co. (subway-elevated lines.)

									1				1
													1
													4
													22
2			3	1		1	3	3					126
	1		29	14	5	8	39	12	2				610
			42	14	20	70	264	113	25		5	1	338
1			14	16	8	27	115	81	24		3		6
						2	2		1				7
			4	2			1	1	6				30
			1	2		1	1	1	1				1
									4				10
						3	1	5	2				13
						1	2	12	4				65
						8	9	11	21	5	4	5	178
							6	13	6	2	2		80
							1	4	2	1			26
													4
									1				4
9	2	3	94	49	42	129	462	265	69	15	54		1,526

² Workday ended the morning of the following day.

Thus, of 2,127 days worked by woman conductors on the cars of the New York Railways Co., 993, or 46.6 per cent, began between midnight and 8 a. m.; 968, or 45.5 per cent, ended between 6 p. m., and 10 p. m.; 887, or 41.7 per cent, ended between the hours of 10 p. m. and 4 a. m. Of 670 days worked by woman conductors on the surface lines of the Brooklyn Rapid Transit Co., 326, or 48.7 per cent, began between midnight and 8 a. m.; 348, or 51.9 per cent, ended between the hours of 6 p. m. and 10 p. m.; 242, or 36.1 per cent, ended between the hours of 10 p. m. and 4 a. m. Of 1,526 days worked by woman guards and conductors on the subway lines of the Brooklyn Rapid Transit Co., 1,102, or 72.2 per cent, began between midnight and 8 a. m.; 925, or 60.6 per cent, ended between the hours of 6 p. m. and 10 p. m.; 282, or 18.5 per cent, ended between the hours of 10 p. m. and 4 a. m.

Of even greater significance, however, in view of the fact that all woman conductors and guards begin work as extras and do not have regular runs for a considerable period of time, is the irregularity in the time of beginning and ending work as between successive days. Even on regular runs, the Saturday and Sunday schedules differ from the Monday to Friday schedules in beginning and ending time. The following table shows the variation in the time of beginning and ending work for both regular and extra woman street railway employees during a period of seven days:

VARIATION OF THE BEGINNING TIME AND THE ENDING TIME OF WORKDAYS OF WOMAN STREET CAR EMPLOYEES IN NEW YORK CITY.

Length of variation.	Number whose beginning time and ending time of workdays during one week varied the classified number of hours.					
	Brooklyn Rapid Transit surface lines.		Brooklyn Rapid Transit sub-way-elevated lines.		New York Railways Co.	
	Begin-ning time.	Ending time.	Begin-ning time.	Ending time.	Begin-ning time.	Ending time.
Under 1 hour.....	27	17	152	61	164	88
1 and under 2 hours.....	15	16	49	52	66	75
2 and under 3 hours.....	7	6	17	35	42	57
3 and under 4 hours.....	10	13	12	23	24	27
4 and under 5 hours.....	5	5	6	26	18	17
5 and under 6 hours.....	13	15	3	18	25	15
6 and under 7 hours.....	8	11	7	18	31	31
7 and under 8 hours.....	6	10	7	5	17	19
8 and under 9 hours.....	12	4	16	8	4	11
9 and under 10 hours.....	13	12	21	12	2	15
10 and under 11 hours.....	5	6	10	22	5	20
11 and under 12 hours.....	2	4	4	9	1	13
12 and under 13 hours.....	2	3	7	11	2	7
13 and under 14 hours.....	5	4	2	7	1	1
14 hours and over.....	1	5	1	7	1	7
Total.....	131	131	314	314	403	403

It will be observed that of 131 woman conductors employed on the surface lines of the Brooklyn Rapid Transit Co. during all or a portion of one week, the variation in beginning time was less than one hour for 27 conductors; one hour and under two hours for 15 conductors; two hours and under three hours for 7 conductors. For 82 conductors the variation in time of beginning work was three hours and over.

The irregularity in time of ending work was quite as marked. Only 17 of the 131 woman conductors quit work within less than one hour of the same time each day. For 92 conductors the variation in time of ending work was three hours and over.

Those who advocate the employment of women as street-car conductors have given scanty consideration to irregularity of hours, to "within" time and to night work, or else they regard these as more than compensated by the comparative lightness of the work. It is necessary, however, to take into account the nervous strain resulting merely from riding for hours at a time on a car that is constantly starting and stopping and that of handling crowds at rush hours. On many cars the conductor is obliged to be on his feet constantly and the principle has been clearly established that a woman can not work at employment requiring constant standing without seriously endangering her health. Moreover, the conductor is exposed to cold, damp, and draughts, even on the best type of inclosed-vestibule and center-door cars. On the closed-vestibule car there is added the strain of opening and closing the door at each stop. On the open summer car, in such common use, the conductor is required to pass constantly along the running board, clinging to a swaying car with one hand and collecting fares with the other. Cars other than "pay as you enter" require often that the conductor force a way through the crowded car to collect fares. The danger of injury, resulting seriously, to a woman doing this work is by no means negligible. However, woman conductors must operate these cars or the type of car must be changed at great expense.

The point has been made repeatedly by the companies during the investigation, that even when women have a choice, they frequently select night runs. At this time the cars are, of course, less crowded and the work less strenuous except, perhaps, during the after-theater rush hours on certain lines. Some of the women have remarked that they preferred the night runs because it left them the day free to do other things. Others with families have said that the night runs enable them to look after the children and prepare the meals during the day. The disastrous consequences of employing women on night work to enable them to work all day for their families have been so thoroughly demonstrated in other industries that it needs no further

demonstration in street-car operation. Lack of sufficient rest must very soon so lessen the vitality that the woman is not only unfit for street railway service but unable to resume her former place either in the home or in industry. There should be added to this a consideration of the dangers to which a woman is conceivably exposed in having to go home unattended, sometimes through practically deserted streets, at hours of the night when police protection is least.

Quite apart from the question of hours or severity of work is that of adequate waiting and toilet rooms at the car barns. The barns are the starting places of the cars. Here the movement of cars is directed, orders are issued to employees, and the run sheet for each day is posted. Here are located the waiting rooms for the employees, with such facilities for rest, comfort, and amusement as it is the policy of the company to provide.

The introduction of women necessitates that some provision be made to house them at these barns. The adequacy of these provisions must be determined in part by well-defined standards of sanitation and comfort, and in part by equally well-defined principles of decency and privacy. Obviously a separate waiting and rest room must be provided for women employees. It must be considered, too that since the strain upon women is greater than upon men in this work, opportunity for rest and relaxation must be provided in even greater measure than for men. The need of adequate rest-room facilities for all women off duty becomes more apparent when it is taken into consideration that employees often live too far from the car barns to make it practicable for them to go home between portions of the day's work. The immediate neighborhood of the car barns is seldom inviting. Even if the waiting period comes at a convenient time or is of sufficient duration to permit woman employees to shop or to go to places of amusement, it is necessary for them to change to street dress and again to uniform or work dress. As a consequence a great many of the women prefer to spend the "time off" at the car barns.

It has been stated previously that woman conductors were being employed on the surface lines in New York City and Brooklyn as rapidly as housing facilities could be provided. In order to determine just what these facilities were, an inspection was made of all the car barns, both surface and subway, where women are employed.

On February 21, 1918, accommodations had been provided for women at eight of the car barns of the New York Railways Co. and at one additional point to supplement the facilities at one of the barns. At all of these points one room had been set aside for the woman employees. For the most part these rooms were quite private, but at one barn the room was separated from the foreman's

office only by a partition extending about half way to the ceiling. At another barn the entrance to the manager's office was through the women's room. All of the rooms had one or more outside windows and were furnished either with steel or wooden lockers, straight-backed chairs, tables, and, with one exception, with wooden benches. Hot and cold water was provided in five of the rooms. In three rooms only cold water was available, and in one room it was necessary to use the facilities provided in the foreman's room. Wash basins, soap, and towels were provided at six of the rooms. Toilet accommodations for the exclusive use of women were found at all places where women were employed. Two of these were small and dark, but all were clean and well kept. Lunch rooms were provided at three barns, open in each case to both sexes. At two barns telephones had been installed to notify women of their runs or to call them for extra work. At one barn the toilet-room equipment included four shower baths.

In general it may be said that the rooms were adequate in size and were kept clean, though some were not particularly inviting, and none may be said to satisfy approved standards of comfort and convenience. A matron or janitress was in charge of each room and was expected to be in constant attendance. In addition the company employs a traveling inspector to whom the women may make complaints or suggestions. Women are forbidden to loiter in any other place than the rest rooms, except for 10 minutes just preceding the leaving of their cars. This rule is not rigidly enforced at all times, however.

A less favorable situation was found in the accommodations provided on the Brooklyn Rapid Transit surface lines, though it should be said that arrangements are being made for more adequate facilities. At one barn there was no waiting and rest room for the exclusive use of women, though a separate toilet was provided. A room was in process of being remodeled for the use of women. This room was located on the ground floor alongside the car tracks that enter the barn. A lunch room was provided at this barn and used by both men and women. The entrance to the lunch room was through the men's waiting room.

At another barn a small room was used temporarily by the women. This room was crowded at the time of inspection. The permanent room to be provided at this barn is located just off the men's club and billiard room, the latter being the entrance to the women's room. No windows are provided for this room, the only light coming from the glass top of a ventilating shaft about 5 by 5 feet.

At still another barn a women's waiting and rest room was provided in a building formerly used as a store. The room had a glass front and, being on the ground floor, was not very private. The

toilet was small and in bad condition. It had previously been kept locked and the women had the use of a toilet in the office located across the street. The room was furnished with a lounge, chairs, and tables, and was heated by a coal stove. A matron was in charge. No lunch room was provided at this barn, and the restaurants in the neighborhood were not very desirable.

One of the remaining three surface-line barns where women were employed had a waiting room located on the ground floor so close to the surface and elevated tracks that rest was almost impossible. The room was entirely apart from the rooms provided for the men, however, and though rather long and narrow—about 9 by 30 feet—was well equipped and was in charge of a matron. Apart from the noise, the most objectionable feature was the location of the toilet which was at the end of the room facing the street, the only means of ventilation being a window opening on the street.

At the other two barns of the surface lines the accommodations were more adequate. The toilets were clean and well kept. Hot and cold water, wash basins, towels, and soap were provided. At one of the rooms a matron was in charge; at the other the woman car cleaners were expected to look after the room.

On the subway-elevated lines of the Brooklyn Rapid Transit Co. women work from four stations. At one station a car standing on the elevated track is used as a crew room for both men and women. This was furnished with the same kind and number of seats as the cars in operation. The only toilet room for women was the one provided for the general public, and at the time of inspection this was in need of repair and was locked. No lunch room was provided.

At another station a car standing on the subway track is used as a crew room for both men and women. A separate toilet room, located conveniently near, was provided for the exclusive use of woman employees. The company does not maintain a lunch room but plenty of good lunch rooms are within reasonable distances from the station.

At one of the two remaining stations both men and women were crowded into the dispatcher's room two flights below the ground level. The women were expected to use the toilet provided for the general public and this was only moderately well kept. Plans have been made for a women's room at this station but it will be some time before the room is ready. At the other station the women's room was separated from the dispatcher's room only by a partition extending about half way to the ceiling. The women's room served as a passageway to the men's room and to the dispatcher's office. The room contained lockers but they were used by the men. No toilet facilities were available, the pipes being frozen. There was no wash basin and no drinking water.

The accommodations at some of the stations, as indicated in the brief description given above, can not be passed over by a mere enumeration of present shortcomings or by an outline of plans later to be carried out. To omit a condemnation of the failure to provide for at least the personal needs of woman employees in advance of their employment would be an evasion of responsibility. Whatever the demand may be for women in the street railway industry, it can not be sufficient to justify their employment under the conditions set forth.

The nature of street railway employment makes it very difficult at best to provide adequate toilet facilities. At each car barn the question was raised as to how long women were required at any one time to be away from toilet facilities provided by the company. At the barns of the New York Railways Co. it was stated that this time never exceeded 30 minutes. The same statement was made at the surface-line barns of the Brooklyn Rapid Transit Co. It was further stated at the barns of both companies that if the car crew found it necessary to stop longer than the car schedule would allow, the crew of the car just behind would take charge of the car vacated and that this would in no way be held against the time or quality of work of the employee. In practice, however, this is not so simple as it appears and several conductors complained that it was not always convenient to take care of personal needs. Obviously at those barns where toilet facilities have not been provided, or where they are not kept in usable condition, women must be subjected to much embarrassment and discomfort. Women at one barn complained that they had to depend upon private homes in the vicinity and that these had finally been closed to them. One extreme case was cited of a woman conductor who was forced to proceed to the end of the line and then use the men's toilet in a saloon. Even under the most favorable conditions, it is doubtful whether the nature of the industry makes it possible properly to safeguard women employees in this respect.

Reference has previously been made to lunch-room facilities either at the car barns or in their vicinity and what has been said of the difficulties in the way of attending properly at all times to personal needs applies as well to the securing of proper food at regular intervals. Every one has observed the familiar sight of motormen or conductors hastily gulping down cold sandwiches while operating the car. Sometimes the cold clamminess of the lunch is relieved by a cup of hot coffee. Lunch rooms in the vicinity of the car barns are often so dirty and the food so bad as to be a real menace to health. No person, male or female, whether or not an employee of the company, should be obliged to patronize these places. Because of the conditions pointed out it is imperative that clean, wholesome lunch rooms be provided by the street railway companies as a means of maintain-

ing the health and efficiency of their employees, especially their woman employees. At best many crew employees must eat hastily and at irregular hours, oftentimes while running their cars.

The question of the dress or uniform of woman street railway employees has not been mentioned previously because it is after all of but trifling significance in comparison with other problems. If anything at all were to be said, it would be in favor of the regulation of apparel of women in this and in other industries. It might be stated in passing, however, that the woman conductors employed by the New York Railways Co. wear a regulation uniform consisting of an all-wool shirt, and a coat, trousers, puttees and cap of khaki. The company furnishes these at a cost of \$5.75 to the employee. The women provide their own heavy coats and other apparel. The Brooklyn Rapid Transit Co. require their woman conductors to wear a dark skirt furnished by the employee, and a cap and heavy coat, both dark blue in color, supplied by the company at a total cost to the employee of \$16.10.

Both the New York Railways Co. and the Brooklyn Rapid Transit Co. submit evidence showing that an unusually large number of male employees have left their service. The latter company, at least, has lowered its standard of physical requirements for male applicants. Both insist that they have been unable to secure a sufficient number of suitable men to operate their cars. A considerable number of employees have been taken by the selective draft, others have left for voluntary service, still others have undoubtedly left because of higher wages in other industries. It is with reference to those who leave for higher wages in other industries that the wage scale of street railway employees is significant. Much has been made of the fact that woman employees do the same work as men, under the same conditions and at the same wages. It is denied that women are employed to fill the easy jobs or to lower the wage scale of men. However, the wage rates in most industries have advanced very greatly, while the rates of street railway employees in New York City and Brooklyn—and probably elsewhere—have advanced much less rapidly. First-year conductors are now paid 27 cents per hour on the New York Railways Co.'s lines and on the surface lines of the Brooklyn Rapid Transit Co. First-year subway conductors employed by the latter company are paid 26 cents per hour; first-year guards, 24 cents. In 1914 the rate of first-year surface-car conductors was 24 cents; of first-year subway conductors, 23 cents; of first-year subway guards, 20 cents. There is thus an advance in four years to first-year surface-car conductors of $12\frac{1}{2}$ per cent; to first-year subway conductors of 13 per cent; to first-year guards of 20 per cent. The rates for the years 1914 and 1918 and the percentage of increase are shown in the following tables:

[1066]

WAGE SCALE OF CONDUCTORS EMPLOYED BY THE NEW YORK RAILWAYS CO.¹

Period of service.	Rate per hour.		Per cent of increase in 1918 over 1914.
	1914	1918	
First year.....	\$0.24	\$0.27	12.5
Second year.....	.25	.30	20.0
Third and fourth years.....	.26	.31	19.2
Fifth year.....	.27	.31	14.8
Sixth to tenth year.....	.27	.32	18.5
Eleventh to fifteenth year.....	.27	.33	22.2
Sixteenth year and after.....	.27	.34	25.9

¹ Runs of less than 8 hours on duty were paid for as 8 hours; over 8 and under 9 hours, paid for as 9 hours; over 9 and under 10 hours, paid for as 10 hours; over 10 hours, credited to the nearest 5 minutes, but paid for in even hours, the fraction of an hour being carried to the next 7-day pay-roll period. Guaranty of \$12.25 per week to men who worked some time every day in 1914; no guaranty in 1918.

WAGE SCALE OF EMPLOYEES OF THE BROOKLYN RAPID TRANSIT CO.

*Conductors—surface lines.*¹

Period of service.	Rate per hour.		Per cent of increase in 1918 over 1914.
	1914	1918	
First year.....	\$0.24	\$0.27	12.5
Second year.....	.24	.30	25.0
Third year.....	.25	.30	20.0
Fourth year.....	.26	.31	19.2
Fifth year.....	.26	.32	23.1
Sixth year.....	.27	.32	18.5
Seventh to ninth year.....	.27	.33	22.5
Tenth year.....	.28	.33	17.9
Eleventh to fifteenth year.....	.28	.34	21.4
Sixteenth year and after.....	.28	.35	25.0

*Conductors and guards—subway lines.*²

Conductors:			
First year.....	\$0.23	\$0.26	13.0
Second year.....	.23	.27	17.4
Third year.....	.24	.28	16.3
Fourth year.....	.25	.29	16.0
Fifth year and after.....	.25	.30	20.0
Guards:			
First year.....	.20	.24	20.0
Second year.....	.21	.25	19.0
Third year.....	.22	.25½	11.4
Fourth and fifth years.....	.22½	.26	15.6
After fifth year.....	.23	.26	13.0

¹ Monday to Friday runs of less than 10 hours on duty were generally paid for as 10 hours. Saturday and Sunday runs of less than 7 hours were paid for actual time; over 7 and under 8 hours, paid for as 8; over 8 and under 9 hours, paid for as 9; over 9 and under 10 hours, paid for as 10; over 10 hours, paid for actual time. Extras who reported regularly as required were guaranteed \$1.50 per day in 1914 and \$1.75 per day in 1918.

² Approximately all conductors and guards operating regular runs of less than 6 hours were paid for 7 or 8 hours; of over 6 and under 7, paid for 8; of over 7 and under 8, paid for 9; of over 8 and under 9, paid for 9½ or 9½; of over 9, paid for 9½ or 10 hours. Reporting time of 10 minutes for employees starting from yards and 30 to 40 minutes allowed off duty on straight runs for meal periods were paid for.

It will be observed that the highest increase is 25.9 per cent. The increase in the cost of living for the same period has advanced about 44.7 per cent in New York City.¹ This, coupled with the prevailing

¹ See the results of the investigation into "Cost of living in the New York shipbuilding district," MONTHLY REVIEW, April, 1918, pp. 151, 152.

high rates of wages in other industries, is at least a contributing factor in the shortage of male labor for street railway work. Women are being paid the same wages as men in the industry. Wages have not actually been lowered by the introduction of women into the employment but quite probably wages have been prevented from rising as much as they otherwise would. The consequences may be far reaching depending upon the attitude of the women thus employed and the attitude of the company. In a measure, too, the attitude of the public and of male employees in the industry toward the introduction of women will determine the extent of the practice, the conditions of employment, and its consequences.

Public sentiment is rarely manifested except when inconvenience is threatened or occasioned. To those who use the street cars the introduction of women meant the operation of a greater number of cars and consequently better transit facilities. Attracted at first by the novelty of woman conductors and inclined somewhat sentimentally toward the idea of women doing their "bit" and releasing men for service, the general public seems now to have complacently accepted the situation with little thought of the consequences that may result and with less knowledge of the conditions under which woman conductors work. A woman conductor, though still an object of interest, no longer excites any considerable comment.

In order to ascertain the attitude of women workers in other industries toward the employment of women in the street railway industry, personal interviews were had with representatives of three women's leagues having headquarters in New York city.

The attitude of the Consumers' League of New York City as expressed by its representatives is that women should receive identical pay for identical work, but they stated that there are industries which women ought not to enter and work that they ought not to attempt. No objection was made to women being used in the operation of street cars, but the belief was expressed that there should be protective legislation regulating the conditions under which women work.

The attitude of the Women's Trade Union League, is clearly defined in its bill introduced into the New York State Legislature and now known as the "Lockwood" bill. This bill, which has the indorsement of the New York State Child Labor Committee and of the Consumers' League, provides that—

No female employee over the age of 16 years shall be required, permitted or suffered to work in or in connection with any * * * steam, elevated, subway or surface electric railways * * * more than six days or 48 hours in any one week or more than 8 hours in any one day unless for the purpose of making a shorter workday of some one day of the week; or before 7 o'clock in the morning or after 10 o'clock in the evening of any day.

An organization known as the Women's League for Equal Opportunity has recently come into being in New York City. This league, which was organized in January, 1918, has now 75 members. It asserts that women should demand "equal rights, equal opportunities, equal responsibilities, equal work, equal pay"; there should be no law that would forbid a woman from doing anything a man does; a woman should be her own judge as to whether she has the strength to do the work or the endurance to work long hours; therefore women should have the opportunity to work as street railway conductors under the same conditions that men work.

Men employees on the cars at the time women were introduced were inclined to treat it as a joke or a new fad of the women. Those who took it seriously looked upon it as a move to take away their jobs or to keep wages down. The fact that women take their turn with men and do not have the easy runs has tended to allay somewhat the fear that women would be used to drive the men out or to break down standards. The ticket agents of the Interborough Rapid Transit Elevated Lines, however, voluntarily agreed to work 12 hours per day instead of 10 if women were not put on to make up the shortage. Organized male labor, it may be said, is not opposed to the introduction of women, providing standards are maintained.

No canvass has been made of woman employees to ascertain why they responded in such large numbers when word went out that the street railway companies would use women on their cars. With some it was undoubtedly economic stress, with others novelty, with others the seizing of the opportunity to enter an industry previously closed to them; still others have been attracted by the prospect of earning more than in other occupations open to women. A few have no doubt been actuated by patriotic motives and the appeal to be of service. From the large number of applicants, the companies have been in a position to choose those most apt and physically able to remain in service. The age limits are 21 to 45, and a large percentage of applicants is rejected. A careful investigation is made by the company of the record of every applicant in order to weed out those who, for any cause, would not be desirable and permanent employees.

Comparative figures are not available to show the relative stability of women in this work. From December 4, 1917, to February 15, 1918, however, the New York Railways Co. took on 532 women, not including those who were students on the latter date. During the same period 100 women left the service of the company. The surface lines of the Brooklyn Rapid Transit Co. took on 258 woman conductors between the dates December 14, 1917, and February 15, 1918, not including those who were students on the latter date. During this period 79 left the service. The subway lines of the

Brooklyn Rapid Transit Co. took on 348 guards during the period October 24, 1917, to February 15, 1918, not including students on the latter date, and 51 left the service of the company. This indicates that in spite of the opportunity afforded the companies for careful selection, a rather high percentage of women have either found the work disappointing and have left the service or were found to be unsatisfactory and were discharged.

From the facts brought out in this report it must be evident to any thinking person that it is practically impossible to make the conditions of street railway employment even tolerably endurable to woman employees and that the operation of street cars is one of the last occupations into which women should be lured or forced. There are thousands of clerical and factory positions now filled by men which could be filled just as well or better by women. Common sense dictates that women be first placed in those positions where conditions are most favorable and most readily adaptable for their employment. If the exigencies of war make it necessary to put women into the less desirable employments such as street railway operation, the public should first oblige such industry to prepare itself for the employment of women by providing the irreducible minimum of decency and comfort before it is permitted to employ them. Moreover, any policy of employing women to lower wages or to keep wages from rising to meet increases in the cost of living will have a most detrimental effect on the labor market and will result in a lowering of standards of wages and working conditions for both male and female labor.

EFFECT OF RAILWAY NATIONALIZATION ON WAGES, HOURS, AND TRANSPORTATION RATES.

BY FLORENCE E. PARKER.

By the action of the Government in assuming control of the railroads of the country, the United States joins Great Britain, France, Russia, and Italy, all of which took over the operation of their railroads as a war measure. Of these countries, all but Great Britain already owned and operated a part of the railroad lines before the War. Aside from State operation of railways as a purely war measure, the tendency toward Government ownership of this public utility has been marked. France has owned and operated the State Railway since 1878, and in 1908 purchased the Western Railway. The other lines were operated, until the outbreak of war, under private management. Before the War Russia was gradually acquiring the private lines of that country. Italy has owned the majority of her railroads since 1884 and has operated them since 1905. Switzerland and Japan have also definitely committed themselves to Government ownership of railways, the former in 1898 and the latter in 1906.

The following table shows the comparative extent of public and private ownership of railways in specified countries, in 1913, the latest year for which figures are available:

MILEAGE OF STATE AND PRIVATE RAILWAYS IN 1913, BY COUNTRIES.

[Source: Archiv für Eisenbahnwesen, 1913, pp. 520-522. Publication of Preussischen Ministerium der öffentlichen Arbeiten.]

Country.	Number of miles of railroad.			Per cent of mileage—	
	State owned.	Privately owned.	Total.	State owned.	Privately owned.
<i>Europe.</i>					
Germany.....	36,597	2,979	39,576	92.5	7.5
Austria-Hungary.....	23,429	5,260	28,689	81.7	18.3
Great Britain.....		23,422	23,422		100.0
France.....	5,606	26,182	31,788	17.6	82.4
European Russia.....	24,549	14,076	38,625	63.6	36.4
Italy.....	9,085	1,866	10,951	83.0	17.0
Belgium.....	2,704	2,770	5,474	49.4	50.6
Luxembourg.....	122	204	326	37.4	62.6
Netherlands.....	1,113	909	2,022	55.0	45.0
Switzerland.....	1,700	1,320	3,020	56.3	43.7
Spain.....		9,532	9,532		100.0
Portugal.....	713	1,139	1,852	38.5	61.5
Denmark.....	1,217	1,125	2,342	52.0	48.0
Norway.....	1,634	286	1,920	85.1	14.9
Sweden.....	2,863	6,136	8,999	31.8	68.2
Serbia.....	634		634	100.0	
Roumania.....	2,204	133	2,337	94.3	5.7
Greece.....		999	999		100.0
Bulgaria.....	1,199		1,199	100.0	
European Turkey.....		1,238	1,238		100.0
Islands of Malta, Jersey, and Man.....		68	68		100.0
Total.....	115,369	99,644	215,013	53.7	46.3

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MILEAGE OF STATE AND PRIVATE RAILWAYS IN 1913, BY COUNTRIES—Concluded.

Country.	Number of miles of railroad.			Per cent of mileage—	
	State owned.	Privately owned.	Total.	State owned.	Privately owned.
<i>The Americas.</i>					
Canada.....	1,771	27,509	29,280	6.0	94.0
United States.....		255,180	255,180		100.0
Newfoundland.....		769	769		100.0
Mexico.....	12,344	3,487	15,831	78.0	22.0
Central America ¹	359	1,645	2,004	17.9	82.1
Greater Antilles.....	150	3,254	3,404	4.4	95.6
Lesser Antilles.....		336	336		100.0
Colombia.....	110	511	621	17.7	82.3
Venezuela.....	68	565	633	10.7	89.3
British Guiana.....		104	104		100.0
Dutch Guiana.....		27	27		100.0
Ecuador.....		651	651		100.0
Peru.....	1,052	666	1,718	61.2	38.8
Bolivia.....		1,502	1,502		100.0
Brazil.....	6,723	8,793	15,516	43.3	56.7
Paraguay.....		232	232		100.0
Uruguay.....		1,638	1,638		100.0
Chile.....	1,980	1,976	3,956	50.1	49.9
Argentina.....	3,488	17,139	20,627	16.9	83.1
Total.....	28,045	325,994	354,039	7.9	92.1
<i>Asia.</i>					
Asiatic Russia and Siberia.....	6,799	3,081	9,880	68.8	31.2
China.....		6,119	6,119		100.0
Japan (including Korea).....	4,867	1,955	6,822	71.3	28.7
British India.....	29,299	5,329	34,628	84.6	15.4
Ceylon.....		603	603		100.0
Persia.....		34	34		100.0
Asia Minor.....	912	2,484	3,396	26.9	73.1
Portuguese Indies.....		51	51		100.0
Malay States.....		857	857		100.0
Dutch Indies.....	1,536	236	1,772	86.7	13.3
Siam.....	597	105	702	85.0	15.0
Other countries.....		2,296	2,296		100.0
Total.....	44,010	23,150	67,160	65.5	34.5
<i>Africa.</i>					
Egypt (including Sudan).....	2,908	785	3,693	78.7	21.3
Algiers and Tunis.....	1,802	2,161	3,963	45.5	54.5
Belgian Congo Colonies.....		863	863		100.0
Union of South Africa:					
Cape Colony.....	3,429	545	3,974	86.3	13.7
Natal.....	1,102		1,102	100.0	
Central South Africa.....	3,311	155	3,466	95.5	4.5
Rhodesia.....		2,405	2,405		100.0
Colonies:					
German.....	2,593		2,593	100.0	
English.....	1,313	1,041	2,354	55.8	44.2
French.....		1,998	1,998		100.0
Italian.....		96	96		100.0
Portuguese.....		1,009	1,009		100.0
Total.....	16,458	11,058	27,516	59.8	40.2
<i>Australia.</i>					
New Zealand.....	2,859	29	2,888	99.0	1.0
Victoria.....	3,645	25	3,670	99.3	.7
New South Wales.....	3,928	167	4,095	95.9	4.1
South Australia.....	2,079	232	2,311	90.0	10.0
Queensland.....	4,521	294	4,815	93.9	6.1
Tasmania.....	507	194	701	72.3	27.7
Western Australia.....	2,852	576	3,428	83.2	16.8
Total.....	20,391	1,517	21,908	93.1	6.9
Grand total.....	224,273	461,363	685,636	32.7	67.3

¹ Including Guatemala, Honduras, Salvador, Nicaragua, Costa Rica, and Panama.

Eleven of the European countries for which figures are given owned all or the greater part of their railways in 1913. All of the seven States of Australia owned the greater part of their railroad lines. In the Americas, on the other hand, the railroads of 16 of the 19 geographical divisions were predominantly private-owned.

The transfer of railroad operation from private to public management in the United States brings up the question of what effect this transfer will be likely to have upon the wages received by railroad employees and the length of their working day, as well as upon the freight and passenger rates charged. These points are of present interest not only to the employees concerned but also to the traveling and shipping public. It was thought that, in this connection, the experience of other countries might throw some light on what may be expected to happen here. Accordingly, a historical study of the effect of nationalization of railways in France, Italy, Switzerland, and Japan was undertaken. The results of this study, though not satisfactory in all respects on account of the scarcity of available data, are given here.

FRANCE.

The railroad policy of France dates from 1842, when a national railway system was planned. Under the plan the State undertook the construction of earthwork, masonry, and stations, and provided one-third of the necessary land. The Departments, corresponding to our States, were to pay the other two-thirds of the land cost. Private companies were to lay the rails, maintain the permanent way, and supply and operate the rolling stock. Nine lines were laid out by expert engineers in such a way as to avoid parallel lines.¹

In 1883 the railroads were reorganized into six systems, in addition to the State system of 1,615 miles acquired in 1878.² Each of the six "great companies," as they are called, had a distinct territory in which it had a monopoly. The affairs of the companies were subject to close scrutiny by the State. By the "conventions" and "cahiers des charges" under which the companies operated they were allowed to charge up to certain maximum rates (which, as a matter of fact, were higher than the companies cared to charge), but no change could be made in the rates of any company without the approval of the Minister of Public Works.³ The minister also regulated the maximum hours which railroad employees should be allowed to work. The Government guaranteed each company a minimum dividend equal to the dividend it had formerly paid; but, on the

¹ New Encyclopedia of Social Reform, p. 1022.

² British Board of Trade. Return to House of Commons on railways (foreign countries and British possessions), 1907, p. 46.

³ Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 137.

other hand, two-thirds of the amount available for dividends, above a certain fixed profit, went to the State.¹

From the foregoing it is evident that in France the interests of railroads and State are closely connected.

On July 13, 1908, the bill authorizing the purchase of the railway lines of the Western Co. was passed. This step was taken because the Western had become so in debt to the State, through subventions granted to it, that doubt was felt as to its ability ever to repay the money owed. Thus, 3,707 miles were added to the "old" State System, as it was henceforth called, which had by this time increased to 1,844 miles.²

Following is a statement showing the length of each of the "great" railways in 1908,² when the Western was taken by the Government, and the per cent that the mileage of each is of the total mileage of the "great" lines:

	Mileage.	Per cent.
State	1,844	7.7
Western	3,707	15.4
Northern	2,342	9.7
Eastern	3,101	12.9
Orleans	4,816	20.0
Paris-Lyon-Mediterranean	5,906	24.5
Midi	2,380	9.9
Total.....	24,096	100.0

Wages.—According to a report made to the British Board of Trade in 1910, the salaries fixed by the decree of December 16, 1899, amended by the decree of July 2, 1901, for engineers ("engine drivers" in the British report), guards, firemen, and brakemen on the State lines, were as follows:

ANNUAL SALARIES OF SPECIFIED OCCUPATIONS ON FRENCH STATE RAILWAYS FIXED BY DECREE, 1901.³

Class.	Salaries fixed for each class of—			
	First-grade engineers.	Engineers.	Guards ⁴ and firemen.	Brakemen.
	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
Class No. 1.....	4,200 (\$810.60)	3,300 (\$636.90)	2,250 (\$434.25)	2,100 (\$405.30)
Class No. 2.....	3,900 (\$752.70)	3,000 (\$579.00)	2,100 (\$405.30)	1,950 (\$376.35)
Class No. 3.....	3,600 (\$694.80)	2,700 (\$521.10)	1,950 (\$376.35)	1,800 (\$347.40)
Class No. 4.....	3,300 (\$636.90)	2,400 (\$463.20)	1,800 (\$347.40)	1,650 (\$318.45)
Class No. 5.....	3,000 (\$579.00)	2,100 (\$405.30)	1,650 (\$318.45)	1,500 (\$289.50)
Class No. 6.....	2,700 (\$521.10)	1,800 (\$347.40)	1,500 (\$289.50)	1,350 (\$260.55)
Class No. 7.....			1,350 (\$260.55)	1,200 (\$231.60)

¹ New Encyclopedia of Social Reform, p. 1023.

² France. Ministère du Travail et de la Prévoyance Sociale. Annuaire Statistique, 1910, p. 162.

³ Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, pp. 204, 205.

⁴ Corresponding to "conductors" on United States railways, but with less extensive duties.

The following table shows, for the same occupations, the salaries fixed by the decree of January 22, 1910, in effect November 1, 1909:

ANNUAL SALARIES OF SPECIFIED OCCUPATIONS ON FRENCH STATE RAILWAYS,
FIXED BY DECREE, 1909.¹

Class.	Salaries fixed for each class of—			
	First-grade engineers.	Engineers.	Guards ² and firemen.	Brakemen.
	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
Class No. 1.....	5,000 (\$965.00)	3,600 (\$694.80)	2,400 (\$463.20)	2,100 (\$405.30)
Class No. 2.....	4,500 (\$868.50)	3,300 (\$636.90)	2,200 (\$424.60)	1,950 (\$376.35)
Class No. 3.....	4,000 (\$772.00)	3,000 (\$579.00)	2,000 (\$386.00)	1,800 (\$347.40)
Class No. 4.....	3,600 (\$694.80)	2,700 (\$521.10)	1,800 (\$347.40)	1,650 (\$318.45)
Class No. 5.....	3,300 (\$636.90)	2,400 (\$463.20)	1,650 (\$318.45)	1,500 (\$289.50)
Class No. 6.....	3,000 (\$579.00)	2,100 (\$405.30)	1,500 (\$289.50)	1,350 (\$260.55)
Class No. 7.....		1,800 (\$347.40)	1,350 (\$260.55)	1,200 (\$231.60)

¹ France. Budget of 1912, vol. 4, pp. 1327-1331.

² Corresponding to "conductors" on United States railways, but with less extensive duties.

³ Class was later abolished by decree of Dec. 23, 1911, and employees of the class were promoted to class No. 6. (Budget of 1913, vol. 4, pp. 808, 809.)

Comparison of the two tables above shows an increase in every class of first-grade engineers and of engineers. In the case of the latter a seventh class was created, with the salary of the former class 6. Salaries of guards and firemen were increased in the three higher classes but remained unchanged in the four lower classes. No change was made in the salaries of any of the classes of brakemen, though, as noted in the second table, employees of class 7 were promoted to class 6 when, in 1911, class 7 was abolished by order. The same order abolished all classes of employees with salaries of less than 1,200 francs (\$231.60), and thus established 1,200 francs as the minimum salary on the French State railways.

According to the statement of the director of the State railroads, the effect of the new scale of 1909 was that it brought about "an immediate improvement in the situation of employees whose salary did not correspond to that of one of the classes of the new scale." All these employees obtained, beginning with November 1, 1909, the salary provided for the class immediately above that in which they had formerly been.¹

Each year two tables of advancement are made out, one according to seniority and one according to selection on the basis of merit. Promotions are from one class to the next higher class and occur January 1 and July 1, according to the directions of the tables, and may be made on the basis of seniority or of merit, or a combination of the two. Advancements on the ground of seniority take place automatically at intervals varying with the classification group of the employee. Such promotions may be hastened, on the ground of merit, by the recommendation or "choice" of a promotion committee.²

¹ France. Budget of 1913, vol. 4, 2^e annexe à l'Ordre Général No. 525, p. 827.

² Information relative to promotions obtained from Budget of 1912, vol. 4, p. 1336, and Budget of 1913, vol. 4, p. 828.

The following table shows the basis upon which advancements are made, as established in 1912:

BASIS ESTABLISHED IN 1912 FOR PROMOTIONS ON THE FRENCH STATE RAILWAYS.

Salary classification.	Interval between promotions according to—		Proportionate weight of merit and of seniority.
	Seniority. (Maximum.)	Merit. (Minimum.)	
Over 6,000 francs.....	4 years.....	Merit entirely.
Over 4,500 francs and including 6,000 francs.....	3 years.....	Do.
Over 2,400 francs and including 4,500 francs.....	2½ years.....	1 seniority, 2 merit. 3 seniority, 3 merit.
1,650 francs and including 2,400 francs.....	do.....	
Under 1,650 francs.....	3 years.....	Do.
Group XIV.....	2 years.....	Do.

The following statement shows the average salary in each of the four most important branches of the railway administration and of all employees in 1911 computed on the basis of employees actually in service December 31, 1911:¹

Service of direction.....	\$584.73
Service of operation.....	302.81
Service of traction and material.....	385.14
Service of way and construction.....	224.07
Total employees (all branches of the service).....	312.32

All the above figures are for actual salary. In addition, the employees of all French railways are given allowances of various kinds—residence allowance, pension deposit, yearly bonus for good service, family allowance (per child under 16 years up to third child)—besides the privilege of reduced freight rates, passes on the company lines, and concessions in the matter of physician and medicine.² The railroads do not supply the uniforms.

Hours of labor.—As mentioned before, the length of the working day is regulated by decree of the Minister of Public Works. Up to the time the Western Railroad was taken over, the hours of “engineers, firemen, and employees in train service were fixed by decrees bearing date of November 4, 1899, amended May 20, 1902, and May 9, 1906. An order applying to station employees was issued on November 23, 1899, while the hours of labor of those engaged in the supervision and maintenance of way were regulated by an order of October 10, 1901.”³

From 1883 to the dates named above the hours of labor of engineers, firemen, conductors, and brakemen had been fixed at not more than 12 hours daily, including the time of their obligatory presence at duty points before and after actual employ-

¹ France. Budget of 1913, vol. 4, p. 622.

² Léon Seilhac: La Grève des Cheminots, 1910, p. 26.

³ Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, p. 124.

ment, while the hours of labor of switchmen had been fixed at 12 per day as early as 1864.¹

The decree of May 9, 1906, stipulated that the hours of actual work of engineers and firemen should not exceed 90 in any consecutive 9 days, and that those of trainmen should not exceed 140 in any consecutive 14 days, thus establishing an average working day of not over 10 hours.²

According to a decree issued April 10, 1909, so far as possible 270 hours should be the maximum number of hours for engineers and firemen and 280 hours for trainmen, over a period of 30 consecutive days.² This decree reduced the maximum hours per day of engineers and firemen from 10 to 9 and of trainmen from 10 hours to 9 hours and 20 minutes.

The decree of April 10, 1909, was canceled and superseded by that of May 28, 1914. The principal changes effected by the later decree are that the minimum interval of rest separating two periods of work is reduced from 17 to 15 hours, and that a period of rest of 30 hours must be allowed every 10 days instead of every fortnight.

The following table, the figures of which are taken from bulletins of the French labor office, shows the average number of hours actually worked on each of the "great" railways of France during the years 1907, 1910, and 1912. The figures in this table are not very satisfactory, in that the average number of hours as given is not a definite number, but a range, of hours. They were, however, the only figures for actual hours that could be obtained.

AVERAGE DAILY HOURS WORKED ON FRENCH RAILROADS, 1907, 1910, AND 1912.

Occupation and railroad.	Average number of hours worked per day.					
	1907 ³		1910 ⁴		1912 ⁵	
	<i>H. m.</i>	<i>H. m.</i>	<i>H. m.</i>	<i>H. m.</i>	<i>H. m.</i>	<i>H. m.</i>
Engineers and firemen:						
Old State Railroad.....	4 32	to 10 00	5 52	to 9 52	3 32	to 9 53
Western Railroad.....	5 08	to 9 54	3 35	to 9 49		
Northern Railroad.....	5 28	to 9 15	5 40	to 10 00	4 13	to 9 57
Eastern Railroad.....	6 27	to 10 00	5 02	to 9 56	5 05	to 9 00
Orleans Railroad.....	6 58	to 10 00	5 01	to 9 55	5 03	to 9 58
Paris-Lyon-Mediterranean Railroad.....	6 22	to 9 59	5 42	to 10 00	5 57	to 9 57
Midi Railroad.....	7 05	to 9 55	6 37	to 9 58	5 53	to 9 53
Train agents:						
Old State Railroad.....	4 28	to 10 19	2 21	to 10 05	1 54	to 10 55
Western Railroad.....	5 31	to 10 32	4 23	to 10 33		
Northern Railroad.....	4 35	to 9 52	6 11	to 9 34	6 25	to 9 51
Eastern Railroad.....	6 08	to 10 52	5 48	to 9 26	5 28	to 9 08
Orleans Railroad.....	6 01	to 10 52	6 22	to 9 41	6 27	to 10 17
Paris-Lyon-Mediterranean Railroad.....	7 18	to 10 53	6 56	to 10 13	7 25	to 10 16
Midi Railroad.....	6 32	to 10 23	6 39	to 10 13	6 54	to 9 58

¹ Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, p. 124.
² France. Bulletin de l'Office du Travail, May, 1909, p. 572.
³ France. Bulletin de l'Office du Travail, July, 1910, pp. 731, 733.
⁴ Idem. September, 1913, pp. 881, 883.
⁵ Idem. June, 1914, p. 404.

This table shows that while the average hours actually worked by engineers and firemen in 1907 did not exceed the 10-hour maximum established by the decree of 1906, on only one railroad, the Northern, was this true of trainmen. In 1912 three lines were still offenders with respect to the hours of trainmen, the State lines (the old State System and the Western Railroad) being among them. Only one line, the Eastern, conformed to the decree of April 10, 1909, establishing 9 hours as the working day for engineers and firemen and 9 hours and 20 minutes as that for trainmen.

It will be noted that both upper and lower limits of length of average actual time worked by engineers on the State lines were reduced between 1907 and 1912. On the other hand, while the lower limit on the State lines in 1912 was lower than on the other lines, the upper limit of hours of engineers and firemen was not noticeably lower than that of the private companies, and in the case of trainmen was higher.

Freight and passenger rates.—The question of French freight and passenger rates is involved. Freight rates are very complicated, and the difficulties in determining them have led to the growth of a distinct business, that of the "expediteur," the professional rate computer. In France freight is sent by "grande vitesse" and by "petite vitesse." The former, or fast freight, corresponds somewhat to our "express" service, and the latter, or slow freight, to our regular freight service.

In this study no attempt was made to secure rates for the fast freight, for the reason that it corresponds more nearly to our "express" service and not to "freight" as we understand it. In securing the rates for slow freight, only the receipts per ton-mile could be obtained from the figures available. It was thought, however, that the receipts per ton-mile would answer the present purpose, since these receipts may be taken as the average of freight rates, as "rates" are understood in this country, and since the object of this article is to show the upward or downward trend of the rates rather than the amount of the rates themselves.

Somewhat the same difficulty was encountered in ascertaining the passenger rates. French railroads carry first, second, and third class coaches, but while the official reports give the number of people who traveled in each class, they do not give the miles traveled in each class, nor the receipts from each class of travelers. Therefore, only the receipts per mile from all classes of passenger travel are given.

By the "cahier des charges," passengers are allowed free transportation of 30 kilograms (66 pounds) of baggage.¹

¹ Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 125.

The following table shows the average receipts per ton-mile and per passenger-mile for the years 1907, 1910, and 1912. For purposes of comparison, the corresponding receipts of the five private railroad companies are given.

AVERAGE RECEIPTS PER TON-MILE AND PER PASSENGER-MILE OF FRENCH RAILROADS, 1907, 1910, AND 1912, AND PER CENT OF INCREASE OR DECREASE IN 1910 AND 1912 AS COMPARED WITH 1907.

Railroad.	Average receipts per mile. ¹					
	1907		1910		1912	
	Passenger.	Freight.	Passenger.	Freight.	Passenger.	Freight.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Old State Railroad.....	0.950	1.460	0.933	1.446	0.929	1.447
Western Railroad.....	1.109	1.460	1.046	1.471	1.044	1.470
Private railroads:						
Northern.....	1.128	1.026	1.095	1.029	1.073	1.014
Eastern.....	1.028	1.126	1.002	1.069	.983	1.037
Orleans.....	1.101	1.348	1.068	1.278	1.059	1.268
Paris-Lyon-Mediterranean.....	1.242	1.221	1.204	1.213	1.201	1.195
Midi.....	1.100	1.353	1.078	1.276	1.079	1.294
All private railroads.....	1.140	1.190	1.107	1.158	1.097	1.139

Railroad.	Per cent of increase (+) or decrease (-) as compared with 1907 in—			
	1910		1912	
	Passenger.	Freight.	Passenger.	Freight.
Old State Railroad.....	-1.8	-1.0	-2.2	-0.9
Western Railroad.....	-5.7	+ .8	-5.9	+ .7
Private railroads:				
Northern.....	-2.9	+ .3	-4.9	-1.2
Eastern.....	-2.5	-5.1	-4.4	-7.9
Orleans.....	-3.0	-5.2	-3.8	-5.9
Paris-Lyon-Mediterranean.....	-3.1	-.7	-3.3	-2.1
Midi.....	-2.0	-5.7	-1.9	-4.4
All private railroads.....	-2.9	-2.7	-3.8	-4.3

¹ Figures computed from data given in *Annuaire Statistique* of the French Ministère du Travail et de la Prévoyance Sociale for the years 1909, 1912, and 1914.

As the above table shows, passenger receipts on the Western Railroad declined 5.7 per cent between 1907 and 1910. Freight receipts, however, increased 0.8 per cent in the same time. It is a question whether the decrease in passenger receipts was due to State operation of the road, inasmuch as during the same period, 1907 to 1910, the private companies reduced not only their receipts per passenger-mile 2.9 per cent, but also their freight receipts 2.7 per cent. Instead of Western passenger rates (already lower than the average passenger rate of the companies) being reduced and the freight rate (much higher than that of the companies) being increased, one would expect to find the reverse. The explanation may be that, as noted before, each com-

pany, having a monopoly in its district, does not have to compete with the others in the matter of rates.

It will be noticed that instead of the passenger rate being higher than the freight rate, as in the United States, the opposite is true. This was found to be the case in all of the countries studied.

ITALY.¹

Italy has tried various policies with regard to her railways. Originally the lines were owned and operated by private companies, but were gradually acquired by the State under whose management they continued until 1884. In that year, though ownership still remained in the Government, operation was leased for 60 years to three companies, called the Mediterranean, the Adriatic, and the Sicilian, respectively. The lease provided that the 60 years should be divided into three periods of 20 years each, and that at the end of any 20-year period the State or the companies might abrogate the contract, the railways to revert to the State in that case.²

At the end of the first period the State exercised its right and took over the operation of the railroads by the law of April 22, 1905.³ Actual management was undertaken July 1, 1905.³

Wages.—In 1903, while the railways were being operated by the three companies, the average annual salary (including supplementary allowances) of all railway employees was \$257.46.⁴ In 1908, three years after the resumption of Government operation, the average wage had risen to \$301.38,⁵ and by 1910 to \$315.38. A British official report gives the wages, for 1910, of engineers, firemen, and brakemen, as follows:

ANNUAL SALARIES OF ENGINEERS, FIREMEN, AND BRAKEMEN ON ITALIAN STATE RAILWAYS, 1910.^a

Occupation.	Annual salaries.		Years to attain maximum.	Amount of supplementary allowances per year.
	Minimum.	Maximum.		
Engineers.....	\$289.50	\$521.10	18	\$171.60
Firemen.....	173.70	318.45	23	156.60
Brakemen.....	6.41	6.62	23	118.20

^a Report to Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 271.

^b Per day.

The following table shows the average annual salaries of employees of the different branches of the railway service, 1910 and 1913. No

¹ Grateful acknowledgment is made of assistance rendered by Mr. André Bernard, of the Legislative Reference Division, Library of Congress, in obtaining information on Italy.

² Bul. 31, U. S. Bureau of Labor Statistics, November, 1900, p. 1211.

³ Report to Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 228.

⁴ Italy. Ministero di Agricoltura, Industria e Commercio. Direzione Generale della Statistica. Anuario Statistico Italiano, 1905-1907, p. 655.

⁵ Idem, 1911, p. 187.

detailed figures relative to salaries could be obtained for the years prior to 1910.

AVERAGE ANNUAL SALARIES OF EMPLOYEES ON **ITALIAN** STATE RAILWAYS, BY BRANCH OF SERVICE, 1910 AND 1913.

Branch of service.	1910. ¹			1913. ²		
	Average annual salary.	Average amount of allowances.	Total annual salary (including contributions to pension, etc.)	Average annual salary.	Average amount of allowances.	Total annual salary (including contributions to pension, etc.)
General administration.....	\$354.11	\$90.73	\$476.97	\$407.06	\$122.99	\$572.87
Movement.....	234.36	76.59	340.20	272.56	95.71	400.40
Traction.....	230.94	138.66	401.17	281.97	183.71	506.34
Rolling stock.....						
Maintenance and construction.....	157.66	26.27	197.08	258.25	117.12	402.53
All employees.....	214.26	76.37	315.38	252.09	96.43	376.81

¹ Ferrovie dello Stato. Statistica dell'Esercizio, Anno 1910, Part I, pp. 374-377.

² Idem, 1913, Part I, Vol. II, pp. 280-283.

In 1914, the latest year for which figures are available, the average wage for all employees was \$378.26.¹

Employees are not provided with their uniforms free of charge, but the railway administration contributes to the cost.²

Promotions and increases in salary are determined by the Council of Administration.³

Hours of labor.—Up to 1900 no effort was made by the Italian Government to fix definite hours for employees of railways. The law of March 20, 1865, provided merely that “the companies must fix a time schedule of service for the employees so as to allow them the necessary hours of continuous rest.”⁴ This was so vague as to have no real force.

The decree of November 7, 1902, specified definite hours:

The average duration of a day's labor of locomotive engineers and firemen, inclusive of the reserve days, days subject to orders, and days of rest, must not exceed 10 hours. The hours of labor include the time of actual service, counting from the moment when the employee is required to be present on duty until the time when he is permitted to leave, together with intervals between the arrival and departure of trains, when such intervals are not more than one and one-half hours in length. Time required to go by train to the place of duty and to return, and the time during which employees must be on their locomotives subject to orders to go to the relief of any train, are also computed as work time. * * *

Actual working time, or the time considered as such, should fall within a period of not more than 17 hours' length, which must be both preceded and followed by periods

¹ Italy. Ministero di Agricoltura, Industria e Commercio. Direzione Generale della Statistica. *Annuario Statistico Italiano*, 1915, p. 222.

² Report to Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910, p. 280.

³ Idem, p. 229.

⁴ Bul. 31, U. S. Bureau of Labor Statistics, November, 1900, p. 1216.

of unbroken rest. The maximum work time within such a period is fixed at 13 hours, unless the labor is broken by brief periods of rest, when the hours of labor may be increased to 14. * * *

For train employees, including conductors, guards, and brakemen, the hours of labor include the schedule time of the train, the time spent in preparation for work, and in turning it over, and intervals of not more than 1½ hours' length between the arrival and departure of trains. To this is added one-fourth of the time which any employee must spend at the stations on reserve and subject to call. The average duration of daily labor thus computed, including reserve service and short periods of rest during working time, is limited to 11 hours. The working time must fall within a period of not more than 17 hours' length, unless the day is broken by one or more periods of inactivity of not less than 4 hours' length, when the day may be prolonged to 19 hours. Actual labor, however, must not exceed 15 hours in any work period. * * *

The hours of labor of station employees, including track workmen, are fixed with regard to the nature of their employment. The limit named in the decree is 10 hours where the labor is difficult or taxing, and 12 hours under ordinary conditions. Where service alternates between night and day shifts, labor of the more difficult kind may be extended to 12 hours, if in addition to the hour allowed for meals there is given each week a continuous rest of 24 hours at the time of the change from night to day service, or the reverse. The time of actual labor must fall within a period of 16 or 17 hours, according as the period of unbroken rest allowed is 8 or 7 hours. The latter limit is allowed only when the employee resides in the station or at a point not more than 500 meters (1,640 feet) distant from his post of duty.

The regular term of daily service for gatekeepers is fixed at 14 hours for males and 12 hours for females. Trackmen who also serve as gatekeepers may be employed for not more than 13 hours daily, with a rest of not less than 8 hours, besides the time required for going to and from home.¹

As far as can be determined the Italian railways are still working under this law.

Freight and passenger rates.—In Italy, as in France, the freight service generally has been divided into fast and slow freight.

In 1903, while the operation of the railroads was still being carried on by private companies, the average receipts per passenger-mile were 1.303 cents and per ton-mile 1.175 cents.²

Since 1903 no figures for passenger-miles or ton-miles have been published by the Italian railway administration and therefore figures corresponding to those given above for 1903 could not be obtained. In 1910, however, a report³ dealing with Italian railways was made to the British Board of Trade giving actual rates for the various classes of freight and passenger service. The following facts are taken from that report.

Passenger rates on the Italian State railways are divided into two classes: (1) For journeys up to 150 kilometers (93.2 miles) and (2)

¹ Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, pp. 123-131.

² Italy. Direzione Generale della Statistica. *Annuario Statistico Italiano*, 1905-1907, pp. 660, 665.

³ Report to British Board of Trade on railways in Belgium, France, and Italy. [Cd. 5106.] 1910.

"differential" rates for longer distances. For the first 150 kilometers the rate is as follows:

Kind of train.	Fare per passenger per mile.		
	First class.	Second class.	Third class.
Fast.....	<i>Cents.</i> 3.964	<i>Cents.</i> 2.774	<i>Cents.</i> 1.818
Slow and mixed.....	3.603	2.522	1.623

For trains composed entirely of first-class cars the fare is 0.1392 lira per passenger per kilometer (4.32 cents per mile).

Beyond 150 kilometers the fares rise gradually.

No free baggage, except hand baggage, is allowed.

Goods may be shipped by either fast or slow freight. Fast-freight rates vary according to the kind of goods sent. Slow freight is divided into eight classes, the rates for which are as follows:

	Class 1.	Class 2.	Class 3.	Class 4.	Class 5.	Class 6.	Class 7.	Class 8.
Per ton per mile.....	<i>Cents.</i> 4.64	<i>Cents.</i> 4.00	<i>Cents.</i> 3.48	<i>Cents.</i> 2.90	<i>Cents.</i> 2.32	<i>Cents.</i> 2.03	<i>Cents.</i> 1.74	<i>Cents.</i> 1.45
Fixed terminal charge per ton.....	5.80	5.80	5.80	5.80	5.80	3.48	3.48	3.48

The following changes in rates were effected by the act of April 13, 1911, effective June, 1911:

1. Nine per cent increase in the price of all tickets 40 per cent or more under the regular rate.
2. Graded increase in regular rate, according to length of journey.
3. Nine per cent increase on all season tickets.
4. Six per cent increase on all round-trip tickets.
5. Increase of 0.0515 lira (0.99 cent) for goods of the first five classes of slow freight, and of 0.0258 (0.5 cent) on the last three classes.

In 1913 a commission was appointed to inquire into the question of rates. Its report was made in 1917, but the recommendations have not yet gone into effect.

SWITZERLAND.

Up to 1898 the railways of Switzerland were privately owned and managed. On February 29, 1898, a referendum was taken and the purchase of the chief railways authorized. The dates of purchase were as follows: Central Suisse, Nord-Est, and Union Suisse, January 1, 1901; Jura-Simplon, January 1, 1903; and St. Gothard, May 1, 1909.¹

¹ British Board of Trade. Return to House of Commons on railways (foreign countries and British possessions), 1907, p. 72.

Wages.—Immediately upon the passage of the railway-purchase bill, an investigation of the wages of employees of all the principal railway companies in Switzerland was undertaken. The following table taken from the consequent report shows salaries of specified employees in 1898, at entrance, and after each classified length of service:

AVERAGE ANNUAL SALARIES OF EMPLOYEES ON SWISS RAILWAYS IN 1898, AT ENTRANCE AND AFTER EACH SPECIFIED LENGTH OF SERVICE.

[Source: Les traitements du personnel des chemins de fer suisses, by Sourbeck.]

Occupation.	Average annual salary in 1898.							
	At entrance.	After 1 to 2 years of service.	After 3 to 5 years of service.	After 6 to 10 years of service.	After 11 to 15 years of service.	After 16 to 20 years of service.	After 21 to 25 years of service.	After 25 years of service.
Engineers.....	\$303.40	\$352.80	\$364.77	\$388.70	\$434.64	\$473.62	\$534.61	\$555.45
Conductors.....			314.98	332.35	349.52	379.05	391.23	509.52
Firemen.....	261.71	267.11	297.22	308.22	342.19	347.79	360.33	370.56
Brakemen.....	218.86	220.02	234.30	255.53	270.59	280.43	274.64	277.92
All employees.....	254.37	260.74	289.11	321.35	362.26	389.67	273.90	468.99

Shortly after the purchase of the railroads was authorized, the Swiss parliament took up the question of salaries of railroad employees and passed a law, in effect June 29, 1900, dividing the employees into nine classes for which the following minimums and maximums were established:

MINIMUM AND MAXIMUM ANNUAL SALARIES FOR EMPLOYEES ON SWISS RAILROADS ESTABLISHED BY LAW OF JUNE 29, 1900.¹

Class.	Salaries established in each class.	
	Minimum.	Maximum.
	<i>Francs.</i>	<i>Francs.</i>
Class No. 1.....	10,000 (\$1,930.00)	15,000 (\$2,895.00)
Class No. 2.....	6,000 (\$1,158.00)	10,000 (\$1,930.00)
Class No. 3.....	5,000 (\$965.00)	8,000 (\$1,544.00)
Class No. 4.....	4,000 (\$772.00)	7,000 (\$1,351.00)
Class No. 5.....	3,000 (\$579.00)	5,000 (\$965.00)
Class No. 6.....	2,400 (\$463.20)	4,800 (\$926.40)
Class No. 7.....	1,800 (\$347.40)	3,600 (\$694.80)
Class No. 8.....	1,500 (\$289.50)	2,700 (\$521.10)
Class No. 9.....	1,200 (\$231.60)	2,500 (\$482.50)

¹ H. Haguet: Le rachat des chemins de fer suisses. 1903, pp. 81, 82.

The law of June 29, 1900, also stipulated that every three years increases should be given of 500 francs (\$96.50) for the first and second classes, and of 300 francs (\$57.90) for the remaining classes.¹

A law of 1906 provided that each married employee, or unmarried employee with dependents, earning less than 4,000 francs (\$772) a

¹ H. Haguet: Le rachat des chemins de fer suisses. 1903, p. 82.

year should receive a bonus of 100 francs (\$19.30); and all other employees earning less than 4,000 francs a bonus of 50 francs (\$9.65).¹

The table below shows the average annual salaries received by employees in the different branches of the Swiss railway service (all railways) in 1898, and in the corresponding branches of service on the State railways, 1907, 1910, and 1915:

AVERAGE ANNUAL SALARIES OF EMPLOYEES ON SWISS RAILWAYS, BY BRANCH OF SERVICE, IN SPECIFIED YEARS.

Branch of service.	Average annual salary received in each specified branch of service.			
	All rail- ways, 1898. <i>a</i>	State railways.		
		1907 <i>b</i>	1910 <i>c</i>	1915 <i>d</i>
General administration.....	\$476. 17	\$501. 81	\$550. 86	\$618. 33
Maintenance and inspection of way.....	126. 79	131. 38	146. 33	146. 72
Operation and movement of trains.....	334. 47	379. 01	420. 84	478. 18
Traction and material.....	235. 82	259. 13	289. 50	317. 20
All employees.....	254. 63	291. 20	328. 25	366. 10

a Switzerland. Post- und Eisenbahn departement. Schweizerische Eisenbahn-Statistik, 1898, pp. 114-135.

b Idem. 1907, pp. 162-199.

c Idem. 1910, pp. 160-197.

d Idem. 1915, pp. 148-181.

This table shows that there was a steady increase in the salaries in all departments during the time in which acquisition of the railways was taking place, and continuing to 1915, the latest year for which reports were available.

Hours of labor.—The hours of labor on Swiss railways were regulated, until 1902, by the law of June 27, 1890. This law provided that the maximum day for all employees should not exceed 12 hours.²

This law was superseded by a new enactment of December 19, 1902, after the nationalization of the railroads took place.

This law fixes 11 hours as the limit of the actual working time of officials, employees, and laborers of all kinds, which period may be reduced by the Federal Council in appropriate cases. The work period is to be divided into two parts, as nearly equal as possible, by a rest period of at least one hour. The time of rest is to be allowed at home where possible.

The period of work must fall within 14 consecutive hours for persons employed on locomotives and trains, and within 12 consecutive hours for female gatekeepers. The duty period is fixed at 16 hours' length for other classes of employees if they lodge in company buildings near their places of work, and at 15 hours in other cases. The hours of duty of all males may be extended to 16 when required by special conditions, provided that the periods of duty do not exceed an average of 14 and 15 hours, respectively, in any 3 days.³

¹ A. N. Holcomb: First decade of the Swiss Federal railways. In *Quarterly Journal of Economics*, vol. 26: 341-362. February, 1912.

² Bul. 20, U. S. Bureau of Labor Statistics, January, 1899, p. 110.

³ Bul. 68, U. S. Bureau of Labor Statistics, January, 1907, pp. 132, 133.

It will be seen that the chief feature of the new law was the reduction of hours from 12 to 11 per day.

Passenger and freight rates.—There are several classes of passenger travel in Switzerland, but as was the case in France, no division into classes is shown in the official reports. The figures given below are therefore receipts per ton-mile and per passenger-mile:

AVERAGE RECEIPTS PER TON-MILE AND PER PASSENGER-MILE OF SWISS RAILROADS, 1898, 1910, AND 1913, AND PER CENT OF INCREASE OR DECREASE IN 1910 AND 1913 AS COMPARED WITH 1898.

Railroad.	Average receipts per mile.					
	1898 ¹		1910 ¹		1913 ²	
	Passenger.	Freight.	Passenger.	Freight.	Passenger.	Freight.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Private railroads.....	1.502	2.617	1.615	6.214	2.073	4.280
State railroads.....	.....	.....	1.164	2.465	1.144	2.447

Railroad.	Per cent of increase (+) or decrease (-) as compared with 1898 in—			
	1910		1913	
	Passenger.	Freight.	Passenger.	Freight.
Private railroads.....	+ 7.5	+145.1	+38.0	+64.4
State railroads.....	³ -22.5	³ - 5.0	³ -23.8	³ - 6.5

¹ Data from *Annuaire statistique de la Suisse*, 1912, pp. 115, 116. Bureau de statistique du Département Fédéral de l'Intérieur.

² *Idem*, 1915, pp. 106, 107.

³ Percentage computed on basis of 1898, when all railways were private.

Assuming that income per ton-mile and per passenger-mile may be taken as equivalent to averages of freight rates and passenger rates, respectively, then in Switzerland, ownership by the Confederation has accomplished a good deal in the matter of reduction of rates. From 1898 to 1910 (the year after the last of the important lines, the St. Gothard, was purchased) passenger receipts declined 22.5 per cent and by 1913 had declined 23.8 per cent. During the same time passenger rates on the private lines had risen 7.5 and 38 per cent. On the State lines freight receipts per ton-mile also declined 5 and 6.5 per cent; on the private lines these rates increased 145.1 per cent between 1898 and 1910, and in 1913 were still 64.4 per cent higher than in 1898.

It is evident that there is a great disproportion between the rates of the private and those of the State lines.

JAPAN.

Japan is unique in its railway development in that the State entered the railway field before private capital. The first line, running between Tokio and Yokohama, was laid in 1870.¹ Once a beginning was made, however, private enterprise outstripped the State, and in 1906 the State owned only 1,531 miles of railroad as compared with 3,251 miles owned by private companies.² The bill for Federal purchase of the 17 principal privately owned lines passed March, 1906, and provided that the acquisition was to take place between 1906 and 1915. As a matter of fact the transference to public management was practically complete by March, 1908. During the financial year 1906-7³ six private railways were purchased, and by the end of March, 1908, the Government owned and operated the lines of the 17 companies,⁴ 90.9 per cent of all the railways of the country.⁵

Wages.—The wages of certain employees on Government railways, as reported to the State Department in 1910, by an American consul, were as follows:

ANNUAL SALARIES OF EMPLOYEES ON JAPANESE STATE RAILWAYS.

[U. S. Department of State Doc. No. 477, Wages and prices abroad, 1910, pp. 76 and 85.]

Grade.	Salaries of engineers.		Salaries of assistant engineers and clerks (including station masters).
	Throne appointees.	Cabinet appointees.	
Special.....	\$2,241.00	\$1,494.00	\$597.60
First.....	1,992.00	1,245.00	448.20
Second.....	1,743.00	1,095.60	358.56
Third.....	1,494.00	996.00	298.80
Fourth.....		896.40	268.92
Fifth.....		796.80	239.04
Sixth.....		697.20	209.16
Seventh.....		597.60	179.28
Eighth.....		498.00	149.40
Ninth.....		448.20	119.52
Tenth.....		398.40	89.64

The consul, reporting the above in 1910, stated that a bill was passed on March 10, 1910, providing for a general increase of 25 per cent in the wages of railroad employees, to take effect on and after April 1, 1910.

The following table shows the average amount received per month by certain employees in 1907-8 and 1910-11:

¹ Japan. Bureau of Commerce and Industry. General view of commerce and industry of the Empire of Japan, 1913, p. 41.

² The "Japan Gazette" Japan Year Book, 1914, p. 91.

³ The Japanese fiscal year ends Mar. 31.

⁴ Japan. Bureau of Commerce and Industry. General view of commerce and industry of the Empire of Japan, 1916, p. 3.

⁵ The Seventeenth Financial and Economic Journal of Japan, 1917, p. 148.

AVERAGE MONTHLY SALARIES OF CERTAIN EMPLOYEES ON JAPANESE STATE RAILWAYS, 1907-8 AND 1910-11.

Occupation.	Average monthly salary per employee in—	
	1907-8 ¹	1910-11 ²
Engineers, chokunin ³ rank.....	\$133.46	\$161.47
Engineers, sonin ⁴ rank.....	53.65	67.98
Assistant engineers, hannin ⁵ rank.....	21.06	26.32
Assistant engineers.....	10.73	11.60
Brakemen.....	5.90	6.24
Assistant firemen.....	5.75	.....
Guards.....	.....	7.53

¹ Report of Imperial Government Railways of Japan for year ended Mar. 31, 1908, appendix Table XL.

² Idem, 1911, p. 129.

³ Denotes appointment by the Emperor.

⁴ Denotes appointment made with the approval of the Emperor.

⁵ Denotes appointment at the discretion of the chief official.

The figures in the above table are not, of course, comparable with the figures reported by the consul for 1910.

In the table following are shown the average monthly salaries of the various grades of employees on the Japanese State railways in 1905-6 (the year the railway-purchase bill was passed), in 1907-8 (the year in which the purchase of the roads was practically completed), as well as those for the years 1910-11, 1911-12, and 1915-16.

AVERAGE MONTHLY SALARIES OF EMPLOYEES OF EACH GRADE ON JAPANESE GOVERNMENT RAILWAYS IN SPECIFIED YEARS.¹

Grade.	Average monthly salaries of employees of each grade in—				
	1905-6	1907-8	1910-11	1911-12	1915-16
Officials, chokunin rank.....	\$145.25	\$135.38	\$164.39	\$165.78	\$166.83
Officials, sonin rank.....	64.72	52.12	66.76	68.10	75.99
Clerks, hannin rank.....	16.73	15.90	21.22	21.58	21.86
Assistant engineers, hannin rank.....	21.66	21.05	26.32	26.07	26.09
Employees, koin class.....	7.57	9.24	9.77	9.68	10.08
Employees, yonin class.....	6.67	6.89	7.31	6.94	7.92
Total.....	7.75	8.29	9.25	9.34	9.74

¹ Report of Imperial Government Railways of Japan for year ending Mar. 31, 1916, p. 89.

The foregoing table shows that upon the inauguration of State ownership of the Japanese railways, in 1907-8, the average monthly salary of employees of the four higher grades fell, though that of all employees increased. This was due to the fact that the salary of employees of the koin and yonin classes, who comprised about 92 per cent of the total number of employees, increased. During the period 1907 to 1910 the average salary of all classes of employees increased, the increases ranging from 5.7 per cent for employees of the koin class to 33.5 per cent for clerks of hannin rank. Considering all classes together the average increase was 11.6 per cent. It is

evident that the 25 per cent increase spoken of by the consul was not evenly distributed among all grades of employees.

Hours of labor.—Japan has never officially regulated the length of the railway employees' working-day.¹

Freight and passenger rates.—Following are the average receipts per passenger-mile (all classes), and per ton-mile:

AVERAGE RECEIPTS PER PASSENGER-MILE AND PER TON-MILE, OF JAPANESE RAILROADS, 1905-6, 1907-8, AND 1911-12, AND PER CENT OF INCREASE OR DECREASE IN 1907-8 AND 1911-12 AS COMPARED WITH 1905-6.^a

Railroad.	Average receipts per mile.					
	1905-6		1907-8		1911-12	
	Passenger.	Freight.	Passenger.	Freight.	Passenger.	Freight.
State lines.....	<i>Cents.</i> 0.709	<i>Cents.</i> 0.999	<i>Cents.</i> 0.741	<i>Cents.</i> 0.866	<i>Cents.</i> 0.689	<i>Cents.</i> 0.826
Private companies.....	.659	.898	.773	1.065	.775	1.230

Railroad.	Per cent of increase (+) or decrease (-) as compared with 1905-6 in—			
	1907-8		1911-12	
	Passenger.	Freight.	Passenger.	Freight.
State lines.....	+ 4.5	-13.3	- 2.8	-20.9
Private companies.....	+17.3	+18.6	+17.6	+37.0

^a Data from Sixteenth and Seventeenth Financial and Economic Annuals of Japan, 1916 and 1917.

As the table shows, in 1907-8 there was an increase over 1905-6 of 4.5 per cent in the average receipts per passenger-mile on the State lines. By 1911-12, however, these receipts were 2.8 per cent less than in 1905-6. Between 1905-6 and 1907-8 freight rates on the State lines fell 13.3 per cent, and between 1905-6 and 1911-12, 20.9 per cent. It is interesting to note that while the rates of the State railroads were decreasing, those of the private companies were increasing.

GREAT BRITAIN.²

Less than 24 hours after formal declaration of war between Great Britain and Germany, August 4, 1914, the Government had taken over the control of the entire railway system and had placed it in the hands of the Central Railway Executive Committee.

In reading the following account of changes in wages and rates which followed upon the Government assumption of control, it

¹ Information from Japanese Embassy.

² Great Britain has been included in this study because Government control of the railways was undertaken there, as in the United States, as a war measure, and likewise, as here, ownership remains in the original companies, the Government simply directing the operation.

should be borne in mind that these changes are principally due to the War and can not^e be pointed to as results of Government operation.

*Wages.*¹—Up to the outbreak of the War no general increase in the wages of railway employees had taken place since 1911, though the unions had been striving for one.

The following table shows the average weekly earnings per employee (exclusive of clerical staff, salaried officers, and casual employees) on 27 of the principal railways, in the first week in December of the years 1911 to 1913:

AVERAGE WEEKLY EARNINGS OF RAILWAY EMPLOYEES IN GREAT BRITAIN 1911 TO 1913.^a

Year.	Average weekly earnings per employee.	
	England and Wales.	Scotland.
1911.....	<i>s. d.</i> 27 4½ (\$6.66)	<i>s. d.</i> 23 5½ (\$5.71)
1912.....	28 0 (6.81)	24 4 (5.92)
1913.....	28 6½ (6.95)	25 1½ (6.12)

^a Great Britain, Board of Trade. Report on rates of wages and hours of labor in the United Kingdom in 1913. [Cd. 7635.] p. 30.

Since the outbreak of the War various "war bonuses" have been granted because of the advance in cost of living due to the War. With the exception of the first bonus, one-fourth of the cost of which was borne by the railways, these bonuses have been guaranteed by the Government. The following table shows the amount of each separate bonus granted, together with the time the increases went into effect and the employees affected.

¹ Except as otherwise noted, information in regard to wages and rates in Great Britain was secured from War administration of the railways in the United States and Great Britain, by Frank Haig Dixon and Julius H. Parmelee. Carnegie Endowment for International Peace.

TIME OF GRANTING BONUSES, AMOUNT OF BONUS, AND EMPLOYEES AFFECTED,
GREAT BRITAIN.

Year and month.	Amount of bonus (per week).		Employees affected.
	s.	d.	
(1).....	2	6 (\$0.61)	Men.
June, 1915.....	1	6 (.37)	Boys.
October, 1915.....	2	6 (.61)	Men.
	1	0 (.24)	Boys.
September, 1916.....	5	0 (1.22)	Men.
	2	6 (.61)	Boys.
	3	0 (.73)	Women.
	1	6 (.37)	Girls.
April, 1917.....	5	0 (1.22)	Men.
	2	6 (.61)	Boys.
	2	6 (.61)	Women.
	1	3 (.30)	Girls.
November, 1917.....	6	0 (1.46)	Men.
	3	0 (.73)	Boys.
	3	0 (.73)	Women.
	1	6 (.37)	Girls.
Total:			
Men.....	21	0 (5.11)	
Boys.....	10	6 (2.56)	
Women.....	8	6 (2.07)	
Girls.....	4	3 (1.03)	

¹ Date not reported.² Average; bonus was 3s. for men receiving 30s. or more per week, 2s. for men receiving less than 30s. per week.

The shopworkers were given bonuses similar to those noted in the table. The first bonus was given to them in February, 1915. This bonus, which amounted to 3s. (73 cents) a week, was later increased to 4s. (97 cents) for timeworkers and 10 per cent for pieceworkers. In September, 1916, the shopworkers were given an additional bonus of 5s. (\$1.22) per week, in February, 1917, 5s. more, and in August, 1917, still another increase of 3s. to men, and 1s. 6d. (37 cents) to boys. The same increases were added to the weekly earnings of pieceworkers.

On July 1, 1916, salaried employees receiving an annual salary of from £200 to £213 (\$973.30 to \$1,036.56) were given a bonus sufficient to bring the annual income up to £213. These bonuses were doubled in September, 1916.

Until April, 1917, the bonuses did not apply in the computation of overtime and Sunday work which was paid for at the old rate.

Passenger and freight rates.—In 1911 as the result of a threatened general strike of railway workers, wages were advanced. To compensate the railways for this increase in expenses a law was passed early in 1913 permitting the roads to raise their rates approximately 4 per cent. The advances did not, however, go into effect until a few months before the War. Freight rates have increased very little since the railways have been controlled by the Government. Passenger rates have been increased several times and on January 1, 1917, were advanced 50 per cent. The normal passenger scale was as fol-

lows: First-class, $1\frac{1}{2}$ d. (3.04 cents) to 2d. (4.06 cents) per mile; second class $1\frac{1}{4}$ d. (2.54 cents) per mile; third class 1d. (2.03 cents) per mile.

SUMMARY.¹

Wages.—The data secured in this study show that in each of the four countries studied¹ an increase of wages has taken place either coincident with or shortly after State purchase. In France an increase was given in the wages of employees of the Western Railroad when that line was taken over, but since no data could be secured showing their average wage before 1908, it is impossible to calculate just what the per cent of increase was. In Italy, the increase, from 1903 to 1908, amounted to 17 per cent; in Switzerland, from 1898 to 1910, to 28.9 per cent; and in Japan, from 1905-6 to 1907-8, to 7 per cent. It can not be asserted that these increases of wages occurred solely in consequence of the ownership of the railways by the State, since many factors may enter into the question of wages. In France, for instance, a general strike occurred on the railways in 1910. This may or may not have had an effect in bringing about the increase.

Hours of labor.—It is difficult to say just what effect Government ownership has had on the length of the working-day of railway employees. France was the only country for which information as to actual hours worked could be secured. It is known, however, that France reduced the maximum working-day from 10 to about 9 hours, and Switzerland from 12 to 11 hours. No evidence was found of reduction of hours in Italy since the first definite pronouncement on the subject in 1902, three years before resumption of Government operation. Japan, as has been said, has no official limitation of working hours on railways.

Passenger and freight rates.—In France, in the period 1907 to 1910, average receipts per passenger-mile decreased 5.7 per cent, and per ton-mile increased 0.8 per cent. Government ownership in Switzerland resulted in a decrease, during 1898 to 1910, of receipts for both passengers and freight, the decreases being 22.5 and 5 per cent, respectively. In Japan, during 1905-6 to 1907-8, receipts per passenger-mile increased 4.5 per cent and those per ton-mile decreased 13.3 per cent.

¹ Great Britain is not included in the summary discussion for the reason that, as explained before, changes in wages, hours, and rates in that country, consequent to Government control, are strictly war changes.

FOOD SITUATION IN GERMANY NOVEMBER 1, 1917, TO JANUARY 31, 1918.

COMPILED AND TRANSLATED BY ALFRED MAYLANDER.

A detailed survey of the food situation in central European belligerent countries, compiled from articles in the daily press of those countries, has recently been published by the Bureau of Labor Statistics as Bulletin No. 242. This survey covered the period January 1 to October 31, 1917. In the following pages this survey is continued with respect to Germany, in more summarized form, for the period November 1, 1917, to January 31, 1918.

THE MEMORIAL OF THE NEUKÖLLN CITY COUNCIL.

The outstanding feature of the food situation in Germany during the three months under review in this article was the sensational case of the Neukölln memorial which demonstrates the utter breakdown of the economic system of the imperial food authorities. On December 3, 1917, the municipal administration of that Berlin suburb, reduced to desperation by the impending breakdown of its organization for the food supply, addressed to the War Food Bureau a lengthy memorial reviewing the whole situation; and on December 13 a report on the matter was presented to the city council. The municipal administration had intended to publish the memorial and to send copies of it to other municipalities; but von Waldow, the State secretary of the War Food Bureau, alarmed at the very frank exposure of the state of affairs, intervened with a prohibition to publish. The Berlin Socialist daily *Vorwärts*, however, by some means procured a copy of the memorial, and published it in full, with a defiant editorial note to the effect that in such cases to keep silent is to be an accessory after the fact. The memorial is too long to be reproduced in full, but in view of its importance some parts of it are given here:¹

The growing popular discontent, particularly among munition workers, leads us to call attention to conditions in the food supply which demand speedy remedial action, because, in our opinion, they are the cause of the discontent observable everywhere.

Of the 1,300 or so establishments employed on war work in our town some 350 employ over 50 workmen and 6 over 1,000. Our large establishments, like Krupp's and other establishments, have bought foodstuffs themselves and sold them to their employees in addition to the foodstuffs rationed to the general population. As a rule, the armament firms, in order to get food supplies, have paid prices in excess of the maxima. Some firms have sold to their workmen at the legal retail prices, paying the difference themselves; others have sold at cost price, thus in some cases exceeding the maximum prices. Hence the smaller establishments have asked the communes to secure to their workers advantages similar to those enjoyed by employees in the larger estab-

¹ *Vorwärts*. Berlin, Dec. 16, 1917.

lishments, since they themselves were unable to buy on a large enough scale. The military inspectors supported this demand, and in order to prevent discontent we were compelled to buy food in the open market for distribution to the smaller establishments, even at prices exceeding the maximum prices. Most of the foodstuffs bought by us were from abroad. In order to keep within the law we repeatedly asked for import permits, but in vain. We did at least succeed in effecting a certain equalization between the workers in large and in small establishments and prevented, at all events, general unrest among the working classes, so that till the beginning of October matters were fairly satisfactory; but since then great discontent has manifested itself, because the large firms, owing to the growing scarcity, have bought up all obtainable foodstuffs. Many urban communes have done likewise, and those which have tried, at least in the main, to keep the law are faced by insoluble problems in the future. These conditions are due to the utter breakdown of the economic system of the imperial food authorities, as we will show in detail by single foodstuffs:

Grain and flour.—The grain and flour supply is admittedly based on a sound foundation, but a weak spot in the organization is the permission to certain estates to trade freely in seeds. The result is that large quantities of grain find their way into the market through the seed farms. We frequently receive from speculators offers of seeds for use as food without a seed voucher. Sometimes as much as 3,000 centners (3,306.9 hundredweight) or over are offered, prices up to 200 marks¹ per centner² (\$43.18 per hundredweight) being asked for wheat, oats, and barley. These are not wild offers; delivery is guaranteed.

Pulse.—Seed peas, beans, horse beans, and vetch have been offered us at prices ranging from 140 to 260 marks per centner (\$30.23 to \$56.14 per hundredweight) without a seed voucher. When we declined them they were bought by another commune of Greater Berlin. The quantity amounted to 3,100 centners (3,417.1 hundredweight).

Potatoes.—The potato supply is also systematically organized, but a weak spot is left in so far as potatoes not requisitioned for the cities are left for free trade, and are bought at considerably above the maximum prices. Rhenish industrial towns have now bought potatoes in such quantities that they can supply more than the legal ration; and they have done this by paying prices of 6.7 marks per centner (86.8 cents per bushel) instead of the legal producers' price, plus speed bonus, of 5.5 marks (71.3 cents per bushel), and by allowing the growers for storage 50 pfennigs per centner per month (6.5 cents per bushel). They have also supplied coal to the delivering growers' unions. Now importing unions have been advised by the Imperial Potato Office to secure by delivery contracts potatoes not obtained on December 15. If they wish to get potatoes by this method, communes will have to make similar offers; otherwise the contracts will not be carried out. But how, then, are potatoes to be sold at the prescribed retail price without enormous subsidies from the municipal funds?

Vegetables and fruit.—The permission accorded to large firms, etc., to conclude cultivation and delivery contracts for vegetables has had the effect of creating a very unwelcome competition with the communes, for to these firms, with their enormous profits, money was no object, and even in making contracts they considerably exceeded the maximum prices. Moreover, the ammonia which most of them were able to offer to growers was an additional assistance in making contracts.

But even among communes themselves there was a wild competition, leading to disregard of the regulation; and only those communes which had ammonia to dispose of were able to obtain considerable quantities of vegetables by contracts. One Berlin commune with 900 centners (992.07 hundredweight) of ammonia obtained enough vegetables to supply them to families for winter storage by the half centner, whereas in other communes there is now a dearth of vegetables.

¹ \$47.60.

² A centner of wheat is 1.837 bushels; of oats is 3.445 bushels; and of barley is 2.296 bushels.

About the middle of September matters became intolerable. Since in addition to the vegetables secured by contracts others could be sold in the open market at exorbitant prices, growers were tempted to deliver, not to holders of their contracts, but to the open market. Hence, of our total contracted quantity of 260,000 centners (286,598 hundredweight) in autumn vegetables alone, we received only 5,000 to 10,000 centners (5,511.5 to 11,023 hundredweight) and were compelled to buy in the open market against the competition of the big industrial firms and at prices above the maxima, prices rising from day to day, particularly as live-stock keepers were buying up vegetables to give to their cattle, owing to the fodder shortage.

Even official bodies were unwilling to let us have vegetables at the fixed prices, but demanded in addition allowances of all kinds, sometimes 50 per cent above the maxima. Finally, at the present time both State and imperial offices are selling vegetables to their staff at prices much above the maxima.

We inclose a note of our purchases, forced upon us by prevailing conditions, at prices above the maxima; only in this way were we able to satisfy the enormous demand for vegetables, and so in some measure to stem the unrest, which was largely due to discontent at the ample supply of vegetables in the other commune referred to above. Our food expert represented to the authorities that in order to redress inequalities we ought to receive a larger supply of other foods, but this caused opposition in other communes, and the authorities could give us no assurance.

Milk.—Greater Berlin is receiving even smaller supplies of milk. This is due mainly to a fodder shortage; but the Greater Berlin Fat Office has had recourse to a bonus system, which has already had a measure of success.

Cheese.—Prices are fixed imperially for all varieties, but nobody regards them. In butter shops cheese is not to be had at these prices, but in all restaurants cheese is obtainable, because restaurant keepers are not bound by the prices. We are daily offered (and have had to accept the offers in order to supply small industrial establishments) all kinds of cheese at prices at least 100 per cent above the maximum prices.

Meat supply.—The distribution is determined by the quantities of animals assigned for slaughter to the Livestock Dealers' Union. At times, especially last September, the deliveries were irregular; those of hogs have considerably declined, from a weekly average of 450 to at most 50, and in September no pork could be distributed at all. The increased prices for young pigs, intended to cause more slaughtering, have not affected the direct regular supply. We, like other towns, bought some 5,000 young pigs in September and October, when the country people were getting rid of them in large quantities, but we had to pay 1.9 marks per pfund (41 cents per pound) instead of the legal 1.6 marks (35.1 cents per pound). Although the trade in live stock is confined to the organizations created for the purpose, pigs can not be had at the maxima, but they can be bought by the thousands from the same organizations when higher prices are offered; and a similar state of things exists as regards cattle. Large firms buy animals for their employees at exorbitant prices; and naturally workers not favored are discontented.

Meat preparations, fat, and butter.—The Hindenburg Fund for the Fat Supply of Workers in War Industries, from which so much was hoped, was so utter a failure, so far as we are concerned, that we had combined the first and second consignments in order to distribute 225 grams (7.9 ounces) per capita. As Greater Berlin firms received considerably larger quantities we were compelled by the impertunity of the munitions industry to buy meat preparations, fat, and butter from abroad through the agency of private dealers, at prices ranging from 8 to 15 marks per $\frac{1}{2}$ kilogram (\$1.73 to \$3.24 per pound); but for the last three weeks we have had to leave the market to the big industrial firms, which pay prices quite beyond the reach of the workers.

Fodder.—As regards oats, the system is in general satisfactory, though there must be a gap somewhere, since in illicit trade oats are sold at 100 to 140 marks per centner

(\$6.91 to \$9.67 per bushel) instead of the legal 20 marks (\$1.38 per bushel). Conditions are intolerable as regards hay, straw, and chaff. When the greater part of the fodder harvest was requisitioned for army needs, most districts were closed, and the towns received export permits for particular districts to cover the small quantities allowed them. As soon as a few districts were opened again free trade was possible for stocks not requisitioned; and as the quantity was small there was fierce competition, and the maximum prices went to the winds. Neukölln bought at the following prices per centner: Hay 9.75 to 12.2 marks (\$42.10 to \$52.68 per ton), instead of the legal maximum, 3.4 marks (\$14.68 per ton); straw 6 marks (\$25.91 per ton), instead of the legal maximum, 4 to 4.5 marks (\$17.27 or \$19.43 per ton); chaff 7 marks (\$30.22 per ton), instead of the legal maximum, 5 marks (\$21.59 per ton). And even so it was not possible to obtain the whole quantity assigned, since dealers preferred to sell to private customers, who paid still higher prices.

The net result is a competition between industry and municipalities, which is taken full advantage of by profiteers, who know that their victims will not reveal their own illegal acts. In a meeting held by the State distribution office for Greater Berlin it was established that all the Greater Berlin communes there represented had exceeded the maximum prices for vegetables. Communes which abstain from such illegalities incur the risk of finding their own citizens worse provided for than others.

We conclude that these conditions urgently demand redress. Above all, the system of delivery contracts is quite unfitted to produce a uniform distribution, and illicit trade can be prevented only if all foodstuffs are officially requisitioned and individual foodstuffs not subjected to a mixed system of free trade and official control.

It is well known that privations can be borne fairly easily when we know that others are sharing them, but inequalities lead to bitter indignation. Uniform distribution is what the time demands. Matters can only be put right by requisitioning all foodstuffs at the place of production, which should be done not merely, as in war companies, by persons interested, but by impartial supervisory officials. We therefore recommend the following measures:

(1) The producing centers, delivery unions, distributing centers, etc., to be subjected to a supervisory commission of six members, of whom at least four must belong to consuming circles. For the delivery of agricultural products the four consumers' representatives must be taken from the districts of the importing unions; of industrial products, from the trade-unions of the industry in question. The commission shall be attached as an advisory and controlling authority in rural delivering districts to the Landrat [highest administrative official in rural districts]; in industrial producing districts, to the chairman of the competent distributing authority for the war company. Its decisions must be carried out by the head of the delivering, producing, or distributing authority, with reservation to him of the right of objection. In case of objection the War Food Bureau is to decide.

(2) All foodstuffs to be requisitioned and left to the control of the importing authorities. Seeds to be controlled by the supervisory commission and distributed according to agricultural requirements.

(3) In larger residential and industrial areas the food distribution must be in uniform quantities and according to a uniform system. Hence uniform food distributing offices must be appointed for these districts.

We express the hope that the War Food Bureau, in view of the intolerable conditions, which must certainly lead to a catastrophe, will speedily take suitable measures to eliminate the causes of discontent. The municipal bodies have unanimously declared that it is their first duty to supply the populace with such food as is procurable, and that they are determined to pursue this end by the legal¹ methods already adopted,

¹ Illegal is evidently meant.

unless the War Food Bureau speedily provides a remedy, even though this should mean the economic ruin of the municipalities through the payment of usurious prices which they can not charge upon the poorer classes.

We ask you to admit a committee of six appointed by us to a discussion of existing conditions.

The Vorwärts, which, ever since its publication of the above memorial, has devoted special attention to the subject of illegal trading and profiteering, quoting from a report of a meeting in the Imperial Fruit and Vegetable Office held since the Neukölln revelations and attended by representatives of the Greater Berlin food committees, the Usury Office, and the police authorities, states ¹ that the food expert of a western Berlin suburb described the memorial as very calm and true to facts, and said he had experienced much worse things lately.

In reply to a demand for an alteration in the system, the chairman of the meeting, a Regierungsrat, stated that no alteration would be made. At the conclusion of his remarks he said that the observance of maximum prices at present could not be thought of. The communes were right to exceed them until an end was put to the competition of the large industrial establishments. But this proceeding must go on only for a definite period, which would be made known later. After that there must be no more exceeding of the maximum prices. Vorwärts comments:

What a situation for the public prosecutor. The legal authorities have announced their intention of prosecuting all offenses against maximum price legislation, and meanwhile the imperial authorities, with the express consent of the Usury Office and of the police authorities, decide that for the time being maximum prices may be exceeded. Not only so, but the presiding Regierungsrat states that nothing will be altered in the system, and stopped all debate on this point. The nation will certainly conclude that there is no serious desire to improve matters. Who can doubt that offenses will still go on after the certain period has elapsed? The people that ask for bread are being played with. When the Reichstag meets shortly, let it see if a solid structure can be erected out of the ruins of the present food policy. But certainly things can no longer go on without thoroughly drastic measures.

Meanwhile the authorities continue on their ill-advised course of bullying the municipalities without (so far as can be seen) taking any serious steps either to remove the causes of the prevailing abuses or to interfere with the activities of the great armament firms. Vorwärts learns ² that the public prosecutor has brought an action against Mayor Kaiser and Municipal Councillor Mier, of Neukölln, for exceeding maximum prices, and against Municipal Councillor Adam for evasion of the seed-corn order. Vorwärts says:

It appears that the Neukölln municipal administration will be made responsible even for transgressions not actually committed. The municipal authorities recently purchased a number of carloads of white cabbage at a price above the maximum, viz.,

¹ Vorwärts. Berlin, Jan. 13, 1918.

² Idem, Jan. 9, 1918.

11 marks per centner (\$2.38 per hundredweight). However, Neukölln never got this cabbage, the firm of Krupp paying 17 marks per centner (\$3.67 per hundredweight), and thus acquiring the goods. Nothing is so far known of any action against Krupp. Perhaps it will be the irony of fate that Neukölln will be punished, while Krupp von Bohlen will be given a distinction for showing such solicitude for his workers. Even the War Department has tried to profit by such transactions. We learn that the War Department quite recently was offered ham and sausages at 14 marks per half kilogram (\$3.02 per pound), which were bought up at once.

If the public prosecutor means to take proceedings against all authorities and big firms guilty of exceeding the maximum prices, a great number of judicial officials will have to be released from active military service to cope with the mass of work. Or are the people of Neukölln only to be treated as transgressors of the law and the profiteers to go unscathed?

THE GENERAL FOOD SITUATION.

During the month of January of the present year, though the German press contains a good many items relating to the food supply, there was no change in the general situation. The most important review of the food situation noticed by the writer is a speech made to the Saxon Agricultural Council by Undersecretary of State von Braun.¹

He admitted failures in the present system, but said that it could not be radically altered. To restore free trade in foodstuffs was impossible, for it would run the prices up so high that many people, especially those of the middle classes and those with a fixed income, would not be able to pay them. The proposal to grant State aid to such was impracticable, for the cost would run into billions. Therefore maximum prices and public control of foodstuffs must continue.

The speaker stated that the new proposals for putting the control into the hand of agricultural organizations could not in any case be put into operation before the next harvest year. (According to the Dresden correspondent of the *Münchner Neueste Nachrichten*, the Saxon Government has the gravest doubts about the new proposals, deeming them in many cases impracticable.)

As to present conditions he said:

We shall get through all right with the bread grain, thanks to the early threshing arrangements which must be repeated in 1918. Whether there will again be a temporary reduction of the bread ration is not yet clear; it would then again have to be replaced by increased rations of other foodstuffs. The manufacture of barley and oat preparations must unfortunately be restricted, because the harvest was poor and there are insuperable difficulties in the way of a sufficient supply of raw materials and coal to the factories. The potato supply for the winter is assured; there are also sufficient stocks to maintain till April the present ration and to provide material to eke out the bread supply. The supply of milk, butter, and fat is not very hopeful. The present meat ration can be maintained, at any rate for the present.

This, according to his view, is not a very cheering utterance, and one may infer from it that there is at least considerable likelihood of

¹ *Münchner Neueste Nachrichten*. Munich, Jan. 29, 1918. Morning edition.

a reduction of the bread ration in the spring, and that a reduction of the potato ration after April and of the meat ration at almost any time is by no means improbable. The cumulative weight of evidence contained in articles in the German press published during January goes to indicate a continued deterioration both in the actual state and in the future prospects of the German food supply. The months from March to June are always the most trying, and, failing help from the Ukraine or elsewhere, the coming spring will almost certainly bring the severest privations which Germany has yet had to endure.

CROP PROSPECTS.

The *Frankfurter Zeitung*¹ contains the following crop report:

The warm weather has thawed the snow in the fields almost everywhere, and in many parts of Germany has so far softened the ground that plowing for the spring cultivation has again become possible. According to the reports to hand, the appearance of the autumn crops, especially of the rye fields, is very good. The first half of the winter, therefore, seems to have passed without deterioration, though the most dangerous months are undoubtedly still to come. There is not yet very much trace in the consignments of bread grain of any effect of the warning to farmers mentioned in earlier reports, and repeated in the meantime, that on March 1 the prices of grain would be lowered. On the other hand the offer of seed grain has undoubtedly improved a little, and, indeed, as the season advances rather better supplies seem to be forthcoming of several kinds of stocks.

FOOD RATIONS.

Food rations are generally fixed by the Imperial War Food Bureau, on the basis of the estimated supply, for the entire Empire. In practice, however, the food rations apportioned to the civilian population of the individual localities vary greatly from locality to locality and are dependent on the actual supply on hand.

A table compiled from the local German press showing the average weekly rations of principal foodstuffs in 24 representative towns during the four weeks ending August 26, 1917, has been given in Bulletin No. 242 (pp. 63, 64) of this bureau. Like data have been compiled for the four weeks ending December 30, 1917, and are given in the table below. In many cases the rations shown in the table are the maximum rations, the actual rations depending on the available supply. Hamburg professes to publish only the actual rations available for distribution. Brunswick, on the other hand, qualifies nearly every amount with the condition "if sufficient supplies are in the hands of the authorities." It will be noticed that for several towns the list is very incomplete. All rations which could be obtained from the press were noted, but only a few towns (Hamburg, Altona, Berlin, and Gladbach) publish complete lists. In the case of all other towns the rations had to be taken

¹ *Frankfurter Zeitung*. Frankfort on the Main, Feb. 3, 1918. Morning edition.

from announcements in the advertisement columns and elsewhere. Naturally these announcements refer mainly to special distributions of foodstuffs and not to staple foods. The table does not include special supplementary rations for children, nursing mothers, and sick people.

AVERAGE WEEKLY RATIONS OF PRINCIPAL FOODSTUFFS IN 23 REPRESENTATIVE GERMAN TOWNS FOR THE FOUR WEEKS ENDING DECEMBER 30, 1917.

[Compiled from the local German papers. Blanks mean that it is not known what (if any) rations are given; in many cases, of course, there may be no ration of the food in question. A star means that a ration is known to be given, but the amount is not stated.]

City.	Bread.		Flour.	Hulled barley.	Groats.	Grits.	Farina- ceous foods.	Fresh meat.	Sau- sage.	Fish.
	Lbs. ozs.	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.
Aix-la-Chapelle.....	4 6	13 $\frac{1}{2}$	1.75	1.75				7	1.75	0.87
Altona.....	3 15	3 $\frac{1}{2}$						7	3.50	
Berlin.....	4 4 $\frac{1}{2}$				.87			8.75		
Charlottenburg.....	4 4 $\frac{1}{2}$				.87			8.75		
Schöneberg.....	4 4 $\frac{1}{2}$		.87	1.09		.87		8.75		
Wilmsdorf.....	4 4 $\frac{1}{2}$		.87	1.09				8.75		
Bremen.....	4 4 $\frac{1}{2}$	1		1.09		1.09		8.75		
Breslau.....	4 6		(*)	(*)	(*)	(*)		8.75		
Brunswick.....	4 2 $\frac{1}{2}$	(*)						8.75		
Dresden.....	4 6		1.09	2.19				7	1.75	
Düren.....	3 13 $\frac{1}{2}$							7	1.75	
Düsseldorf.....	3 13 $\frac{1}{2}$					.87	.87	6.12	2.62	.87
Frankfort on the Main.....	(*)			2.19				7	1.75	
Gladbach.....	4 6			.87		.87		5.25	3.50	(*)
Hamburg (urban).....	4 3 $\frac{1}{2}$						1.40	8.75		
Hamburg (rural).....	4 4 $\frac{1}{2}$		.70				1.05	7		
Hanover.....	(*)	2 $\frac{1}{2}$		2.19		2.19				
Kiel.....	3 15	2.6	1.75							
Krefeld.....	3 13 $\frac{1}{2}$				8.75			7	1.75	
Leipzig.....	(*)				4.37	4.37		7	1.75	
Magdeburg.....	(*)		1.09							2.19
Munich.....	4 6		1.75	.87			1.75	8.75		
Stuttgart.....	4 4 $\frac{1}{2}$		.87			.87		8.75		

City.	Eggs.	Butter.	Mar- garine.	Edible fat.	Cheese.	Potatoes.	Vege- tables.	Legu- minous products.	Sugar.
	Average number.					Lbs. ozs.	Lbs.		
Aix-la-Chapelle.....	$\frac{1}{2}$	2.19			1.09	7 10 $\frac{1}{2}$			6.12
Altona.....	$\frac{1}{2}$	1.75	1.05		1.09	7 1 $\frac{1}{2}$			6.12
Berlin.....	$\frac{1}{2}$	1.05	1.75			7 10 $\frac{1}{2}$			8.75
Charlottenburg.....	$\frac{1}{2}$	1.05	1.75			7 10 $\frac{1}{2}$	5 to 10		6.06
Schöneberg.....	$\frac{1}{2}$	1.05	1.75			7 10 $\frac{1}{2}$			6.12
Wilmsdorf.....	$\frac{1}{2}$	1.05	1.75			7 10 $\frac{1}{2}$			6.12
Bremen.....	$\frac{1}{2}$	1.75	1.05			7 10 $\frac{1}{2}$	(*)		5.69
Breslau.....	$\frac{1}{2}$	(*)				7 1 $\frac{1}{2}$			6.12
Brunswick.....	$\frac{1}{2}$	2.80			4.37	7 10 $\frac{1}{2}$		(*)	6.12
Dresden.....	$\frac{1}{2}$	.54	2.37		4.37	7 10 $\frac{1}{2}$			6.12
Düren.....	$\frac{1}{2}$		1.75			8 7 $\frac{1}{2}$			
Düsseldorf.....	$\frac{1}{2}$	.54	1.64			7 10 $\frac{1}{2}$			6.12
Frankfort on the Main.....	$\frac{1}{2}$		1.75		.87				6.12
Gladbach.....	$\frac{1}{2}$		2.19			7 10 $\frac{1}{2}$			6.30
Hamburg (urban).....	$\frac{1}{2}$	1.05	2.10			7 1 $\frac{1}{2}$			5.69
Hamburg (rural).....	$\frac{1}{2}$	.87	3.85			7 10 $\frac{1}{2}$		.70	6.12
Hanover.....	$\frac{1}{2}$	2.27							6.12
Kiel.....	$\frac{1}{2}$	2.27			1.09	7 10 $\frac{1}{2}$			6.12
Krefeld.....	$\frac{1}{2}$	.54	1.53			7 10 $\frac{1}{2}$			(*)
Leipzig.....	$\frac{1}{2}$		2.45			7 10 $\frac{1}{2}$			
Magdeburg.....	$\frac{1}{2}$	1.18	.44		.52	7 10 $\frac{1}{2}$			
Munich.....	$\frac{1}{2}$	2.62			3.50	7 10 $\frac{1}{2}$			6.12
Stuttgart.....	$\frac{1}{2}$	2.19		1.09	2.19	7 10 $\frac{1}{2}$			5.33

¹ Cabbage.

AVERAGE WEEKLY RATIONS OF PRINCIPAL FOODSTUFFS IN 23 REPRESENTATIVE GERMAN TOWNS FOR THE FOUR WEEKS ENDING DECEMBER 30, 1917—Concluded.

City.	Artificial honey.	Sirup.	Jam.	Coffee substitutes.	Soup.	German tea.	Heavy workers.	
							Potatoes.	Bread.
	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.	Lbs. ozs.	Lbs. ozs.
Aix-la-Chapelle.....			7	2.19				
Altona.....	2.19		2.19				2 11 $\frac{3}{4}$	
Berlin.....	2.19		4.37	(*)	0.87			
Charlottenburg.....	1.09		4.37		1.09			
Schöneberg.....	4.37	.87	4.37	6.56	1.09			
Wilmersdorf.....	2.19		4.37					
Bremen.....			5.69				3 4 $\frac{1}{2}$	
Breslau.....			(*)		(*)		{ 2 3 to 3 4 $\frac{1}{2}$	
Brunswick.....								
Dresden.....	3.27		6.30		2.19			
Düren.....			4.37	.44				
Düsseldorf.....	1.31		6.12		.44			1 6
Frankfort on the Main.....			2.19					
Gladbach.....			3.50	.87				
Hamburg (urban).....			7	8.75		1.75	2 11 $\frac{3}{4}$	
Hamburg (rural).....			2.19	1.09			3 4 $\frac{1}{2}$	1 8 $\frac{1}{2}$
Hanover.....	2.19		4.37					
Kiel.....			4.37	2.19				1 15 $\frac{1}{2}$
Krefeld.....			4.16	3.93	.87			
Leipzig.....	(*)							
Magdeburg.....	1.09		2.19	(*)				
Munich.....	4.37			2.19				
Stuttgart.....	1.09		1.75		.65			

LABOR AND THE WAR.

NATIONAL WAR LABOR BOARD—ITS PURPOSE AND FUNCTIONS.

The War Labor Conference Board,¹ appointed by the Secretary of Labor to aid in the formulation of a national labor program, submitted its report under date of March 29, 1918. The recommendation made by this board is that there be created, for the period of the war, a national war-labor board whose primary duty shall be to handle all questions in dispute between employers and employees, to the end that maximum production may be maintained.

This National War Labor Board has been formally created by the President, who, in a proclamation issued on April 8, designated as members thereof the same representatives of employers and employees who, together with ex-President William H. Taft and Frank P. Walsh, as chairmen, representing the public interests, had composed the War Labor Conference Board whose recommendation was thus consummated. The President's proclamation is as follows.²

Whereas, in January, 1918, the Secretary of Labor, upon the nomination of the president of the American Federation of Labor and the president of the National Industrial Conference Board, appointed a War Labor Conference Board for the purpose of devising for the period of the war a method of labor adjustment which would be acceptable to employers and employees; and

Whereas said board has made a report recommending the creation for the period of the war of a national war labor board with the same number of members as, and to be selected by the same agencies, that created the War Labor Conference Board whose duty it shall be to adjust labor disputes in the manner specified, and in accordance with certain conditions set forth in the said report; and

Whereas the Secretary of Labor has, in accordance with the recommendation contained in the report of said War Labor Conference Board dated March 29, 1918, appointed as members of the National War Labor Board Hon. William Howard Taft and Hon. Frank P. Walsh, representatives of the general public of the United States; Messrs. Loyall Z. Osborne, L. F. Loree, W. H. Van Dervoort, C. E. Michael, and B. L. Worden, representatives of the employers of the United States; and Messrs. Frank J. Hayes, William L. Hutcheson, William H. Johnston, Victor A. Olander, and T. A. Rickert, representatives of the employees of the United States;

Now, therefore, I, Woodrow Wilson, President of the United States of America, do hereby approve and affirm the said appointments and make due proclamation thereof, and of the following for the information and guidance of all concerned:

The powers, functions, and duties of the National War Labor Board shall be: To settle by mediation and conciliation controversies arising between employers and workers in fields of production necessary for the effective conduct of the war, or in

¹ An account of the appointment of this board appeared in the MONTHLY REVIEW for April, 1918, pp. 103 to 105.

² Official Bulletin, Apr. 10, 1918.

other fields of national activity, delays and obstructions which might, in the opinion of the national board, affect detrimentally such production; to provide, by direct appointment or otherwise, for committees or boards to sit in various parts of the country where controversies arise and secure settlement by local mediation and conciliation; and to summon the parties to controversies for hearing and action by the national board in event of failure to secure settlement by mediation and conciliation.

The principles to be observed and the methods to be followed by the national board in exercising such powers and functions and performing such duties shall be those specified in the said report of the War Labor Conference Board dated March 29, 1918, a complete copy of which is hereunto appended.

The national board shall refuse to take cognizance of a controversy between employer and workers in any field of industrial or other activity where there is by agreement or Federal law a means of settlement which has not been invoked.

And I do hereby urge upon all employers and employees within the United States the necessity of utilizing the means and methods thus provided for the adjustment of all industrial disputes, and request that during the pendency of mediation or arbitration through the said means and methods there shall be no discontinuance of industrial operations which would result in curtailment of the production of war necessities.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done in the District of Columbia, this eighth day of April, in the year of our Lord one thousand nine hundred and eighteen, and of the independence of the United States the one hundred and forty-second.

The following is the text of the report of the War Labor Conference Board as submitted to the Secretary of Labor on March 29:¹

HON. WILLIAM B. WILSON,
Secretary of Labor.

SIR: The commission of representatives of employers and workers, selected in accord with the suggestion of your letter of January 28, 1918, to aid in the formulation in the present emergency of a national labor program, present to you as a result of their conferences the following:

(a) That there be created for the period of the War a National War Labor Board of the same number and to be selected in the same manner and by the same agencies as the commission making this recommendation.

(b) That the functions and powers of the national board shall be as follows:

1. To bring about a settlement, by mediation and conciliation, of every controversy arising between employers and workers in the field of production necessary for the effective conduct of the War.

2. To do the same thing in similar controversies in other fields of national activity; delays and obstructions in which may, in the opinion of the national board, affect detrimentally such production.

3. To provide such machinery, by direct appointment or otherwise, for selection of committees or boards to sit in various parts of the country where controversies arise to secure settlement by local mediation and conciliation.

4. To summon the parties to the controversy for hearing and action by the national board in case of failure to secure settlement by local mediation and conciliation.

(c) If the sincere and determined effort of the national board shall fail to bring about a voluntary settlement, and the members of the board shall be unable unanimously to agree upon a decision, then and in that case, and only as a last resort, an

¹ Official Bulletin, Apr. 1, 1918.

umpire appointed in the manner provided in the next paragraph shall hear and finally decide the controversy under simple rules of procedure prescribed by the national board.

(d) The members of the national board shall choose the umpire by unanimous vote. Failing such choice, the name of the umpire shall be drawn by lot from a list of 10 suitable and disinterested persons to be nominated for the purpose by the President of the United States.

(e) The national board shall hold its regular meetings in the city of Washington, with power to meet at any other place convenient for the board and the occasion.

(f) The national board may alter its methods and practice in settlement of controversies hereunder from time to time as experience may suggest.

(g) The national board shall refuse to take cognizance of a controversy between employer and workers in any field of industrial or other activity where there is by agreement or Federal law a means of settlement which has not been invoked.

(h) The place of each member of the national board unavoidably detained from attending one or more of its sessions may be filled by a substitute to be named by such member as his regular substitute. The substitute shall have the same representative character as his principal.

(i) The national board shall have power to appoint a secretary and to create such other clerical organization under it as may be in its judgment necessary for the discharge of its duties.

(j) The national board may apply to the Secretary of Labor for authority to use the machinery of the department in its work for conciliation and mediation.

(k) The action of the national board may be invoked in respect to controversies within its jurisdiction by the Secretary of Labor or by either side in a controversy or its duly authorized representative. The board, after summary consideration, may refuse further hearing if the case is not of such character or importance to justify it.

(l) In the appointment of committees of its own members to act for the board in general or local matters, and in the creation of local committees, the employers and the workers shall be equally represented.

(m) The representatives of the public in the board shall preside alternately at successive sessions of the board or as agreed upon.

(n) The board in its mediating and conciliatory action, and the umpire in his consideration of the controversy, shall be governed by the following principles:

There should be no strikes or lockouts during the War.

1. The right of workers to organize in trade-unions and to bargain collectively through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the employers in any manner whatsoever.

2. The right of employers to organize in associations of groups and to bargain collectively through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the workers in any manner whatsoever.

3. Employers should not discharge workers for membership in trade-unions, nor for legitimate trade-union activities.

4. The workers in the exercise of their right to organize shall not use coercive measures of any kind to induce persons to join their organizations, nor to induce employers to bargain or deal therewith.

1. In establishments where the union shop exists the same shall continue and the union standards as to wages, hours of labor, and other conditions of employment shall be maintained.

2. In establishments where union and nonunion men and women now work together, and the employer meets only with employees or representatives engaged in said establishments, the continuance of such condition shall not be deemed a grievance. This declaration, however, is not intended in any manner to deny the right or dis-

courage the practice of the formation of labor unions, or the joining of the same by the workers in said establishments, as guaranteed in the last paragraph, nor to prevent the War Labor Board from urging, or any umpire from granting, under the machinery herein provided, improvement of their situation in the matter of wages, hours of labor, or other conditions, as shall be found desirable from time to time.

3. Established safeguards and regulations for the protection of the health and safety of workers shall not be relaxed.

If it shall become necessary to employ women on work ordinarily performed by men, they must be allowed equal pay for equal work and must not be allotted tasks disproportionate to their strength.

The basic eight-hour day is recognized as applying in all cases in which existing law requires it. In all other cases the question of hours of labor shall be settled with due regard to governmental necessities and the welfare, health, and proper comfort of the workers.

The maximum production of all war industries should be maintained, and methods of work and operation on the part of employers or workers which operate to delay or limit production, or which have a tendency to artificially increase the cost thereof, should be discouraged.

For the purpose of mobilizing the labor supply with a view to its rapid and effective distribution, a permanent list of the number of skilled and other workers available in different parts of the Nation shall be kept on file by the Department of Labor, the information to be constantly furnished:

1. By the trade-unions.
2. By State employment bureaus and Federal agencies of like character.
3. By the managers and operators of industrial establishments throughout the country.

These agencies should be given opportunity to aid in the distribution of labor, as necessity demands.

In fixing wages, hours, and conditions of labor regard should always be had to the labor standards, wage scales, and other conditions prevailing in the localities affected.

1. The right of all workers, including common laborers, to a living wage is hereby declared.

2. In fixing wages, minimum rates of pay shall be established which will insure the subsistence of the worker and his family in health and reasonable comfort.

LOYALL A. OSBORNE.
L. F. LOREE.
W. H. VAN DERVOORT.
C. E. MICHAEL.
B. L. WORDEN.
WM. H. TAFT.

FRANK J. HAYES.
WM. L. HUTCHESON.
THOMAS J. SAVAGE.
VICTOR A. OLANDER.
T. A. RICKERT.
FRANK P. WALSH.

At the conclusion of the deliberations of the War Labor Conference Board the following statement was issued by ex-President Taft:

I am profoundly gratified that the conference appointed under the direction of Secretary Wilson has reached an agreement upon the plan for a National Labor Board to maintain maximum production by settling obstructive controversies between employers and workers. It certainly is not too much to say that it was due to the self-restraint, tact, and earnest patriotic desire of the representatives of the employers and the workers to reach a conclusion. I can say this with due modesty, because I was not one of such representatives. Mr. Walsh and I were selected as representatives of the public. Personally it was one of the pleasant experiences of my life. It brought me into contact with leaders of industry and leaders of labor, and my experience gives me a very high respect for both. I am personally indebted to all of the board, but

especially to Mr. Walsh, with whom, as the only other lawyer on the board, it was necessary for me to confer frequently in the framing of the points which step by step the conference agreed to. Of course, the next question is "Will our plan work?" I hope and think it will, if administered in the spirit in which it was formulated and agreed upon.

In a statement issued at the same time Frank P. Walsh said:

The plan submitted represents the best thought of capital and labor as to what the policy of our Government with respect to industrial relations during the War ought to be. Representing capital were five of the largest employers in the Nation, but one of whom had ever dealt with trade unions, advised and counseled by ex-President Taft, one of the world's proven great administrators and of the very highest American type of manhood. The representatives of the unions upon the board were the national officers of unions engaged in war production and numbering in their ranks considerably over 1,000,000 men and women.

The principles declared might be called an industrial chart for the Government, securing to the employer maximum production and to the worker the strongest guaranty of his right to organization and the healthy growth of the principles of democracy as applied to industry as well as the highest protection of his economic welfare while the war for human liberty everywhere is being waged. If the plan is adopted by the Government, I am satisfied that there will be a ready and hearty acquiescence therein by the employers and workers of the country, so that the volume of production may flow with the maximum of fruitfulness and speed. This is absolutely essential to an early victory. The industrial army, both planners and workers, which are but other names for employers and employees, is second only in importance and necessity to our forces in the theater of War. Their loyal cooperation and enthusiastic effort will win the War.

UNITED STATES EMPLOYMENT SERVICE CONSERVING FARM LABOR.

During the agricultural season of 1917 farm laborers from the United States were recruited by the Canadian Government under an agreement entered into between the two Governments permitting free passage across the line. Many Canadian Government agents were in the field soliciting agricultural workers, the laborers being paid railroad fare to their places of employment and very liberal wages while working on the farms. In order to protect American farmers against this competition, a new arrangement has been made between the Canadian Government and the United States Department of Labor, based on last year's agreement but with an important exception noted in the following statement issued by the United States Department of Labor:

"At the beginning of the present season officials of the Canadian Government called upon the Department of Labor at Washington to propose a renewal of the previous year's agreement. The agreement was renewed, but a provision was inserted, at the suggestion of the United States Employment Service, under which the Canadian Government will not place recruiting forces in the field this year and instead will rely on supplies of surplus farm labor which will be sent

through offices of the United States Employment Service after the demands of American farmers have been met.

"Under the agreement above referred to the Canadian Government is advertising through a number of publications in the Middle West, asking that farm workers apply at United States Employment Service offices for opportunity. This advertising itself carries the agreed statement that farm labor will not be directed to Canada until local needs have been supplied, and this policy will be carried out by the United States Employment Service."

SECOND REPORT ON JOINT STANDING INDUSTRIAL COUNCILS, GREAT BRITAIN.

[From The Labour Gazette of the Ministry of Labor, Great Britain, March, 1918.]

The Second Report on Joint Standing Industrial Councils, which has been prepared by the Committee on Relations between Employers and Employed, has now been published.¹ This report deals especially with industries in which organization on the part of employers and employed is less completely established than in the industries covered by the previous report² and with industries in which such organization is weak or nonexistent.

For convenience of consideration the committee have divided the industries of the country into three groups:

Group A.—Consisting of industries in which organization on the part of employers and employed is sufficiently developed to render their respective associations representative of the great majority of those engaged in the industry.

Group B.—Comprising those industries in which, either as regards employers and employed, or both, the degree of organization, though considerable, is less marked than in Group A.

Group C.—Consisting of industries in which organization is so imperfect, either as regards employers or employed, or both, that no associations can be said adequately to represent those engaged in the industry.

In the more highly organized industries (Group A) the committee have, in their first report, proposed a triple organization of national, district, and workshop bodies. In industries where there are representative associations of employers and employed, which, however, do not possess the authority of those in Group A industries, they now propose that the triple organizations should be modified by attaching to each National Industrial Council one or at most two

¹ Cd. 9002. Price 1d.

² Reprinted in Bulletin 237 of the U. S. Bureau of Labor Statistics, Industrial Unrest in Great Britain, pp. 229-237.

representatives of the Ministry of Labor to act in an advisory capacity. In industries in both Groups A and B they propose that unorganized areas or branches of an industry should be provided, on the application of the National Industrial Council and with the approval of the Ministry of Labor, with trade boards for such areas or branches, the trade boards being linked with the industrial council. In industries having no adequate organization of employers or employed, it is recommended that trade boards should be continued or established, and that these should, with the approval of the Ministry of Labor, be enabled to formulate a scheme for an industrial council which might include in an advisory capacity the "appointed members" of the trade board.

Briefly, the proposals are that the extent of State assistance should vary inversely with the degree of organization in industries. The committee do not, however, regard Government assistance as an alternative to the organization of employers and employed. On the contrary, they regard it as a means of furthering the growth and development of such organization.

The proposals which are set forth do not require legislation except on three points, namely, to provide: (1) That the trade boards shall have power, in addition to determining minimum rates of wages, to deal with hours of labor and questions cognate to wages and hours; (2) that the trade boards shall have power to initiate inquiries and make proposals to the Government departments concerned on matters affecting the industrial conditions of the trade, as well as on questions of general interest to the industries concerned respectively; (3) that when an industrial council sufficiently representative of an industry makes application, the Minister of Labor shall have power, if satisfied that the case is a suitable one, to make an order instituting for a section of the industry a trade board on which the industrial council shall be represented, or constituting the council a trade board under the Trade Boards Act.

The committee remark that their proposals must necessarily be adapted to meet the varying needs and circumstances of different industries, and do not anticipate that there will be uniformity in practice. Their recommendations are intended merely to set forth the main line of development believed to be essential to insure better relations between employers and employed. The application of the recommendations to the several industries can, the committee assert, be safely left to those intimately concerned, with the conviction that the flexibility and adaptability of industrial organizations which have been so large a factor in enabling industry to stand the enormous strain of the war will not fail the country when peace returns.

In a prefatory note it is stated that this report is now receiving the joint consideration of the Minister of Reconstruction and the Minister of Labor in the light of the practical experience which has been gained in establishing joint industrial councils in accordance with the proposals of the first report. A statement will shortly be published with regard to any modification of the recommendations of this second report which may be considered expedient from the administrative point of view.

WOMEN AGRICULTURAL WORKERS IN GREAT BRITAIN.

An important report on "Industry and Finance—War Expedients and Reconstruction"¹ has recently been published under the authority of the council of the British Association for the Advancement of Science. Following is a summary of one of the most interesting contributions to this document—the chapter dealing with women workers in agriculture:

When war conditions brought about a shortage of "pickers" and later on of male agricultural laborers, it was difficult to get women to fill their places as there was a strong prejudice, among both women and farmers, against women working on the land. The public mind associated such work with the evils of casual labor, with a poor class of workers, and a low state of progress. This attitude has been overcome to a considerable extent as a result of "the patriotism of the educated woman, who threw herself into the breach with spirit and self-sacrifice, demonstrating the possibilities of women's work on the land both by precept and example."

The employer has found the new type of woman workers, in general, more conscientious and intelligent than the customary worker, and this has created a favorable impression even when the inexperience of these women results in less rapid work. Educated women are in demand as farm hands, and there are often refusals to take any other type. The supply of such women is, of course, very limited.

The placing of women on the land proceeded very slowly during the first months of the war. In 1915, however, a movement was started at the instigation of the Board of Agriculture to organize women's agricultural committees or farm labor committees throughout England and Wales. At the close of 1916 most counties had committees of this kind. The Board of Trade's women agricultural officers and the sole woman officer of the Board of Agriculture, at that time appointed, kept in touch with these committees, visiting and encouraging them.

¹ Industry and Finance—War Expedients and Reconstruction, edited by A. W. Kirkaldy. London (1917). 371 pp.

Toward the close of 1916 there were 4,000 registrars and some 1,000 district representatives, and thousands of public meetings had been held for the purpose of convincing the farmer and the village woman of the necessity of using her labor on the land. There is no doubt that this organization accounts largely for the great increase in local labor which undoubtedly took place in 1916.

Despite various efforts of a number of organizations, the finding and placing of women for permanent work on the land did not go forward rapidly.

This was partly due to the natural difficulties of the position and a little, perhaps, to a certain prejudice against labor exchanges. This was evidenced by the better results often obtained by a voluntary organization such as the Women's Land Service Corps (State aided) and by the direct work of placing, beginning to be carried on by the women's war agricultural committees.

At the beginning of 1917 a great impetus was given to the movement by the formulation of a scheme for the more extensive recruiting and training of women on a national basis. At the same time, the task of developing and extending the work of the women's war agricultural committees was undertaken by the Board of Agriculture, thus linking their work more closely with that of the county war agricultural committee (composed almost entirely of men), which worked under the auspices of the Board of Agriculture, and upon whose executives had been conferred very wide statutory powers.

The work of both these committees is now controlled by the new Department of Food Production, the work of the women's war agricultural committee being directed from the women's branch of the Board of Agriculture.

In March, 1917, the energies of the women's organization became concentrated on the effort to secure for the land a permanent body of women who should undertake service for the duration of the War under semimilitary conditions of mobilizing, etc., and be guaranteed to the farmer as strong and medically fit, having been in all cases selected with considerable care and, when necessary, trained in farm work for at least a month. In return for this, the farmer is expected to pay a minimum wage of 18s. (\$4.38) per week or the current rate of the district, whichever is the highest.

The scheme was launched under national service, the actual work of receiving applications and calling up volunteers being carried out by the Minister of Labor.

The first members of the Women's Land Army were placed in employment about the beginning of May, and by the end of July more than 5,000 had been chosen from some 40,000 volunteers and enrolled for land service.

The replacement of men by women has been more direct in agriculture than in other industries, agricultural work being more individual and there being little opportunity under present circumstances for bringing about the adjustments and modifications which have been made in factories to adapt the tasks to women's strength.

Selection.—References, medical examinations, and interviews weed out the unsuitable volunteer at the outset; the period of training reveals cases of unsuitability; and, finally, the exigencies of actual employment test the strength of character and physique more than some are able to stand. Of some 20,000 applicants who had appeared before the selection and allocation committees up to September, only about one-third, viz, 6,500, therefore, were accepted. The great majority—nearly 5,000—required training, but about 1,500 were placed directly on the land.

Training.—There are two methods of training—

(a) That which may be regarded as a system of apprenticeship, whereby the volunteer, who has some knowledge of land work, is placed with an employer, who receives

her services free for three weeks, during which time she gains in knowledge and he instructs her in his own special methods. At the end of this time he takes her into ordinary employment at not less than 18s. [\$4.38] per week. During apprenticeship the girl is maintained by the Government, as a bursar, at a cost not exceeding 15s. [\$3.65] a week.

(b) That which is carried out by the board of agriculture at its special training centers, or by arrangement at certain agricultural colleges and farm institutes, or on private practice farms. The cost of this training with maintenance must not exceed 25s. [\$6.08] per head per week for four weeks; and, in practice, varies from 15s. [\$3.65] to 25s. [\$6.08] and is very commonly carried out for 20s. [\$4.87] or 21s. [\$5.11].

In the beginning the training was generalized, but efforts are now being made to standardize the reports of instruction, etc., by establishing special tests. When the training exceeds four weeks, 4s. [97 cents] per week in addition to maintenance are granted to the trainee.

Placing.—The greatest care is taken to insure the maximum of safety and comfort for the worker on the land. A member of the organization is required to inspect and guarantee the place of employment and the place of lodging before a national service volunteer is allocated to it, and when placed, a welfare supervisor keeps in touch with her.

To avoid winter unemployment preparations were made to provide land workers for timber work, hay-baling, tree-pruning, etc.

In some sections there are so few cottages that the housing problem is acute. In most cases the farms are too scattered for the use of hostels for permanent workers. Women can seldom be put in the lodgings formerly occupied by men farm hands, and often where there are suitable accommodations the cottagers will not take in women land workers on account of the extra domestic burdens involved. The conclusion is reached that "it may become necessary to put in force the compulsory billeting bill."

Wages.—Although in general the guaranteed minimum wage of 18s. (\$4.38) per week is not difficult to secure, the cost of subsistence is so high that it is practically impossible for the worker to maintain herself decently.

The following statement is made in this connection:

It is very much to be desired that the minimum should be raised at an early date. The present low rate of pay militates heavily against securing a sufficient number of suitable land workers, and it is very probably one of the chief reasons why not more than half of the original volunteers follow up their cards by appearing before a selection committee. * * * except for the comparatively few able women and willing to offer sacrifice on the altar of patriotism, food production must depend upon workers drawn from the less intelligent and less fit residue. This is, of course, only the current feminine aspect of the dire consequences of the wage disability under which agriculture has labored for so many years.

Since the establishment of the minimum wage, members of the Women's War Agricultural Committee in some counties have found it necessary to counteract its lowering effect by insisting—often with the ready collaboration of the farmers—upon

the payment of a minimum initial wage exceeding by at least 5s. [\$1.22] per week the cost of maintenance. This generally necessitates a payment of 20s. [\$4.87] or 21s. [\$5.11] per week. The most profitable arrangement is undoubtedly that whereby the worker lives in, and is paid in addition a wage varying from 5s. [\$1.22] to 10s. [\$2.43] per week. As the Government supplies free outfit, free travel, and maintenance during a limited period of unemployment to the members of the Women's Land Army, they are just able to keep going. It should be noted that many of the more skilled and experienced workers are able to secure 25s. [\$6.08] or even 35s. [\$8.52] per week.

Among the higher type of volunteers it is clear that in addition to the earnest desire for patriotic service, "many feel the call of the land." It is not unusual to hear a worker declare, after experiencing for some time the real hardships of agricultural toil, that she would not under any circumstances return to her old life—it may be, that of a West End showroom girl.

Although the work of 1917 has resulted in adding to the ranks of agricultural labor a body of women with some claims to being skilled, it can not be definitely concluded that local labor was increased or improved during that year.

The farmer is still much in need of reliable seasonal help, which at the moment is supplied sporadically and unequally by soldiers, school children, and, more rarely, by prisoners.

The situation indicates that local labor still needs stimulating to the full and supplementing by gangs of imported women available as required and at short notice. On the other hand, there is not wanting signs of willful neglect of available and much needed labor to the great detriment of crops.

It may be reasonably expected that women "will constitute a permanent element on the land both at home and in our colonies as workers and wives under new and better conditions. War demands are doing away with the stigma attached to agricultural labor for women and are indicating the place women should hold "in the more highly skilled and intensive cultivation of the future."

LABOR RESETTLEMENT COMMITTEE, GREAT BRITAIN.

[From the Labour Gazette of the Ministry of Labor, Great Britain, March, 1918.]

The minister of labor has set up a committee, to be known as the Labor Resettlement Committee, to advise him on the problems arising out of the demobilization of the forces. The questions which will be referred to it include not only those connected with the resettlement of soldiers and sailors in civil life, but also those connected with the disbandment of munition workers, inasmuch as the restarting of industry after the War demands that these two sets of questions shall be treated on uniform lines. All schemes devised for dealing with these questions will be referred to the committee for their con-

sideration and advice before they are put into operation, and the committee will be closely associated with their administration. By this means the minister hopes to secure the cooperation of employers and trades-unions with the Government, which he regards as an essential condition for success. The committee's terms of reference are as follows:

To advise the Ministry of Labor on the resettlement of labor consequent upon the demobilization of the forces and the discharge of workers owing to the cessation of work connected with the war.

The first meeting of the committee took place on March 12.

The minister of labor, who presided, in opening the proceedings said that it was a matter of great satisfaction to him that he had been able to gather such a powerful and representative committee, representing as it did the employers and workpeople of the principal industries of the country as well as great associations like the Parliamentary Committee of the Trade-Union Congress, the Federation of British Industries, and the Associated Chambers of Commerce, which were closely concerned with all the general questions affecting industry as a whole. They would also have the assistance of the departments of State affected, such as the Admiralty, War Office, and Ministry of Munitions, which would enable them to obtain readily full information as to the position as far as the Government was concerned in regard to the Navy, Army, and civil workers. He felt that if his department was going to discharge successfully the onerous task which had been placed upon it by the War Cabinet of resettling into civil life the millions of men who were now fighting for us, and those other millions of men and women who were engaged in the production of munitions and in other essential services connected with the War, it would be necessary for them to be able to seek at every stage the advice of a body such as the committee before him, who would be competent to speak on behalf of industry. It was, therefore, his intention to avail himself to the fullest extent of the committee's services and to associate them very closely with the administrative work which the department would have to carry out. He could not, of course, devolve upon them the responsibility to Parliament and the country for the measures which would have to be adopted, but he did intend to ask them to share that responsibility with him to some extent by placing all those measures before them for their consideration and advice before they were adopted. He was afraid that when the time for resettlement arrived he might have to make considerable calls on the members of the committee, but he felt sure that they would agree with him in thinking that no task was more important for the future of industry and the country than that of restoring normal conditions as quickly and as early as

possible after the War. He felt that the War would have been largely fought in vain unless it produced a better state of society, in which the advantages of leisure and education were more equally and justly distributed throughout the whole population, but in order to bring this state of affairs about it was necessary to restore the prosperity of industry, which would largely depend on the success which attended the committee's labors.

Turning to the subjects with which the committee would be called upon to deal, he pointed out that there were two sets of questions which they would have to consider, though they constituted a single problem. First, there was the resettlement of sailors and soldiers to civil life, and secondly the resettlement of those who had been engaged in war industries. As regards the former, a subcommittee of the Reconstruction Committee had examined the matter with great care and they would be asked to consider the scheme which that committee recommended for adoption. He thought they would agree that the committee's work had been done well and that they had studied the question with great thoroughness. As regards civil workers, another committee appointed by the Reconstruction Department had been considering their case and are submitting two reports, which would shortly be laid before them. The question of the civil worker he regarded as being more difficult even than that of the soldier and sailor. Recent events, of which the committee would be aware, in connection with discharge of a certain number of munition workers, had brought this question up already in a concrete form. The position arising from these discharges, whether as regards the total numbers discharged or the prospect of finding fresh work, was not of a nature that need cause alarm, but it should be carefully watched, and he proposed to ask the committee to appoint a subcommittee whose function it would be to keep the matter under review.

Among the most important subjects for consideration by the committee would be the arrangements for providing out-of-work pay for ex-service men and others who were unemployed. In the case of ex-service men it was proposed to give a month's furlough with full pay and allowances, to be followed by a free policy of insurance against unemployment which would be valid during the succeeding year. The precise amount of the weekly rate of benefit was not yet settled, but it was proposed that it should be possible to draw benefit up to a total of 20 weeks during the year. The majority of civil war workers were already insured against unemployment, but the rate of benefit in their case was only 7s. (\$1.70) a week, and though this was in many cases supplemented by voluntary insurance through trade-unions, the amount was clearly inadequate for any prolonged period

of unemployment. The best method of dealing with this difficulty and also of providing for the workpeople who were not at present covered by insurance was receiving careful consideration.

There was, further, the question of the machinery by which the schemes adopted were to be administered. The Government had decided that the work would have to be largely carried out by the employment exchanges, which were the only national organization capable of coping with the problem. We possessed a great advantage in having the organization of the employment exchanges ready to hand. He did not think, however, that the exchanges, or indeed any piece of official machinery, could carry out the task unaided. They, like the ministry itself, would need the constant advice and cooperation of the employers and workpeople in their districts. In order to secure this he and his predecessor had undertaken the formation of local advisory committees consisting in the main of an equal number of employers' and workpeople's representatives who would be associated with the work of the exchanges. Some 250 of these committees were already in working order and some of them had performed very valuable work, especially in the direction of finding employment for disabled men. Through the agency of these committees he hoped that the exchanges would be able to ascertain the demand for labor in their districts and to secure the cooperation of the local branches of the trade-unions in meeting it. He was sure that in order to obtain the best results it was necessary to utilize the trade-union organization to the fullest extent. He knew that some trade-unionists did not like using the exchanges, but he also knew many others who did, and he hoped that by a free interchange of information between the exchange and the local branches of the trade-unions through the latter's representatives on the local advisory committees it would be possible to deal successfully with these men. In other words, his view was that every scrap of machinery suitable for the purpose ought to be used in order to carry out the work of resettlement as smoothly and easily as possible, and he hoped that the committee would be able to give him very useful advice as to how coordination could best be secured over the whole field of industry.

There was another class of questions connected with resettlement which would have to be dealt with on a basis of industry. An important part of the scheme so far as the army was concerned was the classification of the various trades of the country according to their national importance and the immediate prospects of employment which they offered. In order to deal with this very difficult problem the Government would require the most complete and up-to-date information about the prospects as regards raw materials, financial facilities, and employment in all the principal industries. Again,

there were questions such as the arrangements for reinstating soldiers and munition workers in the industries from which they have gone, the arrangements in regard to substitutes who have been introduced in their places, the arrangements necessary to enable men whose apprenticeship or training had been interrupted by military service to resume their instruction so that they might become qualified as fully skilled men. All these were very difficult problems which could only be settled by each industry for itself, and it was in connection with these questions among others that the Government hoped to obtain very substantial assistance from the joint industrial councils which were in process of being set up in various industries, and the interim joint reconstruction committees which the Ministry of Reconstruction, the Board of Trade, and the Ministry of Labor were collaborating to bring into being in those industries which were not ready for the immediate formation of industrial councils. It was essential that these difficult questions to which he had referred should be carefully considered beforehand by joint bodies fully representative of the employers' organizations and the trade-unions in every important industry.

BILL FOR THE CREATION OF LABOR BOARDS IN GERMANY.¹

The various federations of German trade-unions and of salaried employees have joined in laying before the Federal Council (Bundesrath) and the Reichstag the draft of a law for establishing labor boards which will come up for discussion during the present session of the Reichstag. Enactment of the bill seems assured as the new imperial chancellor, Count von Hertling, before taking office, had pledged the Government's support of the bill.

The proposal of establishing labor boards is by no means new. A bill creating such boards was submitted to the Reichstag by several parties in 1910, but on its second reading failed of passage, owing to the opposition of the Federated Governments to the rôle assigned in the bill to the workmen's secretariats. Since then various new considerations have made it seem expedient to abandon the bill of 1910 and to draft a new bill. First, the bill of 1910 provided for the creation of labor boards on purely occupational lines. In view, however, of the growth of occupational organizations of workmen and salaried employees and of the general recognition accorded to them the interest in occupational representation of the workmen has greatly diminished, while the need for general territorial representation of the workmen which guarantees comprehensive safeguarding of the general social interests of all occupational groups

¹ Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands. Vol. 27, No. 49. Berlin, Dec. 8, 1917.

has become more urgent. Second, there arose the necessity to enable the proposed labor boards to represent labor interests proper, because otherwise the workmen and salaried employees would be at a disadvantage as compared with the employers, to whom the legislation has already given official representation in the form of chambers of commerce, chambers of handicrafts, and chambers of agriculture. Third, the experiments made during the war have taught the workmen that it does not suffice to charge labor boards with the maintenance of industrial peace as an ideal, but that this task requires legal regulation and creation of positive institutions for which the arbitration boards and workmen's committees of the national auxiliary service law may serve as suitable models.

The central organizations of the federations of trade-unions and of salaried employees have therefore themselves undertaken the task of rewriting the bill of 1910 in a manner corresponding to the interests of the wageworkers represented by them. The accomplishment of this task was not easy, for the conceptions as to the scope of the bill already diverged on the main question as to whether the creation of labor boards or of workmen's chambers is to be demanded. The Christian and Hirsch-Duncker trade-unions were bound by the resolutions of their congresses to equipartisan representation of employers and workmen in the proposed boards, while the socialist free trade-unions (*Freie Gewerkschaften*) at their congress in Cologne in 1905 had voted with two-thirds majority in favor of workmen's chambers proper. As a bill for the creation of workmen's chambers proper had no prospects of enactment this last fact would not have prevented the Social-Democratic Party in the Reichstag from voting for a law creating labor boards, provided such a law would have given to the working classes suitable legal representation with sufficient authority and rights. At the present time the enactment of a bill giving legal representation to labor in the form of equipartisan boards seems possible, while a bill creating workmen's chambers proper would not even pass the Reichstag. This outlook caused the general commission of the free trade-unions in agreement with the other central organizations to formulate their bill in such a manner that it will suit the representatives of employers' interests while at the same time it safeguards the interests of the workmen and salaried employees. The bill recently submitted to the Reichstag contains 48 sections, based mainly on the bill of February 11, 1910, and on a later bill submitted by Representative Mumm on November 30, 1915, but containing several novel proposals. Owing to the length of the bill only its principal provisions can be given here.

The bill provides for the creation of labor boards for the safeguarding of the common industrial and economic interests of employers and workmen and of the special interests of workmen. It gives the boards a legal character. They are to be created for the district of one or several administrative authorities. Special workmen's divisions for the safeguarding of workmen's interests are to be formed in all labor boards and in their vocational sections. These divisions shall be composed only of representatives elected by the workmen.

The special tasks assigned to the labor boards and their sections are the following:

1. To promote mutually beneficial relations between employers and employees.

2. To aid the State and municipal authorities in the promotion of the economic and industrial interests of both employers and employees through the communication of facts and the rendering of opinions; to participate on request of these authorities in investigations of industrial and economic conditions in their district; to render, in particular, opinions as to the issuance of regulations in pursuance of articles 105b, paragraphs 2 and 3; 105d, 105e, paragraph 1; 120, 120e, 128, 139a, 139c to 139m; 154, paragraph 4, of the Industrial Code; article 62 of the Commercial Code, and of mining regulations having as their aim the protection of the lives, health, and morality of the workmen; further, to render opinions as to the local customs for the interpretation of contracts and the compliance with obligations between employers and employees.

3. To discuss demands and proposals which relate to employers' or employees' industrial or economic interests.

4. To set on foot institutions and measures which aim at the promotion of the general welfare of employees, and, on request of the representatives of such institutions, to participate in their administration.

5. To cooperate in the regulation of the system of mercantile and trade apprenticeship and vocational education and to cooperate in the school administration.

6. To promote the conclusion of collective and minimum-wage agreements through collection of material relating thereto.

7. To create trade boards for the home industries and to promote their activity through regulation of working and wage conditions.

8. To promote free employment exchanges.

9. To promote the procuring of employment for war invalids.

10. To appoint experts on request of the authorities.

The bill also authorizes the labor boards to undertake independently investigations as to the industrial and economic conditions in their

district and to give legal force to wage schedules fixed by the trade boards for home industries.

The divisions for workmen within the labor boards are assigned the following duties:

1. To discuss demands and proposals of the workmen and to prepare such proposals for discussion by the labor board or its sections.
2. To make investigations required therefor as to the amount of wages and their relation to the cost of living and as to hours of labor.
3. To render independently opinions if required and to make proposals to authorities, communal unions, and the legislatures of the Federal States and of the Empire.

According to the bill submitted by the trade-unions the labor boards are not to be founded on a vocational but a territorial basis; but they are to contain vocational sections, among them being those for agriculture and forestry, and for technical and mercantile salaried employees. Government and municipal works are included in the scheme.

This radical alteration of organization, in comparison with that of the older schemes, seems to be contemplated chiefly because it makes possible the incorporation in it of a conciliation board conceived on broad lines, which is desired under the trade-union scheme when the national auxiliary service law ceases to be in force. In this direction the following proposals are made in the bill under discussion: The compulsory formation of workmen's and salaried employees' committees is to remain in force and is extended to all establishments employing at least 20 workmen or salaried employees. The bill assigns to these committees essentially the same tasks as are assigned to the workmen's committees in the auxiliary service law. Should no agreement be arrived at in case of differences arising between the workmen's or salaried employees' committee and the management of an establishment, or should no such committee exist a conciliation board provided for in the bill intervenes. The chairman of this board, who may be neither an employer nor an employee, is to be appointed by the competent labor board. In addition to the chairman the conciliation board is to be composed of four permanent and two nonpermanent associates. The employers' and employees' representatives in the labor board each elect in separate meetings two of the permanent associates, while the nonpermanent associates (one employer and one employee) of the conciliation board are appointed by the chairman of the board. Such conciliation boards are to be created for the district of one or more administrative authorities. Decisions of the conciliation board may be appealed to an arbitration board to be created for the district of each chamber of labor. The chairman of the arbitration board may be neither an employer nor an employee, while the associate members of the board must be se-

lected in equal numbers from among employers and employees. Parties may be represented by counsel before the conciliation and arbitration boards. The conciliation courts, so far as they have existed in peace time, and the intervention of trustworthy private individuals are to be retained to the extent that the conciliation boards provided for in the present bill shall only be summoned to sit if neither side appeals to some other suitable authority.

Finally, the bill differs from the older proposals in yet another particular, viz, the question of expenditure; it desires the Empire to bear the costs of the labor boards, as indeed the Bundesrath is to fix the district in which labor boards are to be established.

Commenting on the scheme of the trade-unions the *Soziale Praxis*¹ says that—

While this scheme does not agree with its own demands, it desires to abstain from criticism and only wishes to emphasize the fact that the scheme contains both the advantages and disadvantages of a compromise between organizations which held views in some measure widely divergent. The mere fact that all the organized workers of Germany are united on this platform will certainly enhance the prospect of realization of the demands put forward in the scheme.

PROPOSED DECENTRALIZATION AND STANDARDIZATION OF GERMAN INDUSTRY.

In the organ of the German Employers' Association,² Engineer Georg Siener discusses the question whether it would not be possible after the war to decentralize German industry more or less by removing factories from the cities to the country. "Decentralization" in this sense is eminently desirable to prevent overcrowding in large cities. Whether it is possible in any particular case depends on three factors—technical facilities (i. e., access to raw materials, to power, and to markets), labor, and lands. The cheapening of transportation and the erection of large central power stations will greatly increase the mobility of industry; and decentralization is favored by the modern tendency, especially in the iron and steel and machinery industry, to specialization and the production of standardized parts which can be carried on quite apart from the main factory. The difficulty of procuring labor in out-of-the-way places constitutes the chief obstacle to decentralization of industry; it can perhaps be partly overcome by offering the workman a plot of ground for growing vegetables, etc. On the other hand the cheapness of land in the country offers the greatest inducement to the manufacturer to remove his plant there; but care must be taken that this advantage is not lost through speculation in land. Finally, if decentralization is to be

¹ *Soziale Praxis* and *Archiv für Volkswohlfahrt*. Vol. 27, No. 10. Berlin, Dec. 6, 1917.

² *Arbeitgeber-Zeitung*, Dec. 30, 1917.

a success, it must be carried out on an organized plan under the supervision of public bodies dealing with large areas, not piecemeal by individuals. Good results, too, might be attained by laying out "industrial highways" alongside railways and canals.

The Welthandel¹ states that the Society of German Engineers in cooperation with a large number of industrial concerns is agitating for standardization of the machinery industry and of the iron and metal industry generally. This movement, the Welthandel predicts, will promote the development of German industries on fresh and improved lines.

Tools, threads, nuts, bolts, rivets, and other small fittings, having all the same dimensions, will be manufactured and employed everywhere. Every manufacturer, manager of a plant, or engineer has very often gone through the disagreeable experience of finding that threads were not the same, or that tools did not fit the existent mandrels, or that the dimensions of rivets, nuts, and bolts supplied by every manufacturer were of different sizes. For instance, the hexagonal nuts: Their width and depth vary with each manufacturer. If tools are considered, it is hard to find, for instance, two reamers or countersink drills of different makes having the same dimensions as regards their diameter, length, and slot to take up the drive. The difference in the conical end of reamers and countersink drills is very often so small that it can not be detected by the eye and is only noted at the time of fitting them in the chucks.

The "German Industrial Standards" are published in tables under the title "D. I. Norm," by the standard committee for the German industry. All the societies and unions of special trades, officials, and a large number of firms belonging to all kinds of industries are represented in this committee by their best experts. The draft of the "D. I. Norm" is based upon the opinions collected from forms which are sent to be filled in to as many industrial establishments as possible. These drafts are discussed and approved by the standard committee. The restrictions which are imposed on the industries by the "D. I. Norm" are kept for this reason within practical limits. It may be expected, therefore, that the use of the "D. I. Norm" will greatly facilitate the manufacture and purchase of products of all kinds in the industrial world.

DEMobilIZATION IN AUSTRIA AFTER THE WAR.

²The Bremer Bürger-Zeitung² calls attention to an article by the well-known trade-union writer, Julius Deutsch, of Vienna, in the Austrian labor periodical, "Der Kampf," in which he points out a

¹ Der Welthandel, Dec. 14, 1917.

² Bremer Bürger-Zeitung. Bremen, Nov. 16, 1917.

difference in the attitude of the German and Austrian trade-unions toward demobilization. Both are agreed that after peace is concluded no worker should be kept in the army longer than is absolutely necessary on military grounds; but in regard to the exact process of demobilization they differ. The Austrian trade-unions demand discharges according to age, preference to be given only in exceptional cases to specially important groups of workers; while the German trade-unions insist that the first consideration should be given to particular callings and particular groups of workmen. The motive which weighs with them is the desire to bring about the economic revival as quickly as possible. With regard to the problem of work for the discharged soldiers, Deutsch says that the Social-Democratic policy is not to keep them in barracks till they have found some means of supporting themselves, but to enable them, by Government assistance, to resume their duties as citizens. The ways in which the Government can assist are by cheapening the cost of living, supporting the unemployed, continuing military pay for one month after discharge, granting sick leave, and, where necessary, expenses of a stay in a health resort, establishing employment offices with equal representation for employers and employed, granting free transportation to places of employment away from home, protecting soldiers' families against creditors (prolonging period of payment and prohibiting too hasty sale of pledges), and, lastly, by resuming social reforms and provision for housing.

LABOR CONDITIONS IN INDUSTRIAL AND COMMERCIAL ESTABLISHMENTS IN FRANCE, JULY, 1917.¹

A summary of the reports relative to the supply of labor in industrial and commercial establishments in France at various dates from August, 1914, to January, 1917, was published in the MONTHLY REVIEW for August, 1917. The data upon which the reports have been based were collected by the labor inspection service, and cover only such establishments as were able to furnish comparable data for the entire period under investigation. For this reason the number of establishments varies in the different investigations.

The ninth investigation relative to labor conditions was made in July, 1917. The figures cover only such establishments as are subject to inspection laws; consequently mines and quarries, railroads and tramways, and establishments under the supervision of the minister of war and the minister of marine are not included. It is reasonable to suppose that if these were considered, the number of persons employed in industry and commerce would show a much greater per

¹ France. Bulletin du Ministère du Travail et de la Prévoyance Sociale Nos. 10-12, October to December, 1917. Paris.

cent of increase than is shown in the tables prepared by the labor office. There has been an especial increase in the number of employees in establishments engaged in work for national defense. These are not subject to inspection by agents other than those of the departments of Government for which they are being operated.

The number of establishments for which data were reported in July, 1917, was 52,278, which before the War furnished employment to 1,524,959 persons. The data given in the following tables refer only to these establishments and are entirely independent of any data reported at any of the preceding investigations.

The figures shown are not to be taken as indicating in any manner the extent of unemployment, but rather the business situation in the industries considered. The decreases in employment shown in most of the industrial groups do not mean that the workmen leaving them were necessarily unemployed. An average of 24 per cent was mobilized and many others who were unable to find employment in their usual occupations have accepted employment in industries which have not suffered from the war, or in which the demand for employment has increased, as in the chemical and metallurgical groups, in which, while the number of establishments in operation has decreased, the number of employees is largely in excess of the number employed before mobilization.

The investigation shows a gradual movement since July, 1915, toward recovery in every industrial group, both in the number of establishments in operation and the number of persons employed.

NUMBER OF ESTABLISHMENTS FURNISHING DATA RELATIVE TO INDUSTRIAL CONDITIONS PREVAILING DURING THE WAR AND NUMBER AND PER CENT IN OPERATION AT SPECIFIED DATES.

[From Bulletin du Ministère du Travail et de la Prévoyance Sociale, October to December, 1917, p. 434.]

Industrial group.	Number of establishments reporting.	Establishments in operation in—				Per cent of establishments in operation in—			
		August, 1914.	July, 1915.	July, 1916.	July, 1917.	August, 1914.	July, 1915.	July, 1916.	July, 1917.
Food preparation.....	4,222	3,094	3,655	3,852	3,908	73	87	91	93
Chemical.....	1,583	894	1,243	1,357	1,410	56	79	86	83
Rubber, paper, cardboard.....	786	351	642	1,097	1,724	45	82	89	92
Printing and binding.....	1,312	652	952	1,022	1,103	50	75	78	84
Textiles.....	3,605	1,124	2,681	2,951	3,135	31	74	82	87
Clothing, millinery, etc.....	10,817	5,187	6,963	8,013	8,211	48	64	74	75
Leather and hides.....	3,151	1,217	1,768	1,943	2,023	39	56	62	64
Woodworking.....	5,142	1,622	2,751	3,401	3,706	32	53	66	72
Metallurgy (base).....	7,908	3,160	5,273	5,969	6,436	40	67	75	81
Metallurgy (fine).....	562	7	388	407	497	10	69	72	88
Precious stones.....	98	7	41	54	52	7	42	55	53
Building trades, etc.....	2,930	785	1,134	1,354	1,479	27	39	46	50
Porcelain, pottery, glass, etc.....	1,258	393	682	791	884	29	54	63	70
Storage and transportation.....	469	291	354	405	416	62	75	86	89
Commerce.....	8,435	4,973	5,411	5,988	6,320	59	64	71	75
Total.....	52,278	23,777	33,938	38,209	40,304	45	65	73	77

NUMBER OF PERSONS EMPLOYED IN ESTABLISHMENTS FURNISHING DATA RELATIVE TO INDUSTRIAL CONDITIONS PREVAILING DURING THE WAR AND NUMBER AND PER CENT AT WORK AT SPECIFIED DATES.

[From Bulletin du Ministère du Travail et de la Prévoyance Sociale, October to December, 1917, p. 435. The number of employees at work, as shown by this table, does not include mobilized workers.]

Industrial group.	Number of employees before the War.	Number of employees at work in—				Per cent at work in—			
		August, 1914.	July, 1915.	July, 1916.	July, 1917.	August, 1914.	July, 1915.	July, 1916.	July, 1917.
Food preparation.....	93,775	50,469	73,406	80,671	80,577	54	78	86	86
Chemical.....	78,892	35,470	66,228	84,070	93,667	45	84	107	119
Rubber, paper, cardboard.....	55,298	17,606	33,467	40,040	42,508	32	61	72	77
Printing and binding.....	38,114	13,198	18,509	20,845	21,397	35	49	55	56
Textiles.....	309,287	104,698	220,090	246,642	255,227	34	71	80	83
Clothing, millinery, etc.....	137,764	44,332	87,222	104,743	109,743	32	63	76	80
Leather and hides.....	70,212	26,864	48,097	55,999	59,375	38	68	80	85
Woodworking.....	84,790	19,315	43,161	61,905	72,581	23	51	73	86
Metallurgy (base).....	371,300	122,356	324,041	514,318	642,539	33	87	139	173
Metallurgy (fine).....	8,037	1,050	3,586	4,473	4,861	13	45	56	60
Precious stones.....	2,842	543	1,196	1,410	1,517	19	42	50	53
Building trades, etc.....	72,351	11,502	24,042	32,430	36,609	16	33	45	51
Porcelain, pottery, glass, etc.....	81,227	16,494	32,386	41,735	45,258	20	40	42	56
Storage and transportation.....	39,162	14,548	22,314	28,933	28,127	48	74	96	93
Commerce.....	90,908	40,284	53,029	62,652	65,407	44	58	69	72
Total.....	1,524,959	518,729	1,050,774	1,380,866	1,559,393	34	69	91	102

¹ This total is not the correct sum of the items; the figures are given as they appear in the source shown above.

In July, 1917, 77 per cent of the establishments reporting for the entire war period were in operation, and employed 102 per cent of the number of persons employed before the War in these establishments. If to this 102 per cent employed be added the 24 per cent withdrawn by mobilization, the number of active and potential employees in July, 1917, exceeded the number before the War by 26 per cent. The source of this increase is discussed in the MONTHLY REVIEW for August, 1917.

The following table shows (1) the estimated proportion of industrial workers mobilized for military duty when the War began, and (2) the per cent of increase or decrease in the number of employees in specified months, 1914 to 1917, in establishments investigated as compared with the normal number of employees before the War. In this table both active and mobilized workers are considered as employees. That is to say, in computing the percentages of increase or decrease the decrease due to mobilization of workers is not taken into consideration.

PER CENT OF INCREASE OR DECREASE IN NUMBERS EMPLOYED IN SPECIFIED INDUSTRIAL GROUPS AT SPECIFIED PERIODS AS COMPARED WITH NORMAL NUMBERS EMPLOYED BEFORE THE WAR.

[In this table mobilized workers are not deducted in computing the per cent of increase or decrease as compared with normal.]

Industrial group.	Per cent of employees withdrawn by mobilization.	Per cent of increase (+) or decrease (-) as compared with normal number before the War.			
		August, 1914.	July, 1915.	July, 1916.	July, 1917.
Food preparation.....	26	-20	+ 4	+12	+ 12
Chemical.....	27	-28	+11	+34	+ 46
Rubber, paper, cardboard.....	19	-49	-20	- 9	- 4
Printing and binding.....	24	-41	-27	-21	- 20
Textiles.....	15	-51	-14	- 5	- 2
Clothing, millinery, etc.....	6	-62	-31	-18	- 14
Leather and hides.....	26	-36	- 6	+ 6	+ 11
Woodworking.....	30	-47	+19	+ 3	+ 16
Metallurgy (base).....	32	-35	-19	+71	+105
Metallurgy (fine), and precious stones.....	23	-62	-33	-23	- 8
Building trades, etc.....	33	-51	-34	-22	- 16
Porcelain, pottery, glass, etc.....	28	-52	-32	-30	- 16
Storage and transportation.....	32	-20	+ 6	+28	+ 25
Commerce.....	25	-31	-17	- 6	- 3
Total.....	24	-42	- 7	+15	23

LABOR REGULATIONS FOR FACTORIES IN SWITZERLAND.¹

The Federal Council, by ordinance, effective November 15, 1917, enacted the following factory regulations to be observed in applying the Federal neutrality law of August, 1914.

Hours of labor in factories shall not exceed 10 per day. On Saturdays and the days next preceding holidays $9\frac{1}{2}$ hours shall constitute a day's work. When the hours of labor on Saturdays do not exceed $6\frac{1}{2}$ and labor ends at 1 o'clock p. m., the hours on other days may extend to $10\frac{1}{2}$.

A rest period of one hour near midday is mandatory, unless the day's work ends at 2 o'clock p. m. and a half-hour rest period is granted, or the hours of labor do not exceed 9 with a like rest period granted, or unless the day's work does not exceed $6\frac{1}{2}$ hours and a rest period of 15 minutes is granted.

In establishments employing but one shift the rest periods shall not be deducted unless they are regularly and simultaneously granted to all employees, and during that time they are permitted to leave their working places.

From May 1 to September 15 labor shall be performed between the hours of 5 a. m. and 8 p. m., and for the rest of the year between 6 a. m. and 8 p. m. On Saturdays work shall stop at 5 p. m.

A schedule of hours of work shall be filed with local authorities.

Permits may be granted: To arrange rest periods by turns; to extend hours of labor 2 hours for not more than 25 days a year

¹ Bulletin du Ministère du Travail et de la Prévoyance Sociale. Nos. 10-12, October to December, 1917, Paris.

(exceptionally the number may be further increased when the permit applies to a small portion only of the employees, or a portion of the factory); permitting night work 30 nights per year, except 1 night between Saturday afternoon and Monday morning, and provided that not more than 10 hours' work is required during the 24, broken by a rest period of at least one-half hour; and to work 12 Sundays, at the most, per year.

The department of political economy may extend these permits when important reasons, especially for national defense, or to increase the food supply, warrant such action.

Notice that these permits have been granted must be filed with the cantonal authorities and with the proper labor inspectors.

When overtime, night, or Sunday work is permitted the employer is required to pay the employees so engaged time and a quarter. Extra pay in piecework shall be based on average earnings. If working at a fixed rate that shall be the basis.

No other method of payment for overtime work is permitted. All permits shall specify this rate and be posted in the factory.

PROVISION FOR DISABLED SOLDIERS AND CIVILIANS.

PROPOSED VOCATIONAL REHABILITATION ACT.

A bill to provide for the vocational rehabilitation and return to civil employment of disabled soldiers and sailors discharged from our military and naval forces was introduced in the Senate of the United States on April 8, 1918.

The new bill places entire responsibility for the vocational reeducation and placement of disabled members of the forces with the Federal Board for Vocational Education and provides that every person who is disabled under circumstances entitling him, after discharge from the military or naval forces, to compensation under Article III of the War Risk Insurance Act, as amended, and who in the opinion of the Federal Board for Vocational Education is unable to resume his former occupation or to enter some other suitable occupation, and who may be vocationally rehabilitated, shall either be ordered by the Bureau of War Risk Insurance to follow such course of vocational rehabilitation as the Federal Board for Vocational Education shall provide, or shall be retained in the forces and detailed to the control of the Federal board until such course of training has been satisfactorily completed. Every person so designated shall receive as monthly compensation a sum equal to the amount of his pay for the last month of active service, or to the amount to which he would be entitled under the War Risk Insurance Act, in the same manner as if he were an enlisted man. Failure to follow the prescribed course of training will result in the withholding by the Bureau of War Risk Insurance, in its discretion, of all or any part of the monthly compensation due him.

The bill proposes to give the Federal Board for Vocational Education power to provide such facilities, instructors, and courses of vocational rehabilitation as it deems necessary for the proper training of persons concerned, power to provide for the placement of rehabilitated persons, and to use in its placement work, with the approval of the Secretary of Labor, the facilities of the Department of Labor, in so far as it may be practicable. The Federal board is also authorized to make studies, investigations, and reports regarding the vocational rehabilitation of disabled persons and their placement in suitable occupations, and to cooperate with such other public or private agencies as it may deem advisable in the performance of the duties imposed upon it by the proposed act.

Section 5 of the bill provides that all medical and surgical work and other treatment necessary to give functional and mental restoration to disabled persons prior to their discharge shall be under the control of the War and Navy Departments; and for cooperation between these departments and the Federal board to insure a proper process of prevocational and vocational training.

The proposed act, if passed, will repeal section 304 of the War Risk Insurance Act, as amended, which embodies the only provision which has as yet been made for this important work. This section apparently places the work of rehabilitation within the jurisdiction of the Bureau of War Risk Insurance, and is a promise of what should be done, rather than a workable program. It makes no appropriation for carrying on the work. Section 304 reads:

In cases of dismemberment, of injuries to sight or hearing, and of other injuries commonly causing permanent disability, the injured person shall follow such course or courses of rehabilitation, reeducation, and vocational training as the United States may provide or procure to be provided. Should such course prevent the injured person from following a substantially gainful occupation while taking same, a form of enlistment may be required which shall bring the injured person into the military or naval service. Such enlistment shall entitle the person to full pay as during the last month of his active service, and his family to family allowances and allotments as hereinbefore provided in lieu of all other compensation for the time being.

In case of his willful failure properly to follow such course or so to enlist, payment of compensation shall be suspended until such willful failure ceases and no compensation shall be payable for the intervening period.

The Congressional Record for April 8, 1918, which reprints the bill and memoranda submitted in connection with it, includes the following paragraph:

Section 304 is buried in an act, every one of whose other important sections deals with war-risk insurance. Admittedly it was inserted as a promise by Congress that the rehabilitation, reeducation, and vocational training of injured sailors and soldiers would be more definitely provided for at the ensuing session. Naturally, under these circumstances, this very difficult and highly specialized work is committed, under the general terms of the act, to an organization and administration which, while admirably adapted for war-risk insurance—for which it was primarily intended—is inadequate, so far as section 304 is concerned, for the proper care, education, and placement in industry of injured men.

The practicability of such economic adjustment as is proposed in this bill has already been established by the other belligerent countries, who have already in operation carefully worked-out organizations which carry on the work of rehabilitating the disabled victims of the War, and which have accomplished remarkable results. In England the authority for carrying on this work is centralized under the Minister of Pensions, a cabinet office which has been created since the beginning of the War. In France the vocational reeducation and employment of disabled members of the forces is under the super-

vision of the Minister of Labor. In Canada a new department, known as the Department of Soldiers and Sailors Civil Reestablishment, has recently been created to supervise the vocational and employment work of that country. The experience of all of these countries has been that a centralization of governmental authority in this matter is essential, whether vested in a department created for the purpose or in an existing agency suitably equipped.

NEW FRENCH LAW RELATING TO THE REHABILITATION OF DISABLED SOLDIERS.

A French law, adopted January 2, 1918,¹ places the vocational reeducation and employment of disabled soldiers in France under the supervision of the Minister of Labor and makes some changes in the organization and work of the national office of disabled and retired soldiers. The decree of February 26, 1918,² determines some of the measures necessary to the application of this law. A complete translation of the law and extracts from the decree applying it are here reprinted:

ARTICLE 1. Every soldier or former soldier of the military and naval forces suffering from infirmities resulting from wounds received, or from sickness contracted or aggravated during the present war may request his inclusion in a school for vocational reeducation for the purpose of readjusting himself to industry with particular reference to his occupational training and employment.

The request may be addressed either to a school for reeducation; to a prefect of the "Departement" in which the applicant formerly resided; to a departmental committee of wounded and retired soldiers of that "Departement;" or to the national office of wounded and retired soldiers.

Persons under treatment, or whose retirement is being considered, should make their requests to the chief physician of the health office (*Formation Sanitaire*) in which they are under treatment.

ART. 2. The national office of wounded and retired soldiers, which is declared a public establishment, under the supervision of the Minister of Labor, constitutes an organ of cooperation between public offices and private associations or enterprises concerned with the soldiers mentioned in article 1. Its functions are: To collect and collate information concerning the aims of these offices, associations, or enterprises; to encourage and assist in the readaptation of such persons to industry; to investigate legislative provisions and regulations which may be adopted in their favor and to follow the application of it, and in a general way to assure the support and permanent assistance recognized by the nation to be justly due them.

ART. 3. The resources of the national office of wounded and retired soldiers include:

1. The annual credit carried in the budget of the Minister of Labor and Social Welfare, in the special division entitled "National Office for Wounded and Retired

¹ Loi concernant la rééducation professionnelle et l'Office National des Mutilés et Réformés de la Guerre. Published in the Journal Officiel de la République Française for Jan. 3, 1918, pp. 99, 100. Paris.

² Un décret rendu en conseil des ministres déterminant les mesures d'exécution nécessaires à l'application de la loi concernant la rééducation professionnelle et l'Office National des Mutilés et Réformés de la Guerre. Feb. 26, 1918. Published in the Journal Officiel de la République Française, Feb. 28, 1918, pp. 1992-1995.

Soldiers," and other subventions which may be appropriated by the State, the departments, and the communes.

2. Gifts, legacies, and donations of any nature or origin which may be made either directly to the office, whether to the whole body of soldiers or former soldiers named in article 1, or to a definite class of them. Provided that when such gifts, legacies, or donations are made for the wounded and retired soldiers of a definite district, they shall be distributed by decree, issued upon the advice of the national office, between the departmental committees and localities interested.

3. All other resources which may by law accrue to the national office.

ART. 4. In case the national office or any departmental office is abolished, the funds resulting from gifts, legacies, or donations made to the office or committee shall be placed by decree of the Council of State, with the approval of the Minister of Labor, to the credit of public establishments or of recognized public utilities capable of fulfilling the wishes of the donors.

ART. 5. In each "Departement" there shall be created, upon the agreement of the general council and the national office, by decree which shall determine the extent of their territorial jurisdiction and specify the number of their members, departmental or local, wounded and retired soldiers' committees.

These committees may receive State, departmental, or communal subventions, gifts, and legacies, subject to the conditions prescribed by the civil code for the establishment of public utilities.

They shall not acquire any other real estate except that necessary for their meetings, or for the conduct of the business provided for in article 1.

ART. 6. The council of ministers shall determine by decree the methods necessary for the execution and application of this law, and especially:

1. The organization of the national office for wounded and retired soldiers, and the departmental committees provided for in article 5, as well as the conditions under which the private associations or enterprises shall be represented in the said bodies;

2. The conditions under which State aid may be granted to departmental committees and institutions for reeducation after consultation with the national office (commission of reeducation), as well as the control and supervision of the use of such subventions;

3. The proofs necessary to be furnished the departmental committees by the soldiers mentioned in article 1 in order to become beneficiaries under the provisions of paragraph 1 of article 7.

ART. 7. During the period of occupational reeducation of a soldier whose pension has not been liquidated, his family shall continue to receive the military allowance. If his pension is liquidated and if the twelfth of that amount is less than the amount of the monthly allowance to the family, the difference shall be paid until the completion of the period of reeducation.

The departmental committee shall determine the duration of the period of occupational reeducation during which the family of the soldier may be paid the benefit provided for in the paragraph above. Appeal from this decision can be made to the national office by the soldier involved within one month after his notification of it.

ART. 8. In no case shall the pension be reduced because of the fact of occupational reeducation and readaptation to work.

ART. 9. The minister of labor shall make an annual report to the President of the Republic showing the operations of the national office, the results of occupational reeducation and employment secured for the persons mentioned in article 7, and relative to the distribution of State subventions.

EXTRACTS FROM THE DECREE OF FEBRUARY 26, 1918, APPLYING IN ABOVE LAW.

CHAPTER I. NATIONAL OFFICE OF DISABLED AND RETIRED SOLDIERS.

ARTICLE 1. The national office of disabled and retired soldiers, under supervision of the minister of labor and social welfare shall be composed of 60 members of French nationality, appointed for three years, by decree, upon the nomination of the Minister of Labor, namely:

- 5 senators.
- 10 deputies.
- 3 representatives of the minister of labor.
- 3 representatives of the minister of war, of whom one shall represent the military health service.
- 2 representatives of the minister of the interior.
- 2 representatives of the minister of commerce.
- 2 representatives of the minister of agriculture.
- 2 representatives of the minister of the navy, of whom one shall represent the health service.
- 1 representative of the minister of finance.
- 1 representative of the minister of public instruction.
- 1 representative of the minister of the colonies.
- 2 members, one an employer, the other a workman, of the superior labor council.
- 1 member of the superior council of mutual aid societies.
- 1 member of the superior council of technical instruction.
- 1 member of the superior council of agriculture.
- 1 member of the Paris chamber of commerce.
- 1 member of the superior council of public assistance.
- 1 surgeon and one physician from the hospitals.
- 3 directors of the schools of professional reeducation.
- 6 members of associations of the wounded or disabled.
- 6 persons chosen from associations or private institutions concerned with the care of wounded or retired soldiers.
- 4 persons known by reason of their special ability, their work, or their services.

* * * * *

The president of the national office shall be assisted by three vice presidents appointed by the minister of labor from among the members of the national office.

ART. 2. The national office shall include three branches, the organization of which shall be fixed by an order of the minister of labor: (1) an executive committee, (2) a commission of reeducation, and (3) an advisory council (*conseil de perfectionnement*). A member may serve in more than one of these branches.

The executive committee shall establish the plan for the official budget and financial statements; shall prepare decisions relative to the acceptance of gifts and legacies; shall have charge of the reports of departmental and local committees in matters with which the executive committee is concerned, whether concerning the constitution and administration of those committees, or placement; shall keep a register of the disabled, giving useful information which will facilitate their reeducation and employment, and giving information concerning the general assistance which they may need; shall gather definite information regarding occupations open to the disabled according to the nature of the disability, the needs of each industry and of each locality, the placements made, and the offers and demands for work which can not be met by local organizations; shall give advice concerning the distribution of occupations reserved for disabled and retired soldiers, according to the law of April 17, 1916; in a general manner, shall include in its functions all that concerns the administrative and financial working of the national office, all that concerns the working of the de-

partmental and local committees, and questions within the jurisdiction of the ministry of labor, especially that of placement.

The commission of reeducation shall give advice upon the demands for State aid made by institutions or associations which are concerned with professional reeducation; shall assemble documents relating to equipment, methods, and the general organization of reeducation; shall secure reports relative to attendance at the schools and results obtained; shall examine appeals made against the decisions of departmental committees relative to reeducation and in a general manner include in its functions all questions concerning vocational reeducation and the administrative working, financial or technical, of centers and schools of vocational reeducation.

The advisory council (*conseil de perfectionnement*) shall include in its functions all questions concerning the general interests, material and moral, of disabled soldiers, keeping in touch with all kinds of institutions (except those concerned with vocational reeducation) whose purpose is to lend assistance to soldiers or former soldiers named in article 1 of the law.

It shall secure all documents relating to institutions which aid the disabled, as well as information regarding the help afforded them.

ART. 3. The full assembly of the members of the national office shall examine the matters referred to it, either by the minister or by the divisions specified in article 2. It shall decide particularly upon the appeal made against the decisions of the departmental or local committee by the application of article 7 of the law of January 2, 1918, and upon the acceptance or refusal of gifts or legacies which are made to the office.

Its decisions shall become operative if within 20 days from the close of the session the minister of labor does not ask their annulment on the ground of excess of power or violation of legislative or regulative order. In case of urgency the minister may sign a resolution for immediate execution.

If after two months, annulment has not been confirmed by a decree rendered in the council of State, the decision shall become executory.

ART. 5. The full assembly of the national office shall meet at least once in six months and at any other time the needs of the service require a meeting, or upon request of the executive committee.

Within 8 days after the meeting a copy of the proceedings shall be sent to the minister of labor.

ART. 6. Every hospital, school of reeducation, or other institution (with the exception of field hospitals, or hospitals behind the lines designated by the military health service), which in any way gives aid to soldiers or former soldiers who, because of injuries or infirmities contracted during the war, have become incapable of remunerative work, or whose capacity for work is greatly diminished, shall be required to send to the departmental committee of the department in which the institution is located a statement accompanied by a medical record card, the form for which has been established by agreement between the minister of labor and the military health service. These documents shall be transmitted to the national office by the committee within a month at most.

ART. 7. The administrative service of the national office shall be divided into three sections corresponding to the three special divisions specified in article 2.

The heads of the sections shall have a consulting voice in the full assembly, where they perform the duties of secretaries, one of them acting as general secretary of the national office. They shall be responsible to the chairman of the executive committee, who can delegate his powers either to another member of the committee or to the general secretary.

CHAPTER II. DEPARTMENTAL OR LOCAL COMMITTEES OF THE DISABLED AND RETIRED OF THE WAR.

ARTICLE 16. The departmental committee shall have its headquarters at the largest city of the Department. It shall be composed, with the prefect as chairman, of members named by the prefect with the approval of the minister of labor, the general council of the department, and of the national office (executive committee). Members of the local committee shall be selected in the same way.

The departmental or local committee may appoint qualified persons to visit the wounded in hospitals to give advice which wounded men may need and assist them in their readjustment to industry.

A daily list of these persons shall be made and sent to the national office.

ART. 17. Employment service for the disabled and retired shall be assured by the public employment offices which, in cooperation with the departmental or local committees, shall adopt measures expedient for this purpose.

Public employment offices shall make known to the departmental committees the results of the work of placing the disabled and retired. In the executive committee of each departmental employment office the departmental committee for disabled and retired soldiers shall be represented by at least one member and not more than three.

ART. 18. The departmental or local committee shall watch over the interests of the disabled soldiers, except in the case of special institutions for the assistance of the tubercular, in all cases in which the disabled men need aid, including apprenticeship and employment.

It shall endeavor to create centers or schools of reeducation in the departments which are unprovided, or insufficiently provided, with them.

As soon as it is known that a disabled soldier, capable of reeducation, is in a hospital of a Department the committee shall have him visited by an advisor, who will aid him in choosing a vocation, with due consideration to his probable invalidity and the nature of his former vocation, as well as to the opportunities for work which are offered in the department in which he lived before the war and persuade him to enter upon a course of reeducation as soon as possible.

The school shall be designated by the president of the commission of reeducation of the national office, taking into consideration the places available and the region to which the wounded man belonged before the war.

ART. 19. The departmental or local committee shall meet at least once in three months and whenever it is called by the president.

ART. 23. The assembly of the departmental committee or of the local committee shall give advice upon:

1. Regulations relative to the appointment of an efficient force and the management, promotion, and discipline of the administrative personnel.
2. The acceptance or refusal of gifts and legacies which may be referred to it under the conditions prescribed by article 910 of the civil code.
3. All questions relating to disabled or retired soldiers which are submitted to it by the minister of the national office or the prefect.

ART. 24. Appeals may be made against the decisions of the departmental or local committee by a person or a group of persons concerned. These appeals shall be addressed to the minister of labor, who shall transmit them at once to the executive committee of the national office, and notify the chairman of the departmental committee and the chairman of the local committee advising them that they have a month from the date of notification in which to reply.

At the expiration of the time indicated the prefect shall transmit the papers of appeal to the minister of labor, with his report, for examination by the national office.

The executive committee of the national office shall decide from this memorandum upon the decisions which should be made.

ART. 26. The national office shall be advised, in a form which will be fixed by ministerial order, of all placements made, of all relief accorded by departmental or local committees.

CHAPTER III. STATE SUBSIDIES.

ART. 38. State grants allowed to departmental committees, whether for their own working or for that of local committee, shall be determined by the minister of labor upon the advice of the national office (executive committee). State grants allowed to establishments for professional reeducation of the disabled and retired shall be determined by the minister charged with the management of the divisions of the budget relative to those grants, upon the advice of the national office (commission of reeducation).

CHAPTER IV. REQUIREMENTS FOR ADMISSION.

ARTICLE 41. Soldiers or former soldiers mentioned in article 1 of the law of January 2, 1918, who desire to be admitted to the advantages specified in paragraph 1 of article 7 of the said law shall make their request by letter, addressed either to a school of reeducation, or to the prefect of the Department in which the wounded man resided before the War, or to the departmental committee of that department, or to the national office. This request may be sent by the man interested to the mayor of the commune where he is staying, who will transmit it to the national office.

Soldiers in course of treatment or about to be retired shall address their request to the military authority.

The request shall make known:

1. The name, given name, and address of the man;
2. The place (commune and Department) of his residence before the War;
3. His military position;
4. The nature of his disability and the cause of his wound;
5. His former vocation;
6. The vocation in which he wishes to be reeducated;
7. The establishments for reeducation to which he has been previously admitted, or the declaration that he has been in none;
8. The region in which he wishes to locate after reeducation;
9. The allowances which he, or members of his family, have been receiving.

ART. 42. Upon the admission of a disabled man to a school the director shall notify the national office and the prefect of the Department in which the man lives. The prefect in his turn shall advise the departmental committee and the mayor of his home commune as to the day on which the man began his reeducation.

Upon the conclusion of the period fixed for reeducation, or upon the departure for any reasons whatever, of the disabled man from the place of reeducation, the director of the school shall immediately advise the national office and the prefect interested, of his departure, who in turn shall advise the mayor of the man's home commune and the departmental committee.

FRENCH EXPERIENCE IN THE PLACEMENT OF DISABLED SOLDIERS.

One section of the interallied conference for the study of questions concerning war invalids, which was held at Paris in May, 1917, was devoted to the discussion of the problem of employment of disabled

men.¹ A summary of the opinions of certain French specialists present at the conference, on the subject of placement of such men in commerce and industry, is printed below:

I. Is it well to keep disabled men so far as possible in their former vocations?

There is evidently every advantage from both the technical and the psychological point of view in placing a disabled man in his former calling or at least in an industry which is related to it, even though in order to readapt himself he finds it necessary to go through a school of reeducation. Every injured workman should be advised before choosing another calling to consider under what conditions he could continue his former trade, and if this seems possible, every facility should be given him to make an attempt for two or three months at readapting himself to it, with all the aid which can be afforded him by means of prosthesis, tools, and experience. If he (especially a man with his upper limbs crippled) is persuaded that by the help of physical means he can do this, the results will be better in the trade which he knows and which he has acquired through several years of practice, habit, and experience, since each profession, each trade has a special technique, its own manners, its usages, its traditions, and its particular character which it stamps upon the worker. According to an inspector of labor, disabled men employed in a new calling on account of their infirmity become easily discouraged, and cases are not infrequent in which such men give up their work entirely.

II. Should disabled men remain in the region in which they were living before the war?

Of course the choice of residence is subordinated to the exercise of their calling. They can not return to the parts of the country from which they came unless they are sure of finding work there by which they can make their living. Rural exodus is not favored. It is indispensable that the greatest possible number of injured farmers be influenced to return to the land. A large number of wounded can be of great service to agriculture and there is not the slightest doubt of the need for agricultural workmen. It is considered advisable to train those formerly on the land and unable to return to it in some skilled trade which can be pursued in the country. It is hoped that all efforts, both in the line of vocational reeducation and of employment, will be directed toward the returning of disabled soldiers to the regions in which they originally lived.

III. Is it well to create special shops for invalids?

Special shops are necessary for invalids in whom the degree of disability makes certain equipment and tools of a special nature necessary, for example, for the blind. There is no reason why

¹ Conference interalliée pour l'étude de la rééducation professionnelle et des questions qui intéressent les invalides de la guerre du 8 au 12 Mai, 1917. Paris, 1917. pp. 259-269.

invalids whose disabilities do not demand special equipment should be separated from their comrades and isolated in special shops, which would very soon be considered "charity" shops. Invalids employed in such shops would soon form a special category of workmen hostile to the other workmen in their occupation; and, too, the disabled gain a certain amount of inspiration from association with their normal comrades and become less sensitive to their physical inferiority.

IV. Should it be admitted as a principle that the disabled ought to receive for equal production a salary equal to that of the normal workman?

Unless some equitable arrangement be made, there is the risk that upon demobilization the uninjured soldier will find himself opposed in his prewar occupation by his disabled comrade. All of the employers from whom the labor office has received reports on the employment of war invalids have spontaneously declared that reeducated or readapted disabled men will be employed under normal conditions and that the work which they do, whether at home or in the shop, will be paid for at the same rate as that done by normal workmen. All employers and others interested in the employment of the disabled are not in accord on this point. However, there seems to be no objection to the formula "Equal production, equal pay."

The principle of equal wages being admitted, it is always necessary to establish a distinction in its application to different methods of executing the work. For piecework the rule can be inflexible as its application is simple. For work by the day the minimum salary should be equal for the disabled and the normal workman. If the production of the disabled worker is less than that of the normal workman, it is suggested that this situation be relieved by reducing the working day for the disabled by one, two, or three hours, as the exigencies of the case demand. In some cases the disabled might work half a day and the day be filled by two such men working alternately. This, of course, involves the question of special cases.

As to the comparative earning capacity of the disabled and normal workman, authorities seem to disagree. By some it is stated that disabled workmen should be able to earn as much as normal men, for the occupations in which they are engaged should be such that these men could fill them as well as normal workers; that whenever the vocations of the disabled men are adapted to their possibilities, the output is about the same as that of normal workmen doing the same work. Other authorities have estimated that for woodwork the production of the disabled man is a little more than 80 per cent of that of the normal workman. This valuation is also found in the report of an inspector of labor, who says that "a metal establishment of Billancourt employed 10 disabled men, of whom 5

had crippled legs, 2 were blind in one eye, and 2 had projectiles in the thorax which had not been extracted." He estimated that the production of these workmen is 80 per cent of that of the normal specialists in each class.

One inspector of labor reports an important factory in Paris which employs an almost equal number of normal and disabled workmen (more than 200 of each class). Those with crippled legs work sitting, are engaged as stampers, measurers, turners of sheaths, and polishers. In this factory the number of processes has to be increased on account of their employment, for it is necessary to carry their work to and from them. This inspector further states that the inferior production of the disabled man may be quite variable, but it is in general incontestable and that in order to lessen it in a measure, and to reach the limit of possible output, it will be necessary to permit the reduction of the day and choice of work.

Another inspector says, "The length of the day need not be changed on account of the employment of disabled men if such men are given work suitable for their physical condition. It is indispensable to give disabled men work which is compatible with their strength and ability."

V. Ought special organizations to be created for the employment of the disabled or ought they to be placed through the ordinary public employment offices?

An investigation of the subject was made by the French departments concerned, with the result that the public employment offices already established have been expressly charged with the placement of the wounded. It was believed that the question of employment for this class of workers was the same as for normal workers and that special institutions created for the purpose would create a danger that these workers would not be employed under normal conditions of remuneration.

The fact that they enjoy military pensions might influence the disabled to accept places at a scale of wages inferior to that of normal workmen. There would arise the possibility of conflicts between the normal workers and the injured ones, whom the former might accuse of underbidding them. Besides this, offices created especially for the disabled or wounded would have a tendency to concentrate these workmen in a small number of vocations and establishments.

It is not to be expected that an employer would always apply to special placement offices from pure philanthropy. On the contrary, there is danger that employers who apply to these special placement offices would only do so with the idea of finding cheap labor.

The conclusion which has been drawn by all concerned with placing wounded soldiers is that it is best not to separate their placement from that of the general workers, and that both classes of workmen

should be placed through the public employment service. It is there that employers who are looking for them will find them under the best material and moral conditions. It is there that employers who do not intend to employ wounded soldiers and who do not think themselves able to employ them may yet be influenced to employ them, perhaps by persuasive methods or perhaps by failure to find other labor.

For the duration of the War the private offices concerned exclusively with the employment of the disabled, such as those established by associations of employers and by the trades-unions have a useful function and it is not considered expedient to abolish them. Reeducation schools are placing the disabled who have been reeducated. It is foreseen, however, that most of these institutions will survive only a short time after the War, and they do not now reach a large number of invalided men who have not undergone vocational reeducation. This class of the disabled have recourse to the offices which have already taken charge of placing ordinary workmen.

VI. Rules to be observed in placing wounded soldiers.

All departmental or municipal employment offices are under the control of a commission composed of employers and workmen chosen from among the principal trades expected to have recourse to their placement services.

Public employment offices have been instituted in all parts of the country for placing normal workmen and the conditions under which they function are determined by general rules, the application of which presents a minimum of guaranties sufficient for those involved. For the placing of invalids it would be necessary to make these guaranties more exact and complete. (1) Some one in authority in each office should thoroughly familiarize himself with the requirements of the work and take necessary steps to learn the exact conditions under which the wounded men will work and the salaries which they will receive. These should, if possible, be stipulated by contract. (2) The office should always, before directing the disabled workman to the employer who has asked for him, become familiar with the contract between the parties. (3) The placing office should cooperate with the office in the region to which the disabled man is sent, in order to know whether the conditions stipulated in the contract are kept by the employers, and if adequate living conditions can be assured in the locality in which the workman will reside. (4) Managers of the offices should get in touch with the employers in the trades in which the disabled men are likely to be employed in order to show the employers the possibilities for their employing wounded men. In this way they can dissipate doubts that may exist on this subject. (5) Employment offices should keep in intimate relation with the departmental committees of the disabled. Only the close and con-

tinued collaboration of these two organizations can give satisfactory results, either on the economic or on the moral side. (6) Employment offices should impress upon disabled men the desirability of entering schools and learning trades suited to their infirmities, and of not being seduced by offers of immediate employment which may be remunerative now because of the present abnormal demand for labor or because of the interest which is felt in the disabled. After the War these employments will not suffice for them and they will find that results are demanded of them more in keeping with the high wages, employers forgetting with time the sentiments which have guided them in employing the wounded. (7) Employment offices should make it their special effort to see that all disabled men capable of filling positions are put in the way of securing work of as high a grade as is possible for them and in which they will be most useful to society. If the organization of the offices is good and the cooperation between them sufficiently close, they will find it easy to attain these ends.

VII. Ought it to be made obligatory for employers to employ disabled soldiers?

Laws have been proposed making obligatory the employment of a certain number of disabled men in Government service or any of the enterprises enjoying governmental assistance and making it obligatory on all employers to employ a proportionate number of disabled men.

These measures are considered justifiable. If, it is said, the owners of large businesses were frightened at the thought of the law making it their duty to employ some injured men among a large personnel of employees, and if such a thought could be capable of discouraging their initiative, one might well fear that left to themselves they would fail of the duty of employing the disabled, and the latter would be left to live on their pensions alone. So far these laws have not been necessary in France, employers giving evidence of their appreciation of their moral obligation to employ a proportionate number of disabled employees in their establishments.

The following resolutions on the questions discussed were proposed for the adoption of the interallied conference:

1. So far as possible, disabled soldiers should be kept in their former vocations.
2. Disabled men should be kept so far as the trade followed by them will permit, in the region in which they lived before the war.
3. It is not best, in the majority of cases, to create special workshops for disabled soldiers.
4. The disabled soldiers should receive for equal production, wages equal to those of normal workmen.
5. In general, it is preferable to commit the placement of disabled soldiers to public and private organizations which are charged with the placement of normal workmen.

However, it is advisable (1) for the vocational schools to place their pupils directly, (2) for the war offices which have already been constituted in each allied country to continue their placement work until the termination of hostilities.

6. Public and private placement services should apply, in placing the disabled soldiers, besides the general rules for placing normal workmen, stricter rules, notably those concerning the stability of employment, the conditions of labor, and the scale of wages.

7. It belongs to the legislature in each allied country to decide whether or not employers should be placed under obligation to employ disabled soldiers. Meantime, the interallied conference holds that there is a moral obligation resting upon employers to employ disabled soldiers in a number proportional to the importance and personnel of each industrial and commercial establishment.

PRICES AND COST OF LIVING.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

The retail prices of food in the United States, according to reports received from retail dealers by the Bureau of Labor Statistics, show a decrease of 4 per cent on March 15, 1918, compared with February 15, 1918. This decrease is caused, to a large extent, by the price changes in eggs, butter, and potatoes, which changes are natural at this season of the year.

Prices are not given for hens because, conforming to the ruling of the Food Administration, no live or fresh hens were sold in March. This restriction was lifted at midnight, April 19.

Of the 15 articles for which relative prices are given, 4 show the following decreases: Eggs, 28 per cent; potatoes, 22 per cent; sugar, 13 per cent; and butter, 5 per cent. Two articles, milk and flour, show no change, while the increase in the price of lard is practically negligible, being less than one-half of 1 per cent.

A table showing the course of prices in the United States in February and March, 1918, is given below:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON
FEB. 15, 1918, AND MAR. 15, 1918.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913. For certain articles relative prices are not shown because quotations were not secured for 1913.]

Article.	Unit.	Average money price.		Relative price.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak.....	Pound....	\$0.334	\$0.338	131	133
Round steak.....	do.....	.314	.318	141	143
Rib roast.....	do.....	.263	.268	133	135
Chuck roast.....	do.....	.227	.232	.....	.....
Plate beef.....	do.....	.177	.182	.....	.....
Pork chops.....	do.....	.336	.339	160	161
Bacon.....	do.....	.484	.488	179	181
Ham.....	do.....	.438	.441	163	164
Lard.....	do.....	.330	.332	209	210
Hens.....	do.....	.362	.....	170	.....
Salmon, canned.....	do.....	.291	.295	.....	.....
Eggs.....	Dozen.....	.611	.443	177	128
Butter.....	Pound.....	.579	.552	151	144
Cheese.....	do.....	.349	.351	.....	.....
Milk.....	Quart.....	.134	.134	151	151
Bread.....	16-oz. loaf ¹	.083	.084	166	168
Flour.....	Pound.....	.066	.066	200	200
Corn meal.....	do.....	.070	.072	233	240
Rice.....	do.....	.118	.120	.....	.....
Potatoes.....	do.....	.032	.025	188	147
Onions.....	do.....	.049	.040	.....	.....
Beans, navy.....	do.....	.131	.131	.....	.....
Prunes.....	do.....	.165	.165	.....	.....
Raisins, seeded.....	do.....	.150	.151	.....	.....
Sugar.....	do.....	.106	.092	193	167
Coffee.....	do.....	.304	.304	.....	.....
Tea.....	do.....	.609	.615	.....	.....
All articles combined.....				161	154

¹ 16 ounces, weight of dough.

Prices of food as a whole advanced 16 per cent in the year from March 15, 1917, to March 15, 1918.

In this one year period, the only decline in price is that of potatoes. This article decreased 51 per cent. Corn meal shows the greatest increase, or 75 per cent. Sugar shows the least increase, or 4 per cent.

The increases in the prices of the other articles range from 14 per cent to 47 per cent and are in detail as follows: Rib roast, 14 per cent; flour and sirloin steak, 15 per cent each; bread, 17 per cent; butter, 19 per cent; round steak, 20 per cent; pork chops, 21 per cent; eggs, 27 per cent; ham, 31 per cent; milk, 35 per cent; lard, 39 per cent; and bacon, 47 per cent.

Food as a whole was 59 per cent higher in March, 1918, than in the same month in 1913. In this 5-year period, every article increased in price 33 per cent and over. Flour was just twice as high in March, 1918, as in March, 1913. Lard increased 112 per cent and corn meal, 145 per cent. The increase in only four articles was less than 50 per cent. Eleven articles increased over 50 per cent, and 3 of these increased 100 per cent and over. The percentages of increases in detail for this 5-year period are as follows: Corn meal, 145 per cent; lard, 112 per cent; flour, 100 per cent; bacon, 87 per cent; ham and sugar, 69 per cent; bread, 68 per cent; potatoes, 67 per cent; eggs and pork chops, 66 per cent; milk, 51 per cent; round steak, 49 per cent; rib roast, 38 per cent; sirloin steak, 37 per cent; and butter, 33 per cent.

A table showing the average and relative retail prices of food in the United States on March 15 of each year, 1913 to 1918, inclusive, follows:

AVERAGE MONEY PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MAR. 15 OF EACH YEAR, 1913 TO 1918, INCLUSIVE.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1913. For certain articles relative prices are not shown because quotations were not secured for 1913.]

Article.	Unit.	Average money price, Mar. 15—						Relative price, Mar. 15—					
		1913	1914	1915	1916	1917	1918	1913	1914	1915	1916	1917	1918
Sirloin steak.....	Lb.....	\$0.246	\$0.254	\$0.246	\$0.262	\$0.295	\$0.338	97	100	97	104	116	133
Round steak.....	do.....	.213	.230	.221	.233	.267	.318	96	103	99	104	119	143
Rib roast.....	do.....	.193	.199	.195	.206	.232	.268	98	101	99	104	118	135
Chuck roast.....	do.....	.....	.169	.160	.165	.193	.232	.....	.....	.....	.....	.....	.....
Plate beef.....	do.....	.....	.124	.122	.124	.146	.182	.....	.....	.....	.....	.....	.....
Pork chops.....	do.....	.202	.209	.177	.218	.279	.339	97	100	85	104	133	161
Bacon.....	do.....	.261	.267	.264	.276	.353	.488	97	99	98	103	123	181
Ham.....	do.....	.262	.265	.256	.303	.338	.441	97	99	95	113	125	164
Lard.....	do.....	.156	.156	.152	.182	.238	.332	99	99	96	115	151	210
Salmon, canned.....	do.....	.....	.....	.198	.200	.222	.295	.....	.....	.....	.....	.....	.....
Eggs.....	Doz.....	.263	.308	.255	.285	.349	.443	77	90	74	82	101	128
Butter.....	Lb.....	.414	.351	.359	.402	.461	.562	108	92	94	105	121	144
Cheese.....	do.....	.....	.....	.232	.250	.323	.351	.....	.....	.....	.....	.....	.....
Milk.....	Qt.....	.089	.090	.088	.088	.100	.134	100	101	99	100	112	151
Bread.....	16 oz ¹.....	.....	.055	.063	.064	.072	.084	100	110	126	128	144	168
Flour.....	Lb.....	.033	.033	.044	.039	.057	.066	100	99	136	120	174	200
Corn meal.....	do.....	.030	.031	.033	.032	.041	.072	98	103	110	107	137	240
Rice.....	do.....	.....	.....	.091	.091	.091	.120	.....	.....	.....	.....	.....	.....
Potatoes.....	do.....	.015	.019	.014	.024	.052	.025	88	107	82	140	207	147
Onions.....	do.....	.....	.....	.033	.045	.125	.040	.....	.....	.....	.....	.....	.....
Beans, navy.....	do.....	.....	.....	.076	.092	.154	.181	.....	.....	.....	.....	.....	.....
Peas.....	do.....	.....	.....	.137	.133	.141	.165	.....	.....	.....	.....	.....	.....
Prunes.....	do.....	.....	.....	.125	.126	.141	.151	.....	.....	.....	.....	.....	.....
Raisins, seeded.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sugar.....	do.....	.....	.....	.066	.074	.087	.092	99	93	120	137	160	167
Coffee.....	do.....	.054	.051	.....	.299	.299	.304	.....	.....	.....	.....	.....	.....
Tea.....	do.....	.....	.....	.....	.546	.546	.615	.....	.....	.....	.....	.....	.....
All articles combined.....	.....	.....	.....	.....	.....	.....	.....	97	99	98	107	133	154

¹ Loaf; 16 ounces, weight of dough.

The next table gives average retail prices for February, 1918 and for March, 1913, 1914, 1917, and 1918, for 15 of the larger cities. The prices for Atlanta, Ga., are not included as less than 80 per cent of the firms of that city sent in their reports for March, 1918, to the bureau.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak.....	Pound.....	(1)	(1)	(1)	(1)	(1)	\$0.220	\$0.238	\$0.282	\$0.334	\$0.338
Round steak.....	do.....	(1)	(1)	(1)	(1)	(1)	.207	.218	.268	.329	.329
Rib roast.....	do.....	(1)	(1)	(1)	(1)	(1)	.180	.180	.218	.255	.268
Chuck roast.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.153	.190	.237	.237
Plate beef.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.128	.154	.186	.189
Pork chops.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.193	.184	.258	.344
Bacon, sliced.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.220	.236	.288	.449
Ham, sliced.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.300	.290	.380	.479
Lard.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.140	.144	.238	.326
Lamb.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.183	.185	.265	.337
Hens.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.218	.208	.278	.403
Salmon, canned.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.183	.261	.256
Eggs, strictly fresh.....	Dozen.....	(1)	(1)	(1)	(1)	(1)	.....	.217	.316	.314	.655
Butter.....	Pound.....	(1)	(1)	(1)	(1)	(1)	.....	.421	.374	.486	.604
Cheese.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.335	.357	.364
Milk.....	Quart.....	(1)	(1)	(1)	(1)	(1)	.....	.088	.087	.092	.130
Bread.....	16-oz. loaf ²	(1)	(1)	(1)	(1)	(1)	.....	.048	.049	.066	.077
Flour.....	Pound.....	(1)	(1)	(1)	(1)	(1)	.....	.032	.032	.058	.067
Corn meal.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.025	.025	.036	.060
Rice.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.093	.115	.117
Potatoes.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.015	.019	.056	.036
Onions.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.139	.049	.041
Beans, navy.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.150	.182	.184
Prunes.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.130	.166	.169
Raisins.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.140	.151	.149
Sugar.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.051	.046	.086	.090
Coffee.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.235	.282	.285
Tea.....	do.....	(1)	(1)	(1)	(1)	(1)	.....	.....	.550	.644	.633

	Boston, Mass.					Buffalo, N. Y.					
	1913	1914	1917	1918	1918	1913	1914	1917	1918	1918	
Sirloin steak.....	do.....	\$0.346	\$0.322	\$0.396	\$0.424	\$0.423	\$0.220	\$0.216	\$0.265	\$0.321	\$0.324
Round steak.....	do.....	.330	.343	.376	.430	.428 ¹	.190	.194	.238	.299	.301
Rib roast.....	do.....	.234	.244	.274	.303	.298	.173	.168	.200	.253	.257
Chuck roast.....	do.....	.....	.168	.218	.254	.249	.....	.154	.180	.230	.234
Plate beef.....	do.....	.....	.....	.....	.....	.....	.....	.118	.150	.179	.179
Pork chops.....	do.....	.222	.227	.279	.345	.346	.193	.198	.303	.321	.342
Bacon, sliced.....	do.....	.254	.250	.317	.460	.463	.210	.202	.290	.438	.448
Ham, sliced.....	do.....	.288	.313	.373	.460	.458	.250	.253	.350	.448	.453
Lard.....	do.....	.157	.154	.243	.335	.335	.141	.141	.225	.318	.323
Lamb.....	do.....	.218	.212	.279	.333	.334	.173	.163	.233	.294	.301
Hens.....	do.....	.242	.247	.300	.380	.....	.217	.218	.280	.360	.....
Salmon, canned.....	do.....	.....	.225	.308	.308	.308	.....	.....	.192	.286	.288
Eggs, strictly fresh.....	Dozen.....	.328	.347	.450	.748	.546	.247	.327	.380	.690	.468
Butter.....	Pound.....	.414	.357	.457	.560	.558	.406	.341	.450	.585	.540
Cheese.....	do.....	.....	.....	.321	.336	.335	.....	.....	.312	.342	.345
Milk.....	Quart.....	.089	.089	.105	.145	.145	.080	.080	.100	.140	.140
Bread.....	16-oz. loaf ².....	.052	.052	.069	.076	.080	.050	.046	.076	.078	.083
Flour.....	Pound.....	.037	.037	.053	.073	.070	.029	.029	.053	.063	.064
Corn meal.....	do.....	.035	.035	.048	.079	.079	.025	.026	.040	.075	.078
Rice.....	do.....	.....	.....	.098	.122	.123	.....	.....	.095	.121	.123
Potatoes.....	do.....	.016	.019	.052	.038	.025	.014	.017	.055	.031	.024
Onions.....	do.....	.....	.121	.054	.043	.....	.....	.....	.208	.053	.040
Beans, navy.....	do.....	.....	.....	.153	.186	.186	.....	.....	.154	.186	.184
Prunes.....	do.....	.....	.....	.144	.170	.170	.....	.....	.132	.172	.175
Raisins.....	do.....	.....	.....	.140	.150	.149	.....	.....	.122	.141	.142
Sugar.....	do.....	.053	.049	.083	.098	.093	.053	.049	.088	.097	.098
Coffee.....	do.....	.....	.....	.334	.341	.341	.....	.....	.333	.306	.305
Tea.....	do.....	.....	.....	.600	.631	.638	.....	.....	.425	.567	.570

¹ No averages are shown for this city because over 20 per cent of the firms on the Bureau's list failed to report for March, 1918.

² 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918—Continued.

Article.	Unit.	Chicago, Ill.					Cleveland, Ohio.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak.....	Pound.....	\$0.220	\$0.242	\$0.269	\$0.304	\$0.303	\$0.237	\$0.249	\$0.282	\$0.316	\$0.318
Round steak.....	do.....	.189	.210	.233	.272	.274	.210	.221	.258	.299	.301
Rib roast.....	do.....	.194	.194	.216	.251	.255	.192	.196	.227	.252	.259
Chuck roast.....	do.....	.160	.182	.214	.220	.....	.170	.202	.236	.239	.....
Plate beef.....	do.....	.119	.137	.166	.169	.....	.124	.143	.177	.184	.....
Pork chops.....	do.....	.179	.184	.258	.301	.309	.198	.203	.312	.326	.336
Bacon, sliced.....	do.....	.298	.309	.348	.499	.492	.256	.278	.349	.477	.483
Ham, sliced.....	do.....	.313	.312	.343	.448	.450	.335	.357	.400	.455	.469
Lard.....	do.....	.146	.152	.226	.317	.321	.161	.163	.252	.322	.328
Lamb.....	do.....	.197	.195	.250	.306	.316	.203	.191	.288	.311	.323
Hens.....	do.....	.199	.203	.268	.352	.....	.227	.230	.307	.373	.....
Salmon, canned.....	do.....	.....	.....	.246	.303	.286	.....	.....	.200	.281	.285
Eggs, strictly fresh	Dozen.....	.234	.277	.323	.593	.407	.272	.287	.354	.702	.446
Butter.....	Pound.....	.404	.329	.445	.547	.506	.434	.360	.495	.578	.539
Cheese.....	do.....	.....	.....	.318	.377	.381	.....	.....	.317	.342	.340
Milk.....	Quart.....	.080	.080	.090	.119	.119	.088	.080	.100	.130	.130
Bread.....	16 oz. loaf ²	.054	.054	.073	.084	.089	.049	.050	.070	.078	.081
Flour.....	Pound.....	.027	.029	.053	.063	.064	.032	.032	.058	.068	.067
Corn meal.....	do.....	.029	.029	.047	.069	.071	.027	.029	.043	.069	.071
Rice.....	do.....	.....	.....	.087	.121	.124	.....	.....	.092	.121	.121
Potatoes.....	do.....	.013	.017	.045	.029	.020	.014	.018	.054	.031	.022
Onions.....	do.....	.....	.....	.111	.046	.036	.....	.....	.130	.048	.034
Beans, navy.....	do.....	.....	.....	.157	.185	.184	.....	.....	.160	.177	.177
Prunes.....	do.....	.....	.....	.143	.165	.165	.....	.....	.140	.172	.173
Raisins.....	do.....	.....	.....	.144	.151	.150	.....	.....	.130	.146	.146
Sugar.....	do.....	.049	.050	.082	.087	.087	.055	.050	.092	.094	.089
Coffee.....	do.....	.....	.....	.283	.282	.286	.....	.....	.288	.291	.300
Tea.....	do.....	.....	.....	.530	.591	.583	.....	.....	.433	.580	.595
		Denver, Colo.					Detroit, Mich.				
Sirloin steak.....	do.....	\$0.227	\$0.229	\$0.244	\$0.303	\$0.307	\$0.240	\$0.241	\$0.270	\$0.321	\$0.321
Round steak.....	do.....	.196	.211	.225	.282	.286	.194	.203	.232	.298	.293
Rib roast.....	do.....	.166	.174	.198	.236	.238	.198	.198	.236	.259	.271
Chuck roast.....	do.....	.....	.158	.175	.209	.217	.....	.156	.178	.224	.224
Plate beef.....	do.....	.....	.097	.118	.151	.152	.....	.119	.134	.177	.181
Pork chops.....	do.....	.176	.192	.255	.325	.330	.186	.188	.262	.331	.331
Bacon, sliced.....	do.....	.270	.274	.367	.483	.518	.224	.228	.300	.457	.474
Ham, sliced.....	do.....	.283	.351	.367	.475	.489	.255	.280	.300	.426	.428
Lard.....	do.....	.139	.163	.243	.341	.344	.162	.160	.230	.336	.335
Lamb.....	do.....	.169	.164	.236	.292	.297	.172	.170	.244	.324	.327
Hens.....	do.....	.207	.204	.233	.338	.....	.216	.223	.276	.375	.....
Salmon, canned.....	do.....	.....	.....	.200	.279	.280	.....	.....	.200	.274	.290
Eggs, strictly fresh	Dozen.....	.261	.260	.350	.600	.415	.252	.314	.350	.668	.449
Butter.....	Pound.....	.390	.336	.428	.560	.497	.406	.337	.454	.568	.526
Cheese.....	do.....	.....	.....	.325	.361	.357	.....	.....	.300	.343	.350
Milk.....	Quart.....	.084	.084	.083	.115	.115	.080	.089	.110	.140	.140
Bread.....	16 oz. loaf ²	.047	.048	.075	.087	.086	.050	.050	.073	.075	.084
Flour.....	Pound.....	.026	.026	.047	.054	.056	.031	.030	.056	.065	.068
Cornmeal.....	do.....	.024	.026	.032	.056	.060	.027	.029	.045	.077	.074
Rice.....	do.....	.....	.....	.092	.116	.120	.....	.....	.086	.121	.122
Potatoes.....	do.....	.010	.015	.047	.022	.020	.012	.016	.051	.029	.021
Onions.....	do.....	.....	.....	.144	.044	.034	.....	.....	.119	.055	.044
Beans, navy.....	do.....	.....	.....	.138	.174	.173	.....	.....	.155	.182	.179
Prunes.....	do.....	.....	.....	.138	.171	.168	.....	.....	.129	.171	.170
Raisins.....	do.....	.....	.....	.131	.153	.147	.....	.....	.128	.141	.141
Sugar.....	do.....	.054	.048	.082	.090	.092	.050	.050	.090	.089	.088
Coffee.....	do.....	.....	.....	.288	.300	.295	.....	.....	.275	.304	.301
Tea.....	do.....	.....	.....	.488	.575	.576	.....	.....	.475	.573	.547

² 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918—Continued.

Article.	Unit.	Milwaukee, Wis.					New York, N. Y.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak.....	Pound.....	\$0.215	\$0.230	\$0.277	\$0.302	\$0.303	\$0.254	\$0.260	\$0.296	\$0.347	\$0.346
Round steak.....	do.....	.200	.210	.247	.287	.288	.238	.254	.291	.356	.357
Rib roast.....	do.....	.178	.185	.218	.248	.249	.217	.218	.254	.295	.296
Chuck roast.....	do.....	.....	.163	.195	.227	.229	.....	.161	.192	.237	.233
Plate beef.....	do.....	.....	.118	.140	.171	.173	.....	.148	.172	.220	.221
Pork chops.....	do.....	.....	.188	.182	.272	.306	.311	.213	.218	.285	.349
Bacon, sliced.....	do.....	.....	.273	.273	.325	.479	.482	.236	.251	.311	.459
Ham, sliced.....	do.....	.....	.268	.277	.342	.452	.451	1.198	1.195	1.256	1.336
Lard.....	do.....	.....	.153	.160	.244	.326	.328	.160	.157	.232	.331
Lamb.....	do.....	.....	.200	.188	.290	.323	.328	.173	.166	.237	.283
Hens.....	do.....	.....	.218	.212	.273	.326	.....	.211	.216	.274	.365
Salmon, canned.....	do.....	.....	.....	.233	.272	.284	.....	.....	.258	.350	.353
Eggs, strictly fresh.....	Dozen.....	.232	.259	.342	.635	.411	.318	.398	.408	.697	.501
Butter.....	Pound.....	.396	.324	.475	.551	.514	.412	.349	.470	.582	.527
Cheese.....	do.....	.....	.....	.317	.348	.354	.....	.....	.313	.345	.344
Milk.....	Quart.....	.070	.070	.080	.110	.110	.090	.090	.109	.146	.146
Bread.....	16-oz. loaf ².....	.050	.051	.077	.075	.076	.053	.055	.077	.077	.079
Flour.....	Pound.....	.031	.030	.057	.065	.065	.032	.032	.057	.071	.073
Corn meal.....	do.....	.033	.033	.050	.075	.082	.034	.034	.051	.080	.082
Rice.....	do.....	.....	.....	.095	.121	.120	.....	.....	.089	.117	.119
Potatoes.....	do.....	.012	.016	.051	.029	.019	.023	.016	.057	.044	.036
Onions.....	do.....	.....	.....	.137	.147	.038	.....	.....	.111	.052	.038
Beans, navy.....	do.....	.....	.....	.153	.186	.183	.....	.....	.152	.183	.183
Prunes.....	do.....	.....	.....	.148	.166	.159	.....	.....	.142	.169	.171
Raisins.....	do.....	.....	.....	.145	.148	.146	.....	.....	.137	.149	.149
Sugar.....	do.....	.054	.050	.081	.086	.089	.048	.045	.084	.091	.083
Coffee.....	do.....	.....	.....	.283	.268	.270	.....	.....	.267	.267	.266
Tea.....	do.....	.....	.....	.557	.589	.606	.....	.....	.454	.536	.584
		Philadelphia, Pa.					Pittsburgh, Pa.				
Sirloin steak.....	do.....	\$0.286	\$0.300	\$0.345	\$0.401	\$0.398	\$0.260	\$0.277	\$0.315	\$0.377	\$0.373
Round steak.....	do.....	.235	.257	.309	.376	.374	.220	.237	.285	.351	.347
Rib roast.....	do.....	.214	.219	.256	.303	.303	.218	.217	.247	.290	.296
Chuck roast.....	do.....	.....	.178	.215	.258	.260	.....	.168	.200	.256	.257
Plate beef.....	do.....	.....	.119	.145	.192	.190	.....	.128	.148	.192	.188
Pork chops.....	do.....	.....	.203	.215	.294	.363	.356	.213	.218	.308	.333
Bacon, sliced.....	do.....	.....	.238	.257	.326	.470	.466	.281	.295	.337	.501
Ham, sliced.....	do.....	.....	.297	.296	.395	.488	.489	.288	.290	.373	.478
Lard.....	do.....	.....	.150	.162	.235	.334	.334	.151	.156	.236	.332
Lamb.....	do.....	.....	.186	.195	.266	.324	.326	.225	.203	.303	.347
Hens.....	do.....	.....	.218	.238	.293	.371	.....	.264	.270	.350	.436
Salmon, canned.....	do.....	.....	.....	.193	.265	.265	.....	.....	.227	.305	.306
Eggs, strictly fresh.....	Dozen.....	.254	.347	.368	.690	.460	.254	.343	.350	.697	.458
Butter.....	Pound.....	.475	.407	.519	.630	.592	.434	.367	.489	.591	.568
Cheese.....	do.....	.....	.....	.333	.374	.377	.....	.....	.325	.357	.366
Milk.....	Quart.....	.080	.080	.090	.130	.132	.088	.092	.103	.138	.135
Bread.....	16-oz. loaf ².....	.043	.043	.064	.071	.071	.048	.048	.071	.086	.086
Flour.....	Pound.....	.032	.032	.058	.072	.070	.031	.032	.058	.069	.068
Corn meal.....	do.....	.023	.028	.037	.073	.076	.027	.029	.045	.085	.082
Rice.....	do.....	.....	.....	.097	.130	.131	.....	.....	.094	.121	.123
Potatoes.....	do.....	.021	.025	.062	.039	.028	.015	.018	.054	.037	.026
Onions.....	do.....	.....	.....	.122	.052	.039	.....	.....	.129	.050	.037
Beans, navy.....	do.....	.....	.....	.148	.186	.184	.....	.....	.165	.190	.188
Prunes.....	do.....	.....	.....	.142	.168	.171	.....	.....	.138	.175	.172
Raisins.....	do.....	.....	.....	.127	.140	.142	.....	.....	.142	.149	.146
Sugar.....	do.....	.049	.045	.079	.092	.088	.056	.055	.099	.098	.099
Coffee.....	do.....	.....	.....	.285	.278	.279	.....	.....	.270	.299	.301
Tea.....	do.....	.....	.....	.544	.596	.587	.....	.....	.567	.728	.732

¹ Whole.

² 16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES, FOR MAR. 15, 1913, 1914, 1917, FEB. 15, 1918, AND MAR. 15, 1918—Concluded.

Article.	Unit.	St. Louis, Mo.					San Francisco, Cal.				
		Mar. 15.			Feb. 15.	Mar. 15.	Mar. 15.			Feb. 15.	Mar. 15.
		1913	1914	1917	1918	1918	1913	1914	1917	1918	1918
Sirloin steak.....	Pound.....	\$0.228	\$0.258	\$0.276	\$0.300	\$0.317	\$0.203	\$0.210	\$0.231	\$0.264	\$0.284
Round steak.....	do.....	.202	.234	.263	.297	.312	.190	.197	.227	.258	.282
Rib roast.....	do.....	.147	.200	.221	.261	.269	.207	.221	.237	.249	.267
Chuck roast.....	do.....	.155	.179	.213	.222	.222	.155	.163	.191	.191	.206
Plate beef.....	do.....	.142	.136	.171	.180	.180	.150	.156	.182	.198	.198
Pork chops.....	do.....	.180	.188	.257	.293	.300	.240	.250	.308	.351	.356
Bacon, sliced.....	do.....	.238	.250	.322	.478	.488	.321	.337	.375	.538	.535
Ham, sliced.....	do.....	.267	.275	.356	.458	.467	.270	.279	.383	.494	.494
Lard.....	do.....	.136	.126	.226	.293	.303	.169	.165	.235	.334	.337
Lamb.....	do.....	.171	.179	.265	.302	.317	.173	.183	.253	.293	.314
Hens.....	do.....	.186	.196	.251	.347	.....	.238	.240	.283	.418	.....
Salmon, canned.....	do.....	.....	.196	.288	.288	.289	.....	.....	.196	.254	.253
Eggs, strictly fresh.....	Dozen.....	.220	.258	.298	.573	.398	.235	.246	.325	.489	.433
Butter.....	Pound.....	.412	.320	.476	.580	.563	.429	.307	.417	.589	.568
Cheese.....	do.....	.....	.....	.314	.365	.368	.....	.....	.288	.329	.326
Milk.....	Quart.....	.080	.080	.095	.130	.120	.100	.100	.100	.121	.121
Bread.....	16 oz. loaf ².....	.049	.050	.074	.088	.085	.051	.052	.063	.084	.084
Flour.....	Pound.....	.030	.028	.053	.061	.061	.033	.034	.051	.062	.061
Corn meal.....	do.....	.021	.026	.035	.062	.068	.034	.035	.044	.069	.073
Rice.....	do.....	.....	.....	.088	.111	.113	.....	.....	.088	.119	.120
Potatoes.....	do.....	.013	.017	.048	.031	.023	.012	.017	.045	.022	.023
Onions.....	do.....	.....	.....	.114	.044	.029	.....	.....	.092	.034	.026
Beans, navy.....	do.....	.....	.....	.149	.179	.188	.....	.....	.147	.158	.155
Prunes.....	do.....	.....	.....	.141	.167	.168	.....	.....	.124	.142	.135
Raisins.....	do.....	.....	.....	.150	.169	.169	.....	.....	.135	.128	.137
Sugar.....	do.....	.051	.047	.083	.087	.086	.053	.051	.079	.087	.088
Coffee.....	do.....	.....	.....	.237	.274	.275	.....	.....	.317	.301	.300
Tea.....	do.....	.....	.....	.543	.652	.660	.....	.....	.517	.543	.529
		Seattle, Wash.					Washington, D. C.				
Sirloin steak.....	do.....	\$0.218	\$0.240	\$0.250	\$0.300	\$0.305	\$0.264	\$0.271	\$0.291	\$0.380	\$0.392
Round steak.....	do.....	.200	.212	.230	.285	.290	.231	.233	.279	.360	.369
Rib roast.....	do.....	.182	.191	.222	.251	.255	.210	.210	.240	.296	.308
Chuck roast.....	do.....	.151	.172	.214	.217	.217	.170	.203	.257	.266	.266
Plate beef.....	do.....	.128	.135	.183	.184	.184	.128	.158	.202	.196	.196
Pork chops.....	do.....	.234	.240	.288	.388	.388	.219	.208	.283	.378	.387
Bacon, sliced.....	do.....	.300	.314	.376	.535	.533	.254	.246	.308	.485	.485
Ham, sliced.....	do.....	.300	.300	.360	.469	.465	.286	.286	.350	.473	.481
Lard.....	do.....	.173	.162	.240	.327	.334	.146	.143	.220	.336	.333
Lamb.....	do.....	.182	.191	.262	.327	.328	.214	.199	.282	.346	.368
Hens.....	do.....	.240	.250	.275	.359	.....	.221	.230	.283	.391	.....
Salmon, canned.....	do.....	.....	.....	.218	.283	.289	.....	.....	.197	.287	.300
Eggs, strictly fresh.....	Dozen.....	.235	.257	.321	.528	.456	.226	.294	.331	.671	.443
Butter.....	Pound.....	.440	.350	.444	.588	.582	.441	.359	.490	.605	.592
Cheese.....	do.....	.....	.....	.281	.308	.308	.....	.....	.326	.357	.363
Milk.....	Quart.....	.086	.088	.100	.126	.126	.090	.090	.100	.140	.140
Bread.....	16 oz. loaf ².....	.049	.051	.081	.087	.086	.049	.050	.071	.074	.082
Flour.....	Pound.....	.030	.029	.048	.058	.058	.036	.038	.057	.069	.068
Corn meal.....	do.....	.030	.032	.040	.072	.072	.025	.025	.036	.063	.064
Rice.....	do.....	.....	.....	.086	.117	.121	.....	.....	.089	.127	.127
Potatoes.....	do.....	.009	.012	.025	.017	.016	.015	.019	.051	.036	.024
Onions.....	do.....	.....	.....	.115	.042	.034	.....	.....	.138	.050	.039
Beans, navy.....	do.....	.....	.....	.150	.168	.169	.....	.....	.156	.196	.178
Prunes.....	do.....	.....	.....	.130	.146	.145	.....	.....	.140	.175	.175
Raisins.....	do.....	.....	.....	.131	.147	.145	.....	.....	.135	.156	.155
Sugar.....	do.....	.061	.056	.085	.091	.091	.050	.048	.083	.089	.089
Coffee.....	do.....	.....	.....	.326	.312	.315	.....	.....	.286	.293	.296
Tea.....	do.....	.....	.....	.500	.564	.556	.....	.....	.557	.637	.652

² 16 ounces, weight of dough.

100 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

The following table gives average retail prices in 29 smaller cities for February and March, 1918:

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR FEB. 15, 1918, AND MAR. 15, 1918, IN 29 CITIES.

[The average prices below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Birmingham, Ala.		Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak.....	Lb....	\$0.352	\$0.349	\$0.418	\$0.402	\$0.310	\$0.323	\$0.308	\$0.312	\$0.282	\$0.288
Round steak.....	do....	.376	.322	.384	.368	.278	.299	.298	.302	.273	.279
Rib roast.....	do....	.279	.267	.316	.302	.253	.270	.263	.268	.244	.246
Chuck roast.....	do....	.225	.223	.274	.263	.209	.223	.210	.208	.210	.210
Plate beef.....	do....	.170	.178	.170	.175	.152	.162	.181	.190	.177	.183
Pork chops.....	do....	.339	.325	.338	.329	.356	.356	.363	.362	.284	.322
Bacon, sliced.....	do....	.520	.530	.506	.506	.572	.568	.507	.506	.453	.451
Ham, sliced.....	do....	.440	.445	.501	.501	.494	.494	.460	.460	.434	.438
Lard.....	do....	.321	.323	.330	.331	.339	.338	.338	.340	.302	.310
Lamb.....	do....	.350	.350	.320	.312	.319	.330	.357	.373	.277	.290
Hens.....	do....	.300	.....	.368	.....	.383	.....	.363	.....	.365	.....
Salmon, canned.....	do....	.267	.275	.362	.366	.355	.383	.274	.280	.261	.259
Eggs, strictly fresh.....	Doz.....	.522	.396	.794	.542	.694	.500	.650	.438	.614	.384
Butter.....	Lb....	.590	.588	.536	.530	.595	.588	.569	.580	.585	.545
Cheese.....	do....	.363	.353	.347	.344	.350	.350	.352	.353	.368	.376
Milk.....	Qt....	.152	.152	.145	.140	.150	.150	.155	.160	.130	.130
Bread.....	16 oz. ¹	.089	.089	.083	.089	.106	.106	.091	.094	.081	.082
Flour.....	Lb....	.067	.067	.070	.070	.068	.067	.076	.074	.070	.070
Corn meal.....	do....	.055	.056	.085	.082	.074	.074	.061	.065	.060	.064
Rice.....	do....	.121	.118	.126	.125	.118	.125	.092	.087	.118	.117
Potatoes.....	do....	.039	.030	.041	.029	.019	.018	.043	.036	.037	.029
Onions.....	do....	.058	.040	.058	.046	.043	.037	.053	.051	.051	.048
Beans, navy.....	do....	.188	.185	.190	.185	.165	.179	.191	.194	.159	.164
Prunes.....	do....	.161	.161	.171	.169	.157	.158	.160	.165	.160	.153
Raisins.....	do....	.158	.157	.158	.158	.147	.146	.150	.150	.150	.158
Sugar.....	do....	.094	.091	.100	.097	.100	.100	.091	.090	.094	.093
Coffee.....	do....	.320	.323	.326	.319	.420	.427	.282	.281	.273	.264
Tea.....	do....	.762	.796	.634	.618	.759	.778	.636	.645	.706	.694
Article.	Unit.	Columbus, Ohio.		Dallas, Tex.		Fall River, Mass.		Indianapolis, Ind.		Jacksonville, Fla.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
Sirloin steak.....	do....	\$0.322	\$0.323	\$0.330	\$0.340	\$0.425	\$0.435	\$0.315	\$0.322	\$0.348	\$0.338
Round steak.....	do....	.291	.300	.316	.334	.364	.372	.313	.313	.306	.313
Rib roast.....	do....	.249	.254	.272	.288	.278	.278	.239	.238	.277	.269
Chuck roast.....	do....	.226	.230	.244	.259	.235	.242	.216	.222	.213	.228
Plate beef.....	do....	.173	.179	.196	.211	.....	.....	.171	.177	.167	.170
Pork chops.....	do....	.316	.313	.341	.341	.337	.337	.325	.336	.353	.344
Bacon, sliced.....	do....	.478	.481	.541	.547	.445	.448	.476	.400	.500	.505
Ham, sliced.....	do....	.445	.455	.461	.483	.437	.436	.457	.453	.438	.438
Lard.....	do....	.328	.329	.339	.345	.317	.320	.310	.315	.333	.329
Lamb.....	do....	.315	.325	.367	.417	.319	.324	.283	.300	.321	.331
Hens.....	do....	.325	.....	.302	.....	.363	.....	.333	.....	.363	.....
Salmon, canned.....	do....	.275	.266	.282	.277	.292	.315	.240	.239	.285	.285
Eggs, strictly fresh.....	Doz.....	.615	.374	.497	.400	.784	.576	.598	.369	.556	.470
Butter.....	Lb....	.574	.544	.551	.531	.529	.542	.568	.542	.599	.594
Cheese.....	do....	.347	.353	.365	.353	.331	.331	.384	.385	.353	.358
Milk.....	Qt....	.130	.130	.158	.163	.128	.130	.107	.107	.180	.180
Bread.....	16 oz. ¹	.089	.089	.078	.085	.088	.088	.077	.089	.087	.084
Flour.....	Lb....	.067	.066	.065	.065	.074	.074	.065	.066	.071	.070
Corn meal.....	do....	.062	.066	.069	.070	.087	.093	.065	.067	.061	.063
Rice.....	do....	.123	.119	.119	.118	.121	.121	.120	.118	.106	.106
Potatoes.....	do....	.031	.013	.032	.026	.038	.030	.031	.021	.043	.037
Onions.....	do....	.052	.045	.057	.047	.051	.044	.048	.047	.058	.054
Beans, navy.....	do....	.181	.181	.179	.182	.183	.186	.178	.180	.195	.196
Prunes.....	do....	.157	.154	.172	.170	.173	.168	.163	.165	.176	.177
Raisins.....	do....	.152	.151	.152	.156	.153	.159	.173	.173	.176	.181
Sugar.....	do....	.094	.090	.094	.094	.100	.099	.091	.092	.098	.092
Coffee.....	do....	.300	.288	.362	.355	.324	.334	.294	.295	.327	.319
Tea.....	do....	.780	.800	.863	.823	.535	.506	.703	.765	.768	.724

¹ Loaf; 16 ounces, weight of dough.

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS. 101

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR FEB. 15, 1918, AND MAR. 15, 1918, IN 29 CITIES—Continued.

Article.	Unit.	Kansas City, Mo.		Little Rock, Ark.		Los Angeles, Cal.		Louisville, Ky.		Manchester, N. H.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
		Sirloin steak.....	Lb....	\$0.321	\$0.329	\$0.313	\$0.340	\$0.290	\$0.310	\$0.303	\$0.315	$0.438	$0.441
Round steak.....	do....	.296	.302	.279	.293	.254	.278	.293	.295	.398	.400
Rib roast.....	do....	.233	.243	.260	.260	.236	.262	.231	.241	.269	.270
Chuck roast.....	do....	.202	.211	.204	.221	.200	.223	.210	.221	.239	.242
Plate beef.....	do....	.167	.168	.197	.193	.158	.185	.183	.204	.....	.....
Pork chops.....	do....	.310	.311	.344	.337	.378	.388	.320	.324	.338	.324
Bacon, sliced.....	do....	.493	.495	.506	.529	.529	.564	.498	.494	.453	.459
Ham, sliced.....	do....	.456	.460	.488	.481	.519	.529	.450	.461	.416	.418
Lard.....	do....	.344	.344	.341	.340	.333	.337	.315	.326	.342	.345
Lamb.....	do....	.271	.255	.317	.345	.314	.320	.323	.333	.330	.325
Hens.....	do....	.293	.....	.329	.....	.378	.....	.373	.....	.378	.....
Salmon, canned.....	do....	.292	.300	.295	.289	.326	.329	.250	.246	.295	.307
Eggs, strictly fresh.....	Doz.....	.586	.397	.567	.393	.491	.430	.608	.389	.715	.539
Butter.....	Lb....	.562	.534	.575	.585	.555	.538	.597	.575	.579	.583
Cheese.....	do....	.360	.363	.379	.374	.335	.337	.369	.370	.338	.339
Milk.....	Qt....	.123	.122	.150	.150	.140	.140	.128	.128	.140	.140
Bread.....	16 oz. 1.....	.089	.088	.093	.093	.076	.076	.081	.084	.077	.077
Flour.....	Lb....	.064	.067	.067	.067	.063	.063	.068	.068	.071	.069
Corn meal.....	do....	.069	.074	.064	.066	.080	.083	.063	.065	.080	.077
Rice.....	do....	.113	.119	.117	.115	.115	.119	.117	.120	.119	.121
Potatoes.....	do....	.031	.025	.033	.027	.021	.019	.035	.028	.037	.027
Onions.....	do....	.052	.049	.054	.048	.037	.026	.047	.041	.051	.043
Beans, navy.....	do....	.185	.182	.184	.185	.166	.168	.185	.181	.185	.186
Prunes.....	do....	.145	.144	.171	.169	.151	.156	.169	.175	.160	.163
Raisins.....	do....	.145	.146	.149	.153	.141	.138	.142	.159	.153	.153
Sugar.....	do....	.100	.100	.095	.097	.088	.088	.091	.090	.097	.098
Coffee.....	do....	.291	.286	.326	.317	.312	.303	.265	.268	.342	.342
Tea.....	do....	.618	.658	.835	.760	.591	.605	.724	.718	.591	.586

Article.	Unit.	Memphis, Tenn.		Minneapolis, Minn.		Newark, N. J.		New Haven, Conn.		New Orleans, La.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
		Sirloin steak.....	do....	\$0.302	\$0.318	\$0.264	\$0.277	\$0.366	\$0.365	\$0.418	\$0.409	$0.291	$0.301
Round steak.....	do....	.288	.308	.255	.261	.377	.373	.382	.376	.253	.259
Rib roast.....	do....	.243	.264	.214	.226	.302	.298	.318	.312	.243	.253
Chuck roast.....	do....	.204	.233	.197	.205	.266	.265	.276	.268	.192	.199
Plate beef.....	do....	.183	.199	.149	.155	.195	.195	.....	.....	.166	.172
Pork chops.....	do....	.331	.321	.302	.304	.356	.362	.337	.327	.356	.350
Bacon, sliced.....	do....	.500	.500	.482	.488	.442	.450	.506	.502	.517	.500
Ham, sliced.....	do....	.429	.437	.436	.440	.343	.342	.503	.501	.450	.438
Lard.....	do....	.327	.327	.319	.326	.340	.342	.338	.338	.331	.336
Lamb.....	do....	.306	.330	.259	.279	.336	.349	.335	.327	.301	.319
Hens.....	do....	.318	.....	.315	.....	.367	.....	.383	.....	.368	.....
Salmon, canned.....	do....	.312	.301	.331	.342	.345	.353	.283	.336	.330	.328
Eggs, strictly fresh.....	Doz.....	.500	.384	.585	.384	.718	.513	.783	.565	.485	.395
Butter.....	do....	.581	.559	.534	.489	.609	.552	.549	.498	.569	.549
Cheese.....	do....	.337	.340	.318	.327	.360	.358	.342	.348	.353	.345
Milk.....	Qt....	.150	.150	.110	.110	.145	.145	.143	.143	.143	.143
Bread.....	16 oz. 1.....	.087	.088	.077	.079	.076	.076	.086	.089	.073	.073
Flour.....	Lb....	.067	.068	.059	.060	.073	.072	.071	.071	.075	.070
Corn meal.....	do....	.059	.062	.056	.059	.084	.085	.087	.085	.063	.060
Rice.....	do....	.103	.107	.110	.116	.121	.121	.125	.123	.108	.110
Potatoes.....	do....	.037	.026	.024	.018	.042	.034	.040	.034	.038	.034
Onions.....	do....	.051	.041	.039	.031	.058	.049	.062	.049	.045	.037
Beans, navy.....	do....	.191	.188	.176	.179	.187	.185	.190	.191	.174	.173
Prunes.....	do....	.166	.162	.150	.155	.174	.178	.179	.179	.160	.155
Raisins.....	do....	.144	.147	.144	.144	.150	.151	.154	.153	.151	.154
Sugar.....	do....	.096	.092	.091	.093	.096	.093	.105	.101	.090	.088
Coffee.....	do....	.301	.294	.309	.309	.298	.299	.329	.322	.266	.261
Tea.....	do....	.697	.734	.504	.504	.546	.563	.580	.600	.634	.637

1 Loaf; 16 ounces, weight of dough.

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AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR FEB. 15, 1918, AND MAR. 15, 1918, IN 29 CITIES—Concluded.

Article.	Unit.	Omaha, Nebr.		Portland, Oreg.		Providence, R. I.		Richmond, Va.		Rochester, N. Y.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
		Sirloin steak.....do..	\$0.302	\$0.312	\$0.282	\$0.281	\$0.514	\$0.519	\$0.330	\$0.336	\$0.320	$0.323
Round steak.....do..	.282	.296	.262	.285	.425	.426	.307	.317	.309	.303	
Rib roast.....do..	.234	.241	.254	.255	.333	.334	.270	.299	.263	.259	
Chuck roast.....do..	.205	.217	.204	.208	.298	.301	.233	.245	.250	.243	
Plate beef.....do..	.157	.164	.167	.171	.....	.....	.198	.202	.191	.184
Pork chops.....do..	.297	.297	.352	.355	.362	.359	.359	.359	.327	.346	
Bacon, sliced.....do..	.486	.490	.514	.529	.471	.476	.479	.470	.443	.447	
Ham, sliced.....do..	.442	.455	.469	.464	.523	.523	.423	.430	.445	.430	
Lard.....do..	.336	.338	.345	.346	.341	.341	.340	.332	.333	.336	
Lamb.....do..	.266	.275	.300	.294	.355	.332	.313	.338	.321	.318	
Hens.....do..	.322	.....	.337	.....	.397	.....	.371	.....	.377	.....
Salmon, canned.....do..	.285	.288	.336	.338	.305	.309	.238	.244	.294	.298	
Eggs, strictly fresh.....Doz..	.577	.351	.507	.421	.735	.567	.617	.392	.710	.474	
Butter.....Lb..	.549	.504	.591	.594	.572	.576	.599	.596	.565	.552	
Cheese.....do..	.349	.353	.324	.336	.341	.340	.356	.360	.337	.342	
Milk.....Qt..	.123	.123	.127	.126	.145	.145	.147	.147	.136	.136	
Bread.....16 oz. l..	.088	.088	.087	.087	.084	.088	.089	.089	.073	.080	
Flour.....Lb..	.060	.060	.057	.056	.068	.069	.072	.069	.067	.067	
Corn meal.....do..	.062	.063	.069	.074	.075	.076	.061	.063	.078	.079	
Rice.....do..	.110	.114	.118	.124	.119	.121	.127	.128	.128	.128	
Potatoes.....do..	.025	.023	.016	.014	.036	.026	.040	.030	.027	.019	
Onions.....do..	.045	.043	.032	.029	.050	.034	.061	.047	.045	.028	
Beans, navy.....do..	.173	.172	.149	.149	.185	.187	.202	.198	.182	.193	
Prunes.....do..	.164	.164	.136	.133	.177	.179	.149	.161	.188	.187	
Raisins.....do..	.166	.168	.137	.137	.147	.149	.149	.149	.151	.151	
Sugar.....do..	.090	.090	.092	.089	.097	.096	.100	.095	.097	.091	
Coffee.....do..	.315	.315	.325	.331	.339	.339	.281	.289	.303	.303	
Tea.....do..	.635	.642	.569	.569	.586	.586	.738	.724	.538	.533	

Article.	Unit.	St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
		Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.	Feb. 15, 1918.	Mar. 15, 1918.
		Sirloin steak.....do..	\$0.289	\$0.298	\$0.280	\$0.283	\$0.355	\$0.357	\$0.322	$0.335
Round steak.....do..	.254	.267	.261	.268	.324	.326	.312	.327	
Rib roast.....do..	.237	.250	.236	.238	.281	.285	.251	.265	
Chuck roast.....do..	.202	.216	.205	.215	.242	.247	.224	.238	
Plate beef.....do..	.146	.158	.170	.173	.179	.184	.190	.195	
Pork chops.....do..	.300	.304	.352	.352	.338	.347	.314	.319	
Bacon, sliced.....do..	.482	.482	.500	.508	.483	.495	.494	.492	
Ham, sliced.....do..	.454	.456	.445	.446	.441	.450	.443	.455	
Lard.....do..	.321	.320	.360	.359	.326	.324	.334	.338	
Lamb.....do..	.266	.277	.292	.293	.332	.334	.314	.333	
Hens.....do..	.297	.....	.348	.....	.337	.....	.280	.....
Salmon, canned.....do..	.298	.298	.299	.321	.302	.299	.263	.270	
Eggs, strictly fresh.....Doz..	.589	.380	.604	.394	.705	.466	.645	.390	
Butter.....Lb..	.549	.493	.575	.546	.541	.530	.598	.545	
Cheese.....do..	.331	.334	.338	.337	.325	.329	.386	.386	
Milk.....Qt..	.110	.110	.115	.114	.140	.140	.125	.111	
Bread.....16 oz. l..	.088	.079	.087	.088	.085	.085	.090	.090	
Flour.....Lb..	.062	.062	.054	.055	.071	.071	.064	.063	
Corn meal.....do..	.065	.067	.074	.075	.....	.....	.075	.083
Rice.....do..	.120	.128	.109	.108	.121	.124	.126	.130	
Potatoes.....do..	.024	.020	.017	.014	.032	.025	.031	.021	
Onions.....do..	.038	.030	.045	.042	.061	.052	.049	.029	
Beans, navy.....do..	.188	.187	.182	.179	.180	.181	.195	.195	
Prunes.....do..	.165	.165	.154	.150	.174	.171	.164	.169	
Raisins.....do..	.147	.151	.146	.145	.147	.147	.179	.178	
Sugar.....do..	.096	.095	.097	.087	.092	.092	.092	.093	
Coffee.....do..	.319	.323	.354	.350	.316	.318	.295	.296	
Tea.....do..	.543	.550	.647	.627	.596	.586	.675	.696	

¹ Loaf; 16 ounces, weight of dough.

PRICE CHANGES, WHOLESALE AND RETAIL, IN THE UNITED STATES.

A comparison of wholesale and retail price changes for important food articles in recent months shows that for most commodities the rise continues to be more pronounced in wholesale than in retail prices. This accords with the well-established principle that wholesale prices respond more quickly to change-producing influences than do retail prices.

In collecting data for the comparison it was found that in some instances it was impossible to obtain both wholesale and retail prices for articles having precisely the same description. For example, fresh beef is not retailed in the same form in which it is customary to handle it at wholesale. In such cases the articles most nearly comparable were used. It was found impracticable, also, in most instances to obtain both wholesale and retail prices for the same date. The retail prices shown are uniformly those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days in advance of the 15th. For these reasons exact comparison of retail with wholesale prices can not be made. The figures are believed to be of interest, however, in contrasting price variations in the retail with those in the wholesale markets.

In the table which follows the wholesale price is in each case the mean of the high and the low quotations on the date selected, as published in leading trade journals, while the retail price is the average of all prices reported directly to the bureau by retailers for the article and city in question. The initials W. and R. are used to designate wholesale and retail prices, respectively.

To assist in comparing wholesale with retail price fluctuations, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential represents even approximately the margin of profit received by the retailer since, in addition to possible differences of grade between the articles shown at wholesale and retail, various items of handling cost are included in the figure.

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

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	1913: Average for year.	July.			1917					1918	
			1914	1915	1916	Jan.	Mar.	Apr.	July.	Oct.	Jan.	Mar.
Beef, Chicago:												
Steer loin ends.....W..	Lb.	\$0.168	\$0.175	\$0.160	\$0.205	\$0.200	\$0.200	\$0.200	\$0.190	\$0.235	\$0.200	\$0.220
Sirloin steak.....R..	Lb.	.232	.260	.258	.281	.265	.269	.293	.302	.306	.302	.303
Price differential.....		.064	.085	.098	.076	.065	.069	.093	.112	.071	.102	.083
Beef, Chicago:												
Steer rounds, No. 2.....W..	Lb.	.131	.145	.143	.145	.120	.135	.155	.170	.190	.165	.170
Round steak.....R..	Lb.	.202	.233	.228	.241	.227	.233	.256	.266	.273	.273	.274
Price differential.....		.071	.088	.085	.096	.107	.098	.101	.096	.083	.108	.104
Beef, Chicago:												
Steer ribs, No. 2.....W..	Lb.	.157	.165	.145	.175	.160	.175	.210	.200	.230	.200	.200
Rib roast.....R..	Lb.	.195	.212	.213	.229	.223	.216	.241	.246	.247	.254	.255
Price differential.....		.038	.047	.068	.054	.063	.041	.031	.046	.017	.054	.055
Beef, New York:												
No. 2 loins.....W..	Lb.	.158	.183	.170	.200	.180	.195	.190	.190	.275	.235	.225
Sirloin steak.....R..	Lb.	.259	.274	.282	.294	.284	.296	.318	.337	.356	.344	.346
Price differential.....		.101	.091	.112	.094	.104	.101	.128	.147	.081	.109	.121
Beef, New York:												
No. 2 rounds.....W..	Lb.	.121	.135	.135	.145	.130	.150	.170	.175	.190	.180	.190
Round steak.....R..	Lb.	.249	.270	.271	.289	.275	.291	.315	.337	.360	.352	.357
Price differential.....		.128	.135	.136	.144	.145	.141	.145	.162	.170	.172	.167
Beef, New York:												
No. 2 ribs.....W..	Lb.	.151	.165	.160	.180	.160	.185	.200	.190	.275	.235	.215
Rib roast.....R..	Lb.	.218	.225	.227	.243	.238	.254	.270	.279	.298	.294	.296
Price differential.....		.067	.060	.067	.063	.078	.069	.070	.089	.023	.059	.081
Pork, Chicago:												
Loins.....W..	Lb.	.149	.165	.150	.165	.165	.225	.240	.250	.330	.270	.250
Chops.....R..	Lb.	.190	.204	.201	.217	.227	.258	.285	.292	.358	.316	.309
Price differential.....		.041	.039	.051	.052	.062	.033	.045	.042	.028	.046	.059
Pork, New York:												
Loins, western.....W..	Lb.	.152	.163	.153	.165	.170	.210	.235	.235	.300	.265	.255
Chops.....R..	Lb.	.217	.230	.217	.239	.248	.285	.319	.326	.399	.348	.349
Price differential.....		.065	.067	.064	.074	.078	.075	.084	.091	.099	.083	.094
Bacon, Chicago:												
Short clear sides.....W..	Lb.	.127	.139	.113	.159	.158	.196	.218	.247	.318	.301	.284
Sliced.....R..	Lb.	.294	.318	.315	.328	.316	.348	.395	.439	.475	.498	.492
Price differential.....		.167	.179	.202	.169	.158	.152	.177	.192	.157	.197	.208
Ham, Chicago:												
Smoked.....W..	Lb.	.166	.175	.163	.190	.188	.228	.243	.243	.283	.298	.304
Smoked, sliced.....R..	Lb.	.266	.338	.328	.349	.333	.343	.382	.414	.439	.428	.450
Price differential.....		.100	.163	.165	.159	.145	.115	.139	.171	.156	.130	.146
Lard, New York:												
Prime contracts.....W..	Lb.	.110	.104	.080	.133	.159	.193	.215	.201	.246	.246	.262
Pure tub.....R..	Lb.	.160	.156	.151	.168	.213	.232	.263	.274	.313	.330	.334
Price differential.....		.050	.052	.071	.035	.054	.039	.048	.073	.067	.084	.072
Lamb, Chicago:												
Dressed round.....W..	Lb.	.149	.170	.190	.190	.200	.200	.220	.260	.270	.240	.240
Leg of yearling.....R..	Lb.	.198	.219	.208	.231	.232	.250	.263	.287	.314	.306	.316
Price differential.....		.049	.049	.018	.041	.032	.050	.043	.027	.044	.066	.076
Poultry, New York:												
Dressed fowls.....W..	Lb.	.182	.188	.175	.215	.220	.230	.265	.248	.285	.298	.343
Dressed hens.....R..	Lb.	.214	.220	.219	.256	.261	.274	.293	.287	.323	.326	....
Price differential.....		.032	.032	.044	.041	.041	.044	.028	.039	.038	.028	....
Butter, Chicago:												
Creamery, extra.....W..	Lb.	.310	.265	.265	.275	.370	.400	.440	.375	.435	.490	.455
Creamery, extra.....R..	Lb.	.362	.312	.322	.335	.438	.445	.484	.432	.487	.544	.506
Price differential.....		.052	.047	.057	.060	.068	.045	.044	.057	.052	.054	.051
Butter, New York:												
Creamery, extra.....W..	Lb.	.323	.280	.270	.285	.395	.408	.450	.395	.443	.510	.468
Creamery, extra.....R..	Lb.	.382	.328	.336	.346	.460	.470	.513	.453	.515	.574	.527
Price differential.....		.059	.048	.066	.061	.065	.062	.063	.058	.072	.064	.059
Butter, San Francisco:												
Creamery, extra.....W..	Lb.	.317	.245	.265	.255	.355	.330	.390	.385	.460	.530	.500
Creamery, extra.....R..	Lb.	.388	.329	.338	.333	.425	.417	.452	.455	.545	.602	.568
Price differential.....		.071	.084	.073	.078	.070	.087	.062	.070	.085	.072	.068
Cheese, Chicago:												
Whole milk.....W..	Lb.	.142	.133	.145	.145	.218	.240	.223	.216	.246	.233	.248
Full cream.....R..	Lb.	.....	.....	.229	.242	.321	.318	.327	.339	.368	.375	.381
Price differential.....		.....	.....	.084	.097	.103	.078	.104	.123	.122	.142	.133
Cheese, New York:												
Whole milk, State.....W..	Lb.	.154	.144	.146	.151	.220	.261	.245	.238	.255	.230	.251
Full cream.....R..	Lb.	.....	.....	.229	.228	.301	.313	.335	.328	.340	.344	.344
Price differential.....		.....	.....	.083	.077	.081	.052	.090	.090	.085	.114	.093

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

Article and city.	Unit.	1913: Average for year.	July.			1917					1918	
			1914	1915	1916	Jan.	Mar.	Apr.	July.	Oct.	Jan.	Mar.
Cheese, San Francisco:												
Fancy.....	W. Lb.	\$0.159	\$0.125	\$0.115	\$0.135	\$0.180	\$0.210	\$0.215	\$0.200	\$0.220	\$0.255	\$0.255
Full cream.....	R. Lb.	.....	.....	.....	.200	.229	.242	.288	.297	.297	.316	.335
Price differential.....					.....	.085	.094	.062	.078	.082	.097	.096
Milk, Chicago:												
Fresh.....	W. Qt.	.038	.036	.037	.036	.045	.040	.054	.047	.074	.070	.062
Fresh, bottled.....	R. Qt.	.080	.080	.080	.081	.100	.090	.100	.100	.129	.119	.119
Price differential.....		.042	.044	.043	.045	.055	.050	.046	.053	.055	.049	.057
Milk, New York:												
Fresh.....	W. Qt.	.035	.030	.030	.031	.051	.049	.049	.050	.072	.081	.075
Fresh, bottled.....	R. Qt.	.090	.090	.090	.090	.100	.109	.109	.114	.138	.150	.146
Price differential.....		.055	.060	.060	.059	.049	.060	.060	.064	.066	.069	.071
Milk, San Francisco:												
Fresh.....	W. Qt.	.039	.039	.038	.038	.038	.038	.038	.043	.059	.066	.066
Fresh, bottled.....	R. Q.	.100	.100	.100	.100	.100	.100	.100	.100	.121	.121	.121
Price differential.....		.061	.061	.062	.062	.062	.062	.062	.057	.062	.055	.055
Eggs, Chicago:												
Fresh, firsts.....	W. Doz.	.226	.188	.168	.218	.485	.263	.305	.310	.370	.565	.341
Strictly fresh.....	R. Doz.	.292	.261	.248	.296	.525	.323	.376	.406	.469	.651	.407
Price differential.....		.066	.073	.080	.078	.040	.060	.071	.096	.099	.086	.066
Eggs, New York:												
Fresh, firsts.....	W. Doz.	.249	.215	.200	.241	.505	.273	.330	.350	.400	.645	.380
Strictly fresh.....	R. Doz.	.397	.353	.326	.372	.667	.408	.424	.477	.627	.808	.501
Price differential.....		.148	.138	.126	.131	.162	.135	.094	.127	.227	.163	.121
Eggs, San Francisco:												
Fresh.....	W. Doz.	.268	.230	.220	.240	.380	.215	.280	.320	.435	.610	.380
Strictly fresh.....	R. Doz.	.373	.338	.310	.333	.480	.325	.374	.392	.608	.710	.433
Price differential.....		.105	.108	.090	.093	.100	.110	.094	.072	.173	.100	.053
Meal, corn, Chicago:												
Fine.....	W. Lb.	.014	.016	.....	.019	.024	.026	.036	.045	.052	.051	.055
Fine.....	R. Lb.	.029	.028	.031	.031	.042	.047	.050	.058	.071	.070	.071
Price differential.....		.015	.012	.....	.012	.018	.021	.014	.013	.019	.019	.016
Beans, New York:												
Medium, choice.....	W. Lb.	.040	.040	.058	.098	.108	.125	.130	.154	.138	.141	.136
Navy, white.....	R. Lb.	.....	.....	.081	.113	.149	.152	.162	.188	.185	.185	.183
Price differential.....		.....	.....	.023	.015	.041	.027	.032	.034	.047	.044	.047
Potatoes, Chicago:												
White ¹	W. Bu.	.614	1.450	.400	.975	1.750	2.100	2.800	2.625	1.135	1.185	.810
White.....	R. Bu.	.900	1.640	.700	1.356	2.370	2.717	3.455	2.975	1.660	1.680	1.189
Price differential.....		.286	.190	.300	.381	.620	.617	.655	.350	.525	.495	.379
Rice, New Orleans:												
Head.....	W. Lb.	.050	.054	.049	.046	.048	.048	.049	.071	.077	.088	.085
Head.....	R. Lb.	.....	.....	.075	.074	.074	.077	.088	.101	.100	.106	.110
Price differential.....		.....	.....	.026	.028	.026	.029	.039	.030	.023	.018	.025
Sugar, New York:												
Granulated.....	W. Lb.	.043	.042	.059	.075	.066	.069	.081	.074	.082	.073	.073
Granulated.....	R. Lb.	.049	.046	.063	.079	.074	.084	.087	.084	.097	.097	.088
Price differential.....		.006	.004	.004	.004	.008	.015	.006	.010	.015	.024	.015

¹ Good to choice.

Wholesale and retail prices, expressed as percentages of the average money prices for 1913, are contained in the table on page 107. A few articles included in the preceding table are omitted from this one, owing to the lack of satisfactory data for 1913. It will be seen from the table that since the beginning of 1917 the retail prices of most of the commodities included in the exhibit have fluctuated at a lower percentage level, as compared with their 1913 base, than have the wholesale prices. This is particularly true of pork, bacon, hams, lard, butter, milk, eggs, and corn meal. For corn meal especially, there has been a much smaller percentage of increase in the retail than in the wholesale price. Comparing March, 1918, prices with the average for 1913, it is seen that only 3 articles of the 25 included in the table show a larger per cent of increase in the retail than in the wholesale price. These are beef in Chicago (two price series) and granulated sugar in New York. In several of the months of 1917 the retail prices of these articles were relatively lower than were the wholesale prices.

While the percentage of increase in retail prices was less than that in wholesale prices for most of the articles, it should be noted that a comparison of the actual prices shown in the preceding table indicates that in the majority of cases the margin between the wholesale and the retail price in March, 1918, was considerably greater than in 1913. The following table shows, for example, that the wholesale price of short clear side bacon increased 124 per cent between 1913 and March, 1918, while the retail price of sliced bacon increased only 67 per cent. The preceding table shows, however, that the difference between the wholesale price of the one and the retail price of the other was 16.7 cents per pound in 1913 and 20.8 cents per pound in March, 1918, or 4.1 cents more at the latter date than at the former. It is also seen that the wholesale price in March, 1918, had increased 15.7 cents over the 1913 price, while the retail price had increased 19.8 cents.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN
SELECTED CITIES (AVERAGE FOR 1913=100).

[The initials W=wholesale; R=retail.]

Article and city.	1913: Average for year.	July.			1917					1918		
		1914	1915	1916	Jan.	Mar.	Apr.	July.	Oct.	Jan.	Mar.	
Beef, Chicago:												
Steer loin ends (hips).....W..	100	104	95	122	119	119	119	113	140	119	131	131
Sirloin steak.....R..	100	112	111	121	114	116	126	130	132	130	131	131
Beef, Chicago:												
Steer rounds, No. 2.....W..	100	111	109	111	92	103	118	130	145	126	130	130
Round steak.....R..	100	115	113	119	112	115	127	132	135	135	136	136
Beef, Chicago:												
Steer ribs, No. 2.....W..	100	105	92	111	102	111	134	127	146	127	127	127
Rib roast.....R..	100	109	109	117	114	111	124	126	127	130	131	131
Beef, New York:												
No. 2 loins, city.....W..	100	116	108	127	114	123	120	120	174	149	142	142
Sirloin steak.....R..	100	106	109	114	110	114	123	130	137	133	134	134
Beef, New York:												
No. 2 rounds, city.....W..	100	112	112	120	107	124	140	145	157	149	157	157
Round steak.....R..	100	103	109	116	110	117	127	135	145	141	143	143
Beef, New York:												
No. 2 ribs, city.....W..	100	109	106	119	106	123	132	126	182	156	142	142
Rib roast.....R..	100	103	104	111	109	117	124	128	137	135	136	136
Pork, Chicago:												
Loins.....W..	100	111	101	111	111	151	161	168	221	181	168	168
Chops.....R..	100	107	106	114	119	136	150	154	188	166	163	163
Pork, New York:												
Loins, western.....W..	100	107	101	109	112	138	155	155	197	174	168	168
Chops.....R..	100	106	100	110	114	131	147	150	184	160	161	161
Bacon, Chicago:												
Short clear sides.....W..	100	109	89	125	124	154	172	194	250	237	224	224
Sliced.....R..	100	108	107	112	107	118	134	149	162	169	167	167
Hams, Chicago:												
Smoked.....W..	100	105	98	114	113	137	146	146	170	180	183	183
Smoked, sliced.....R..	100	127	123	131	125	129	144	156	165	161	169	169
Lard, New York:												
Prime, contract.....W..	100	95	73	121	145	175	195	183	224	224	238	238
Pure, tub.....R..	100	98	94	105	133	145	164	171	196	206	209	209
Lamb, Chicago:												
Dressed, round.....W..	100	114	128	128	134	134	148	174	181	161	161	161
Leg of, yearling.....R..	100	111	105	117	117	126	133	145	159	155	160	160
Poultry, New York:												
Dressed fowls.....W..	100	103	96	118	121	126	146	136	157	164	188	188
Dressed hens.....R..	100	103	102	120	122	128	137	134	151	152	.....	.....
Butter, Chicago:												
Creamery, extra.....W..	100	85	85	89	119	129	142	121	140	158	147	147
Creamery, extra.....R..	100	86	89	93	121	123	134	119	135	150	140	140
Butter, New York:												
Creamery, extra.....W..	100	87	84	88	122	126	139	122	137	158	145	145
Creamery, extra.....R..	100	86	88	91	120	123	134	119	135	150	138	138
Butter, San Francisco:												
Creamery, extra.....W..	100	77	84	80	112	104	123	121	145	167	158	158
Creamery, extra.....R..	100	85	87	86	110	107	116	117	140	155	146	146
Milk, Chicago:												
Fresh.....W..	100	95	97	95	118	105	142	124	195	184	163	163
Fresh, bottled, delivered.....R..	100	100	100	101	125	113	125	125	161	149	149	149
Milk, New York:												
Fresh.....W..	100	86	86	89	146	140	140	143	206	231	214	214
Fresh, bottled, delivered.....R..	100	100	100	100	111	121	121	127	153	167	162	162
Milk, San Francisco:												
Fresh.....W..	100	100	97	97	97	97	110	151	169	169	169	169
Fresh, bottled.....R..	100	100	100	100	100	100	100	100	121	121	121	121
Eggs, Chicago:												
Fresh, firsts.....W..	100	83	74	96	215	116	135	137	164	250	151	151
Strictly fresh.....R..	100	89	85	101	180	111	129	139	161	223	139	139
Eggs, New York:												
Fresh, firsts.....W..	100	86	80	97	203	110	133	141	161	259	153	153
Strictly fresh.....R..	100	89	82	94	168	103	107	120	158	204	126	126
Eggs, San Francisco:												
Fresh.....W..	100	86	82	90	142	80	105	119	162	228	142	142
Strictly fresh.....R..	100	91	83	89	129	87	100	105	163	190	116	116
Meal, corn, Chicago:												
Fine.....W..	100	114	.....	136	171	186	257	321	371	364	393	393
Fine.....R..	100	97	107	107	145	162	172	200	245	241	245	245
Potatoes, Chicago:												
White, good to choice.....W..	100	236	65	159	285	342	456	428	185	193	132	132
White.....R..	100	182	78	151	263	302	384	331	184	187	132	132
Sugar, New York:												
Granulated.....W..	100	98	137	174	153	160	188	172	191	170	170	170
Granulated.....R..	100	94	129	161	151	171	178	171	198	198	180	180

MEAT PRICES IN FRANCE.

The following table, taken from the Journal Officiel de la République Française for February 25, 1918, shows the wholesale prices for three grades of each of six kinds of meat as reported by the Villette market, for the second week of February, 1918, and for the third week in February, 1914, to 1918, inclusive.

AVERAGE WHOLESALE PRICES OF MEATS AT THE SLAUGHTERHOUSE IN THE VILLETTE MARKET, PARIS, FOR SPECIFIED WEEKS.

Kinds of meat.	Average wholesale prices of meats per pound.					
	Second week in February, 1918.	Third week in February—				
		1918	1917	1916	1915	1914
Ox:						
First grade.....	\$0.313	\$0.348	\$0.235	\$0.215	\$0.193	\$0.164
Second grade.....	.296	.326	.226	.203	.184	.147
Third grade.....	.268	.306	.208	.189	.172	.137
Cow:						
First grade.....	.313	.348	.235	.215	.193	.165
Second grade.....	.289	.319	.224	.203	.184	.149
Third grade.....	.263	.301	.207	.189	.172	.140
Bull:						
First grade.....	.289	.317	.211	.198	.184	.136
Second grade.....	.278	.303	.202	.191	.179	.128
Third grade.....	.261	.284	.191	.180	.170	.123
Veal:						
First grade.....	.490	.525	.304	.320	.226	.234
Second grade.....	.433	.473	.260	.280	.208	.214
Third grade.....	.354	.394	.216	.245	.180	.189
Mutton:						
First grade.....	.515	.534	.380	.306	.226	.258
Second grade.....	.459	.494	.354	.271	.208	.235
Third grade.....	.398	.433	.311	.236	.191	.214
Pork:						
First grade.....	.484	.490	.313	.298	.189	.143
Second grade.....	.457	.464	.290	.287	.186	.140
Third grade.....	.431	.438	.265	.270	.170	.134

COST OF LIVING IN HOLLAND.

The appended table taken from the December issue of the monthly Bulletin of the Dutch Statistical Office¹ gives index numbers of the price movement of some articles of daily consumption in Holland during the months of September, October, and November, 1917, and for the years 1913 to 1916, inclusive:

INDEX NUMBERS OF PRICES OF SELECTED ARTICLES OF DAILY CONSUMPTION IN HOLLAND, 1913 TO 1916, AND SEPTEMBER, OCTOBER, AND NOVEMBER, 1917.

[Prices of 1893=100.]

Article.	1913	1914	1915	1916	1917		
					Septem-ber.	Octo-ber.	Novem-ber.
Cheese.....	140	139	160	180	233	246	247
Coffee.....	94	88	91	100	126	126	128
Margarine.....	127	99	102	110	123	123	125
Butter oil.....	94	97	130	149	252	300	308
Rape oil.....	136	137	192	214	323	.....	.....
Starch.....	103	107	130	157	387	.....	.....
Sugar (moist).....	89	91	105	115	116	116	118
Sirup.....	100	100	125	161	182	182	182
Sugar (refined white).....	85	89	98	102	103	103	103
Salt.....	80	80	90	90	100	100	130
Tea.....	112	113	116	119	117	117	117

¹ Maandschrift van het Central Bureau voor de Statistiek. The Hague, Dec. 31, 1917.

The figures for coke, putting the average price of eight municipal gas works for the year 1913 at 100, were as follows:

1914.....	95.58
1915.....	123.73
1916.....	152.10
First half of 1917.....	200.99
July, 1917.....	230.24
August, 1917.....	229.80
September, 1917.....	243.16
October, 1917.....	243.27
November, 1917.....	265.45

CHANGES IN THE CHARACTER OF FOOD CONSUMPTION IN SWEDEN.

It is generally known that as prices of certain articles of consumption increase purchasers whose incomes do not increase in like proportion will begin buying articles of a cheaper grade of the same kind, or will substitute others of a different kind lower in price. Thus oleomargarine may be substituted for butter, beans for meat, and mixed breads for wheat bread, to mention only a few. While these facts are generally known, the matter has never been definitely disclosed in any formal investigation because of the difficulties of securing data from the same families at different periods of time—a period of low prices, and a period of high prices.

Such an investigation, however, has now been made by the Swedish labor office¹ at a time when changes of the kind mentioned have been very rapid. In 1913-14 an extended inquiry was made by that office into the cost of living of families of moderate or low earnings. In 1916 a similar inquiry was directed by the Crown. Household account books were distributed in the cities taking part in the former inquiry and were kept by the same families that participated in the earlier investigation. The data secured covered the month of May, 1914, and May, 1916, so as to reflect conditions before and during the War. Twenty-five cities participated in the inquiry. The study included 601 family budgets kept for one month.

The average income per family per week was 35.92 crowns (\$9.63) in 1914, and 39.22 crowns (\$10.51) in 1916. The average weekly income, however, per unit of consumption—adult 15 or more years of age—had increased only slightly, i. e., from 10.67 crowns (\$2.86) to 10.84 (\$2.91) because of a corresponding increase in the number in each family and in the average age of the members during the period between the two inquiries. While there was a slight change in average weekly income only about half as many families in 1916 as in

¹ Livsmedelsförbrukningen inom mindre bemedlade hushåll åren 1914 och 1916 av. K. Socialstyrelsen. Stockholm, 1917. 77 pp.

1914 were in the lowest income group—i. e., under 30 crowns (\$8.04) a week.

The results of the inquiry show that between May, 1914, and May, 1916, the tendency was to substitute cheaper for dearer articles of food and cereals and vegetables for animal foods. There was a decreased consumption of meat, milk, butter, cheese, and eggs and an increased consumption of fish, oleomargarine, bread, flour, cereals, peas, potatoes, and sugar. For example, rye bread took the place of wheat bread and oleomargarine the place of butter.

In 1914 the average consumption of meat per household was 1,464 grams (3.23 pounds) per week, and in 1916 it was 1,402 grams (3.09 pounds), a decrease of 4.2 per cent per family, but of 11 per cent per unit of consumption. A decreased use of salt or smoked pork per family is shown, i. e., 270 grams (9.5 ounces) per week in 1914 to 211 grams (7.4 ounces) in 1916. Consumption of veal decreased from 249 grams (8.8 ounces) to 194 grams (6.8 ounces) per week.

In 1914 the average quantity of salt herring and codfish used per family was 237 grams (8.37 ounces); in 1916, 298 grams (10.52 ounces), the increase being entirely in the use of salt herring. The increase was equal to 17.1 per cent per unit of consumption.

The consumption of milk decreased 10.3 per cent per unit of consumption, due almost entirely to a decrease in the quantity of whole milk used. The consumption of butter decreased from 634 grams (22.38 ounces) to 483 grams (17.05 ounces), or 23.8 per cent, while the use of oleomargarine increased from 431 grams (15.21 ounces) to 616 grams (21.74 ounces) per week, or 42.9 per cent. Per unit of consumption butter fell off 29.3 per cent and oleomargarine increased 32.8 per cent. The quantity of cheese used per family decreased 26.7 per cent. There was a smaller number of eggs used per family in 1916 than in 1914.

In grains, flour, and bread a considerable increase of consumption is shown. The weekly supply of flour changed from 3,830 grams (3.5 pounds) to 4,982 grams (11 pounds), an increase of 30.1 per cent. The consumption of bread increased 11.5 per cent—4,471 to 4,984 grams (9.86 to 11 pounds). Of the different classes of bread rye flour shows a greater increase in its use than any other, i. e., 15.2 per cent. The consumption of white bread decreased 14.3 per cent, from 441 to 378 grams (15.6 to 13.3 ounces). The use of oats, rice, and other grits and groats increased 19.4 per cent; that of rice alone increased 31.1 per cent.

Calculated per unit of consumption the increase was 21.2 per cent for flour, 3.8 per cent for bread, and 11.5 per cent for groats and grits.

The increase in the use of potatoes is shown to have been 51.8 per cent per family and 41.3 per cent per unit of consumption. The

use of sugar increased 11.4 per cent per family and 3.7 per unit of consumption. Coffee shows a slight increase per family, 9.3 per cent, and 1 per cent per unit of consumption.

Of the total expenses for foods and drinks, proportionately more was spent for food in 1916 (95.16 per cent) than in 1914 (93.92 per cent). Expenses for spirituous liquors formed 2.97 in 1914 and 2.11 per cent in 1916. Meals taken away from home amounted to 2.4 per cent of total spent for food in 1914 and 1.56 per cent in 1916.

The cost of foods served at the home was 15.01 crowns (\$4.03) per week in 1914 and 19.73 (\$5.29) in 1916, being an increase of 31.4 per cent, while the decrease in the cost of spirituous liquors was 8.3 per cent and in meals away from home 13.2 per cent. The expenditure for tobacco remained practically stationary.

The average expenditures for meat increased during the period from 1.98 crowns (53.1 cents) to 2.70 crowns (53.5 cents) weekly, an increase of 36.4 per cent. The cost for this item was 12.32 per cent of the entire weekly budget in 1914, and 13.04 per cent in 1916. The expenditure for sausage and prepared meats increased by 29.8 per cent, and was 3.51 and 3.57 per cent of the total food budgets of the respective years.

Dairy products, eggs, etc., formed 35.10 per cent and 34.68 per cent of the food budgets in 1914 and 1916, respectively. This decrease was due to a diminished use of high-priced articles—butter, cream, whole milk, cheese, and eggs. The per cent of expenditures increased for skimmed milk (2.17 to 2.32), oleomargarine (3.71 to 5.62), and lard (0.51 to 0.74).

The expenditure for bread changed slightly from 12.34 per cent to 12.29 per cent of the food budget. The expenditure for rye bread, dry and fresh, increased, and for all other classes of bread an approximately equal decrease is noted. Flour formed 6.91 per cent of the budget in 1914, and 8.58 per cent in 1916. The expenditures for this class of foods increased from 1.11 crowns (29.7 cents) per family per week to 1.78 crowns (47.7 cents) or 60.4 per cent. Wheat flour formed about 70 per cent in value of all flour and meal purchased. Oats, rice, and other grits cost 52.4 per cent more per family in 1916 than in 1914.

But little difference is noted in the percentage of expenditures for beans, peas, and other vegetables as compared with the whole food budget. The cost of potatoes, however, increased 69 per cent.

Sugar and molasses and coffee showed a decreased proportion of expense in the budget for the latter year, but an absolute increase, the percentage of increase being 20.6 for sugar and molasses and 14.9 for coffee.

The Swedish labor office continued its investigation into the changes in the dietary of the workingman's family and in the cost of

living, and has presented the results in a recent number of its official journal.¹ During the period May, 1916, to June-July, 1917, changes in food consumption were somewhat different from what they were between 1914 and 1916. Scarcity of certain foods and a system of governmental rationing compelled a limitation in the consumption of the cheaper cereals and vegetables. The consumption of bread, flour, cereals, peas, potatoes, oleomargarine, and sugar decreased, while the consumption of meat, fish, and butter increased considerably, although these were not the cheaper commodities, the principal increase in consumption being of meat and fish. The details as to amounts consumed are set forth in the following table:

AVERAGE QUANTITY OF VARIOUS ARTICLES OF FOOD CONSUMED PER WEEK PER FAMILY MEMBER MAY, 1914, MAY, 1916, AND JUNE-JULY, 1917.

[Sociala Meddelanden, Stockholm, 1917, No. 10, pp. 1190, 1191.]

Item.	Unit of quantity.	Average weekly consumption per family member.		
		May, 1914.	May, 1916.	June-July, 1917.
Number of members in all families.....		2,412	2,951	2,832
Average number of persons per family.....		4.55	4.66	4.60
<i>Articles of consumption.</i>				
Meats (all kinds).....	Ounce.....	11.5	11.1	13.5
Fresh meats.....	do.....	9.1	9.1	10.1
Beef.....	do.....	4.1	4.4	5.8
Veal.....	do.....	1.9	1.5	2.0
Mutton.....	do.....	.1	1.2	.1
Pork.....	do.....	3.0	3.1	2.2
Salt meats.....	do.....	2.4	2.0	3.5
Beef.....	do.....	.1	.2	.2
Pork.....	do.....	2.2	1.8	3.3
Fish:				
Salt herring.....	do.....	1.8	2.2	3.1
Cod.....	do.....	.2	.2	.4
Milk.....	Quart.....	4.0	3.8	4.1
Whole.....	do.....	2.8	2.7	3.2
Skimmed.....	do.....	1.2	1.1	.9
Butter.....	Ounce.....	4.9	3.4	8.0
Oleomargarine.....	do.....	3.4	4.7	.....
Cheese.....	do.....	2.3	1.7	1.7
Eggs.....	Number.....	3.0	3.0	2.0
Bread:				
Rye, hard.....	Ounce.....	5.6	6.8	7.4
Rye, soft.....	do.....	23.1	23.3	18.1
Wheat.....	do.....	4.2	3.5	2.3
Biscuit.....	do.....	2.3	2.2	1.0
Flours:				
Wheat.....	do.....	28.2	35.4	28.5
Rye.....	do.....	19.9	25.0	13.0
Potato.....	do.....	6.9	9.1	12.1
Oat meal.....	do.....	.7	.8	.2
Other.....	do.....	.3	.2	.1
Groats and grits.....	do.....	.4	.3	1.0
Oats.....	do.....	4.1	4.9	2.5
Rice.....	do.....	2.8	3.4	.7
Corn.....	do.....	.8	1.0	1.0
Other.....	do.....	.1	.1	.2
Other.....	do.....	.3	.4	.6
Peas.....	do.....	.7	1.0	.5
Beans.....	do.....	.5	.4	.2
Potatoes.....	Quart.....	1.2	1.7	1.1
Sugar.....	Ounce.....	12.6	13.8	11.3
Coffee.....	do.....	2.5	2.8	1.3

¹ Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm, 1917. No. 10, pp. 1176-1191.

CIVIL REQUISITION IN FRANCE.¹

A law passed August 3, 1917, provides that during the War certain commodities stored by private persons and by certain classes of establishments are subject to requisition. The classes of commodities and establishments to which the law applies include all articles necessary for food, clothing, light, and heat for the civil population, all materials used and all establishments engaged in producing, manufacturing, handling, or conserving such articles.

No requisition shall be made except upon authority of decrees issued by the council of ministers, which shall determine (1) the nature of the commodity requisitioned, (2) the period allowed for persons having such commodity in storage or in process of manufacture to furnish a declaration, (3) the quantities and materials not subject to declaration or requisition, because of the indispensable needs of the producer during the current season, for seeding, fertilizing, grain or fodder for working animals and for sustenance of the members of the producer's family and his employees engaged in the exploitation of the enterprise, (4) the quantities of commodities not subject to requisition because of their minor importance, and those which will be exempt from all requisition as necessary for the requirements of the family of the holder and persons living with him for the ensuing three months, but such exemptions shall be considered in determining the quantity apportioned the holder in case the population is placed upon rations.

The directors or proprietors of all industrial and commercial establishments of the classes subject to requisition and not in operation are required to make a declaration in so far as it relates to the stock of articles or materials mentioned, regardless of the purpose for which they are held in store.

The authority of requisition is vested in the minister of commerce and industry, upon the proposition of the minister interested. He may delegate his authority to commissions presided over by the prefects.

Written notice of requisition is served by civil authorities upon the holders, operators, or proprietors.

Persons upon whom requisition shall be illegally enforced may enter protest, and the issue may be determined by summary proceedings in a civil court of last resort. The court may declare the writ null and allow pecuniary damages.

Notwithstanding the fact that a protest is made, all requisitions are immediately enforceable, and no court shall suspend an execution unless after a hearing the requisition is annulled.

¹ Bulletin du Ministère du Travail et de la Prévoyance Sociale. Nos. 10-12, October to December, 1917. Paris.

Industrial and commercial establishments may be requisitioned in whole or in part. In case of partial requisition, if the operator agrees to conduct production or manufacture of commodities as required by the minister of commerce, under conditions imposed by him, the requisition is immediately canceled. In case of the requisition of an entire establishment, its operation is conducted on the account of the State, even when at the request of the operator he may be permitted to direct its operations.

Before taking possession of any establishment requisitioned, an inventory of the plant, materials, stock, and merchandise must be taken in the presence of the operator or proprietor, who shall be duly notified, and an expert appointed by agreement between the minister of commerce and the interested party, or in default of agreement by the president of the civil court as referee. Statements made by the operator or proprietor and by the expert shall be made a matter of record.

A commission to which one industrial operator, one merchant, and one member of the chamber of commerce shall be appointed, shall decide the amount of indemnity payable in case of requisition. The minister shall also appoint a president, who shall vote only when there is a parity of votes. The operator or proprietor may appeal from the award.

The same method of procedure is followed when products are requisitioned. Awards are payable within 15 days, or thereafter draw interest at the legal rate.

Penalties are provided for failure to furnish declaration, and for preparing fraudulent, etc., declarations; and requisition of commodities not declared may be ordered.

RECENT LABOR AWARDS.

LABOR AWARD IN PACKING-HOUSE INDUSTRIES.

The following arbitration wage award issued by the United States administrator, Samuel Alschuler, in the packing-house industries is of significance and importance not only because of the decisions rendered but especially because of the argument upon which these decisions were based. With the exception of the wage demand, substantially everything asked for by the employees was granted by the arbitrator. This included the important demand for a basic eight-hour day. The eight-hour demand was granted upon economic and social grounds. The wage increases were determined with reference to the cost of living, although the arbitrator stated that in arriving at these increases he was influenced by the probability of overtime work. The lower paid employees, however, were granted not only a higher relative increase, but also a higher absolute increase.

Following is the text of the award in full:

IN THE MATTER OF THE ARBITRATION OF SIX QUESTIONS CONCERNING WAGES, HOURS, AND CONDITIONS OF LABOR IN CERTAIN PACKING-HOUSE INDUSTRIES, BY AGREEMENT SUBMITTED FOR DECISION TO A UNITED STATES ADMINISTRATOR.

In pursuance of agreements made with the President's Mediation Commission, in December, 1917, and later supplemented,¹ whereunder a United States administrator was constituted to adjust differences between certain large employers in the packing-house industry and their employees respecting wages, hours, and conditions of employment, 18 questions were submitted for immediate arbitration by the administrator. Through subsequent negotiations between those concerned 12 of these questions were settled by agreement, and as so agreed upon are appended hereto for reference. The six remaining questions, in the form of propositions, constituting the demands by the employees, are as follows:

1. Eight hours shall constitute the basic workday, and such workday shall be completed, in so far as possible, within a period of not more than nine consecutive hours.
2. Overtime work shall be paid for at the following rates: Double time for all time worked on Sundays and holidays, including New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, or the days legally celebrated in lieu thereof; time and one-half for all time worked upon week days in excess of the regular eight-hour workday.
3. Where plants are operated three eight-hour shifts daily, employees shall be allowed 20 minutes off with pay, for lunch.

¹ See MONTHLY REVIEW for March, 1918, p. 59.

4. January 1, 1918, wages shall be increased as follows: For all hourly rate workers, \$1 per day increase over amount paid December 31, 1917, to employees in the same classification for 10-hour day; for all pieceworkers, a percentage increase equal to that applied to hourly rates in the same classification.

5. Wage rates shall be the same for male and female employees doing the same class of work.

6. There shall be no change made in the guaranteed time in effect November 30, 1917.

The plants involved are those of Armour & Co., The Cudahy Packing Co., Morris & Co., Swift & Co., and Wilson & Co., one or more of whom have packing plants at one or more of these cities: Chicago, Kansas City, Sioux City, St. Joseph, St. Louis, East St. Louis, Denver, Oklahoma City, St. Paul, Omaha, and Fort Worth.

The hearing for arbitration of these six questions began before me last February 11, and continued until March 7, during and since which period the matter has had my constant attention. It is to be regretted that the exigencies of the situation do not admit of many months of further research and study which the importance of the main questions involved, in principle and in consequences, would well have justified.

If earnest devotion to the grave duty thus devolved on me could alone give assurance of the excellence of the outcome, I would have no concern regarding it; but profoundly conscious of my own limitations, I can only trust that good intent may be so far furthered by good fortune that the award may at least fairly approximate justice to all so deeply and alike concerned in it—employers, employees, and the public.

The award proper will be premised by a statement as brief as I can well make it, of reasons for my conclusions.

From the stock pens to the finished product there are many operations in this industry, involving numerous classifications of the labor with varying wage rates. The employees in all the plants are mostly men. The female employees are more numerous in those few of the plants in which much canning is done. The far larger proportions of the employees work on an hourly wage, a comparatively small number working on the piecework plan. Of the male employees of the various plants considerably more than half are what may be termed common laborers—being the men now paid the hourly wage of 27½ cents.

Since the occurrence in 1904 of a strike at the Chicago plants, which resulted in the complete defeat of the employees and their organizations, wage rates remained for about 12 years practically unchanged, save perhaps for some reduction in case of the common laborers, who theretofore were receiving about 18 cents per hour. The sharp and progressive advance in living costs, beginning shortly after the commencement of the War in Europe in 1914, brought about some raise in pay in March, 1916, which operated to equalize as to the different plants the wages of the common laborers who thereafter in all of them were paid 20 cents. The subsequent raises in the hourly pay of all employees were: October, 1916, 2½ cents; April, 1917, 2½ cents; September, 1917, 2½ cents. Pieceworkers were given this hourly wage for the time employed, in addition to their piecework earnings.

The industry is of a quite seasonal nature, mainly because of larger stock shipments during the cold weather months. Mr. O'Hern, general superintendent of the Armour plants, stated that for two-thirds of the year the plants are not worked 50 per cent of full capacity. The number of employees varies greatly in different seasons, and the daily hours vary greatly not only for the different seasons, but often in the same season.

The employers seem to regard this as a 10-hour day industry, but in practice the hours of daily work are greater or less than 10, as best suits the needs or convenience of the particular operation or plant. Figures submitted for one of the largest of the concerns show that the average hours worked by the large number of employees in what is

known as the killing gangs, for a period of over a year next preceding the ninth day of the present month, were about 50 hours per week. In one of the other plants it was considerably less, and in still another somewhat more. In most of the other packing employments more daily hours were quite generally served in that period; but even in these, it appears the daily work hours have been quite irregular, being at times much under 10 hours, and at other times, for protracted periods, far in excess. Eleven, 12 and 13 hours daily are exceedingly common, and 14 and 15, and even more hours daily for a number of days, not unusual, and Sunday work very frequent. The average laborer in this industry, who, in the course of this last busy year, received for his work an aggregate pay equal to 10 hours daily at his prevailing hourly rate, for 300 days, would probably have worked many days far less than the 10 hours, and many other days far in excess. In the case of women employees excess time is generally prevented by statutory maximum time limits, this being in some of the States where there are plants, 9 hours—in Illinois, 10.

The employers could consult their own convenience in the matter of overtime, since there has been no advanced rate for time beyond 10 hours, save in those few employments wherein they have made trade-union agreements, viz., printers, masons, and teamsters, aside from which employments, it appears there have been no trades-union agreements in these establishments since the strike of 1904.

For a number of years there has been in force a guaranteed pay system, whereunder employees, while on the pay roll and ready for duty, are guaranteed a certain weekly minimum wage—40 hours—in all of the plants, except Swift's, in which it is 45. No higher wage rate has been paid for Sunday and holiday work.

Employments which in their nature are continuous, such as heating and power plant work, are conducted by two 12-hour daily shifts working seven days weekly.

The general nature of the work in packing houses is too well understood to require description. The common laborer's work does not involve any considerable degree of skill, but is generally laborious and heavy. In the very extensive canning operations and in some of the others the employees are largely women, whose work appears to be of a nature lighter than that of the men, and whose hourly wage is materially less.

The building and shop trades are also represented on the pay rolls—carpenters, machinists, plumbers, steam fitters, electricians, coopers, and others. The daily work hours of these employees are perhaps more regular, and work generally limited to 10.

Very many of the employees are Poles, Lithuanians, Russians and of kindred origin, unversed in the English language, and many of them are colored. No very substantial difference in conditions was pointed as to the plants in the different cities. In some of them there are fewer foreigners than in others; some variance in proportion of colored employees, and of the sexes, and some difference in different localities in prevailing wage rates.

The much greater part of the current output of these plants must be put into suitable form for use by our soldiers and sailors and our allies. This involves the preparation of a vast quantity of canned product, far in excess of what was theretofore made, and the consequent employment of a great many more persons in the canning and related departments than in normal times. It is of prime importance that there be no diminution in this output. Indeed, one of the stipulated purposes of constituting this administration is that there may be no interruption, cessation or curtailment in the supplies, and services of the companies essential to the successful prosecution of the War and military activities of the Government. Far, indeed, from curtailment of output, it should, if necessity require, be increased, if this can be done without, through overwork, impairing the efficiency of the employees, and rendering them less capable of even maintaining present output.

While we fondly hope that the war may be brought to a speedy end, and with complete triumph of our cause, we are confronted with the possibility that it may be long protracted, in which event the continued strength, confidence, and good spirit of our defenders and of our allies will be very materially dependent upon the continuous uninterrupted and dependable movement of supplies from our country, and largely from this industry. We must, therefore, look forward, not to spasmodic and temporary spurts of larger production, but to the long and the steady pull under the strain of which the strength and spirit and efficiency of the workers will likewise be continuously assured, and the productivity of the industry steadily and reliably maintained. This is of vital moment to us all, and particularly to the workers of our land, for if through dire mischance this war be lost to us, and we become a vassal Nation, dominated by a foreign military autocracy, the eight-hour day, the living wage, and all the economic advances in labor conditions here achieved or in process of achievement would disappear—relegated to a time so far away that no one living would likely endure to realize them. Work hours would be to the very limit of daily human endurance, and the wage the merest pittance sufficing for miserable hand-to-mouth existence. Democracy, the hope of all men who believe in equality of right and opportunity, would indeed “perish from the earth.”

1. THE BASIC EIGHT-HOUR DAY.

Assuming this to be a 10-hour industry in the sense that 10 hours is considered the time of daily service within which the employee shall earn a livelihood for himself and family, the demand is that this time be reduced to eight hours. Primarily, there is involved the economic soundness and wisdom of the principle of the eight-hour day as the normal day's work for normal men and women under normal conditions; for if not a sound proposition under normal conditions, it would surely be unsound in our present situation.

Economists, sociologists, philanthropists, and publicists are quite generally favorable to the eight-hour workday, as being most conducive to the welfare of employers, employees, and the community, and it would serve no beneficial purpose here to multiply words in detailing and arguing the reasons they assign therefor beyond stating the general propositions—sanctioned, I believe, by reason, and justified by experience—that longer daily hours in most factory employments tend to induce undue strain and fatigue, to reduce the vitality of the employee, with tendency to irritability, listlessness, and carelessness, and to diminution of industrial efficiency, and consequently less productivity, not only for the overtime worked but for the working days; that the workman, strained and fatigued by too long hours of work, is more prone to seek comfort in the excessive use of stimulants and other harmful indulgences; that the eight-hour day gives opportunity for due recreation and rest, for concourse with family and friends, and for self-improvement, making the happier, healthier, more contented employee, ready day by day, with good will and vigor, to give the best that is in him to his work, producing greater and better results, pleasing at the same time his employer and himself, and generating far better understanding and feeling between them; that the longer exemption from factory toil will broaden his vision, tend to his moral development, and to inspire ambition for better things—better living conditions, larger conception of our institutions, particularly on the part of the non-English speaking foreign-born employees, fitting all for better citizenship and a higher appreciation of its privileges and duties; that it will tend to dignify the labor itself, making it seem, as in truth it is, worthy and proper to be undertaken by poor or rich, foreign or native, educated or ignorant. If but modest part of such benefits are fairly to be anticipated from the shorter workday, it should not be delayed longer than reasonably necessary to institute it.

The public policy of the eight-hour workday has been given oft-repeated sanction by legislation in the majority of the States as well as by Congress, through enactments of various kinds too numerous for specific mention. In a message to Congress in August, 1916, our President stated: "It seemed to me that the whole spirit of the time and the preponderance of evidence in recent economic experience spoke for the eight-hour day. It has been adjudged by the thought and experience of recent years a thing upon which society is justified in insisting as in the interest of health, efficiency, contentment, and a general increase in economic vigor." The President's Mediation Commission in its unanimous report of last January 9 declared, "The eight-hour day is an established policy of the country."

The voluminous evidence adduced at the hearing in support of the contention for the eight-hour day is in the main logical and convincing, and it is particularly to be noted that in so far as concerns the general principle of the eight-hour day no evidence to dispute it was presented. Indeed on behalf of the employers it was repeatedly, openly, and frankly, admitted that a workday shorter than the 10-hour day was desirable, and on behalf of the employers and in the presence of their superintendents it was freely stated that they all believed in a shorter workday; that they had said so, and that there was no room for argument about it. Mr. O'Hern stated that they saw the eight-hour movement coming, and that his concern had prepared plans involving millions of dollars for the construction of additional equipment for the purpose of meeting it; and it was likewise stated for them that after the War is over the packers would themselves probably put the plants on an eight-hour day, and that the only question for the administrator respecting the eight-hour day was as to the wisdom and advisability of installing it while we are at war.

For the employers the contention was earnestly pressed, and much evidence was adduced in support, that the plants were now constructed with a view to the 10-hour day; that equipment and capacities were arranged with reference to such a day, and that to make the necessary change for equipping the plants to be run on the 8-hour day would entail vast structural changes and additions that would require perhaps two years to install, even though materials and labor were now available. It was maintained that these plants are running largely to their full capacity in making the vast meat products required by the Government for supplying our soldiers and sailors, and our allies, and that if now they were placed on an actual 8-hour basis it would reduce their output by at least 20 per cent. It was pointed out that the plants, except Armour's Chicago plant, could not run two 8-hour killing shifts largely because of insufficiency of rendering tanks and cooling space. It was urged that the docks for loading cars, mainly at the Chicago plants, were insufficient to take care of a larger output than at present; also that the killing rate as to hogs had to be slowed down on demand of the inspection authorities; and there were other difficulties suggested. All of them I do not deem it necessary to consider in detail. If more rendering tanks were necessary to accommodate two killing shifts, if required, I believe they would be speedily forthcoming. Greater cooling space would doubtless require considerable time to install, but the evidence shows that in the years gone by, at times the daily kill at Chicago was considerably larger than even nowadays, and the cooling space, not greater than now, was sufficient. It is my judgment that the cooling space is very infrequently taxed to its maximum, and would generally take care of a considerably larger kill than is customary even in the busy season. Unloading facilities would, I am sure, be readily accommodated to needs; and as to inspection, it is not likely that this function, maintained by the Government, would be permitted to retard or impede compliance with the Government's demands upon these plants. If this industry were suddenly to pass from long-existing conditions to the actual eight-hour day, undoubtedly for a time there would be more or less confusion and embarrassment, with a probable slowing up of production as against the present maximum. But I do not

believe this would last long, but on the contrary, that the industry would adjust itself to the new conditions, and the same force of employees would become quite as effective as before to keep up the output, not to mention the employment of more if necessary. Such results, well exemplified in other institutions which have adopted the actual eight-hour day, the superintendents seem to have entirely omitted from their calculations, in concluding that merely because 20 per cent was taken from the workday of the present force it would entail a like percentage of reduction in output.

So even if the actual eight-hour workday were imposed upon this industry, I feel abundantly assured that before very long, such would be the increased productivity of the employees, supplemented if need be by some further equipment, and some additional help, that there would be no diminution in the output. But if the confident predictions of enthusiastic partisans of the eight-hour day, in respect to the greater productivity of employees, should fail of substantial realization, I would yet feel confident that the genius and ability of the men, who are in effective and successful charge of these great plants, would soon adjust them to the new order of things without lessening the output.

The demand, however, is not for the actual eight-hour day but a basic eight-hour day. The distinction is apparent. The one fixes the ultimate hours of work; the other defines and fixes the normal workday within which the wage earner should earn his living, with right to require service for further time if the exigencies of the industry demand. Under the agreement referred to wherein employers and employees alike loyally and patriotically pledged themselves to the uninterrupted operation of the plants and an undiminished output, it is plain whatever the basic day may be, employers may in good faith require, and employees will cheerfully and to the limit of their ability render, any further service calculated to assure our Government and our allies an undiminished meat supply, to the very ultimate capacity of the plants. Indeed, on the hearing, all the superintendents declared, in that same good spirit of loyalty, that notwithstanding the difficulties they believed were in the way of adopting the eight-hour workday during the continuance of the War they would, if required, conform to the basic eight-hour day, whatever the added inconvenience and cost, without diminishing the output of the plants.

In the recent Federal legislation making provision for further hours of service in its many and varied industries theretofore limited to an actual eight-hour day, and in the proclamations for authorizing such further hours of service, the Government did not impeach the principle, nor abandon the practice of the eight-hour day, but, foreseeing the possibility of extraordinary contingencies in these extraordinary times, it made provision to meet them by changing the actual eight-hour day to a basic eight-hour day with increased pay for overtime. The Mediation Commission in its report above referred to said further that "experience has proved justification of its principle also in war times."

It is my belief that we can not go far astray in applying to this essential and basic war industry substantially the declared and practiced policy of the Government with respect to its industrial functions. I am well convinced that the basic eight-hour day, applied to these plants, will make more contented, useful, and effective workers, better and truer Americans, and will redound to the material and moral interest of employers, employees, and the public; and I find in principle for the demand to have concrete application as hereinafter indicated.

As to employments which are continuous during the 24 hours, and in which it has long been customary to employ two 12-hour shifts, it was stated on behalf of the packers at the time of the hearing that this should and would be converted into three 8-hour shifts, and I am of the opinion that this should be done.

That part of this demand which refers to the serving of the eight hours in nine consecutive hours is reasonable and is usual where labor hours are fixed, to prevent

inconvenience and hardship by dividing the workday into various parts, which, while aggregating no more than the total workday hours, might have to be served in remote parts of the 24 hours.

It is readily conceivable that so material a change in the plan of service in these large concerns will entail much thought and planning on the part of those in charge to avoid undue waste and the least embarrassment for all concerned, and had it been possible to have made the decision at the time of my appointment as administrator, in February, I would probably have fixed about 90 days in which to install the basic eight-hour day pending which there should be in practical effect a basic ten-hour day. But I must assume that these careful and efficient superintendents, together with their competent aids and superiors, have not been wholly unmindful of the possibilities of these proceedings, and have already given the matter some thought and study. Feeling that it would not be just to employers to be required immediately to make this change, nor to the employees to delay too long its installation I have fixed upon May 5, 1918, as the date upon which the basic eight-hour day shall begin.

2. COMPENSATION FOR SUNDAYS AND HOLIDAYS AND WEEK-DAY OVERTIME.

As to the fairness of the demand for a higher rate of compensation for Sundays, holidays, and week-day overtime there was no controversy at the hearing, but it was frankly conceded by such of the packers who testified, and by all of the superintendents. In testifying before the United States Commission on Industrial Relations about three years ago Mr. O'Hern, referring to the result of overtime work, said, "we do not get the results in overtime nor do we have men working as efficiently." While presumably he was referring to overtime beyond 10 hours, it would of course have application to the true economic day's work whatever it may be, and it is likewise true that if the overtime beyond the economic day's work is continued on successive days for any considerable time, the impaired results of the labor, and the inefficiency of the laborer would not be limited to the overtime itself, but be reflected in the entire day's work as well. The higher rate serves to deter employers from unnecessarily requiring employees to work at such times; but if such work is necessary it serves also to compensate the employee for the added sacrifice he makes in so working at times when he should have his liberty.

As to the particular holidays there was some contrariety of view, and likewise as to the amount of the extra pay for Sundays and holidays. It is my judgment that double time should be allowed for work on Sundays, and on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Where any operation is continuous in three eight-hour shifts, I do not believe extra pay for Sunday should be allowed if provision is made for relieving the employee from work on some other day of the week.

As to overtime pay for weekdays, the employers, while conceding the general fairness of the principle, contend that the overtime should be allowed for the excess of hours served in the week. That is, if the basic day were 10 hours, excess time should be allowed only if in the week over 60 hours were served. This system is in vogue in many industries, but I do not think it tends so well to serve the purpose of minimizing the daily hours, or rather of equalizing them from day to day, as would the daily application of the principle. If with the eight-hour day the employers may with immunity work the employees 16 hours daily for three days of the week, and not at all for the others, they might regulate their stock purchases and holdings accordingly, whereas if the added pay for overtime applied to the days, they would be more likely to make effort to conform to the eight-hour day, as it would probably be more to their advantage to carry over some of the stock for another day or two than to pay the added rate for overtime.

The most usual and customary rate for weekday overtime is time and one-half, and as to such time served beyond 10 hours I have no hesitancy in fixing that rate, I am convinced, however, that for a very considerable time after the basic eight-hour day becomes effective, at least until employers and employees have become adjusted to the new conditions, it will from time to time be necessary to serve some overtime. In view of this fact I do not believe it would be fair, at least until long enough after the basic eight-hour workday becomes effective to determine more definitely from experience in this industry, to impose on the first two hours so large a penalty as for the excess over 10 hours; and I have accordingly concluded that on and after next May 5 for the first two hours of week day overtime the rate of compensation shall be time and one-fourth.

As to the week day overtime rate for the time intervening between January 14 1918 (on and after which date the said arbitration agreement is by its terms effective), until said May 5, when the basic eight-hour day becomes operative, week day time in excess of 10 hours daily shall be compensated at the rate of time and one-half, and Sundays double time.

3. ALLOWANCE OF 20 MINUTES FOR LUNCH WHERE OPERATION IS BY THREE EIGHT-HOUR SHIFTS.

This demand was not resisted by the employers, and it appearing reasonable is granted.

4. INCREASE IN WAGES.

With the installation of the eight-hour workday following the theretofore 10-hour day, there naturally goes adjustment of the hourly and piecework wage rate so that in the full eight-hour workday there is earned an amount equal to that theretofore earned in the full 10-hour workday. The evidence for the employees and employers as well, is unanimous to the effect that whatever the economic workday is found to be it should under normal conditions afford to the workman a day's living wage for himself and family of average size, generally considered to be wife and three children of about school age. The proposition itself is too clear to require elaboration. The superintendents agreed that while so-called market price of labor, as evidenced by what other industries pay for it, should have some influence, yet in any event it should be a living wage.

While it might seem that the term "living wage" should itself fix its boundaries and convey its significance, it is one of those phrases not capable of exact definition, but is quite dependent on the viewpoint of the one who employs it. While it might generally be understood to be a wage affording a living suited to one's condition in life, it could hardly be said that if because of an unreasonably low wage the condition in life of the employee sinks low, but that his family manages to subsist thereon, that the condition in life of this family is thereby established, and that the wage paid is suited thereto. A living wage surely imports something more than this. On the other hand, the common laborer's living wage can not under the existing order of things be said to include extravagances and superfluities which only those of large means can afford. On behalf of the employees various so-called "living budgets" were presented. With the best of intent these must, it seems to me, reflect more or less the point of view of those who gathered the data or those who compiled them. Where they are made from observations of what a given number of families has actually required to maintain them, they may not afford just guide for those families whose earnings are customarily sufficient to warrant better living, or for families whose earnings were unduly low but which nevertheless have been compelled to subsist thereon, deprived of many things which they ought to have had but could not for lack of means procure. As to whether or not the man with the low wage has been

compelled unduly to so deprive himself and his family, and if so to what extent, affords room for wide divergence of opinion depending in large measure upon the personal views and experiences of those who make or interpret the budgets. Those used to better living might include more, and those not so accustomed less. The budgets presented at the hearing varied from about \$800 to about \$2,000. While budgets are helpful, there is difficulty in reconciling them to each other, and to the actual conditions with which we have to deal.

That the cost of living, from the humblest to the highest, has greatly and progressively increased since shortly after the War in Europe began to the present time is too well known to require more than the statement. Price tables may with some approximation convey an idea of percentages, but we know that it is the common and most generally used articles which have increased most in price. I shall not undertake to prescribe a specific living budget for workmen, nor to indicate with mathematical exactness the percentage of increased living costs for the average workingman's family, as between the present time and some supposedly normal period when the wages received might have been considered adequate—if indeed as to some of these employees such time there was. The raises given the employees in the last two years have been considerable, but at least in the case of the laboring men they supplemented a wage rate which in my judgment was for a considerable time before any of these raises, quite inadequate.

If the 10-hour workman receiving $27\frac{1}{2}$ cents per hour, or the eight-hour workman at correspondingly increased rate worked 300 days a year, his wages would be \$825. I have no hesitation in saying that I do not believe under existing conditions this sum is adequate to the ordinary needs of the average workingman's family in the cities involved. It should be materially increased, and in my judgment there should be a similar increase for all those employees whose wages are lower and even somewhat above that rate, and an increase, though not so much, for all those whose wages are considerably more. This distinction is, I believe, warranted from the fact that those receiving the higher wages do not stand so greatly in need of the increase as the lower rated workers, because with their far higher rate they are much better provided, although their plane of living is no doubt higher. Such of these more skilled workmen whose average day's work has been nearer eight hours than 10 will of course profit more from the eight-hour day rate, and of course, when the basic eight-hour day is in force where overtime is worked the earnings therefor will supplement their incomes, as well, to be sure, as the income of the others so working overtime.

In fixing the rates of increase, as well as in the overtime rate, I feel that it is my duty to take into consideration the likelihood that under present conditions overtime will be served. While this is my best judgment, experience alone must determine how material a factor this will prove. A well-known economist and statistician, testifying for the employees, stated that while it was his belief that overtime work would be unnecessary to maintain the output, if the administrator was satisfied that for any material time it would be necessary, it would only be fair for him to take this into consideration in fixing overtime rates and wage increases.

We are not here met, as is frequently the case in wage fixing, with the ofttimes embarrassing and influential contention that the profits of the industry will not warrant the demanded hours or wages; or that the highly competitive nature of the business would forbid the change except at ruinous cost; or that prices and income are so fixed by law or otherwise that until there is possibility of change in that regard the change in hours or wages would prove destructive to the employer. It has at no time been suggested in these proceedings that from the standpoint of income or profits the industry can not afford to meet the demands. This would not of course warrant the granting of wage demands which are not fair and just. If increased cost through change of hours or advance in wages is not wholly or in part absorbed through appli-

cation thereon of a proportion of the profits which employees are so indispensable a factor in creating, so much of the increased cost not so met would doubtless be reflected in the price charged for the product. The administrator is not constituted to pass on profits nor prices. If industrial profit sharing, as notably in the Henry Ford industries, is to be inaugurated in this industry, in due time it may come through voluntary cooperation of employers and employees.

So far as I have been advised or know, there is no scientific method for accurate wage fixing. In view of all the facts and conditions, I can only exercise my best judgment, and so guided, I have concluded that beginning January 14, 1918, the wage rates shall be increased over those in force December 31, 1917, by adding $4\frac{1}{2}$ cents an hour to the pay of all employees then receiving up to and including 30 cents per hour, 4 cents per hour to those then receiving from 30 cents up to and including 40 cents per hour, and $3\frac{1}{2}$ cents per hour to all those receiving over 40 cents per hour, piecework rates to be adjusted in like proportion according to earnings; that on and after May 5, 1918, when the basic eight-hour day takes effect, the increased hourly wage rates then in force shall be readjusted, so that thereafter the full eight-hour day shall yield the same wage to the employee as did the 10-hour day immediately theretofore, and that piecework rates be readjusted on like principle.

5. EQUALITY OF WAGE RATES FOR MALE AND FEMALE EMPLOYEES.

There was no controversy regarding the principle which this proposition involves. It was conceded, and is right, and is therefore allowed.

But the employers maintain that where males and females are doing the same class of work they are in fact paid the same wage. The evidence shows this to be so in piecework, wherein it clearly appears that the same rate is paid to both, for the same kind of work. There was some contrariety of evidence as to whether in the hourly wage employments males and females were employed in the same kind of work. The superintendents stoutly maintained that the work done by females is of the lighter class, which would ordinarily not require the services of a man, but was such as boys of 16 and over might ordinarily be employed to do, at a lower rate of wage. The preponderance of the evidence in my judgment sustains the contention that in the main this now is the practice in this industry, and I conclude generally that the evidence so shows. It was stated by some of the superintendents that occasionally in workrooms where there are both male and female employees, if for an hour or so or even somewhat longer there is no work for a male employee in the particular heavier work at which he is customarily engaged, he may turn in and help on the lighter work of the female employees, although he would continue to receive his usual larger wage. The evidence shows this to be an occasional happening, and in my judgment it would not vary the general conclusion that the evidence did not show male and female employees to be doing the same class of work in the hourly-pay jobs.

6. GUARANTEED TIME.

The demand is that there be no change in the guaranteed time. It is contended for the employers that the existing guaranteed time, being predicated on a 10-hour day, if the basic day is less than 10 hours, the guaranteed time should be correspondingly reduced. I do not agree with this contention. The guaranteed time is weekly and, of course, the employer would have the benefit of any overtime that may be served. I believe that under all the circumstances it is reasonable. But if the plants are to be run so near their full capacity as the superintendents seem to think, the question of guaranteed time will be of slight importance. There should be some adjustment so that the generally prevailing 40-hours-weekly guaranty will apply to all of the plants. The existing 45-hour guaranty of Swift & Co. is entirely too close to a 48-hour week at the new basic-day schedule to be wholly fair. There should

also be some change in the guaranty as to those weeks in which any one of the stated holidays occurs; otherwise the guaranteed time would equal the basic-day hours for the rest of the week. It is my judgment that as to employees who do not work on such holidays the guaranteed time for the week in which it occurs be $33\frac{1}{2}$ hours.

On argument it was earnestly insisted that if a basic day shorter than 10 hours were fixed upon, it should have application only to those in the skilled trades and occupations, the assigned reason being that in some of the operations, particularly on the killing floors, the laboring men must of necessity serve after many of the skilled workers have completed their day's tasks, in order to complete the work. If all of the workers began and quit at the same hour, there would likely be embarrassment from this situation, necessitating a shorter day's work on the part of some of the skilled workers or a longer day's work for these laborers. I believe this may be obviated by having some of the laborers begin work a little later, or even if necessary, working overtime by different ones of the laborers on different days, until some better plan can be evolved by those whom I firmly believe to be fully capable of working it out. But it seems to me that in any event the embarrassment incident to such a situation would be slight compared with that which would result from the great dissatisfaction that would undoubtedly follow if the major part of the men were excepted from the application and benefits of the shorter day. It is these very common laborers who stand most in need of it. It is these who in Chicago largely live in great numbers in that unlivable section of the city known as "Back of the Yards," many of them in habitations and in conditions in which human beings should not be permitted to remain. Whether this is of choice or of necessity, the shorter workday will have tendency to elevate the choice, and relieve the necessity. I do not believe it would be wise or just to make the exception.

In conformity with these views I make the following award:

1. Beginning May 5, 1918, and thereafter, eight hours shall constitute the basic workday, and such workday shall be completed, in so far as possible, within a period of not more than nine consecutive hours.

Those operations which are continuous during the 24 hours shall on and after said date be conducted by three shifts of eight hours each.

2. Overtime work shall be paid for at the following rates: Double time for all time worked on Sundays and holidays, including New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, or the days legally celebrated in lieu thereof. Where the operation is necessarily and generally carried on for seven days of the week, provision may be made by relief gangs or otherwise, so that the employees in such operations may be relieved from duty on some day of the week, and in case of such relief on any other day of the week double time shall not be allowed for work on Sunday of such week.

On and after the induction of the basic eight-hour day as above provided, the week-day overtime pay (not including any day for which double time is paid) shall be at the rate of time and one-fourth for the first two hours in excess of the regular eight-hour day on each such day and at the rate of time and one-half for all time thereafter on each such day. For the time commencing on and intervening between January 14, 1918, and until such induction of the basic eight-hour day as above provided such week-day overtime pay shall be at the rate of time and one-half for all time in excess of 10 hours of work on any such day, and Sundays double time.

3. Where plants or any part thereof are operated on three eight-hour shifts daily employees shall be allowed 20 minutes off for lunch with pay.

4. Wages shall be increased as follows: Predicated on the hourly wage rate in force December 31, 1917, $4\frac{1}{2}$ cents per hour to such employees as were then being paid at the rate of 30 cents and under per hour; 4 cents per hour to such employees as were then being paid from 30 cents up to and including 40 cents per hour; and $3\frac{1}{2}$ cents per

hour to such employees then being paid at the rate of over 40 cents per hour. For all pieceworkers there shall be a percentage of increase equal to that applied to hourly rates in the same classification. All these increases shall be effective as of January 14, 1918. Upon the induction of the basic eight-hour day as aforesaid, the hourly wage rates shall be readjusted so that thenceforth the compensation for a full eight-hour workday shall be equal to the compensation immediately theretofore for a full 10-hour workday at the increased wage rates above fixed; and piecework rates shall be proportionally readjusted in accordance with the same principle.

5. Wage rates shall be the same for male and female employees doing the same class of work.

6. There shall be no change made in the guaranteed time in effect November 30, 1917, except that the weekly guaranteed time in the plants of Swift & Co. shall be 40 hours, the same as in all the other plants; and except also in those weeks wherein any one of the above-named holidays occurs the guaranteed time of such employees as do not work on any such holiday shall for such week be 33½ hours.

SAMUEL ALSCHULER, *Administrator.*

CHICAGO, ILL., *March 30, 1918.*

AGREEMENT.

1. Should an employee, or employees, feel that they have been unjustly dealt with the matter may at once be taken up with the foreman. Should a satisfactory adjustment not be made, the affected person or persons may appeal the matter through the proper officials up to the general manager of the companies. Such appeal may be made in person or by representative, or representatives, selected by the affected employee or employees.

It being understood that there shall be no permanent person or committee on complaints or grievances in the plants, but such employee or employees have the full right to name the same representative or representatives for successive complaints or grievances if they see fit to do so.

Such complaints shall be made during working hours at a convenient time and place and disposed of without unnecessary delay.

All complaints growing out of dismissals from the service must be made within five days.

2. No employee covered by this agreement shall be suspended, demoted, or dismissed without just and sufficient cause. If, after proper investigation, it is found that an employee has been disciplined unjustly he shall be reinstated with such rights and such compensation as the arbitrator may determine.

3. No employee shall be suspended, demoted, or dismissed because of trade-union membership or for trade-union activity not carried on at the premises nor interfering with the operation of the plant.

4. Employees attending conventions or other duties affecting themselves shall upon giving proper notice to the foreman or superintendent be permitted to absent themselves without pay to attend to such duties in the same manner as workers attending to the duties of fraternal organizations, so long as such absence from the plant does not unduly interfere with the operations of the plant. Upon their return such workers shall be reinstated into the service with all their former rights.

5. There shall be no discrimination against any employee or prospective employee because of creed, color, or nationality.

6. The principles of seniority shall prevail as to all employees below the grade of foreman.

7. No employee shall be discharged or discriminated against in his or her work nor shall any person be refused employment because he or she belongs to a trade-union.

8. Thirty days' continuous employment shall be accepted as prima facie proof of general competency. After said period the specific act or acts of incompetency must be given a dismissed employee upon demand of himself or representatives.

9. Where pieceworkers are employed piece-rate schedules shall be constantly displayed for unhindered inspection.

10. Employees shall not be required to join company sick and death benefit associations.

11. The companies shall furnish proper dressing rooms, lunch rooms, wash rooms, and toilets.

12. Copies of this agreement shall be printed, framed, and posted in all shops and other work places.

RECENT AWARDS OF THE SHIPBUILDING LABOR ADJUSTMENT BOARD.

The following awards have recently been made by the Shipbuilding Labor Adjustment Board:

Decision as to wages, hours, and other conditions in the shipyards of the Newport News Shipbuilding & Dry Dock Co., March 7, 1918.

Decision as to wages, hours, and other conditions in South Atlantic and Gulf shipyards, March 4, 1918, corrected and extended April 6, 1918.

Decision as to wages, hours, and other conditions in North Atlantic and Hudson River shipyards, April 6, 1918.

Decision as to wages, hours of work, and other conditions in shipyards about the Great Lakes, April 19, 1918.

In addition to the above the following awards have been made by the board and have been published in the MONTHLY REVIEW:

Decision touching disputes in shipyards of San Francisco Bay and Columbia River and Puget Sound districts, November 4, 1917, as revised to February 1, 1918. (MONTHLY REVIEW for March, 1918, p. 67.)

Decision as to wages, hours, and other conditions in the Delaware River and Baltimore shipyards, February 14, 1918, as corrected and extended March 1, 1918. (MONTHLY REVIEW for April, 1918, p. 186.)

The text of three¹ of the recent awards follows:

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN THE SHIPYARD OF THE NEWPORT NEWS SHIPBUILDING & DRY DOCK CO.

First. The wage scale for day workers prescribed in this decision in Exhibit "A" is to be put into effect on March 11. Pieceworkers are to have piece earnings beginning March 11, increased 10 per cent until the new piece rates prescribed in the piece-rate book about to be issued by the Shipbuilding Labor Adjustment Board can be put into effect. The board directs that the uniform rates prescribed in its forthcoming piece-rate book be put into effect by the Newport News Shipbuilding & Dry Dock Co. as soon as practicable after copies of the piece-rate book have been received.

Second. As regards hours of employment, we prescribe the following rules:

(1) Eight hours shall constitute a day's work from Monday to Saturday, inclusive; provided that during the months of June, July, and August the working days on Saturdays shall be four hours.

¹ The award affecting employees in the shipyards about the Great Lakes is practically the same as that affecting employees in the North Atlantic and Hudson River shipyards (pp. 136 to 142). The variations are noted on p. 142.

(2) Work in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half.

(3) Work in excess of 60 hours a week for any employee shall not be permitted, except on repair work, or when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life or property from imminent danger.

(4) Work on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday; Decoration Day or Memorial Day; Fourth of July; Labor Day; Thanksgiving Day; and Christmas Day.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Employees engaged on repair work in or upon vessels undergoing repair shall receive double time for all overtime on week days as defined above, as well as on Sundays and the specified holidays.

Our purpose in limiting overtime by the above 60-hours-a-week regulation is to discourage a resort to excessive overtime, which leads to inefficiency and tends to lessen rather than to increase production, and to encourage the introduction of the two and three shift systems. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the Newport News Shipbuilding & Dry Dock Co. to take immediate steps looking toward the introduction of additional shifts in their yards.

Third. For all "dirty work" in connection with the repair of vessels performed in or upon the vessel, employees of the different crafts shall receive 10 cents an hour more than the minimum hourly rates prescribed in Schedule "A" of this decision.

Fourth. Rates of wages now being paid to individual employees in excess of the minimum rates fixed are in no wise altered or affected by the establishment of these rates.

Fifth. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Sixth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyard and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates tentatively fixed and report a recommendation for their confirmation or modification by this board. The board may on the basis of such report and recommendation determine a uniform minimum rate for each such occupation, and add it to the rates prescribed in this award.

(Signed) V. EVERIT MACY, *Chairman.*

(Signed) LOUIS A. COOLIDGE.

(Signed) A. J. BERRES.

WASHINGTON, D. C., March 7, 1918.

EXHIBIT A.

Minimum wage scale for journeymen, specialists, helpers, and laborers in specified crafts in the employ of Newport News Shipbuilding & Dry Dock Co.

Acetylene department:	Rate per hour.	Angle smith department:	Rate per hour.
Burners, first class.....	\$0.65	Angle smiths, heavy fires.....	\$0.87½
Burners, second class.....	.60	Angle smiths, other fires.....	.72½
Grinders.....	.50	Electric welders.....	.65
Chippers.....	.50	Firemen.....	.45
Welders.....	.65		

	Rate per hour,		Rate per hour.
Blacksmith department:		Foundry department—Concl'd.	
Hammer and machine forgers,		Chippers.....	\$0.50
heavy.....	\$1.35	Furnace men.....	.55
Heaters.....	.55	Hull engineering department:	
Lever men and cranemen.....	.70	Marine erectors, first class.....	.72½
Hammer runners, heavy.....	.55	Marine erectors, second class....	.62½
Blacksmiths, heavy fires.....	.87½	Joiners.....	.70
Blacksmiths, other fires.....	.72½	Joiner department:	
Drop forgers.....	.70	Joiners.....	.70
Bolt makers.....	.72½	Machine operators.....	.70
Liner forgers.....	.55	Lumber department:	
Toolsmiths.....	.72½	Machine men.....	.65
Boiler shop:		Machine shop:	
Boiler makers.....	.70	Machinists, first class.....	.72½
Drillers.....	.60	Machinists, second class.....	.62½
Holders-on.....	.50	Buffers and polishers.....	.52
Rivet heaters.....	.25	Die sinkers.....	.75
Planer hands.....	.55	Riggers.....	.62½
Bolting and liner departments:		Material labor department:	
Bolters.....	.50	Engineers, locomotive.....	.65
Liner men.....	.54	Operators, locomotive, canti-	
Cement department:		lever, gantry, and other	
Cementers.....	.50	cranes of over three tons....	.70
Chipping and calking department:		Operators, stiff-legged derricks..	.65
Tank testers.....	.70	Hoisting and portable firemen..	.45
Hand chippers and calkers....	.70	Locomotive conductors.....	.50
Pneumatic chippers and		Road crane conductors.....	.50
calkers.....	.65	Mold loft:	
Packers.....	.50	Gang leaders.....	.85
Coppersmith department:		Loftsmen, first class.....	.82½
Coppersmiths.....	.70	Loftsmen, second class.....	.72½
Plumbers.....	.72½	Joiners.....	.70
Pipe fitters.....	.72½	Paint department:	
Pipe coverers.....	.65	Painters and polishers.....	.60
Pipe-fitting machine men....	.65	Pattern shop:	
Drilling and reaming department:		Pattern makers.....	.75
Drillers.....	.60	Power house department:	
Reamers.....	.50	Engineers.....	.70
Electrical department:		Oilers.....	.45
Electricians, first class.....	.70	Water tenders.....	.45
Electricians, second class.....	.65	Rigging department:	
Wiremen.....	.55	Marine leaders.....	.75
Joiners.....	.70	Marine riggers.....	.62½
Machinists, first class.....	.72½	Crane leaders.....	.75
Machinists, second class.....	.62½	Crane-gang leaders.....	.67½
Fitting-up department:		Cranemen.....	.60
Fitters, first class.....	.72½	Erector leaders.....	.60
Fitters, second class.....	.65	Erectors.....	.50
Regulators, first class.....	.60	Riveting department:	
Regulators, second class.....	.52½	Rivet testers.....	.70
Foundry department:		Stage builders.....	.57½
Molders.....	.72½	Hand riveters.....	.70
Cupola tenders.....	.55	Pneumatic riveters.....	.65

	Rate per hour.		Rate per hour.
Riveting department—Concl'd.		Ship shed department—Concl'd.	
Holders-on.....	\$0. 50	Bending rollers.....	\$0. 62½
Heater boys.....	. 25	Mangle rollers.....	. 57½
Passer boys.....	. 20	Pressmen, first class.....	. 62½
Ship carpenter department:		Pressmen, second class.....	. 55
Ship carpenters, first class.....	. 70	Offsetters.....	. 55
Ship carpenters, second class....	. 65	Sawyers.....	. 47½
Fasteners.....	. 60	Ventilation department:	
Erectors.....	. 50	Layers-out.....	. 70
Wood calkers.....	. 70	Sheet metal workers.....	. 70
Wood reamers.....	. 55	All departments:	
Ship shed department:		Helpers, first class.....	. 42½
Punchers.....	. 55	Helpers, second class.....	. 37½
Planers and scarfers.....	. 55	Laborers.....	. 35
Countersinkers.....	. 55	Common laborers.....	. 30
Drillers.....	. 60		

If unable to secure an adequate force of fully qualified journeymen at the rates specified in this award, the Newport News Shipbuilding & Dry Dock Co. may employ men who have not yet become fully qualified journeymen at minimum hourly rates 10 cents less than those fixed for such journeymen in this scale; provided such men, if retained in employment, shall be advanced to journeymen's wages after having been employed for six months after the date of this award, or after the date thereafter when they accept employment at such lower rate.

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN SOUTH ATLANTIC AND GULF SHIPYARDS BY SHIPBUILDING LABOR ADJUSTMENT BOARD MARCH 4, 1918, CORRECTED AND EXTENDED APRIL 6, 1918.

First. Since the publication of the board's decision in regard to wages, hours, and working conditions in South Atlantic and Gulf shipyards on March 4, we have held a conference in Washington with the shipyard owners and employees affected which has revealed the special difficulties which must be overcome to attract and hold in these Southern yards the force of skilled mechanics which they require to complete the ships they have under construction.

To the South even more than to the North the shipbuilding industry is a new industry. Not only shipyards and equipment have to be called into being, but skilled mechanics have to be drawn in or trained in numbers far beyond the available local supply. To these obstacles to the successful prosecution of the industry, the long, hot summer offers a further handicap. Testimony not only from employees but also from employers and the district officers of the Shipping Board Emergency Fleet Corporation presented at our second hearing indicated a very general conviction that unless wages and other conditions are made as attractive in Southern yards as they are farther north skilled workers, whose earnings permit them to move freely from place to place will migrate. In fact we are advised officially that such migration from one Southern city has already begun. Unless this tendency is checked, the completion in any near future of the ships in process of construction in the Southern yards will be impossible.

In the light of these facts we have decided to substitute a modified wage scale for that previously announced. By means of it we hope that the shipyard contractors may be enabled to draw skilled mechanics to their yards from interior towns.

Encouraged by it we hope that these skilled craftsmen and the employees in the Southern shipyards will disprove the current assumption that Southern labor is less efficient than Northern labor and set an example to the whole country by turning out the ships we so vitally need in record-breaking time.

By establishing the same wage scale for skilled mechanics for the whole Atlantic coast and Gulf, we have made it possible in coming months to institute accurate comparisons between all shipyards. The actual cost of each ton of shipping turned out by the different yards will from now on measure the efficiency of the shipyard employers and employees in these yards and enable the Government to decide wisely what yards should be fostered through additional shipbuilding orders and what should be suppressed because unable to keep pace with the rest of the country. Southern shipyard owners and shipyard employees are thus given an opportunity by our decision to show that they can build ships as economically and efficiently as the shipyards of any other district. We believe that they will seize this opportunity with loyal enthusiasm for the benefit of our common country.

Second. At different times since November, 1917, disputes have arisen on the different shipyards in the district covered by this award. In accordance with statements made either by this board or by officials of the Emergency Fleet Corporation, on the basis of which these disputes have been temporarily settled, we make the minimum rates of wages fixed in Exhibit "A" of this decision retroactive for the employees of the Tampa Shipbuilding & Engineering Co., to November 1, 1917; for those of the Terry Shipbuilding Co. in Savannah, Ga., to January 11, 1918; for those in the shipyards of Brunswick, Ga., and Mobile, Ala., and vicinity, to January 15, 1918; for those of the shipyards of Beaumont, Houston, and Orange, Tex., to January 23, 1918, except for laborers in the shipyards of Orange for whom the retroactive date is to be November 27, 1918, and for those of all the other shipyards of the district under the jurisdiction of the board to February 1, 1918.

To determine the back pay due to an employee on the hourly wage system, the new hourly wage fixed by the board is to be multiplied by the total number of hours which such employee worked from the retroactive date until the date when the new wage scale was put into effect. From the product thus determined the total wage, including premiums and bonuses of every kind, which the employee received for his work, is to be deducted. The balance constitutes the back pay to which he is entitled. In determining the total number of hours of employment, hours counted and paid for at time and one-half, or double time when the original payment was made, are to be counted as time and one-half or double time in calculating earnings at the new rates of wages, but all other hours are to be calculated as straight time.

The back pay to employees in accordance with this provision shall be paid at the earliest date at which the elaborate calculations necessary to their determination can be completed and approved by the auditing department.

Third. In fairness to employees whose rates of wages are fixed by this award and who because of the lack of adequate housing facilities near the plants in which they are employed, are compelled not only to lose time but to suffer a reduction in their earnings to reach their place of employment, we direct that shipyards provide the employees whose rates of wages are fixed by this award and who are compelled to expend regularly more than 10 cents a day in coming to and going from their work with free commutation or other tickets. In providing free transportation to its employees coming from a distance, each shipyard must adopt such precautions to prevent the privilege from being abused as may be prescribed by the auditors of the Navy Department and the Emergency Fleet Corporation. This provision is subject to change at any time that the board is convinced that suitable and adequate housing facilities are available.

Evidence has been presented to us showing that some of the shipyards supply certain of their employees to other shipyards, requiring such employees to pay their own transportation charges. When such expense for transportation for employees ordered to work for other yards exceeds 10 cents a day we direct that the employing yard pay the excess above 10 cents in addition to wages conforming to the minimum scale fixed in this award.

Fourth. As regards hours of employment, we prescribe the following rules for all of the shipyards of the district covered by this award:

(1) Eight hours shall constitute a day's work from Monday to Saturday, inclusive, provided that during the months of June, July, and August the working day on Saturdays shall be 4 hours.

(2) Work on ship construction in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half.

(3) Work in excess of 12 hours a day or 60 hours a week for any employee shall not be permitted except when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life and property from imminent danger.

(4) Work on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Employees engaged on repair work upon or for vessels undergoing repair shall receive double time for all overtime on week days as defined above, as well as on Sundays and the specified holidays.

Our purpose in prescribing the maximum daily and weekly working period is to discourage a resort to excessive overtime which leads to inefficiency and tends to result not only in increased costs but in lessened production. We wish also to encourage the introduction of the two and three shift system. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the southern shipyards to take immediate steps looking toward the introduction of additional shifts in their yards.

Fifth. The shipyard owners are directed to cooperate with employees in making effective the following rules in reference to machinery for the settlement of industrial disputes.

(1) The employees in each craft or calling in a shop or yard shall have the right to select three of their number to represent them as members of a shop committee. Each member of this committee shall be chosen by majority vote through secret ballot in such manner as the employees shall direct. The chairman of each shop committee shall be a member of a joint shop committee.

(2) When a grievance arises it shall be taken up by the craft or laborers' committee, with the foreman or general foreman. In the event the grievance has not been adjusted, it shall then be taken up by the joint shop committee, first with the superintendent, and then failing a settlement, with the higher officials of the company. If the matter can not be adjusted between the joint shop committee and these officials, the joint shop committee shall have the right to call into the conference a representative chosen by the committee. In case such conference fails to result in a satisfactory adjustment, the grievance shall be submitted to the examiner to be appointed by the Shipbuilding Labor Adjustment Board as provided in the memorandum of December 8, 1917, creating this board.

(3) Any committeeman appointed hereunder who shall be found to have been discharged without just or sufficient cause after due investigation in the matter herein provided for the adjustment of grievances shall be reinstated with full pay for all time lost.

Sixth. The question of employing apprentices shall be taken up for adjustment in the manner provided herein for the adjustment of grievances.

Seventh. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Eighth. Employees shall be paid at least once a week on the company's time, and in no case shall more than three day's pay be held back.

Ninth. Any employee laid off or discharged, shall within 24 hours receive all wages due him.

Tenth. No employee shall be required by the employing shipyard to pay any assessment for insurance, medical attendance, or other benefits, or to sign as a condition to employment any waiver of his legal rights.

Eleventh. Competent medical first aid shall be provided for employees requiring such aid and paid for by the employer.

Twelfth. Shipyard owners are directed to provide for their employees adequate and sanitary toilets, washing facilities, and pure drinking water, properly cooled during the summer months.

Thirteenth. The minimum rates of wages to be paid to different classes of employees by all of the shipyards of the district shall be those set forth in the schedule appended hereto (Exhibit A), which is made a substantive part of this award.

Fourteenth. Rates of wages now being paid to individual employees in excess of the minimum rates fixed are in no wise altered or affected by the establishment of these rates.

Fifteenth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyards and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates tentatively agreed upon and report a recommendation for their confirmation or modification by this board. The board may, on the basis of such report and recommendation, determine a uniform minimum rate for each such occupation and add it to the rates prescribed in this award.

Sixteenth. Under rulings of the Navy Department and the United States Shipping Board Emergency Fleet Corporation, the jurisdiction of this board is limited to shipyards which have direct contracts, other than lump-sum contracts, for submarine chasers, from the Navy Department or the Emergency Fleet Corporation and to employees engaged in work in connection with such contracts. The provisions of this decision apply only to yards and employees in yards under our jurisdiction as above defined, and not to private contracts or to employees engaged in work in connection with such contracts.

Seventeenth. The rates and other conditions prescribed in this decision, except as otherwise provided, shall be put into effect on or before Monday, April 22, 1916.

(Signed) V. EVERIT MACY, *Chairman.*

(Signed) LOUIS A. COOLIDGE.

(Signed) A. J. BERRES.

WASHINGTON, D. C., *April 6, 1916.*

ADDENDA TO DECISION FOR SOUTH ATLANTIC AND GULF SHIPYARDS.

(1) To the stated holidays add: Half holidays on State and national election days.

(2) The retroactive provision does not apply to the payment by the employer of the transportation expense of employees nor to the 5 per cent bonus for night work; these payments are intended to begin with March 25.

EXHIBIT A.

Minimum wage scale for journeymen, specialists, helpers, and laborers in specified crafts in steel-ship yards.

	Rate per hour.		Rate per hour.
Acetylene department:		Cement department:	
Burners, first class.....	\$0.65	Cementers.....	\$0.50
Burners, second class.....	.60	Helpers.....	.42½
Grinders.....	.50	Chipping and calking department:	
Chippers.....	.50	Tank testers.....	.70
Welders.....	.65	Chippers and calkers.....	.70
Helpers.....	.46	Packers.....	.50
Angle smith department:		Coppersmith department:	
Angle smiths, heavy fires.....	.87½	Coppersmiths.....	.72½
Angle smiths, heavy fires, helpers.....	.55	Plumbers and pipe fitters.....	.72½
Angle smiths, other fires.....	.72½	Helpers.....	.46
Angle smiths, other fires, helpers.....	.46	Drilling and reaming department:	
Furnace men on shapes and plates (ship work).....	.82½	Drillers.....	.60
Electric welder.....	.65	Reamers.....	.50
Blacksmith shop:		Electrical department:	
Hammer and machine forgers, heavy.....	1.35	Electricians, first class.....	.70
Heater.....	.55	Electricians, second class.....	.65
Lever men or cranemen.....	.70	Wiremen.....	.55
Helpers.....	.50	Joiners.....	.70
Hammer runner, heavy.....	.55	Machinists, first class.....	.72½
Blacksmiths, heavy fires.....	.87½	Helpers.....	.45
Blacksmiths, heavy fires, helpers.....	.55	Erecting department:	
Blacksmiths, other fires.....	.72½	Leading men.....	.85
Blacksmiths, other fires, helpers.....	.46	Marine erectors, first class.....	.72½
Drop forgers.....	.70	Marine erectors, second class... ..	.62½
Drop forgers, helpers.....	.50	Specialists or handy men.....	.52
Bolt makers.....	.72½	Helpers.....	.45
Bolt makers, helpers.....	.46	Fitting-up department:	
Liner forgers.....	.55	Fitters, first class.....	.72½
Liner forgers, helpers.....	.46	Fitters, second class.....	.65
Boiler shop:		Regulators, first class.....	.60
Boiler makers.....	.70	Regulators, second class.....	.52½
Drillers.....	.60	Helpers.....	.46
Holders-on.....	.50	Foundry department:	
Rivet heaters.....	.40	Molders.....	.72½
Flange turners.....	.75	Cupola tenders.....	.72½
Helpers.....	.46	Helpers.....	.46
Slab furnace men.....	.75	Hand and machine chippers... ..	.50
Planer hands.....	.55	Furnace department:	
Bolting and liner department:		Leaders.....	.67½
Bolters.....	.50	Firemen and helpers.....	.55
Liner men.....	.54	Strikers.....	.55
Helpers.....	.42½	Hull engineering department:	
		Marine erectors, first class.....	.72½
		Marine erectors, second class... ..	.62½
		Specialists or handy men.....	.52
		Joiners.....	.70
		Helpers.....	.46

	Rate per hour.		Rate per hour.
Joiner department:		Rigging department—Contd.	
Joiners.....	\$0.70	Crane leaders.....	\$0.75
Machine men.....	.70	Crane-gang leaders.....	.67½
Helpers.....	.42½	Cranemen.....	.60
Lumber department:		Erector leaders.....	.60
Machine men.....	.65	Erectors.....	.50
Helpers.....	.42½	Riveting department:	
Machine shop:		Rivet testers.....	.80
Machinists, first class.....	.72½	Stage builders.....	.57½
Machinists, second class.....	.62½	Riveters.....	.70
Specialists or handy men.....	.52	Holders-on.....	.50
Metal polishers, buffers and platers.....	.70	Heater boys.....	.38
Helpers.....	.46	Passer boys.....	.30
Material labor department:		Helpers.....	.46
Engineers, locomotive.....	.65	Ship carpenter department:	
Operators, locomotive, canti- lever, gantry, and other cranes of over 3 tons.....	.70	Ship carpenters, first class.....	.70
Operators, stiff-legged derricks..	.65	Ship carpenters, second class...	.65
Hoisting and portable firemen..	.50	Helpers.....	.46
Locomotive conductors.....	.50	Ship shed department:	
Road crane conductors.....	.50	Punchers.....	.55
Mold loft:		Planer and scarfer.....	.55
Gang leaders.....	.85	Countersinkers.....	.55
Loftsmen, first class.....	.82½	Drillers.....	.60
Loftsmen, second class.....	.72½	Bending rollers.....	.70
Joiners.....	.70	Mangle rollers.....	.57½
Helpers.....	.42½	Pressmen, first class.....	.62½
Paint department:		Pressmen, second class.....	.55
Painters and polishers.....	.60	Offsetters.....	.55
Bitumastic painters.....	.72½	Sawyers.....	.47½
Helpers.....	.42½	Helpers.....	.46
Pattern shop:		Ventilation department:	
Pattern makers.....	.75	Sheet-metal workers.....	.70
Laborers.....	.40	Helpers.....	.46
Rigging department:		All departments:	
Marine leaders.....	.75	Layers-out shall receive 3 cents an hour more than first-class journeymen in the same de- partment.	
Marine riggers.....	.62½	Laborers.....	.40
		Common laborers.....	.30

Minimum rates for employees in wooden shipyards, in addition to those specified for steel ship yards.

Loftsmen, first class.....	\$0.82½
Loftsmen, second class.....	.72½
Ship carpenters, first class.....	.70
Ship carpenters, second class.....	.65
Joiners.....	.70
Mill men.....	.70
Calkers.....	.70
Fasteners.....	.55
Reamers.....	.55
Offsetters.....	.55

Erectors.....	\$0.55
Carpenters' helpers.....	.46
Laborers.....	.40
Common laborers.....	.30
Oakum spinners, per bale.....	2.25

DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN NORTH ATLANTIC AND HUDSON RIVER SHIPYARDS.

First. One of the most serious influences retarding the progress of the shipbuilding industry, according to the unanimous testimony of the yard owners and of the district officers of the Fleet Corporation who have come before us, is the shifting of men from yard to yard. If the shipbuilding program, so vital to our success in the war, is to be realized, this shifting must be stopped. The only effective way to stop it is to remove its inciting cause, the variable wage rates paid by different yards in the same competitive region. With this purpose in view we have sought in all of our hearings to determine with accuracy the limits of each competitive region, so that we might extend over it a uniform wage scale for shipyard employees.

We have been successful in checking the shifting of labor from yard to yard within the districts in which we have established uniform scales, but this has only aggravated the tendency toward shifting between districts. From Maine to Florida complaints reach us that this shifting is going on to the extent of thousands of men a day. Just as this decision is issued, a single yard reports that its daily loss of employees exceeds 200. The loss in output of tonnage of ships to the country as a whole from this cause can hardly be exaggerated.

After giving the most careful consideration to every aspect of the question, the ease of transportation along the Atlantic and Gulf coasts, the available local labor supplies, and local wage conditions, the cost of living in different shipbuilding centers, etc.—we have come to the conclusion that the shifting of labor will not be checked until the same wage scale, at least for all skilled mechanics, is established for the whole Atlantic coast and Gulf region. We have accordingly decided to establish for all shipyards of the North Atlantic under the jurisdiction of this board the scale set forth in Exhibit A. We are at the same time extending the same rates for skilled mechanics to all South Atlantic and Gulf coast shipyards.

Second. The wage rates set forth in Exhibit A are higher than those now paid in the North Atlantic shipyards and as high or higher than the rates paid in the most representative outside shops employing the same crafts as the shipyards. Nevertheless, they are lower than were requested by the representatives of organized labor at our hearings. The principal argument urged for still higher rates was the increase in the cost of living in the vicinity of New York City, claimed to have been not less than 100 per cent since the beginning of the War.

Appreciating the justice of the contention that wages should be advanced to keep pace with the rising cost of living, we have made a special effort to secure exact information on this point. A thorough investigation of changes in the New York district, not only in retail prices of food, clothing, and other items consumed by wage earners, but also in rents, related to the family budgets of over 600 typical families whose heads are employed in shipbuilding, has been made for us by the United States Bureau of Labor Statistics. This proved an increase so much smaller than that claimed by the representatives of labor that we submitted the data which they presented at our hearings to the bureau for careful analysis. The bureau's report shows that the principal reason for the discrepancy was the difference in the method used in the two investigations. The bureau correctly weighted each item in its investigation according to the proved importance of that item among a normal

family's expenditures; in the investigation of the men showing the 100 per cent increase all items, even the most insignificant, were treated as of equal importance. Thus salad oil increasing 275 per cent was treated as equally important with bread increasing only 33½ per cent; caps increasing 100 per cent as equally important with suits of clothes increasing only 52.2 per cent. Other reasons for the abnormally high increase in the cost of living shown was the comparison of the prices of vegetables and fresh fruits in the winter with their prices in the summer, and of the prices of winter garments with those of summer garments. In view of the fact that the conclusions of the Bureau of Labor Statistics as to the true rise in the cost of living since the beginning of the War correspond closely with other investigations, such as those made for the railroad brotherhoods and submitted by them in connection with their request for an increase in wages, we feel constrained to accept it as substantially accurate. Adding this increase to the wage rates submitted by the men as having prevailed in shipyards in 1914, we get rates somewhat lower for nearly all crafts than those given in Exhibit A. We believe, therefore, that the wage scale fixed makes full allowance for the increased cost of living in the New York district, which appears to have been about the same as in other localities.

Because of this fact and of the necessity which the War imposes of adopting the policy which will result in the maximum production of ships in the minimum time, we have thought it our duty to disregard local considerations and to stabilize as much as possible the whole shipbuilding industry. Though this policy does not benefit wage earners equally in all sections, it works injustice to none. We count confidently on the patriotic cooperation of both shipyard owners and employees to make this national war policy a success.

Third. In accordance with the statement made by the board when the hearing on labor conditions in the yards in and near New York City was postponed, the wage rates enumerated in Exhibit A are to be retroactive for the employees in the occupations enumerated in Exhibit A in the shipyards in the district about New York Harbor, including Bridgeport, under our jurisdiction, to March 11, 1918, for steel shipyards north of Bridgeport under our jurisdiction, to March 20, and for all other yards covered by the award to April 1, 1918.

To determine the back pay due to an employee on the hourly wage system, the new hourly wage fixed by the board is to be multiplied by the total number of hours which such employee worked from the retroactive date until the date when the new wage scale was put into effect. From the product thus determined the total wage, including premiums and bonuses of every kind which the employee received for his work, is to be deducted. The balance constitutes the back pay to which he is entitled. In determining the total number of hours of employment, hours counted and paid for as overtime when the original payment was made are to be counted as overtime at the established rating in calculating earnings at the new rate of wages, but all other hours are to be calculated as straight time. The back pay due to both day workers and pieceworkers shall be paid at the earliest date at which the elaborate calculations necessary to their determination can be completed and approved by the auditing department.

Fourth. As regards hours of employment, we prescribe the following rules for all of the shipyards of the district covered by this award:

(1) Eight hours shall constitute a day's work from Monday to Saturday, inclusive: provided, that during the months of June, July, and August the working-day on Saturdays shall be four hours.

(2) Work on ship construction in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half time.

(3) Work on ship construction on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday, Decoration

Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day, and a half holiday on State and national election days.

(4) Employees engaged on repair work upon or for vessels undergoing repair shall continue to receive the extra compensation which was customary in the yard at the time this decision was rendered for overtime on week days, as defined above, as well as on Sundays and the specified holidays.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Work in excess of 12 hours a day or 60 hours a week for any employee shall not be permitted, except when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life or property from imminent danger.

Our purpose in prescribing the maximum daily and weekly working period is to discourage a resort to excessive overtime, which leads to inefficiency and tends to result not only in increased costs but lessened production. We wish also to encourage the introduction of the two and three shift system. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the shipyards of this district to take immediate steps looking toward the introduction of additional shifts in their yards. We believe that this is entirely practicable even for repair yards since such yards, during the War, have been and probably will be continuously employed to their full capacity.

Fifth. The shipyard owners are directed to cooperate with employees in making effective the following rules in reference to machinery for the settlement of industrial disputes:

(1) The employees in each craft or calling in a shop or yard shall have the right to select three of their number to represent them as members of a shop committee. Each member of this committee shall be chosen by majority vote through secret ballot in such manner as the employees shall direct. The chairman of each shop committee shall be a member of a joint shop committee.

(2) When a grievance arises it shall be taken up by the craft or laborers' committee with the foreman or general foreman. In the event the grievance has not been adjusted, it shall then be taken up by the joint shop committee, first with the superintendent, and then, failing a settlement, with the higher officials of the company. If the matter can not be adjusted between the joint shop committee and these officials, the joint shop committee shall have the right to call into conference a representative chosen by the committee. In case such conference fails to result in a satisfactory adjustment, the grievance shall be submitted to the examiner to be appointed by the Shipbuilding Labor Adjustment Board, as provided in the memorandum of December 8, 1917, creating this board.

(3) Any committeeman appointed hereunder who shall be found to have been discharged without just or sufficient cause, after due investigation in the manner herein provided for the adjustment of grievances, shall be reinstated with full pay for all time lost.

Sixth. The question of employing apprentices shall be taken up for adjustment in the manner provided herein for the adjustment of grievances.

Seventh. Believing that in this national emergency past differences between employers and employees must be forgotten in the common determination to produce the maximum possible number of ships, the board will not tolerate any discrimination either on the part of employers or employees between union and nonunion men.

Eighth. Employees shall be paid at least once a week on the company's time and in no case shall more than three days' pay be held back.

Ninth. Any employee laid off or discharged shall, within 24 hours, receive all wages due him.

Tenth. No employee shall be required by the employing shipyard to pay any assessment for insurance, medical attendance, or other benefits.

Eleventh. Competent medical first aid shall be provided for employees requiring such aid and paid for by the employer.

Twelfth. Shipyard owners are directed to provide for their employees adequate and sanitary toilets, washing facilities, and pure drinking water properly cooled during the summer months.

Thirteenth. The minimum rates of wages to be paid to different classes of employees by all of the shipyards of the district under our jurisdiction shall be those set forth in the schedule appended hereto (Exhibit A) which is made a substantive part of this award.

The board found conditions as regards the size of yards and the efficiency of their equipment so variable in the district that it deems it unwise to attempt to standardize piece rates. It directs that the piece rates prevailing for pieceworkers employed in the district at the time this decision is rendered be increased 15 per cent and that the back pay for such pieceworkers be determined by multiplying their total earnings at piecework during the period when they are entitled to back pay under this award by 15 per cent.

Fourteenth. In a yard in process of construction where the Navy Department or the Emergency Fleet Corporation is paying the entire cost of such construction the rates of wages to be paid to employees engaged on construction work shall be at the prevailing rates in the building trades in the locality in which the yard is situated.

Fifteenth. Hourly or weekly rates of wages now being paid to individual employees in excess of the minimum rates fixed are in nowise altered or affected by the establishment of these rates.

Sixteenth. Rates of wages for occupations not covered by this decision shall be tentatively agreed upon between the individual shipyards and employees concerned. Such tentative rates shall be reported to the examiner, who shall satisfy himself as to the fairness of the rates suggested and report a recommendation for their confirmation or modification by this board. The board may on the basis of such report and recommendation determine a uniform minimum rate for each such occupation.

Seventeenth. Under rulings of the Navy Department and the United States Shipping Board Emergency Fleet Corporation, the jurisdiction of this board is limited to shipyards which have direct contracts, other than lump-sum contracts for submarine chasers, from the Navy Department or the Emergency Fleet Corporation and to employees engaged in work in connection with such contracts. The provisions of this decision apply only to yards and employees in yards under our jurisdiction as above defined and not to private contracts or to employees engaged in work in connection with such contracts.

Eighteenth. The rates and other conditions prescribed in this decision, except as otherwise provided, shall be put into effect on or before Monday, April 22, 1918.

(Signed) V. EVERIT MACY, *Chairman*.

(Signed) LOUIS A. COOLIDGE.

(Signed) A. J. BERRER.

Approved, with the following reservation:

In my opinion there should be a clear disavowal of any intention to impose the findings of the board upon shipyards within which no disputes between employer and employed have arisen resulting in the failure of attempts at mediation or conciliation between those directly involved. The board under the memorandum creating it has no jurisdiction over such yards. It is established to meet a grave war emergency, and its machinery should not be used by organizations of employers or employees to strengthen permanently such organizations or to change working conditions in plants where labor controversies do not imperil effectiveness of operation or impede production.

(Signed) LOUIS A. COOLIDGE.

WASHINGTON, D. C., April 6, 1918.

[1187]

EXHIBIT A.

Minimum wage scale for journeymen, specialists, helpers, and laborers in specified crafts in steel-ship yards.

	Rate per hour.		Rate per hour.
Acetylene department:		Bolting and liner department:	
Burners, first class.....	\$0.65	Bolters.....	\$0.50
Burners, second class.....	.60	Liner men.....	.54
Grinders.....	.50	Helpers.....	.42½
Chippers.....	.50	Cement department:	
Welders.....	.65	Cementers.....	.50
Helpers.....	.46	Helpers.....	.42½
Angle smith department:		Chipping and calking department:	
Angle smiths, heavy fires.....	.87½	Tank testers.....	.70
Angle smiths, heavy fires, help- ers.....	.55	Chippers and calkers.....	.70
Angle smiths, other fires.....	.72½	Packers.....	.50
Angle smiths, other fires, help- ers.....	.46	Cleaning department:	
Furnace men on shapes and plates (shipwork).....	.82½	Leader.....	.55
Electric welder.....	.65	Laborers.....	.40
Blacksmith shop:		Coppersmith department:	
Hammer and machine forgers, heavy.....	1.35	Coppersmiths.....	.72½
Heater.....	.55	Plumbers and pipe fitters.....	.72½
Lever men or cranemen.....	.70	Helpers.....	.46
Helpers.....	.50	Drilling and reaming department:	
Hammer runners, heavy.....	.55	Drillers.....	.60
Blacksmiths, heavy fires.....	.87½	Reamers.....	.50
Blacksmiths, heavy fires, help- ers.....	.55	Electrical department:	
Blacksmiths, other fires.....	.72½	Electricians, first class.....	.70
Blacksmiths, other fires, help- ers.....	.46	Electricians, second class.....	.65
Drop forgers.....	.70	Wiremen.....	.55
Drop forgers, helpers.....	.50	Joiners.....	.70
Bolt makers.....	.72½	Machinists, first class.....	.72½
Bolt makers, helpers.....	.46	Helpers.....	.46
Laborers.....	.40	Erecting department:	
Liner forgers.....	.55	Leading men.....	.85
Liner forgers, helpers.....	.46	Marine erectors, first class.....	.72½
Boiler shop:		Marine erectors, second class... Specialists or handy men.....	.62½ .52
Boiler makers.....	.70	Helpers.....	.46
Drillers.....	.60	Fitting-up department:	
Holders-on.....	.50	Fitters, first class.....	.72½
Rivet heaters.....	.40	Fitters, second class.....	.65
Flange turners.....	.75	Regulators, first class.....	.60
Helpers.....	.46	Regulators, second class.....	.52½
Slab-furnace men.....	.75	Helpers.....	.46
Planer hands.....	.55	Foundry department:	
		Molders.....	.72½
		Cupola tenders.....	.72½
		Helpers.....	.46
		Hand and machine chippers... Laborers.....	.50 .40

	Rate per hour.		Rate per hour.
Furnace department:		Pattern shop:	
Leaders.....	\$0. 67½	Pattern makers.....	\$0. 75
Firemen and helpers.....	. 55	Laborers.....	. 40
Strikers.....	. 55	Rigging department:	
Hull engineering department:		Marine leaders.....	. 75
Marine erectors, first class.....	. 72½	Marine riggers.....	. 62½
Marine erectors, second class.....	. 62½	Crane leaders.....	. 75
Specialists or handy men.....	. 52	Crane-gang leaders.....	. 67½
Joiners.....	. 70	Cranemen.....	. 60
Helpers.....	. 46	Erector leaders.....	. 60
Joiner department:		Erectors.....	. 50
Joiners.....	. 70	Riveting department:	
Machine men.....	. 70	Rivet testers.....	. 80
Helpers.....	. 42½	Stage builders.....	. 57½
Lumber department:		Riveters.....	. 70
Machine men.....	. 65	Holder-on.....	. 50
Helpers.....	. 42½	Heater boys.....	. 38
Machine shop:		Passer boys.....	. 30
Machinists, first class.....	. 72½	Helpers.....	. 46
Machinists, second class.....	. 62½	Ship carpenter department:	
Specialists or handy men.....	. 52	Ship carpenters, first class.....	. 70
Metal polishers, buffers, and platers.....	. 70	Ship carpenters, second class..	. 65
Helpers.....	. 46	Helpers.....	. 46
Material labor department:		Ship shed department:	
Engineers, locomotive.....	. 65	Punchers.....	. 55
Operators, locomotive, canti- lever, gantry, and other cranes of over 3 tons.....	. 70	Planer and scarfer.....	. 55
Operators, stiff-legged derricks.....	. 65	Countersinkers.....	. 55
Hoisting and portable firemen.....	. 50	Drillers.....	. 60
Locomotive conductors.....	. 50	Bending rollers.....	. 70
Road crane conductors.....	. 50	Mangle rollers.....	. 57½
Mold loft:		Pressmen, first class.....	. 62½
Gang leaders.....	. 85	Pressmen, second class.....	. 55
Loftsmen, first class.....	. 82½	Offsetters.....	. 55
Loftsmen, second class.....	. 72½	Sawyers.....	. 47½
Joiners.....	. 70	Helpers.....	. 46
Helpers.....	. 42½	Ventilation department:	
Paint department:		Sheet-metal workers.....	. 70
Painters and polishers.....	. 60	Helpers.....	. 46
Bitumastic painters.....	. 72½	All departments:	
Helpers.....	. 42½	Layers-out shall receive 3 cents an hour more than first-class journeymen in the same de- partment.	
		Laborers.....	. 49

Minimum rates for employees in wooden-ship yards in addition to those specified for steel-ship yards.

Loftsmen, first class.....	\$0. 82½
Loftsmen, second class.....	. 72½
Ship carpenters, first class.....	. 70
Ship carpenters, second class.....	. 65
Joiners.....	. 70

	Rate per hour.
Millmen.....	\$0.70
Caulkers.....	.70
Fasteners.....	.55
Reamers.....	.55
Offsetters.....	.55
Erectors.....	.55
Carpenters' helpers.....	.46
Laborers.....	.40
Oakum spinners (per bale).....	2.25

**DECISION AS TO WAGES, HOURS, AND OTHER CONDITIONS IN SHIPYARDS ABOUT
THE GREAT LAKES.**

The award affecting employees in shipyards about the Great Lakes is practically the same as that affecting employees in North Atlantic and Hudson River shipyards given in the preceding pages, the ship-building labor adjustment board concluding "that substantial justice will be done to all classes of employees if we establish for each yard the same wage scale, hours, and other regulations that we have established for the shipyards on the North Atlantic coast. This wage scale will advance substantially the wages now paid in these yards to nearly all crafts."

The second provision in the North Atlantic award is not included in the award covering the Great Lakes district. Provision is made that the wages shall be retroactive until April 1, and that "piece-workers shall receive as their back pay 15 per cent of their total earnings at piecework from April 1 or other retroactive date until the piece rates to be established in accordance with this decision are put into operation." A new provision in connection with rate of wages established suggests that the board found that in certain departments—for example, the department of riveting and chipping and caulking—the employers and employees both prefer the piece wage system, and that the piece rate scale appropriate to the types of boats under construction in the yards of the Great Lakes district, when agreed upon and recommended to the adjustment board by representatives of shipyards and the piece rate crafts, shall, after approval by the board, be adopted by all the yards of the district employing pieceworkers.

Hours of employment after 5 p. m. and before 8 a. m. are to be counted as hours on the night shift and are entitled to the extra compensation provided. Hours in excess of 12 per day or 60 per week are not permitted except in special cases.

The Great Lakes award makes the following variations from the schedule of rates noted on pages 140 to 142: The inclusion of pipe coverers, coppersmithing department, at 65 cents per hour; the omission of drillers, ship-shed department, at 60 cents per hour, and the inclusion of drillers (operators of drill presses) at 55 cents per hour; and the establishment of a rate for laborers, all departments, of 40 cents per hour instead of 49 cents, as shown on page 141.

WAGES AND HOURS OF LABOR.

WAGE AWARD TO CINCINNATI BRICKLAYERS.

There exists in the city of Cincinnati an agreement between the Contracting Bricklayers' Association and Bricklayers' Union No. 18. Among the several provisions of this agreement is one which provides for a joint board of six members, three from each side, for the adjustment of grievances. Another provision of the agreement specifies that when the adjustment board is unable to agree upon the disposition of a difficulty it is to be augmented by a seventh person selected by mutual consent, and that the decision of the augmented board is to be final and binding.

Recently a question of the wage scale for bricklayers to become operative May 1, 1918, was submitted to the board for determination and, as no agreement could be reached, it was finally decided to augment the board by a seventh person. This seventh person was a prominent trade-unionist.

Aside from the fact that the decision of the arbitrator established a wage of \$7.20 for an 8-hour day, the award made is interesting because of the procedure followed in making it. Inasmuch as the decision was to be based upon the facts presented by the opposing parties, the arbitrator decided to prepare a tentative or trial award which was to be read to both parties before the final decision was made. In effect, this procedure permitted both parties to file what might have been considered a bill of exceptions and to be heard upon these exceptions. This not only enabled both sides to discover the specific values which the arbitrator had placed upon the facts submitted to him, but also afforded an opportunity to the arbitrator to verify his conclusions and to modify them, if necessary. This novel method of procedure met with the unqualified approval of both parties and gave the award a value which otherwise it would not have had.

The following is the verbatim text of the award made:

AWARD OF THE ARBITRATOR.

When the seventh person sat with the joint board for the first meeting the statements made were that the members of the Bricklayers' Union No. 18 had presented a request to the Contracting Bricklayers' Association that their wages should be advanced from the present rate of 75 cents per hour to a rate of 90 cents per hour beginning with May 1, 1918, and that the representatives of the contractors' association had proposed the acceptance of an hourly wage rate of 80 cents.

At this meeting it was unanimously agreed that the question of wages would be considered from two broad points of view:

(a) Was the increase in wages which had been requested justified by any evidence to be introduced?

(b) If the evidence justified the request, would it be advisable to establish this rate, giving due consideration to the welfare of the industry?

Inasmuch as there were certain contracts for bricklaying entered into over a year ago, it was considered essential that the application of any new wage rate to such contracts should be determined.

One session of the joint board was devoted to the consideration of statements and evidence bearing upon the reduction in the purchasing power of wages since the European war began. It was found from the statistics supplied by the Federal Bureau of Labor and other authoritative sources that there had been a marked increase in the price of those necessities of life purchased by wage earners. The examination of these statistics led to the conclusion on the part of the six regular members of the joint board that the increase of 20 per cent asked for, which would make the hourly wage rate 90 cents instead of 75 cents, was not sufficient to meet the increase in the cost of living, or, in other words, to maintain the purchasing power of the bricklayers' earnings. The evidence upon this subject was so conclusive as to leave no ground for doubt or uncertainty and was accepted without a dissenting opinion.

Inasmuch as the evidence introduced had indicated that the members of Bricklayers' Union No. 18 had been justified in requesting an hourly wage rate of 90 cents, the important question then arose as to whether it was advisable in the best interests of the contractors and the bricklayers to establish this rate. Would a 90-cent rate affect the cost of building to such an extent as to prevent building operations which would be carried on if an 80-cent rate prevailed, and to what an extent would an 80 or 85 cent rate stimulate building operations which a 90-cent rate would check or prevent?

Would a 90-cent rate limit to any marked extent the number of buildings to be erected and reduce the amount of work for bricklayers?

In this field for examination, some definite evidence was introduced and the opinions expressed by the regular members of the joint board varied in degree if not in substance. The uncontradicted statements bearing upon this phase of the question were in effect, that a majority of building materials ranging from sand, cement, and bricks to lumber, paint, and structural steel had increased from 10 to 300 per cent. The consensus of opinion expressed by the regular members of the joint board was that a minimum average increase of these materials as used in the average building would approximately be 50 per cent higher than in normal times. It was also admitted that the cost of materials in the erecting of buildings was a larger item than the labor cost.

These statements made it apparent to the seventh person that the increase in the cost of building materials would prove a much greater factor in restricting building operations than the advance in wages asked for. From estimates introduced, which were not seriously questioned by any member of the joint board, the 90-cent hourly rate would increase the cost of erecting the average brick dwelling about 1 per cent.

It is apparent that every increase in the cost of erecting a building must tend to restrict building operations and the responsibility of determining whether the 90-cent hourly rate asked for would operate to a marked degree in holding back the investor and retarding building operations rests upon the seventh person. After giving most searching examination to all of the statements and arguments presented, it is his conclusion that regardless of the price of material, or the rates of wage, building operations will be at a minimum during the period of the War, except where these are required in connection with the production of war munitions or other national necessities. Furthermore, that there are no indications which would warrant the belief that the

present price of building material will be reduced during the period of the War, the probable tendency being toward still further increases. Furthermore, that these present prices of material are a far greater factor in retarding building operations than the wage rate, and finally, that the wage rate requested by the bricklayers will not materially affect the number of buildings to be erected in Cincinnati and vicinity during the War.

Believing that these conclusions are fully justified by the evidence and testimony introduced at the sessions of the joint board at which the seventh person was present, and convinced that the facts indicate that the bricklayers are entitled to a 90-cent hourly rate and that a lower rate would prove of no material benefit to the bricklaying industry, he submits as his decision that, beginning May 1, 1918, the hourly rate for bricklayers shall be 90 cents.

The question of the application of 90-cent rate to work previously contracted for which remains unfinished May 1, 1918, presents some features which the seventh person would not be justified in passing upon, except in so far as the establishing of the actual rate beginning May 1 is concerned.

As the result of many years of experience, it has become the practice by mutual agreement, that the bricklayers should give the contractors approximately six months' notice of their desire for an advance in wages. Not only is this a six months' notice for contractors, but it is also the period during which bricklayers must wait for such advance as the circumstances may justify them in receiving.

To establish a wage rate and then provide that contractors may employ members of the union for wages below the established rate, is to merely render a decision which even though justified, contains no power to carry it into effect, for no bricklayer could be persuaded or compelled to work against his will for a lesser rate than the one which had been established.

These are self-apparent facts.

The only body which has authority to pass upon such questions as to their merits, or grant such relief as may be justified by the facts connected with any particular case, is Bricklayers' Union No. 18.

In so far as the present award is concerned, the 90-cent hourly rate is to apply to all bricklayers on and after May 1, 1918.

WAGE INCREASES IN CERTAIN FOREIGN CITIES REPORTED BY AMERICAN CONSULS.

Through the State Department the Bureau of Labor Statistics is in receipt of communications from American consuls, respectively, at London, telling of newly established rates of pay for British navigation officers; at Nottingham (England), giving a statement of increased wages for tramway employees; at Bordeaux (France), noting wage increases in specified trades since the War began; at Amsterdam (Netherlands), indicating a contemplated increase in wages for municipal employees; and at Kingston (Ontario), outlining a campaign for the purpose of enlisting boys for farm work, with statement of wages to be paid, etc.

STANDARD PAY FOR BRITISH NAVIGATION OFFICERS.

According to the communication from the consul general at London, under date of February 27, 1918, the shipping controller announced a decision reached at a meeting held on February 25,

1918, of the navigating officers' panel of the National Maritime Board with regard to the monthly pay of navigating officers on cargo liners and general trading vessels, the new standard rates being set forth in the following table:

STANDARD RATES OF PAY FOR BRITISH NAVIGATION OFFICERS.

Rank.	Gross tonnage.	Pay at beginning.	Pay after 1 year.	Pay after 2 years.	Pay after 3 years.
First mate (with certificate of superior rating).	1,000 to 3,000	\$107.06	\$109.49	\$111.93	\$116.79
	3,001 to 5,000	111.93	114.36	116.79	121.66
	5,001 to 7,000	116.79	119.23	121.66	126.53
	7,001 to 9,000	121.66	124.09	126.53	131.39
First mate (with certificate of rating).....	1,000 to 3,000	102.19	104.63	107.06	111.93
	3,001 to 5,000	107.06	109.49	111.93	116.79
	5,001 to 7,000	111.93	114.36	116.69	121.66
	7,001 to 9,000	116.79	119.23	121.66	126.53
Second mate (with certificate of superior rating).....	1,000 to 3,000	94.89	97.33	.....	.....
	3,001 to 5,000	97.33	99.76	.....	.....
	5,001 to 7,000	99.76	102.19	.....	.....
	7,001 to 9,000	102.19	104.63	.....	.....
Officer (with second mate's certificate or uncertificated).....	1,000 to 3,000	92.46	94.89	.....	.....
	3,001 to 5,000	94.89	97.33	.....	.....
	5,001 to 7,000	94.89	97.33	.....	.....
	7,001 to 9,000	97.33	99.76	.....	.....

Third mates, with or without certificates, receive \$82.73 on all vessels up to 9,000 tons.

It is announced that "an officer's pay under the new scale will be determined as regards services by the period he has held his rank in the same employment as at February 25, 1918"; also that "an officer will be entitled to back pay at the same rate for any period of service on articles (or continuous employment with the same owners irrespective of articles) as from October 6, 1917, or from the date of commencing pay if subsequent thereto."

The consul general states that the rates indicated in the table are without prejudice to the question of overtime, and that it is to be understood that the cases of oil-tank steamers, motor vessels, sailing vessels, salvage and cable steamers, and other exceptional matters are not covered by this decision and have yet to be considered by the board.

INCREASED WAGES FOR NOTTINGHAM TRAMWAY EMPLOYEES.

The question of the demand of the tramway employees of Nottingham (England) for higher wages, declares the American consul at that place in a communication dated March 11, 1918, was submitted, after it became apparent that no decision could be reached between the employers and the employees, to the Ministry of Labor, which in turn referred the matter to the Committee on Production for settlement. This committee reached the decision that there shall be paid to the men concerned who are 18 years of age and over, and to the grades

of women of similar age whose terms of employment provide that they shall be paid the same rates as the grades of men whose places they are filling, a bonus of £1 (\$4.87) over the prewar rates of the grades concerned, payment to be made on the basis of a week of six days of six shifts. It is further stated that in the case of women 18 years of age and over, not covered by the preceding clause, the advances now being paid are to be increased by 4s. (97 cents) per week, subject to a maximum of £1 (\$4.87) per week over the prewar rates of the grades concerned. The report continues:

In the case of girls and boys under 18 years of age, the advances now being paid are to be increased by such amount per week as shall give them half the additional advances given by this award to the men or women in the same line of employment.

The advances became operative for the week beginning March 1, and are to be taken into account in the calculation for overtime and Sunday work where extra payment was made for such work. All existing bonuses will be taken into account in the calculation of payment for overtime and Sunday work.

The advances thus made are to be regarded as war wages and recognized as due to and dependent upon the existence of the abnormal conditions now prevailing in consequence of the War.

So far as Nottingham is concerned the award means an advance of 5s. 8d. [\$1.38] to the men over 18 years of age employed by the Nottingham corporation tramways, as they had previously received in bonuses since the outbreak of the War an aggregate of 14s. 4d. [\$3.49]. The women, whose total bonuses heretofore have amounted to 6s. 6d. [\$1.58] will be increased to the extent of 6s. 4d. [\$1.54], as they have not been receiving the same rate of war bonuses as the men.

Prior to the War the motormen employed by the Nottingham tramways were paid wages ranging from \$6.84 to \$8.67 per week of six days, and the conductors were paid \$6.96 to \$8.26 for the same period. Under the award recently made by the Committee on Production the weekly wages to be paid to the Nottingham tramway employees will be as follows:

Motormen	\$11. 70 to \$13. 53
Conductors	11. 82 to 13. 12
Conductors (women)	10. 08 to 11. 38

The above figures are based upon a week of six days and do not take into consideration Sundays and overtime, for which the employees are paid an additional amount based upon the above rates.

The increases above mentioned affect about 450 employees of the Nottingham tramways, of whom about 180 are women.

WAGE INCREASES IN BORDEAUX.

An average increase of 165 per cent in the prices of food and the necessaries of life since 1913 compared with a rise in wages averaging only 43 per cent is the interesting statement contained in a communication from the American vice consul at Bordeaux (France) writing under date of February 25, 1918. A table is furnished, compiled by the labor unions, indicating the daily rates of wages in 1913 and 1918 and the per cent of increase in the latter year, the conversions into American equivalents in 1913 being based on 5.18 francs per dollar and in 1918 on 5.70 francs per dollar.

[1195]

DAILY RATES OF WAGES IN SPECIFIED TRADES IN BORDEAUX (FRANCE), 1913 AND 1918.

Trade.	Daily rate of wages. ¹		Per cent of increase, 1918 over 1913. ²	Trade.	Daily rate of wages. ¹		Per cent of increase, 1918 over 1913. ²
	1913	1918			1913	1918	
Coopers.....	\$1.25	\$1.75	40	Sawmill workers.....	\$1.16	\$1.58	36
Chemical workers.....	.97	1.32	36	Typesetting machine operators.....	1.25	1.46	17
Dyers, cleaners (men).....	1.01	1.27	26	Bakers.....	1.06	1.23	16
Dyers, cleaners (women).....	.43	.59	37	Tinners (smiths).....	1.11	1.58	42
Saddlers, harness.....	1.01	1.36	35	Compositors (type).....	1.19	1.46	23
Women garment makers.....	.48	.61	27	Lithographers.....	1.35	1.46	8
Cement workers.....	1.35	1.75	30	Boxmakers.....	.96	1.58	65
Stonemasons.....	1.35	1.40	4	Lighting employees.....	1.06	1.39	31
Coppersmiths.....	1.28	1.53	20	Can makers.....	.79	1.19	51
Railway employees.....	.68	.91	34	Coal yard labor.....	1.50	1.75	17
Carpenters.....	1.16	1.75	51	Tailors.....	1.06	1.27	20
Match factories (men).....	1.39	1.56	12	Furriers.....	.68	.88	29
Match factories (women).....	1.00	1.15	15	Locksmiths.....	1.06	1.40	32
Mechanics.....	1.06	1.67	58				
Hoopmakers.....	1.29	1.97	53				

¹ Errors in conversion, as appearing in the consul's report, have been corrected in this table.

² Computed; this column does not appear in the report sent by the consul.

Compared with the rise in the cost of living, the wage increase is not very favorable. The scale of wages for the various trades does not at all resemble that which is effective in the United States, neither before nor after the four years of war. It must be considered, however, that both labor and living have heretofore been less expensive in France than in the United States, and may still be, though the per cent of increase in the cost of both in the two countries since the commencement of the War might be found varying to a lesser degree.

MUNICIPAL WAGES IN AMSTERDAM.

The American consul at Amsterdam (Netherlands), on January 31, 1918, sent to this Government the following communication respecting municipal wages in that city:

The Amsterdam city authorities contemplate increasing the wages paid to both skilled and unskilled workmen in municipal employment. There is complaint that the increase is unequal among different trades and kinds of work, but nevertheless it appears that in practically all cases the proposed wages are above those paid for similar work by private employers. In comparison with the wages paid in 1916, the proposed increase for municipal workmen is from 6 to 12 per cent, and the proposed new wages average 20 per cent more than wages paid by private persons for similar work in 1916.

The proposed wages for municipal workpeople would be florin 0.33 [13 cents] an hour for unskilled and florin 0.37 [15 cents] for painters, plasterers, smiths, horse-shoers, and carpenters. For extra work and overtime, these wages would be increased 5 or 10 per cent.

In factories and other private industries, wages have been advanced in effect, from time to time since the War began, by extra allowances of 5, 10, or an even greater per cent, because of higher cost of living, which arrangement leaves the rate of wages unchanged and therefore is supposed to obviate the probable difficulty of reducing wages when the cheaper time of peace returns.

ONTARIO FARM LABOR.

A plan to enlist boys for farm work in Ontario, together with a statement of the wages to be paid during the approaching season, is described by the American consul at Kingston in a statement dated March 14, 1918, as follows:

On March 18 a campaign will be started in Ontario for the purpose of enlisting boys for farm work. Last year seven or eight thousand boys were enlisted as soldiers of the soil. The boys will be available for service on the farms about April 1. It is not only boys who are to be enlisted in the cause of production. It is expected that 7,500 men will be obtained as well.

The ages of the boys will run from 15 to 19 years. Last year a minimum wage of \$12 per month was fixed for these in advance. The average wages actually paid was \$18, with some getting as much as \$30, and in one or two exceptional cases \$35 or \$40. This year the minimum wage is fixed at \$15, the boys to serve at least three months and in as many cases as possible for the whole season.

Men sent out from the cities last spring received at the start \$25 to \$40, but this year the suggested minimum is \$40, and it is expected that as much as \$60 will be paid in some cases. The work of securing and distributing this labor is carried out under the auspices of the Ontario Government Public Employment Bureau. In 1917, 1,245 girls from Ontario cities took part in farm work. This year it is hoped that the number will be 5,000. Under present arrangement girls and women registered for three classes of employment; for work in the fields, for housework on the farms, and for a combination of both, with a further division that girls will be expected to go to the fruit farms of the Niagara district.

The girls who are to go out for general farm work have been given a preliminary training by spending an afternoon a week on farms near cities, where they are shown how to harness horses, drive, clean stables, etc.

The terms of employment have not been definitely decided upon in the case of these girls, but it is believed that a reasonable arrangement would be about 10 hours a day. The matter of remuneration will probably be about \$15 a month, including board. In the case of girls going out to fruit farms, where houses are available girls will be grouped in these, and where houses can not be had tents will be put up, each tent providing living quarters for three girls.

Fruit packers are to be guaranteed \$1 per day, rain or shine. When on piecework 2 cents per box is to be paid for picking strawberries, 3 cents for raspberries, 2 cents for blackberries or small gooseberries, 20 cents for 11-quart basket of cherries, 40 cents for black currants, and 20 cents for red currants. When picking pears, peaches, plums, apples, or grapes, \$9 a week is to be paid or 20 cents an hour for extra good pickers. For hoeing the wage is to be 15 cents an hour.

INCREASE OF SALARIES OF PERSONS IN CIVIL SERVICE IN FRANCE.

The President of the Republic of France recently (Feb. 18, 1918) signed a decree which to some extent modified the classification of the employees in the Department of Agriculture¹ and increased the salaries of all grades except the entrance salary. The increases are not to be considered as advances from one grade to another, nor does the present classification in any manner influence the automatic pro-

¹ Journal Officiel de la République Française, Feb. 20, 1918, p. 1733. Paris.

motions from grade to grade. All such promotions are to be based upon the date of the last promotion.

The new classification and salary increases became effective as of July 1, 1917. The increases are as follows:

SALARIES OF EMPLOYEES IN THE DEPARTMENT OF AGRICULTURE IN FRANCE.

Classification.	Salaries of—								
	Bureau chiefs.		Assistant bureau chiefs.		Special agents. ¹		Clerks.		
	Former.	July 1, 1917.	Former.	July 1, 1917.	Former.	July 1, 1917.	Former.	July 1, 1917.	
Class exceptional ²		\$2,316		\$1,544.00					
First class.....	\$1,930	2,123	\$1,351.00	1,351.00	\$1,351.00	\$1,447.50	\$965.00	\$1,061.50	³ \$1,158.00
Second class.....	1,737	1,930	1,158.00	1,254.50	1,158.00	1,351.00	868.50	³ 865.00	³ 868.50
Third class.....	1,544	1,737	1,061.50	1,158.00	1,061.50	1,254.50	772.00	³ 868.50	³ 868.50
Fourth class.....	1,351	1,544	965.00		965.00	1,158.00	694.80	⁴ 772.00	⁴ 772.00
Fifth class.....					868.50	1,061.50	617.60	⁵ 675.50	⁵ 675.50
Sixth class.....						965.00	540.40	⁶ 579.00	⁶ 579.00
Seventh class.....							482.50	⁷ 482.50	⁷ 482.50
New appointees.....							386.00	386.00	386.00

¹ Property clerk, cashier, and librarian.

² New classification.

³ New classification; principal clerks.

⁴ New classification; clerks, class 1.

⁵ New classification; clerks, class 2.

⁶ New classification; clerks, class 3.

⁷ New classification; clerks, class 4.

The salaries are exclusive of all bonuses, but no extra pay is allowed for extra hours nor for any indemnities unless in conformity to ministerial decrees.

Similar decrees followed, covering the department of public works and transports (Mar. 4, 1918)¹ and the keeper of seals, minister of justice and of finance (Mar. 13, 1918),² effective as of July 1, 1917.

In the department of public works, etc., the increases granted are generally 1,000 francs (\$193), and for clerks they vary from 100 francs (\$19.30) in the lowest grade to 500 francs (\$96.50) for the first class per year. A new grade is made in the clerks' class at a salary of 6,000 francs (\$1,158). The salary of class 1 under the former scheme was 5,000 francs (\$965).

In the last decree above noted an exceptional grade is created in each of the classifications of chiefs, assistant chiefs, and principal clerks. The exceptional grades carry increases of 2,000 francs (\$386), 1,500 francs (\$289.50), and 1,000 francs (\$193) over the former highest-paid grades in each class, respectively.

Salaries of assistant chiefs of bureaus of grades 1, 2, and 3 are advanced 1,000 francs (\$193), of chiefs of bureaus of grades 1, 2, and 3 are advanced 2,000 francs (\$386), and the fourth class is paid 8,000 francs (\$1,544), being 1,000 francs (\$193) more than was formerly paid the next higher grade (third). Principal clerks and clerks are granted an increase of 500 francs (\$96.50) in each grade.

¹ Journal Officiel de la République Française, Mar. 6, 1918, p. 2130. Paris.

² Idem, Mar. 15, 1918, p. 2372.

WOMEN IN INDUSTRY.

WOMEN IN THE MUNITION TRADES IN GREAT BRITAIN.

BY MARY CONYNGTON.

In an earlier article¹ some account was given of the changes brought about by the War in the employment of women in Great Britain. In this it is proposed to deal with their experiences in the munition trades. These are selected, first, because the increase in the number of women employed was greater than in other industrial groups, and, second, because women engaged in them were mainly employed either in Government factories or in "controlled" establishments, i. e., establishments directly under the control of the Ministry of Munitions. Consequently the treatment of the women is at once more uniform, and, being a matter of official record, more available for research purposes than are their experiences in trades carried on wholly under private control.

The so-called "munition trades" include a large number of industries, since in a very general way anything the Government needs for carrying on the War is classed as munitions. The term "munition worker" is therefore an elastic one, including workers engaged in occupations as diverse as those in the manufacture of aero engines and rubber sheets, of munition cases and high explosives, of barbed wire and motor lorries, of shells and searchlights. In most of the industries covered, however, women had long been employed to some extent, though usually in a very subordinate capacity. Consequently the novelty brought about by the demands of the War was not in the employment of women, but in the kind of work to which they were put.

The question of using women in new employments was first settled for the engineering trades. At the outbreak of the War these were in the hands of skilled and highly organized men who guarded jealously the position they had won through their unions. Naturally they did not look with favor on the introduction of unskilled workers, and the splitting up of skilled jobs into a number of simple operations each of which might easily be done after a short period of training. There were protracted negotiations between the unions and the Government, ending in what is known as the Treasury Agreement of March, 1915. Under its terms the unions gave up for the period of the War all trade-union-customs which might tend to

¹ MONTHLY REVIEW, April, 1918, pp. 204 to 217.

restrict output, specifically agreeing to the employment of women "under suitable conditions." In June a Ministry of Munitions, with Lloyd George at its head, was formed, and in July, 1915, the first munitions act was passed. This gave the Minister of Munitions power to declare any establishment in which munitions work was carried on a controlled establishment, and thereafter the terms of the Treasury Agreement in regard to trade-union restrictions and the employment of unskilled labor, including women, became effective for that establishment. From the date of the passage of this act the question of the employment of women on any form of munition work was settled; it was merely a matter thereafter of where they could be most effectively employed.

There are no available data to show exactly how many women entered the munition trades under this agreement, but it is known that the number is large. According to the Labor Gazette, the great majority of the women munition workers are in the metal and the chemical trades. For these it gives the following figures of increase:¹

	Metal trades.	Chemical trades.	Both groups.
Number of females employed, July, 1914.....	170,000	40,000	210,000
Increase, October, 1917, in number employed..	379,000	53,000	432,000
Total, October, 1917.....	549,000	93,000	642,000

As the total increase between these two dates in the number of women industrially employed is given as 530,000, it is evident that these two branches of the munition trades are responsible for some four-fifths of the whole increase.

Two questions suggest themselves: How were these hundreds of thousands of women secured and trained, and how did they fare in the new employments to which they rushed? As to the first, there was little difficulty about securing them. When the demand first arose, women were still suffering severely from the unemployment which followed the outbreak of the War, and the munition trades offered a welcome resource for the surplus workers. As this was absorbed and the demand continued, women came in from other trades, and from domestic service, married women who had withdrawn from industry came back, and women who had never worked for wages entered munition factories as a patriotic duty. An inquiry into the pre-war occupations of women for whom insurance books had been issued under the insurance act of 1916 showed the following facts as to workers in two groups of munition trades:²

¹ The Labour Gazette, London, February, 1918, p. 48.

² For data on which this table is based, see The Labour Gazette, December, 1917, p. 438.

NUMBER AND PER CENT, BY PREWAR OCCUPATIONS, OF WOMEN EMPLOYED IN TWO GROUPS OF MUNITION TRADES IN JANUARY, 1917.

Prewar occupation.	Women employed January, 1917, in—					
	Metal trades, excluding engineering.		Chemical trades, including small arms.		Both groups combined.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Same trade.....	53,249	48.1	11,634	6.8	64,883	23.1
Household duties or not previously occupied.....	18,927	17.1	52,407	30.7	71,334	25.4
Textile trades.....	3,408	3.1	6,226	3.6	9,634	3.4
Clothing trades.....	4,635	4.2	17,941	10.5	22,576	8.0
Other industries.....	12,458	11.3	20,879	12.2	33,337	11.9
Domestic service.....	12,502	11.3	44,438	26.0	56,940	20.2
Other nonindustrial occupations.....	5,449	4.9	17,079	10.0	22,528	8.0
Total insured.....	110,628	100.0	170,604	100.0	281,232	100.0

How far these women are representative of the whole number who came into munition work can not be known, but as they number more than a quarter of a million, they are a large enough body for the above figures to be significant. A striking feature of the table is the number coming directly from their homes, who form 25 per cent of the total, the number from domestic service, 20 per cent, and the number from nonindustrial pursuits, 8 per cent. That is, over one-half, 53 per cent, were either not gainfully employed or were in nonindustrial occupations before entering these trades.

The training given the women has changed with the changing needs of the War. At first they were employed mainly either in manual labor, which required only strength, not training, or in what might be called ordinary factory work, on which women had long been employed in other industries. For this, little instruction was needed; the woman was shown her machine, told what to do, and with little or no practice could begin work. At this time, she was very apt to be employed either as a helper to a man, or on one of a group of machines under the supervision of a skilled man. Later as the need for skilled workers became more urgent, the technical schools of the Kingdom were pressed into service for training munition workers, and the Government itself established instructional factories in which women were trained for work demanding skill and accuracy. Under this training they have shown an unsuspected capacity for mechanical work; they are already performing a variety of highly skilled operations, and the field of their activities is steadily extending.

WAGES OF WOMEN UNDER THE MUNITIONS ACTS.

The question of how women fared in these new occupations is largely a matter of the special provisions of the munitions acts. The Treasury Agreement under which they first entered the engi-

neering trades was superseded in July, 1915, by the first Munitions of War Act. Under this strikes and lockouts in munitions works were illegal, a system of arbitration tribunals being established to which all disagreements regarding wages and trade customs must be referred for settlement. The Minister of Munitions was given power to declare any establishment in which munition work was carried on a controlled establishment, and to sanction for it rules and regulations ordinarily prepared by the employer; after this sanction, violation of the rules became an offense punishable by fine inflicted by the munitions tribunals, also established by the act. Still further, the minister might designate certain classes of establishments, and thereafter any worker on munitions in these establishments must procure from his employer a leaving certificate before giving up his job. Unless he could show such a certificate, it was unlawful for any other employer to hire him until after a lapse of six weeks.

The wages question came to the front almost immediately. To a large extent the women went into the factories at the rates for women and girls prevailing before the War began. With the rise in the cost of living, these rates soon became wholly inadequate. Under the munitions act it was almost impossible for the women to secure any improvement in their situation by their own efforts. To strike or to threaten to strike was illegal, and they could not even give up their work, if they were dissatisfied, without facing the penalty of six weeks of unemployment—a penalty which for many of them was absolutely prohibitive.¹ True, they had the right, if they wished an increase of wages, to apply to the arbitration tribunals, but this was a long and tedious process. One of their leaders, writing nearly a year after the passage of the munitions act, thus describes the method of procedure:

First of all, the workers formulate their claim; the union then makes the claim on the employer; the employer ignores it. We write a firmer letter; the employer then replies that he can not consider the claim. We refer it to the committee on production, and that department writes to the employer, suggesting local conference. The employer then sends an alteration of the claim—concedes a little, perhaps. That comes back to us from the committee on production. We submit it to our members. They refuse the alternative proposals. Finally it is referred by the committee on production to the wages tribunal. When the case is called we are summoned to give evidence before the tribunal. We have had to wait weeks, sometimes two or three months, for the decision. We had claims put in last October that were heard by the wages tribunal in May, 1916; we had awards in June.²

¹ A munitions worker might leave without penalty if her employer agreed to give a leaving certificate, but naturally it was against the employer's interest to give one if the worker was at all a satisfactory employee; and it is admitted that in the early days the leaving certificate was sometimes unjustly withheld.

² *Hope for Society: Essays on Social Reconstruction after the War; Women in Industry*, by Miss Margaret Bondfield, p. 131.

The women were practically powerless; but the Government was very unwilling to assume the responsibility of fixing wages for them. It was an admitted fact that women's wages in general had been too low to permit the maintenance of any fair standard of living; the relief committees established at the outbreak of the War found that if they paid women employed in their workshops a fair living wage they would be overwhelmed with women who had given up regular employment in order to secure this better wage. Precisely the same situation faced the Government; there was a real probability that if they fixed anything like the wage the union leaders considered fair, the disparity between the wage of women on Government work and those otherwise employed might give rise to serious industrial disturbances. Besides, the difficulty of adjusting all the varying rates with due reference to local standards, precise nature of the work, and all the special considerations which would have to be taken into account for each factory would have been enormous. After much deliberation the Government in July, 1916, came out with the principle of the standard wage for women. A pledge had been given that women engaged on the work of skilled men should receive equal piece rates with the men. Other women were divided according to whether they were doing what was known as men's work or women's work, and for each class a standard rate was fixed. The women had hoped for minimum rates, and were much disappointed at the substitution of standard rates, but the fixation of these rates was defended on the ground that this method made for industrial peace and steadiness.

If the orders had fixed minimum rates, there would have been a tendency for women to agitate that they should be increased on any and every pretext on the principle that, having got so much by no effort of their own, they should be able to double their emoluments by determined agitation. Moreover, many of the conditions under which women are employed on munitions work must necessarily be of a temporary nature and continue only for the war period. It is of advantage both to employers and employed to divide the work done by women into two broad classes, for which both parties know definitely the rate which will be paid.¹

During 1916-17 a series of orders were issued, dealing with women's wages and based on this general principle.² These cover over 90 per cent of the women working in controlled establishments. No data are at hand to show the number of women in the different wage classes, and consequently it is difficult to say just what the orders have meant as to the general level of women's wages. One member of the Ministry of Munitions, speaking in this country, said that in a few exceptional cases women earned as much as \$75 a week,

¹ See article, "Women's wages in munition factories in Great Britain," MONTHLY REVIEW, August, 1917, p. 121.

² For precise rates fixed for each class, see article referred to in preceding note.

but that on the average their earnings would be about \$10 a week.¹ The Minister of Munitions himself gives a less favorable statement of the situation. Speaking of the awards concerning wages, he says:

Some conception may be formed of the magnitude of the achievement as it affects women's wage when I say that before the War, the average wage for women employed by time rate, doing 48 hours a week, was 12s. [\$2.92]. At the present time, the lowest rate for time work for adult women is 22s. [\$5.35], and the average rate for women time workers is 25s. [\$6.08] a week.²

The women's organizations are far from satisfied with the payment accorded their members, and complain that the advance in wages lags so far behind the advance in prices that the Government standard rates differ little in purchasing power from the minimum rates fixed before the War for the sweated trades. The increase from July, 1914, to June 30, 1917, in the cost of items ordinarily entering into working class family expenditures was 75 per cent,³ so that the purchasing value of the 22s. (\$5.35) minimum quoted by the Minister of Munitions was between 12s. (\$2.92) and 13s. (\$3.16) in prewar prices, and the 25s. (\$6.08) he gave as the average rate had a purchasing value of a little over 14s. (\$3.41) by the standards of 1914.

There are, however, two facts to be borne in mind concerning the Government rates for women. First, the steadiness of the work and the amount of overtime make the earnings higher than the rates would indicate. Against this must be set the admitted fact that overtime is undesirable for any workers, and especially so for women, and that unless it is very carefully controlled and limited, it is inevitably paid for later on by diminished physical capacity. For the time, however, it adds materially to earnings. Second, the rates are in general higher than those paid in uncontrolled establishments for the same kind of work. The women's organizations recognize this, and one of their demands has been that the Government rates should be extended to all women working on Government contracts, whether or not they are in controlled establishments.

HOURS.

Before the War England's legislation in regard to the work of women and children was in many respects advanced. Hours in factory occupations were strictly limited, proper intervals for meals were insisted upon, and night work was forbidden. The tremendous need for output of munitions led to relaxations in all these respects. Very soon after the outbreak of the War the Home Office began issuing

¹ From typewritten report of answers to questions by Mr. G. H. Baillie of the labor supply department of the British Ministry of Munitions, at meeting of the Philadelphia Association for the Discussion of Employment Problems, Oct. 12, 1917.

² British Workshops and the War; a speech delivered by the Rt. Hon. Christopher Addison in the House of Commons, June 28, 1917.

³ The Labour Gazette, London, July, 1917, p. 237.

special orders to individual firms permitting them to employ women overtime or at night or both. According to statements made in Parliament these orders were issued in great numbers, "many thousands" having been granted during the first seven months of the War. The report for 1914 of the chief factory inspector gives a list of 3,141 firms affected by exemption orders between August 4, 1914, and February 19, 1915;¹ as orders were at first issued only for short periods, usually a month, fresh orders being given when needed, these firms alone might account for "many thousands" of such exemptions. In 1915 a new arrangement was put into effect. Orders applicable to an industry as a whole were prepared, and on application an individual employer might be permitted to take advantage of their provisions; if the Ministry felt that the urgency of his work demanded it, a special order might be issued, allowing him exemptions in excess of those embodied in the general order.

These orders were not responsible for all the overtime work which went on. For a time an impression prevailed that the factory restrictions had been laid aside altogether, and certain employers either worked overtime without securing permits, or else, having secured a special order, exceeded the exemptions allowed by it. Instances are given in which, when the factory inspectors brought suit against such offenders, the magistrates refused to inflict any penalty, on the ground that the public welfare would be injured by any interference with production.²

In September, 1916, the Ministry of Munitions appointed a special committee to look into the whole question of the health of munition workers and to report as to what action was needed. This committee issued a series of reports, dealing with hours, Sunday and night work, women workers, welfare work, and so on. As to hours, the committee handled the question carefully, not wishing to embarrass the Government in its task of securing sufficient munitions, but their condemnation of the existing state of affairs was emphatic. They found night work and Sunday work and overlong hours. They found three systems under which women were employed—three shifts of 8 hours each, two shifts of 12 hours, and one shift of from 13 to 14 hours. They found methods of changing shifts at the end of the week under which women were kept at work for 24 hours or longer. They found women working 70, 80, or even more hours

¹ Annual Report of the Chief Inspector of Factories and Workshops for 1914, p. 56 (Cd. 8051).

² For instance, on Apr. 28, 1915, the Secretary for the Home Department was asked in Parliament "whether his attention had been drawn to the legal prosecution of a firm of engineers engaged at cartridge making in Armley, Leeds, in which it was shown that a girl under 18 years of age worked from 6 a. m. on Friday till 7 a. m. on Saturday, when she met with an accident, whilst an older woman worked from 6 a. m. on Friday till 11 a. m. on Saturday; whether he is aware that the stipendiary magistrate declined to convict on the ground that he might be limiting the output of ammunition?" (Women's Trade Union Review, July, 1915, p. 23.)

weekly, and often having to spend an hour each way on the trip between home and factory. And they showed that both the workers' health and the output of munitions suffered from these conditions.

The committee recommended various alterations in the amount and kind of overtime allowed, and in September, 1916, the Home Office issued orders restricting in general the working hours of women to 60 a week, and requiring a Sunday rest or its equivalent. The general orders were not revoked, and under them special orders might still be issued, but the office wished to limit such orders to cases of extreme urgency. At the close of the year the factory inspectors reported a considerable improvement in the situation.

There has been a notable decrease in the requests for long hours, which were common in the early months of the War. The general tendency has been to restrict the weekly hours of work to an amount very little, if at all, in excess of those allowed under the factory act, and to arrange for more elasticity in the daily limits. * * * Several employers have during 1916 expressed themselves strongly against a continuous night shift for women. In general the experience of war emergency work, far from making employers in love with extended hours, seems to be producing a contrary effect and bringing about a sense of the importance of so limiting the period of employment as not to produce any feeling of exhaustion, or even of marked fatigue. * * * Excessive overtime and Sunday labor have been checked and as nearly as possible abolished, and night employment of girls under 18 has been greatly decreased.¹

At the present time night work for women is still used to a considerable extent. The authorities fully admit the undesirability of the practice, but say that they do not see how to get on without it; as soon as military exigencies permit they will gladly give it up. There is complaint of excessive overtime in some branches of work, but it is under regulation; the force of factory inspectors has been increased, and magistrates no longer refuse to punish on proof of violation of the factory acts. The trend now seems toward the reestablishment rather than to further relaxation of prewar standards. Nevertheless, as late as December, 1917, one of the questions asked in Parliament was whether, in view of the findings of the Health of Munition Workers Committee, the Home Secretary "will at once withdraw the general order which allows a shift of 14 hours of work for male and female young persons and boys of 14." In response, it was stated that the general order relating to munition works was under review by the Home Office and the Ministry of Munitions, but that no decision had yet been reached.²

GRIEVANCES CONNECTED WITH THE TRIBUNALS AND LEAVING CERTIFICATES.

Under the munitions act the owner of every controlled establishment must post rules "relating to order, discipline, timekeeping, and efficiency" conspicuously in his establishment, and thereafter

¹ Annual Report of the Chief Inspector of Factories and Workshops for the Year 1916, pp. 4, 7, 8 (Cd. 8570).

² Official Report of Parliamentary Debates in the House of Commons, Dec. 3, 1917, p. 39.

breaches of those rules became offenses to be punished by the munitions tribunals. No arrangement was made for giving the employees any voice in the making of these rules, but it was provided that anyone violating them should not be punished "if the munitions tribunal is satisfied that the rule is an unreasonable one, or that the person had just cause for his failure or refusal to comply with it."

The tribunals were composed of one person appointed by the Minister of Munitions sitting with two others, one representing the employers and one the employees. In practice the employees believed that their representative was overridden, and that their cases did not receive fair consideration. Even if the tribunals were entirely fair in their operation, the system involved a loss of time varying from half a day to a day for the workers accused, in addition to the fine inflicted. The feeling of unfairness which the tribunals often produced was aggravated by the fact that the employee was not free to leave his work if dissatisfied with his treatment. If an employer refused to give a leaving certificate, the employee might bring the matter before the tribunal, but again the workers felt that they did not receive fair treatment in such cases. This was particularly so among women, as at first no provision was made for women upon the tribunals or as advisers for women brought before them. Yet a woman might have good reason for wishing to leave a particular factory which she would hesitate to detail to a room full of men. Some conspicuous cases of hardship due to this cause arose, and in the amended munitions act passed in 1916 it was provided that when women's cases were heard one member of the tribunal must be a woman.

Two reports were issued dealing with the working of these tribunals during the first year of their operation. The following table gives, first, the number of cases acted on between November 29, 1915, and July 1, 1916, inclusive, and, second, the total number from the formation of the tribunals to the latter date.¹

¹ Compiled from reports issued by the Ministry of Munitions: Return of cases heard before munitions tribunals from their inception up to and including Saturday, 27th November, 1915, and Return of cases heard before munitions tribunals from 29th November, 1915, up to and including Saturday, 1st July, 1916 (Cd. 8143 and Cd. 8360).

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CASES ACTED UPON BY TRIBUNALS UP TO JULY 1, 1916.

	Number of cases.	Number of defendants.	Number convicted.	Amount of fines.
CASES ACTED UPON BETWEEN NOV. 29, 1915, AND JULY 1, 1916.				
Against workmen:				
Strike prosecutions.....	34	1,023	599	\$3,806.76
Breaches of rules.....	4,284	12,004	8,633	39,498.44
Miscellaneous cases.....	6	7	1	9.73
Total.....	4,324	13,034	9,233	43,314.93
Against employers:				
Lockout prosecutions.....				
Illegal employment.....	115	115	71	2,442.50
Miscellaneous.....	15	15	11	70.56
Total.....	130	130	82	2,513.06
TOTAL CASES FROM INCEPTION OF MUNITIONS TRIBUNALS UP TO JULY 1, 1916.				
Against employees.....	5,138	16,706	11,656	54,198.49
Against employers.....	216	224	138	3,927.87

The breaches of rules for which, during this period of less than a year, the workers were penalized to the extent of £11,137 1s. 2d. (\$54,198.49), included such offenses as losing time or staying away on what the worker might consider entirely sufficient grounds, or refusing to work at some especially dangerous occupation. Moreover, the feeling of the employees against the tribunals was aggravated by the fact that even those against whom the complaints were not substantiated lost their wages for the time required for the hearings. The latter does not seem to have been a trivial ground of complaint, since the above table shows that during these eleven months some 5,000 of the workers who were brought before the tribunals were found not guilty.

No data are given to show what proportion of the workers included in the above table were women. It is quite possible that they appeared only in small numbers, yet there are some indications that because of their household duties the rules, and the penalties inflicted for their infraction, bore with special hardship on women. Cases were brought up for public inquiry in which women were fined for a few hours' absence from work, although it was established that the absence was for the purpose of caring for a sick husband or little children. Such cases might be exceptional, but they gave color to the claim that the tribunals worked hardship. The Commission of Inquiry into Industrial Unrest in 1917 found among the objections urged against the tribunals in the West Midlands area the following:

(6) That fines are excessive, and especially harsh on women.

(8) That meetings are held in a law court, or even a police court, where there is an objectionable criminal atmosphere.

(9) That women particularly dislike it, and rather than face its publicity, will submit to injustice.¹

The fundamental difficulty with the whole system lay in the leaving certificate. If a worker were free to leave a position when she disliked it, or found the work too hard or the hours too long, she might accept the liability to fines while she stayed with comparative equanimity, but when she was bound to stay whether she wished to or not, the matter took on a very different aspect. And in a large number of cases she was obliged to stay. True, she had a right to appeal to the tribunals to compel her employer to give her a leaving certificate or to grant one themselves. Frequently, however, she was unaware of this right, and even if she were aware of it and made the appeal, it was by no means certain it would be granted. The report on the cases heard before munitions tribunals, quoted above, gives the number of applications made to the tribunals for leaving certificates. From the beginning of August, 1915, when the first appeal was made, to July 1, 1916, the tribunals received 15,210 such applications. Of these 774 proved to be cases in which no leaving certificate was required,² 3,901 are classed as "Withdrawn, etc.," 6,528 were refused, and 4,007 were granted.³ How many of these applications were made by women there is no means of knowing. It will be seen that more than half as many again were refused as were granted, and in some cases the refusal, although no doubt prompted by considerations of national welfare, must have seemed to the applicant purely arbitrary and unjust. Thus a case is cited of a munition worker who applied for permission to leave her employer, who was paying her 12s. (\$2.92) weekly, in order to undertake the same kind of work for another employer who offered her £1 (\$4.87) a week, and whose application was refused.⁴ Naturally it would be difficult for such an applicant to see anything but hardship and injustice to herself in the decision of the tribunal.

The first improvement, from the women's point of view, came with the amendment of the munitions act in 1916, when it was provided that a woman must be a member of any tribunal before which a woman was tried. It was soon found that the woman member got the woman worker's side of the case more fully than the men had been able to do, and that in many cases this made all the difference between a verdict which the worker felt was just and one which left a rankling sense of unfairness. The women's trade-union journals contain frequent references to the good work done by these

¹ Commission of Inquiry into Industrial Unrest. Report of the Commissioners for the West Midlands Area, p. 6 (Cd. 8665); Bul. 237, Bureau of Labor Statistics, pp. 92, 93.

² There was some confusion as to the scope of the order concerning leaving certificates, and for a time there was an impression among the workers that they were required for all employed in munition work.

³ Return of cases heard before munitions tribunals to July 1, 1916, p. 2 (Cd. 8360).

⁴ *The Woman Worker*, London, January, 1916.

women members, and to the ways in which their understanding of the feminine viewpoint prevented the giving of verdicts which, while possibly justifiable on technical grounds, would work real hardship and create much resentment.

In 1917 two causes combined to bring about several improvements in the position of the women workers. There was an amount of industrial unrest which threatened serious trouble if not allayed; and the Government, having the munitions situation well in hand, felt that concessions which hitherto it had not ventured to try might now safely be made. In August, 1917, Order 880 was issued, providing that thereafter proceedings before the munitions tribunals against anyone accused of failing to comply with shop regulations should be instituted only by the Minister of Munitions or the Admiralty or a person acting on his or its behalf.¹ This at once did away with the feeling prevalent among workers that the tribunals were often used by the foremen or employers to gratify personal spite or animosity. It was believed, too, that it would tend to reduce greatly the number of prosecutions brought. Before proceedings could be undertaken, an outside party would have to be convinced that the offense of which the worker was accused was sufficiently serious to justify bringing it before a tribunal, and this in itself would sift out many of the trivial and unreasonable cases.

Not long after this a still greater improvement, the abolition, so far as women were concerned, of the leaving certificate, was made. The order, effective October 15, 1917, in its first form provided that a worker who wished to leave employment on munitions to take up some other form of war work, might do so without a certificate under certain conditions. Before this became effective the Minister of Munitions issued a special order providing that for women a leaving certificate should not be required, even though they wished to leave in order to engage in work "which is not work on or in connection with munitions work."² This did away with what the women workers felt was the greatest of their grievances.

These two measures did much to improve the situation, but the women still felt that they ought to have some direct representation when matters concerning working women were under advisement. In November this desire was met by the appointment of a woman's trade-union advisory committee, consisting of representatives of the national unions which include women members, with Miss Macarthur as chairman. To this committee all questions respecting the employment of women on munitions were to be referred, and while their functions were to be only advisory, the Minister of Muni-

¹ Statutory Rules and Orders No. 880: The Munitions Tribunals Amendment (No. 2) Rules, 1917. Dated Aug. 22, 1917.

² Order No. 1050: The Munitions (Abolition of Leaving Certificates) Order, dated 5th October, 1917

tions, at whose request the appointments were made, expressed a cordial desire to work in close cooperation with their views. In December this committee was reported as working to secure consideration of the whole question of hours worked by women in munitions factories, and an adjustment of the wages situation. In the latter direction two changes were sought: The extension of the Government scale to all women employed on work for the Government, and, second, a consolidated order on women's wages. The first was needed because the Government orders regulating women's wages applied only to those working in controlled establishments, while women employed in other establishments on precisely the same work for the Government were left to make what terms they could with their employers. As to the second object, it was felt that a revision of the various orders respecting wages was needed, and that they should be combined into one comprehensive and consistent whole:

The orders on women's work were made one by one as fresh emergencies arose, and in their present shape they form but a patchy and scrappy piece of legislation. To take but one instance, the time wages of women on men's work can be graded from 6d. [12 cents] an hour up to the fully skilled turner's rate, according to the nature of the work. For women on women's work one rate is prescribed, with only the narrowest of exceptions. Obviously this order is too inelastic and needs amendment.¹

The women at this time were also putting forward a strong plea for an advance of 10s. (\$2.43) per week on the lowest rate fixed, with corresponding increases on those a little higher, on the ground that this was necessary to meet the rise in the cost of living since the rates had been fixed.

As yet no information is available as to the success of these efforts. Whatever their outcome, however, the restrictions put upon the use of the munitions tribunals and the abolition of the leaving certificate have removed the chief complaint women had against their treatment under the munitions acts, and the appointment of the women's advisory committee marks a great step forward for them.

EMPLOYMENT OF MALES AND FEMALES IN CERTAIN UNITED STATES MUNITION PLANTS.

A table is presented herewith which should be of interest as showing the number of employees in certain munition plants in the United States, and the proportion of males and females employed at different dates during the last few years. The per cent of increase or decrease in the numbers of male and female employees as compared with each preceding date is also shown.

¹ The Woman Worker, London, November, 1917, p. 8.

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EMPLOYMENT OF MALES AND FEMALES IN CERTAIN MUNITION PLANTS OF THE UNITED STATES, AT SPECIFIED DATES.

Establishment.	Date.	Persons employed.				Total.	Per cent of increase (+) or decrease (-) in number of employees as compared with each preceding date.		
		Males.		Females.			Males.	Females.	Total.
		Number.	Per cent.	Number.	Per cent.				
No. 1.....	May 13, 1916	6,952	69.0	3,118	31.0	10,070			
	Jan. 13, 1917	6,657	66.3	3,391	33.7	10,048	- 4.2	+ 8.8	- 0.2
	Jan. 12, 1918	6,367	63.8	3,610	36.2	9,977	- 4.4	+ 6.5	- .7
	Feb. 16, 1918	7,157	63.8	4,058	36.2	11,215	+ 12.4	+ 12.4	+ 12.4
No. 2.....	Nov. 18, 1916	9,924	100.0			9,924			
	Mar. 10, 1917	9,382	95.7	423	4.3	9,805	- 5.5		- 1.2
	Aug. 18, 1917	12,246	92.4	1,009	7.6	13,255	+ 30.5	+138.5	+ 35.2
	Oct. 20, 1917	12,151	90.7	1,241	9.3	13,392	- .8	+ 23.0	+ 1.0
No. 3.....	July 15, 1917	7,653	82.9	1,582	17.1	9,235			
	Jan. 12, 1918	10,987	79.2	2,893	20.8	13,880	+ 43.6	+ 82.9	+ 50.3
No. 4.....	Jan. 1, 1917	458	77.6	132	22.4	590			
	Jan. 1, 1918	341	64.1	191	35.9	532	- 25.5	+ 44.7	- 9.8
No. 5.....	July 1, 1914	53	57.6	39	42.4	92			
	July 1, 1915	51	60.0	34	40.0	85	- 3.8	- 12.8	- 7.6
	July 1, 1916	59	59.6	40	40.4	99	+ 15.7	+ 17.6	+ 16.5
	Sept. 22, 1917	44	55.7	35	44.3	79	- 25.4	- 12.5	- 20.2
No. 6.....	Mar. 13, 1915	57	78.1	16	21.9	73			
	Jan. 15, 1916	105	47.3	117	52.7	222	+ 84.2	+61.3	+204.1
	July 1, 1916	147	27.3	391	72.7	538	+ 40.0	+234.2	+142.3
	Nov. 31, 1917	424	41.5	598	58.5	1,022	+188.4	+ 53.1	+ 90.0
No. 7.....	Dec. 19, 1914	588	53.5	511	46.5	1,099			
	Dec. 18, 1915	3,684	57.6	2,722	42.4	6,416	+528.2	+432.7	+483.8
	July 1, 1916	4,568	58.5	3,237	41.5	7,805	+ 23.6	+ 18.9	+ 21.6
	Nov. 24, 1917	4,614	60.9	2,963	39.1	7,577	+ 1.0	- 8.5	- 2.9
No. 8.....	Jan. 6, 1917	818	94.2	50	5.8	868			
	Sept. 8, 1917	192	80.0	48	20.0	240	- 76.5	- 4.0	- 72.4
No. 9.....	Jan. 1, 1916	162	81.4	37	18.6	199			
	July 1, 1916	286	72.0	111	28.0	397	+ 76.5	+200.0	+ 99.5
	Jan. 6, 1917	378	77.1	112	22.9	490	+ 32.2	- .9	+ 23.4
	Sept. 15, 1917	86	82.7	18	17.3	104	- 77.3	- 83.9	- 78.8

SHOP UNIFORMS FOR WOMEN MUNITION WORKERS.

The practicability of protective clothing for women and girl workers having been demonstrated in British industries,¹ particularly in munition factories, a similar experiment is being tried under the direction of the War Department at the Frankford Arsenal where the women workers are being clothed in uniforms characterized by safety features which make them practicable for wear at work which involves danger either from the operation of machinery or the handling of explosive powders. The style of the uniform, to be made of khaki, was determined by a committee of women workers at the Frankford Arsenal, and Mrs. Clara Tead, of the Women's Division of the Ordnance Office. The following description of the uniform is taken from the Official Bulletin for April 10:

¹ See article on "Protective clothing for women and girl workers in Great Britain" in the April, 1918, issue of the MONTHLY REVIEW (pp. 217 to 219).

It consists of a blouse and specially designed overalls which are made full and button around the ankles. In order that there may be no place in the uniform for powder or flying dust to lodge, the blouse buttons over the overalls instead of under; the overalls button forward instead of backward; the collar of the blouse buttons tightly as does the flap of the overall pocket. Puttees may be worn with the overalls. The cap which completes the costume is of lighter fabric than khaki and resembles an aviator's cap in shape.

As the Frankford Arsenal employs the largest number of women of any of the Government plants, the women at this arsenal will be the first to appear in it. As soon as possible the uniform will be put into use in all Government munition plants.

AGREEMENTS BETWEEN EMPLOYERS AND EMPLOYEES.

TRADE AGREEMENTS IN THE STOVE INDUSTRY.¹

BY BORIS EMMET, PH. D.

INTRODUCTION.

The conference agreements in the stove-molding industry represent a growth extending over 26 years. The first agreement, which was signed in 1891, recognized the advisability of dealing collectively with the molders by means of conference committees based upon the principle of conciliation, and specified the procedure to be followed in the adjustment of grievances which might arise. The employers, moreover, promised not to lock out their employees while difficulties were being adjusted. In return for these concessions the molders' union agreed to refrain from striking pending the peaceful adjustment of their grievances. The matter of wages was not taken up until 1892. It was then agreed that a rate of wages once established was to be in operation for a full year, and that either party desiring a change was to notify the other at least thirty days before the expiration of the year. In the absence of such notice the wage rates for the coming year were to remain the same.

The conferees of joint annual sessions of 1893 and 1896 made persistent efforts to determine the methods to be followed in piece-rate determination. The problem of discounts for losses caused by bad work on account of "dull iron"—an important issue in the molding of stoves—was first taken up in 1896, then again in 1906, and finally settled in 1910, in the manner described below. The problem of the hours of labor of molders was first taken up in 1902. Discussions bearing on this subject have taken place at almost every one of the joint sessions since then. The question of limitation of the output which began to be discussed as early as 1898 was settled in 1902 when the union placed itself on record as being opposed to any form of limitation of output in any of the branches of the stove-molding craft. This declaration was preceded by a statement on the part of the foundry-men to the effect that in the future the earnings of molders will exercise no influence upon piece prices. The apprenticeship question which for a long time constituted a grave point of contention between

¹ For valuable suggestions given in connection with the preparation of this report acknowledgment is due to Mr. John P. Frey, editor of the International Molders' Journal.

the foundrymen and their molders was finally settled in 1905 by the adoption of clause 21 which established a ratio of one apprentice to each five journeymen. This arrangement is in force at the present time.

Three great problems have been solved since 1906. These problems dealt with: (1) The introduction of molding machines, with particular reference to piece rates on machine work; (2) the admission of the core makers into the jurisdiction of the trade agreements; and (3) the establishment of a minimum daily wage for molders working by the day. The meaning of these problems and detailed descriptions of how they were solved are given elsewhere in this article.

CHARACTER OF THE AGREEMENTS.

The trade agreements in force in the stove-molding industry are known in the trade as "conference agreements." The parties concerned are the International Molders' Union of North America and the Stove Founders' National Defense Association. The agreements are signed for one year and are subject to change and modification by the annual joint conferences of the parties. These conferences usually consist of 12 persons, six representing each side. The delegations to the annual conferences are elected at the conventions of their respective organizations, the administrative council or executive board of each association having the power to fill vacancies or make changes. The conferees of both sides come to the annual joint sessions with full powers to act and to bind their constituents.

The annual joint conferences are legislative in character. They determine policies which are to be applied to a trade as a whole and do not endeavor to adjust difficulties which arise locally.

The primary agency for the adjustment of local grievances is a shop committee elected by the molders for the purpose of dealing with the firm regarding any controversy which might arise. Difficulties upon the disposition of which the shop committee and firm cannot agree are referred for adjudication to the national officers of the two associations. These officers or their deputies then meet on the premises where the difficulty arose for the purpose of adjusting the disputed point, in accordance with the provisions and specifications of the conference agreements. The joint action of the national officers is final and binding upon both parties.

An appeal from the decisions of the national officers may be taken to a special committee known as the conference committee, which is composed of three members from each association. The conference committee has, however, never played any important part in the adjustment of difficulties. Only three appeals have been made to it during 26 years of the operation of the conference agreements.

The entire scheme of the conference agreements is based upon the principle of conciliation and no outside party or arbitrator ever participated in the sessions of the cooperating parties at which the agreements were made.¹ A few words must be said regarding the procedure followed in the annual conferences. The usual method is for each side to present a bill of particulars of its demands in the form of resolutions. The resolutions thus presented then become the subject of debate and are discussed in a parliamentary manner. Each resolution is discussed, modified, and amended until it appears to be satisfactory to a majority of the conferees.

Not all of the resolutions adopted are immediately incorporated as integral parts of the conference agreements. This is so because very frequently the resolutions represent mere interpretations of provisions already in existence. Such interpretative resolutions are put to a use similar to that of the ordinary by-laws of a constitution. This manner of amendment explains the fact that all of the conference agreements which were adopted during 26 years do not at the present time occupy more than a few small printed pages the meaning of which is intelligible to the average conferee who is either a molder or foundryman, but in no case a lawyer. In this respect the conference agreements in the stove industry differ radically from the so-called protocols of peace of the garment trade—complicated agreements the interpretation of which calls frequently for the services of attorneys.

The powers vested in the conferees by their respective organizations are great and this fact accounts for a good many of the results achieved. Irrespective, however, of their power to act, the leaders of the respective delegations always felt that in order to make the agreements enforceable it was necessary to avoid the forcing of any conditions which the rank and file of either side were at that time unprepared to adopt. Education was imperative because the rank and file frequently had little knowledge of existing conditions in the trade as a whole and seldom understood fine points of industrial diplomacy or conciliation. Many a time "things were on the verge of a smash" because of certain demands on the part of the membership which the conferees knew could not and would not be conceded by the opposing party. This was the case in the matter of apprenticeship regulation as described in detail in an early report on Conciliation in the Stove Industry.² The molders' representatives in this instance were com-

¹ In this connection attention is to be called to an inaccuracy in the terminology of clause 1 of the original agreement of 1891, which clause states that "this meeting adopts the principle of arbitration in the settlement of disputes." The records of the early conferences show most conclusively that it was never the intention of the conferees to resort to arbitration as technically understood, that is, to the invocation of the assistance of an outsider, or the odd man, in the adjustment of disputed points. As a matter of fact arbitration has never been resorted to during the 26 years of the operation of the conference agreements.

² Conciliation in the Stove Industry, by John P. Frey and John R. Commons, Bul. 62, Bureau of Labor U. S. Department of Commerce and Labor, pp. 162-176.

pelled to play a difficult part. They knew that the foundrymen would never agree to the demand of the rank and file for an apprenticeship ratio of one to eight and yet the referendum of the members insisted upon such a ratio. The most advisable thing for the union conferees to do under such circumstances was to put off the consideration of this issue until the membership was educated to the point of understanding the real facts. This it took many years to accomplish. To the credit of the foundrymen it must be said that they understood perfectly the position in which the representatives of the men were and waited patiently until the union rank and file was educated by its representatives. Similar methods of dealing with vital problems were followed frequently by the conferees of the foundrymen. The representatives of the employers found it advisable at times to get the confirmation of their rank and file as to the specific manner of dealing with grave questions. The union delegates in such instance exhibited a "give and take" attitude and were willing to postpone the settlement of some demands until some future time.

ORIGIN AND EARLY DEVELOPMENT OF THE AGREEMENTS.

An account of the workings of trade agreements in the stove molding industry was published by the Bureau of Labor, United States Department of Commerce and Labor, in January, 1906.¹ This account described the workings of the collective-bargaining scheme in operation in this industry between the International Molders' Union of North America and the Stove Founders' National Defense Association from 1891 to about 1906. Following is an attempt to describe the workings of the trade agreements in the stove industry, known technically as the conference agreements, since 1907.

An understanding of the origin and the early development of the conference agreements is necessary to fully comprehend their later development and present status.

Prior to 1891 the stove industry was the field of intensive struggles between the molders, who had organized themselves into an international union as early as 1859, and the foundrymen, who were organized in 1884 under the name of the Stove Founders' National Defense Association. The causes which led to this warfare were numerous and covered a wide range of contentions. The question of wages was naturally one of the most contested points. Differences over the piece rates to be paid for molding were responsible for very many of the strikes and lockouts which occurred. "Discounts" for bad work frequently caused trouble. Inasmuch as molders were paid only for the good work turned out, the matter of "discounts"

¹ Conciliation in the Stove Industry, by John P. Frey and John R. Commons, part of Bul. 62.

for imperfect castings was always of vital interest to the workers. In some instances an increase in wage rate granted was easily lost because of a harsh system of discounts for imperfect work. The other principal causes of contentions are discussed below.

The conference agreement of 1891 brought the principle of collective bargaining into the stove industry. The new method of bargaining eliminated strikes and lockouts by providing means for the peaceful adjustment of any disputes which might arise. Between 1891 and 1906 the following questions were amicably adjusted by the joint conferences of delegates representing the molders and their employers: (1) Establishment of an apprenticeship ratio of one apprentice to each five journeymen molders; (2) abolition of the "buck" or "berkshire" system, which was a system forcing a molder to employ unskilled assistants to work for him on a sort of teamwork basis; this arrangement was similar to what is known as "inside teamwork" in the clothing trade and was considered obnoxious from the union point of view because of its tendency to result in a dilution of skill and in a breaking down of the apprenticeship limitations; (3) establishment of what is known in the trade as the "gangway count," a simple arrangement of having each day's work placed on a gangway running through the foundry, for the purpose of counting the day's output; (4) establishment of the practice of having the firm furnish the molders with a "price book" or a book containing all the piece rates to which the molder is entitled. The absence of the "gangway count" and of the "price book" were always fought against by the men because the lack of such provisions enabled unscrupulous employers "to cheat the molders out of the results of their labor." The establishment of the "gangway count" and of the "price book," both of which innovations were frequently objected to by some foundrymen, enabled the molder to know exactly "where he was at." Abuses similar to those which existed in the absence of the "gangway count" and "price book" intruded themselves at times in the "discounting" of imperfect work. To protect themselves against abuses of the latter kind, the molders demanded and were granted the privilege of inspecting all the bad castings before they are broken up for remelting.

The above-enumerated concessions, with that of collective bargaining, removed once for all many of the principal causes which were responsible for the bitter strikes and lockouts of the former days.

The application of collective-bargaining principles brought valuable results also to the employers. The foundrymen benefited greatly by the elimination of strikes, which fact made possible uninterrupted production. The trade agreements, and the strong disciplinary power of the union in enforcing them, made it possible for

the foundrymen to know in advance the exact labor cost for the year to come. This fact enabled them to shape their sales policies in as profitable a manner as possible. In addition to that, the union put itself on record as opposed to any limitation of output. This position was taken in exchange for a declaration officially made by the foundrymen's association to the effect that the molder's earnings will exercise no influence on the piece rates. The ban placed upon any output limitation was of importance to the foundrymen because a greater output made possible a reduction in the overhead costs of manufacture.

The agreement regarding unlimited outputs shows clearly that each side was beginning to have faith in the integrity of the other. It took years, however, to establish the conference agreements on a solid basis; that is, to educate both sides to the point where they commenced to have faith in the integrity of the opposing party and in the scheme. The old strife between the molders and the foundrymen was so bitter that neither of the sides would at first believe that the establishment of peaceful relations was possible. The conference agreements did not really achieve a permanently solid basis until about 1905. In this connection it must be stated that from the very beginning the officials of both associations endeavored to put their new relations on a solid footing. This object was rather difficult to achieve because the rank and file of both associations were impatient for results.

The tangible results of the annual conferences between 1901 and 1908, unsatisfactory in some respects, were, however, instrumental in establishing the agreements on a solid basis. No increases in piece rates were granted to the molders between 1901 and 1908. This fact gave the leaders of the foundrymen an opportunity to show to their members in a definite way the benefits of the conference agreements. During the same period conditions developed which tended to strengthen the hands of the officials of the molders' union in a similar manner; that is, by showing to their membership some valuable results. After all, and as indicated above, the piece rate paid is not the only matter of importance to the molder. The question of establishing the responsibility for unsatisfactory work was perhaps of as great importance, and in this respect the union secured valuable concessions.

RECENT DEVELOPMENT OF THE AGREEMENTS.

Since 1907 the discussions of the annual conferences of the stove industry have revolved largely around the following problems, each of which was satisfactorily adjusted by the conferees: (1) Wage rates for piece and day workers; (2) discounts for imperfect work; (3) the introduction of molding machines; (4) the extension of the juris-

diction of the conference agreements to the core makers, and (5) the hours of labor of actual molding. The manner in which each of these vital trade questions was adjusted is strikingly characteristic of the actual workings of the conference agreements, and will therefore be described in greater detail.

Wages and discounts.

The molding of stoves, ranges, and heaters has always been on a piece-work basis, the molders being paid only for the perfect work turned out. The original piece price of specific parts of stoves is known in the trade as the "board price," a term taken from the fact that the separate patterns are usually placed on a board for the purpose of assisting the molder in turning out his molds. Curiously enough the "board prices" have always remained the same. Changes in piece rates were expressed in terms of a percentage above or below the original "board price." Thus the piece rate actually paid for any year, or the net cash price, as it is sometimes called, represents the original "board price" plus or minus the so-called "percentage" specified in the agreement. The existence of a certain percentage means that to every dollar of output in terms of "board prices" this percentage is added. The percentage of 85, which is now being paid, means that for every dollar of "board prices" \$1.85 will be paid to the molders.

The collective bargaining of the 20-year period ending with the year 1918 almost doubled the piece rates paid to the molders.¹

Changes in piece rates since 1898.

Period.	Per cent over "board price."	Amount for one dollar "board price."
1898 to 1899.....	10	1.10
1900 to 1901.....	15	1.15
1902 to 1906.....	20	1.20
1907 to 1910.....	25	1.25
1911 to 1912.....	30	1.30
1913 to 1916.....	35	1.35
1917.....	60	1.60
1918.....	85	1.85

Recently a minimum daily wage was established in the stove industry. On account of the nature of their work some stove molders are paid by the day instead of by the piece. Such molders are usually engaged in the making of patterns or in the molding of odd jobs. At one of the joint conferences some years ago the conferees representing the molders suggested the desirability of establishing a

¹ The following table shows the changes in the "percentage" from 1898 to 1918. The points of departure in this table are the piece prices of 1897 which were equivalent to the old "board prices" and subsequently became the basis for adding or subtracting the annual percentages.

minimum daily wage for such workers. This suggestion came to a head at the conference of 1916 at which a daily minimum of \$4.25 was agreed upon for day-working molders. This wage was based upon an 9-hour day. The mentioned minimum of \$4.25 was increased to \$5 by the annual conference held in December of 1917. The new rate is to be in effect during the year 1918.

As stated, the question of discounts is of vital importance to the workers. Under the wage system of the stove industry the molders' actual earnings depended upon some factors other than the so-called percentages, for the reason that molders were paid only for perfect work. The problem of equitably allocating the responsibility for the bad work has at times been almost as important to the molders as the percentage. Additional percentages gained might easily have been lost by discounts for imperfect castings, occasioned frequently by conditions outside the control of the worker, such as "dull iron" and "dirty iron."

By "dull iron" in the stove-molding trade is meant molten iron which is not fluid enough to enable the turning out of a perfect casting. "Dull iron" is frequently due to defects in the "heat," a process not within the control of the molders, and for which the molder should not be held responsible. The problem of "dull iron," however, is complicated by the fact that at times a "dull iron" condition is due to the molder's delay in pouring the metal he has in his ladle. A method, therefore, had to be established wherewith a demarcation line of responsibility for "dull iron" could be definitely determined.

The question of allocating the responsibility for bad work on account of "dull iron" first arose at the conference of 1891. No settlement, however, was then reached. Definite action on the "dull iron" question was agreed upon at the annual conference of 1896 which specified that when it is shown that the aggregate loss on account of "dull iron" amounts to 4 per cent of the total value of the molders' work in any one heat it shall be deemed a bad heat and payment shall be made for all work lost over 4 per cent. This adjustment did not prove satisfactory to the molders. At the annual conference of 1906 the union representatives asked for a modification of the "dull iron" clause of 1896. This demand became the subject of discussion, as a result of which the "dull iron" clause was amended to the effect that "when the aggregate loss from this cause is less than 4 per cent * * * and 10 per cent of the molders lose 10 per cent or more * * * then such men shall be paid for such loss in excess of 4 per cent of their day's work."

The final settlement of the "dull-iron" problem proved to be of great benefit to the molders and was considered by them as a con-

cession almost as valuable as an increased percentage. This concession, although of great value to the molders, did not appear so radical and undesirable to the foundrymen as would have been an increase in percentage. After all, the "dull-iron" concession gave the molders what they were legitimately entitled to.

"Dirty iron," which makes the production of good castings rather difficult, is due to the presence in the metal of excessive amounts of slate cinder or other foreign substances. As in the case of the "dull iron" problem the bad castings caused by "dirty iron" are frequently due to the metallurgical quality of the iron, for which the molders can not be held responsible. Often, however, bad castings supposedly due to "dirty iron" are in reality due to neglect on the part of the molder, or his lack of care, in separating the slag, which is another word for the foreign substances in the molten metal, from the metal itself.

Unlike the "dull iron" question, which was easily settled in 1906 because the foundrymen admitted the possible existence of a "dull iron" condition through no fault of the molder, the "dirty iron" problem was more difficult to solve. Foundrymen contended, and with a good deal of correctness, that iron is always "dirty" and that it is the molder's business carefully to separate the iron from the slag. In a series of annual conferences, however, the conferees representing the workers succeeded in convincing the foundrymen that even most expert and careful molders are sometimes unable completely to separate the slag from the iron and that in such instances it would be unfair to hold the molder wholly responsible for the imperfect work.

The question of establishing an equitable method for "discounting imperfect work due to 'dirty iron'" was partially solved when the foundrymen were convinced by the representatives of the molders that imperfect work of this sort was frequently due to causes outside of the control of even the most expert molder. The very nature of the "dirty iron" question, however, made it extremely difficult to draw a definite demarcation line of responsibility applicable to all instances. The difficulty was solved by the joint conference of 1910 by a provision which established the "dirty iron" question as a legitimate grievance to be adjusted locally by the shop committee of the molders in consultation with the firm, and in instances of inability to agree by the national officers of both associations.

Molding machines.

The molding machine question involved a substitution of machine for hand work and had two aspects. These were: (1) Differences of opinion as to the kind of labor which was to operate the molding machines; that is, whether skilled molders, apprentices, or unskilled

hands be allowed to work on machines; and (2) the methods to be followed in determining the piece rates on machine work.

The conferees representing the molders insisted upon having journeymen operate the machines and upon the desirability of working out some equitable method of piece-rate determination in order to give to labor some of the benefits brought about by the introduction of machinery. The union conferees endeavored, first of all, to establish the machine problem as a legitimate subject of discussion under the jurisdiction of the agreements. In this they were successful. A resolution adopted at the conference of 1905 specified that "the application of machinery, be considered" in the making of piece rates. The following annual conference agreed on the kind of labor to operate the molding machines. Under this agreement molding machines were to be operated by journeyman molders or apprentices. In the event of inability on the part of the management to secure the services of journeymen or apprentices, the matter was to be submitted to the presidents of the two associations, who, upon investigation, were given the power to allow the hiring of additional apprentices over and above the established ratio.

The problem of piece-rate determination was discussed at many of the annual conferences and finally solved at a special conference held in Atlantic City in June, 1914.

The solution of the machine question was greatly accelerated by the fact that one of the subcommittees appointed to study machine piece-rate making succeeded in effecting an arrangement with one of the association foundries—the Weir Stove Co., of Taunton, Mass.—for the pricing of the firm's machine work. In connection with the pricing work at the Taunton foundry, the committee collected a considerable amount of data regarding the comparative earnings and outputs of machine and hand molders. The firm and the committee then agreed to take the average daily earnings of hand molders as the basis for piece-rate making on machine work. The average earnings, based upon what were considered typical earning periods, showed an approximate daily earning capacity of \$4.75. This amount was augmented by 50 cents for the extra labor of handling the additional molds, carrying the iron to the floor and pouring it, the cutting and trimming up of the sand, the shifting of weights and sleeves, the shaking out and wetting down the sand, and the taking out and trimming of the castings—all of these representing an excess of labor above that required on similar work when made by hand. The result—\$5.25—was then considered as the equivalent of the "board price," to be augmented by the existing percentage. The addition of the percentage made the daily wage for pricing machine work about \$6.

Having established the basis upon which the piece-rate calculations for machine work were to be computed, the committee, by a series of tests, arrived at what it considered a fair average output on the machines. The average output divided by the basis of \$5.25 gave the final piece price for machine work. Inasmuch as on the \$5.25 basis the machine molder was to do the molding as well as to perform all the other supplementary labor pointed out above, it was further provided that if any of these supplementary processes are done for the molder by the firm, certain percentages are to be deducted from the established piece price. Thus, for instance, 2 per cent of the price was to be deducted if the firm carries the iron to the molder's floor, 3 per cent if it cuts and trims the sand, 4 if the weights are shifted for the molder, etc. These percentage deductions for work done for the molder by the firm did not necessarily reduce the machine operator's net earning, for when some of the specified work was done by the firm the molder was able to put up a larger number of molds.

The results arrived at the Weir establishment, which was located in Taunton, Mass., subsequently became known as the "Taunton basis." This basis, slightly modified, furnished the groundwork for the final solution of the machine problem.

Status of coremakers.

In the early foundry the molder made his own cores, but with the development of specialization there came into existence the core-maker as a separate and distinct craftsman. By 1896 the craft was fully developed and the International Coremakers' Union organized. Very soon thereafter lack of cooperation and jurisdictional disputes began to appear between the iron molders' union and the core-makers' union. The final result of these jurisdictional difficulties was that the molders, who in the earlier days objected to the admission of coremakers into their union, began to talk of amalgamation with the coremakers' organization. The outcome of this discussion was an amalgamation of the two internationals in 1903.

With the admission of coremakers into the molders' union, the question of the status of coremakers under the conference agreements arose. The foundrymen objected to the admission of the coremakers on the ground that "coremaking had nothing whatever to do with the agreements," and that, as a matter of fact, no distinct occupation of this kind existed in the industry at the time of signing the first agreement in 1891. The union conferees, however, were persistent in demanding the admission of the coremakers. The successive defeats of their coremaking proposal merely resulted in the advancement of identical proposals at the following annual joint conferences. The status of coremakers was finally defined by the annual conference

of 1916. It was then agreed to grant the union demand and to extend the jurisdiction of the conference agreements to coremakers, who were to be known thenceforth as "coremaking molders."

With the admission of the coremakers the question of setting piece rates on coremaking work arose. For this reason the conference which admitted the coremakers also appointed a special committee to investigate methods for determining coremaking prices and to establish basic rates.

Hours of labor.

The question of the hours of labor has been the subject of discussion since 1891. The conference of 1902 established a seven-hour day for actual molding. At the conference held in 1910 the molders asked for a nine-hour day as the limit for all work in foundries, on the ground that a nine-hour day was prevailing in many other trades. This proposal was not adopted. In lieu of it, however, it was agreed that after April 1, 1911, "the last ladle of iron will be given to the molder within an hour and three-quarters after the seven hours of actual molding." In 1913 the union suggested that actual molding be limited to six hours per day. This proposal failed of adoption. At the present time the actual molding hours are six and one-half. The reduction from seven to six and a half hours was agreed to by the annual conference of 1910 and constituted a compromise between the seven-hour molding day insisted upon by the foundrymen and a new demand for a six-hour molding day made by the union.¹

JURISDICTION OF THE AGREEMENTS.

When the first joint conference with the Stove Founders' National Defense Association was held in 1891, the workers in many of the association shops were not fully organized. The initial conferences therefore decided that complete nonunion establishments should not come under its jurisdiction. After some discussion it was also agreed that "open" or partially organized shops should be subject to the agreements only in instances where a majority of the molders employed were affiliated with the union. This arrangement was further modified in 1898 when it was provided that even in open shops where union men were in the minority, the union molders were privileged to submit their grievances for adjustment in the manner indicated in the conference agreements. This understanding resulted in bringing practically all the association stove foundries under the provisions of the conference agreements. It also had a tendency to

¹ The actual molding hours do not, of course, represent all the hours worked by the molders per day. After completing the specified hours of actual molding, the molder has to finish his day's work by pouring out the metal in order to make the castings, "shaking out" the castings and doing other work connected with the finishing of the day's output. This usually takes from 1½ to 2 hours.

encourage nonunionists to join the union so that their grievances might be adjusted.

At the conference of 1900 the molders' representatives proposed that all members of the foundrymen's association recognize the union rules and regulations as binding upon their foundries. This proposal was rather novel for thus far the agreements had said nothing about foundrymen being compelled to operate under full union conditions. The chief arguments advanced in favor of instituting this kind of recognition were two in number. In the first place, it was asserted that all but 10 or 12 association members were running "practically" union shops; it was argued, in the second place, that a compulsory union shop would tend to place all foundrymen upon an equal basis. The union proposal failed of adoption because of the opposition of the foundrymen's conferees. Seven years later the foundrymen submitted a counter resolution to the effect that no molder or coremaker be refused employment or discharged from any foundry governed by the conference agreements because of membership or nonmembership in the union. Like the union proposal of some years before, this suggestion of the foundrymen failed to be adopted because of objections of the opposing delegation.

From careful perusal the minutes of the joint conference as well as of the annual reports of the union officials seem to indicate that, as a matter of fact, the delegates of the molders did not exhibit their customary tenacity of purpose in pressing the proposal for full unionization. This was due to the philosophy held by some of the leading spirits of the molders' union, a philosophy which placed little faith in labor organizations the building up of which was contingent upon the cooperation of employers. These union leaders felt that a more enduring and better disciplined organization could be built up without the assistance of the foundrymen. Judged by the developments of the later years, this philosophy proved to be correct.

The problem of union recognition gradually solved itself. With the establishment of a better understanding between the molders and the foundrymen the latter did not care to contest the gradual unionization of their plants. The mutual "give and take" exhibited at the joint conferences and the stability of the ensuing agreements have finally resulted in a tacit understanding that while nonunionists will not be prevented from securing employment, no obstacles will be thrown in the way of their speedy unionization.

The Stove Founders' National Defense Association has now a membership of 73, of which 72 maintain full union conditions in their shops. These firms employ about 10,000 molders. All of these except apprentices belong to the union. The conference agreements

regulate the ratio of apprenticeship, but not the apprentice's pay. When an apprentice finishes his four years of service he applies for admission into the union and is usually accepted as a full-fledged journeyman.¹

CONCLUSION.

The great successes of the conference agreements were made possible by the fact that there has always been some sort of continuity in the personnel of the annual conferences. The delegations of the annual conferences have always contained men who had been representing their side for years, who knew the history of collective bargaining in the trade, and were familiar with the character of their opponents. The major part of the opposing delegations have known each other for years and faced together almost unsolvable problems which nevertheless were solved. They, therefore, developed confidence in their ability to solve the most difficult problems and in the integrity of their opponents.

The conference agreements are unique in the sense that not once in the 26 years of their existence did there arise any question which proved impossible of solution. Most delicate and vital problems, such as the regulation of apprenticeship, introduction of labor-saving machinery, limitation of output, wages, etc., have been amicably solved in a manner mutually satisfactory. The annual conferences usually consist of twelve persons, six from each side. The union delegation, as a rule, consists of two or three international officials assisted by men from the "sand heap"; that is, workers drawn from the foundry for the conference. As the "sand heap" delegates come directly from the rank and file, such a make-up of the union delegation enables it more easily to direct the actions of the union membership. The actual influence of the "sand heap" delegates consists principally in the confidence which they inspire in the workers at the foundries because of their activity as watchers of the proceedings. The real work is done by the officials of the union who have developed an expert knowledge of the trade and have become able conciliators who have the confidence of the employer's conferees. In brief, the personal equation of the conferences is one of the most determining factors in achieving results and can hardly be overestimated.

¹ In addition to the trade agreements with the Stove Founders' National Defense Association, the International Iron Molders' Union has at the present time 91 agreements with as many stove foundries which are not affiliated with the defense association. The conditions of pay, labor, etc., imposed upon the independent foundries are equivalent to those in force in the association shops. Whenever a change is made in the conference agreements a demand for a similar change is immediately made upon the independent foundrymen. The number of molders employed in independent stove foundries is rather difficult to estimate in view of the fact that some of the independents do not confine their activities to the making of stoves. The latest estimate of the number of molders coming under the trade agreements with the independent foundries is about 5,000.

NEW AGREEMENT FOR ADJUSTMENT OF RAILROAD LABOR DISPUTES.

Recognizing the extreme importance of the speedy and equitable adjustment of any controversy that may arise between the railroads now under Government control and the various brotherhoods of employees, and in order that misunderstandings which tend to lessen the efficiency of the service may be eliminated, the Director General promulgated an order (No. 13), effective March 22, 1918, formally adopting the basis for the adjustment of railroad labor disputes arrived at in an understanding between regional directors for the railroads and the chief officers of the respective employees' organizations. This understanding provides for the appointment of a railway board of adjustment No. 1,¹ consisting of eight members, to handle all controversies growing out of the interpretation or application of the provisions of wage schedules or agreements which are not promptly adjusted by the officials and the employees of any of the railroads operated by the Government. The signers are as follows: R. H. Smith, C. H. Markham, and R. H. Aishton; regional directors for the railroads under Government control; W. S. Stone, grand chief engineer, Brotherhood of Locomotive Engineers; A. B. Garretson, president, Order of Railway Conductors; W. R. Lee, president, Brotherhood of Railroad Trainmen; Timothy Shea, acting president, Brotherhood of Locomotive Firemen and Enginemen.

The following is the full text of the agreement:²

1. There shall be at once created a commission to be known as railway board of adjustment No. 1, to consist of eight members; four to be selected by the said regional directors and compensated by the railroads, and one each by the chief executive officer of each of the four organizations of employees hereinbefore named, and compensated by such organizations.

2. This board of adjustment No. 1 shall meet in the city of Washington within 10 days after the selection of its members and elect a chairman and vice chairman, who shall be members of the board; the chairman or vice chairman will preside at meetings of the board, and both will be required to vote upon the adoption of all decisions of the board.

3. The board shall meet regularly at stated times each month and continue in session until all matters before it are considered.

4. Unless otherwise mutually agreed, all meetings of the board shall be held in the city of Washington, provided that the board shall have authority to empower two or more of its members to conduct hearings and pass upon controversies when properly submitted at any place designated by the board; provided further, that

¹ The board of adjustment was appointed and organized early in April. It consists of four representatives of the railroad management and four officers of the brotherhoods, as follows: Dr. C. P. Neill, manager, Information Bureau of Southeastern Railways, chairman; E. T. Whiter, assistant general manager, Pennsylvania Lines West; John G. Walber, secretary, Bureau of Information of Eastern Railways; J. W. Higgins, executive secretary, Association of Western Railways; L. E. Sheppard, vice president, Order of Railway Conductors of America, vice chairman; F. A. Burgess, assistant chief Brotherhood of Locomotive Engineers; Albert Phillips, vice president Brotherhood of Locomotive Firemen and Enginemen; W. N. Doak, vice president Brotherhood of Railroad Trainmen.

² Official Bulletin, Mar. 25, 1918.

such subdivision of the board will not be authorized to make final decision. All decisions shall be made and approved by the entire board, as herein provided.

5. Should a vacancy occur in the board for any cause, such vacancies shall be immediately filled by the same appointive authority which made the original selection.

6. All authority vested in the commission of eight to adjust disputes arising out of the application of the eight-hour law is hereby transferred to the railway board of adjustment No. 1 in the same manner as has heretofore been done by the commission of eight. All decisions of a general character heretofore made by the commission of eight are hereby confirmed and shall apply to all railroads under governmental operation, unless exempted in said eight-hour law. Decisions which have been rendered by the commission of eight, and which apply to individual railroads, shall remain in effect until superseded by decisions of the railroad board of adjustment No. 1, made in accordance with this understanding.

7. The board of adjustment No. 1 shall render decisions on all matters in dispute, as provided in the preamble hereof, and when properly submitted to the board.

8. The broad question of wages and hours will be considered by the railroad wage commission, but matters of controversies arising from interpretations of wage agreements, not including matters passed upon by the railroad wage commission, shall be decided by the railway board of adjustment No. 1 when properly presented to it.

9. Wages and hours, when fixed by the Director General, shall be incorporated into existing agreements on the several railroads, and should differences arise between the management and the employees of any of the railroads as to such incorporation, such questions of difference shall be decided by the railway board of adjustment No. 1, when properly presented, subject always to review by the Director General.

10. Personal grievances or controversies arising under interpretation of wage agreements, and all other disputes arising between officials of a railroad and its employees, covered by this understanding, will be handled in their usual manner by general committees of the employees, up to and including the chief operating officer of the railroad (or some one officially designated by him), when, if an agreement is not reached, the chairman of the general committee of employees may refer the matter to the chief executive officer of the organization concerned, and if the contention of the employees' committee is approved by such executive officer, then the chief operating officer of the railroad and the chief executive officer of the organization concerned shall refer the matter, with all supporting papers, to the director of the division of labor of the United States railroad administration, who will in turn present the case to the railway board of adjustment No. 1, which board shall promptly hear and decide the case, giving due notice to the chief operating officer of the railroad interested and to the chief executive officer of the organization concerned of the time set for hearing.

11. No matter will be considered by the railway board of adjustment No. 1 unless officially referred to it in the manner herein prescribed.

12. In hearings before the railway board of adjustment No. 1, in matters properly submitted for its consideration, the railroad shall be represented by such person or persons as may be designated by the chief operating officer, and the employees shall be represented by such person or persons as may be designated by the chief executive officer of organization concerned.

13. All clerical and office expenses will be paid by the United States railroad administration. The railroad directly concerned and the organization involved in a hearing will respectively assume any expense incurred in presenting a case.

14. In each case an effort should be made to present a joint concrete statement of facts as to any controversies, but the board is fully authorized to require information in addition to the concrete statement of facts, and may call upon the chief operating

officer of the railroad or the chief executive officer of the organization concerned for additional evidence, either oral or written.

15. All decisions of the railway board of adjustment No. 1 shall be approved by a majority vote of all members of the board.

16. After a matter has been considered by the board, and in the event a majority vote can not be obtained, then any four members of the board may elect to refer the matter upon which no decision has been reached to the Director General of Railroads for a final decision.

17. The railway board of adjustment No. 1 shall keep a complete and accurate record of all matters submitted for its consideration and of all decisions made by the board.

18. A report of all cases decided, including the decision, will be filed with the director, division of labor of the United States railroad administration; with the chief operating officer of the railroad affected; the several regional directors; and with the chief executive officers of the organizations concerned.

19. This understanding shall become effective upon its approval by the Director General of Railroads and shall remain in full force and effect during the period of the present war, and thereafter, unless a majority of the regional directors, on the one hand, as representing the railroads, or a majority of the chief executive officers of the organizations, on the other hand, as representing the employees, shall desire to terminate the same, which can, in these circumstances, be done on 30 days' formal notice or shall be terminated by the Director General himself, at his discretion, on 30 days' formal notice.

EMPLOYMENT AND UNEMPLOYMENT.

EMPLOYMENT CONDITIONS IN SHIPYARDS OF THE EMERGENCY FLEET CORPORATION.

AVERAGE DAILY ATTENDANCE, ALL EMPLOYEES.

In an effort to determine, at least approximately, the work-time efficiency of the labor force in the shipyards, a weekly report giving the daily attendance of all employees is required from every ship-building company. This report is made to the Industrial Service Department of the Division of General Service of the Emergency Fleet Corporation.

The average daily attendance for each week is calculated by adding the attendance for all the days of the week, including Sunday, and dividing by six, regardless of whether or not the company has a Sunday shift. The ratio of this average daily attendance to the total number on the pay roll, expressed as a percentage of the pay roll, gives an approximately accurate notion of the steadiness of the working force. These figures are only closely approximate, however, for the reason that an employee may be in attendance on a given day and yet not work the whole day. For one reason or another he may work only a half day or even less. These part days of idleness are not deducted in the following daily attendance tables. On the other hand, however, a great deal of overtime is common in the yards which would tend to effect these parts of days to a considerable extent.

The general averages of daily attendance for the week ending January 5 are adversely affected by the New Year holiday which fell in that week and the same is true, but to a less extent, of the weeks ending February 16 and 23 on account of the inclusion therein of the holidays, not universally observed, falling on February 12 (Lincoln's Birthday) and February 22 (Washington's Birthday).

There is a large variety of causes why daily attendance is irregular. In the winter season unfavorable weather in the northern yards, particularly on the Atlantic coast and Great Lakes, was perhaps, the chief reason. Other prominent causes have been lack of material, poor housing and transportation facilities, maladjustment of wages as between yards in the same district and immediately adjacent districts, etc. Other causes of absences universally operative in all industries include sickness, injuries, and voluntary absences for various other reasons.

In Table 1 the average percentage of the total number on the pay roll in daily attendance is compared for January and February for every district and with distinction of type of construction. The statistics show a quite general improvement (higher percentages) in February as compared with January. For 67 wood-ship building companies combined, the percentage of daily attendance was 84.2 during January and 85.8 during February. For 60 steel-ship building companies combined, the percentage of daily attendance was 78.6 during January and 82.1 during February. For the 127 shipbuilding companies (wood and steel) making reports complete enough to warrant tabulation, the average daily attendance percentage for January was 79.3 and for February 82.5.

For supervisory and general administrative purposes the shipyards of the United States in which vessels (contract and requisitioned) are being built for the Emergency Fleet Corporation are grouped in geographical divisions designated as districts.

District 1. Maine, New Hampshire and Massachusetts.

District 2. Rhode Island, Connecticut, New York, and part of New Jersey and Pennsylvania.

District 3. Delaware, Maryland, and Virginia.

District 4. The Carolinas, Georgia, and part of Florida.

District 5. Southwestern Florida, Alabama, Mississippi, and the southeastern coast of Louisiana.

District 6. Southwestern coast of Louisiana and Texas.

District 7. California and part of Oregon.

District 8. Washington, except along the Columbia River.

District 9. The Great Lakes.

District 10. The yards in and near Philadelphia, including Chester, Pa., and Camden and Gloucester, N. J.

District 11. Parts of Oregon and Washington, mainly along the Columbia River, but including Tillamook and Portland.

Fabricated¹ yards, including the Submarine Boat Corporation, Newark, N. J., the American International Corporation at Hog Island, Philadelphia, and the Merchant Shipbuilding Corporation at Bristol, Pa.

Table 1, showing the average daily attendance as compared with number of all employees on pay rolls of the establishments in the various districts, follows:

¹ By fabricated is meant the method of construction. Standardized parts are fabricated in various auxiliary plants and these are assembled in the fabricating yards. Assembling would more nearly describe the method of construction.

TABLE 1.—AVERAGE DAILY ATTENDANCE IN RELATION TO TOTAL NUMBER ON PAY ROLL (ALL EMPLOYEES), JANUARY AND FEBRUARY, 1918.

District. ¹	Type of construction.	Number of companies reporting.	January.				February.			
			Total number on pay roll.	Average daily attendance.		Total number on pay roll.	Average daily attendance.			
				Number.	Per cent of number on pay roll.		Number.	Per cent of number on pay roll.		
No. 1.....	Wood.....	7	6,698	5,896	88.0	6,222	5,219	83.9		
	Steel.....	3	70,837	46,756	66.0	63,892	42,803	67.0		
	Total....	10	77,535	52,652	67.9	70,114	48,022	68.5		
No. 2.....	Wood.....	7	11,525	9,176	82.4	14,424	11,139	77.2		
	Steel.....	7	40,650	30,754	75.7	41,253	31,081	75.3		
	Total....	14	52,175	39,930	76.5	55,677	42,220	75.8		
No. 3.....	Wood.....	5	5,706	3,500	61.3	5,236	3,696	70.6		
	Steel.....	5	54,452	37,685	69.2	79,318	62,070	78.3		
	Total....	10	60,158	41,185	68.5	84,554	65,766	77.8		
No. 4.....	Wood.....	8	12,832	10,955	85.4	14,703	13,282	90.3		
	Steel.....	2	2,729	2,566	94.0	2,713	2,454	90.5		
	Total....	10	15,561	13,521	86.9	17,416	15,736	90.4		
No. 5.....	Wood.....	6	14,107	10,975	77.6	12,938	10,350	80.0		
	Steel.....	2	2,891	2,389	82.6	3,242	3,018	93.1		
	Total....	8	16,998	13,364	78.6	16,180	13,368	82.6		
No. 6.....	Wood.....	9	20,149	14,914	74.0	19,417	16,086	82.8		
	Steel ²									
	Total....	9	20,149	14,914	74.0	19,417	16,086	82.8		
No. 7.....	Wood.....	4	5,945	5,443	91.6	5,931	5,324	89.8		
	Steel.....	7	117,940	110,124	93.4	107,581	94,894	88.2		
	Total....	11	123,885	115,567	93.3	113,512	100,218	88.3		
No. 8.....	Wood.....	11	18,917	17,049	90.1	19,541	17,449	89.3		
	Steel.....	9	131,133	121,181	92.4	111,279	99,905	89.8		
	Total....	20	150,050	138,230	92.1	130,820	117,354	89.7		
No. 9.....	Wood.....	1	858	698	81.4	604	448	74.2		
	Steel.....	16	69,610	54,467	78.2	70,692	57,947	82.0		
	Total....	17	70,468	55,165	78.3	71,296	58,395	81.9		
No. 10.....	Wood ³									
	Steel.....	6	86,653	69,782	80.5	102,495	88,335	86.2		
	Total....	6	86,653	69,782	80.5	102,495	88,335	86.2		
No. 11.....	Wood.....	9	30,872	28,753	92.7	30,956	28,574	92.3		
	Steel ²									
	Total....	9	30,872	28,753	92.7	30,956	28,574	92.3		
Fabricated yards...	Steel.....	3	226,703	156,114	68.9	164,657	130,537	79.3		
Grand total.....	Wood.....	67	127,609	107,539	84.2	129,972	111,567	85.8		
	Steel.....	60	803,598	631,818	78.6	747,122	613,044	82.1		
	Total....	127	931,207	739,357	79.3	877,094	724,611	82.5		

¹ For designation of districts see p. 184.

² No steel-ship building companies in this district.

³ No wood-ship building companies in this district.

Table 1 requires no further extended comment as the figures are self-explanatory. It is interesting, however, to note that in districts 7, 8, and 11, representing the Pacific coast, the daily attendance percentage was somewhat higher in January than in February. This was also true of the wood-ship building companies in district 1, of all companies combined in district 2, of the steel-ship building companies in district 4, and of the wood-ship building companies in district 9, the Great Lakes district. In the fabricated (steel) yards the great majority of the employees were and still are engaged in yard and plant construction work. The labor force of these companies in January and February was, therefore, more largely of a casual type than was generally true of any district. In these three companies combined, however, there was a notable increase in the average daily attendance percentage, or from 68.9 in January to 79.3 in February.

In Table 2 are presented the weekly percentages of average daily attendance as measured against the total pay roll. The variations have fluctuated for the 127 companies combined from 71.9 per cent of the pay roll for the week ended January 5 to 84.3 per cent for the week ended March 2. It so happens that the aggregates for both the wood-ship building and steel-ship building companies show the most favorable (highest) percentages of total pay roll in daily attendance during the last week of the nine weeks' period under review. This indication of an improvement in attendance is confirmed by the average improvement for the month of February as compared with January and it is borne out also in a general way by the percentages in detail for the eleven districts and for the combined fabricated yards. The Pacific coast, districts 7, 8, and 11, is the notable exception, but the attendance there has been quite good, comparatively, in the winter months, largely because of the more favorable weather conditions there as compared with the Atlantic coast and Great Lakes.

TABLE 2.—AVERAGE DAILY PERCENTAGE OF ATTENDANCE IN RELATION TO NUMBER ON PAY ROLL (ALL EMPLOYEES) FOR EACH WEEK IN JANUARY AND FEBRUARY, 1918.

District. ¹	Type of construction.	Number of companies reporting.	Percentage of attendance for week ending—								
			Jan. 5.	Jan. 12.	Jan. 19.	Jan. 26.	Feb. 2.	Feb. 9.	Feb. 16.	Feb. 23.	Mar. 2.
No. 1.....	Wood.....	7	83.4	83.9	87.4	94.3	89.7	80.4	86.5	85.4	83.0
	Steel.....	3	53.1	69.8	68.6	69.0	68.5	58.8	72.0	65.2	71.6
	Total...	10	55.5	70.5	69.6	71.2	70.4	60.6	73.3	67.0	72.7
No. 2.....	Wood.....	7	60.5	73.3	81.9	88.7	84.5	76.7	77.0	76.1	78.9
	Steel.....	7	54.2	75.9	82.2	80.8	76.9	71.5	75.6	75.3	77.9
	Total...	14	55.7	75.3	82.2	82.6	78.8	72.9	75.9	78.0	78.2
No. 3.....	Wood.....	5	62.4	66.5	66.7	57.5	54.7	53.9	72.4	79.1	75.8
	Steel.....	5	53.8	65.5	78.9	74.4	72.2	76.9	78.5	75.0	82.4
	Total...	10	54.3	65.6	77.5	72.6	70.5	75.6	78.0	75.2	82.0
No. 4.....	Wood.....	8	77.8	89.0	90.3	78.2	89.4	91.7	91.5	87.7	90.7
	Steel.....	2	93.1	98.0	89.8	96.1	93.2	93.3	90.4	88.0	90.3
	Total...	10	81.0	90.6	90.2	81.3	90.0	91.9	91.3	87.8	90.6
No. 5.....	Wood.....	6	79.0	84.4	80.8	75.4	69.8	77.2	81.4	79.2	81.9
	Steel.....	2	77.7	89.7	76.2	79.9	88.5	96.9	91.4	90.5	94.1
	Total...	8	78.8	85.2	80.1	76.2	73.2	80.8	83.4	81.5	84.5
No. 6.....	Wood.....	9	79.1	77.5	64.0	67.7	81.7	81.8	84.0	77.0	90.1
	Steel ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total...	9	79.1	77.5	64.0	67.7	81.7	81.8	84.0	77.0	90.1
No. 7.....	Wood.....	4	79.7	94.8	93.1	94.4	93.4	92.2	90.5	84.7	91.2
	Steel.....	7	86.6	95.8	95.6	92.8	95.4	92.3	93.4	74.3	93.6
	Total...	11	86.4	95.7	95.4	92.9	95.3	92.3	93.3	74.8	93.5
No. 8.....	Wood.....	11	86.4	91.8	89.7	95.1	85.5	92.0	87.7	89.6	88.1
	Steel.....	9	92.6	92.2	94.4	93.0	90.0	90.4	90.8	88.8	89.3
	Total...	20	91.8	92.1	93.8	93.3	89.6	90.7	90.4	88.9	89.1
No. 9.....	Wood.....	1	70.3	78.3	86.9	91.3	80.0	72.7	79.1	57.8	90.9
	Steel.....	16	74.4	74.4	78.9	83.6	78.5	81.5	81.8	79.9	84.8
	Total...	17	74.4	74.5	79.0	83.7	78.5	81.4	81.7	79.8	84.8
No. 10.....	Wood ³.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Steel.....	6	61.4	80.6	83.2	85.2	87.3	83.7	88.5	85.0	87.3
	Total...	6	61.4	80.6	83.2	85.2	87.3	83.7	88.5	85.0	87.3
No. 11.....	Wood.....	9	82.1	94.7	97.5	95.9	92.1	86.6	93.6	95.6	93.0
	Steel ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total...	9	82.1	94.7	97.5	95.9	92.1	86.6	93.6	95.6	93.0
Fabricated yards...	Steel.....	3	66.5	62.5	73.4	69.5	72.5	73.5	81.5	78.4	83.5
Grand total.....	Wood.....	67	78.7	85.9	85.0	84.9	84.6	83.9	86.5	85.2	87.6
	Steel.....	60	70.9	76.7	82.2	79.0	78.5	77.7	82.8	79.6	83.7
	Total...	127	71.9	77.9	82.5	79.9	79.5	78.7	83.5	80.6	84.3

¹ For designation of districts, see p. 184.

² No steel-ship building companies in this district.

³ No wood-ship building companies in this district.

LABOR TURNOVER AMONG SHIPBUILDING EMPLOYEES.

Briefly stated, the method of calculating labor turnover percentage is as follows:

For January, when full reports were available, five weeks have been taken and for February four weeks. To calculate the labor turnover percentage for a five-weeks period, the numbers of shipbuilding employees on the pay roll for each of the five weeks were added and the sum was divided by five to get the average number on the pay roll for January. Similarly, for February the pay-roll figures for four weeks were added and the sum divided by four to get the average number on the pay roll. The average number of shipbuilding employees on the pay roll divided into the number of shipbuilding employees replaced during a given period gives the turnover percentage for the period. To reduce the monthly turnover percentage to a yearly basis for purposes of uniform comparison the monthly percentages are multiplied by the factor 10.4 (that is, 52 divided by 5) when five weeks are included in the month, and by 13 (that is, 52 divided by 4) when four weeks are included in the month.

On an increasing pay roll, the number of men replaced would be represented by the number lost from the pay roll; on a decreasing pay roll, the number of men replaced would be represented by the total number hired during the period under observation.

This is the method that has been followed in the preparation of Table 3, which shows the comparative turnover percentages of shipbuilding employees for 116 companies summarized by districts and with distinction of wood and steel types of construction.

Considering the grand totals, the 63 wood-ship building companies combined show a turnover percentage for shipbuilding employees, yearly basis, of 178 in January and 177 in February—practically the same for both months. The 53 steel-ship building companies combined show a labor turnover percentage of shipbuilding employees of 202 in January, on a yearly basis, as against 207 in February. In other words, the turnover was somewhat lower for the wood-ship builders than for the steel-ship builders and in neither case was there much change in February as compared with January when only the aggregate totals are considered.

The table in detail shows many variations. In January the turnover percentage varied from 68 for the two small steel-ship building companies in the fourth district to 287 for the three fabricated yards combined and 257 for the 6 wood-type yards combined in the fifth district. In February the variations in the turnover percentages were of equally wide range. When the analysis is carried further and the turnover percentages are calculated for the several companies individually the differences and variations are still more striking and are of wider range.

TABLE 3.—YEARLY LABOR TURNOVER FOR SHIPBUILDING EMPLOYEES, BASED ON JANUARY AND ON FEBRUARY, 1918.

District. 1	Type of construction.	Number of companies reporting.	January.			February.		
			Average number on pay roll.	Number replaced.	Per cent of turnover (yearly basis).	Average number on pay roll.	Number replaced.	Per cent of turnover (yearly basis).
No. 1.....	Wood.....	8	1,534	374	254	1,243	155	163
	Steel.....	3	13,126	1,709	135	14,732	1,655	146
	Total...	11	14,660	2,083	148	15,975	1,810	147
No. 2.....	Wood.....	5	1,138	172	157	2,712	505	242
	Steel.....	4	6,210	2,116	355	7,153	1,241	225
	Total...	9	7,348	2,288	323	9,865	1,746	229
No. 3.....	Wood.....	5	769	142	192	873	128	191
	Steel.....	6	17,626	3,209	189	21,029	2,893	180
	Total....	11	18,395	3,351	189	21,902	3,021	180
No. 4.....	Wood.....	6	1,841	173	98	2,642	208	103
	Steel.....	2	511	33	68	556	41	96
	Total....	8	2,352	206	92	3,198	249	101
No. 5.....	Wood.....	6	1,588	393	257	2,301	419	241
	Steel.....	2	356	31	90	419	76	235
	Total...	8	1,944	424	227	2,720	495	237
No. 6.....	Wood.....	9	3,433	760	230	4,615	810	229
	Steel ²							
	Total....	9	3,433	760	230	4,615	810	229
No. 7.....	Wood.....	4	1,016	151	155	1,351	184	177
	Steel.....	7	19,154	4,490	243	23,035	5,442	307
	Total....	11	20,170	4,641	239	24,386	5,626	300
No. 8.....	Wood.....	8	2,873	517	187	3,433	603	228
	Steel.....	7	25,078	4,336	180	29,280	4,047	179
	Total...	15	27,951	4,853	181	32,713	4,650	185
No. 9.....	Wood.....	1	171	19	115	151	4	34
	Steel.....	14	12,734	2,620	214	13,782	2,097	198
	Total....	15	12,905	2,639	212	13,913	2,101	196
No. 10.....	Wood ³							
	Steel.....	5	12,943	2,214	178	14,231	2,188	200
	Total...	5	12,943	2,214	178	14,231	2,188	200
No. 11.....	Wood.....	11	6,275	842	139	7,552	618	107
	Steel ²							
	Total...	11	6,275	842	139	7,552	618	107
Fabricated yards ..	Steel.....	3	1,202	332	287	1,898	300	205
Grand total.....	Wood.....	63	20,638	3,543	178	26,673	3,634	177
	Steel.....	53	108,940	21,090	202	126,095	19,980	207
	Total....	116	129,578	24,633	198	152,768	23,614	202

¹ For designation of districts, see p. 184.

² No steel-ship building companies in this district.

³ No wood-ship building companies in this district.

A large labor turnover always represents heavy economic loss, through reduction of efficiency, loss of work-time, other expense and waste involved in the replacement of men, and the consequent

slowing down of production. Like daily attendance, labor turnover is due to many causes most of which operate more intensively on casual than upon skilled labor. A high labor turnover, however, among skilled workmen entails heavier losses upon production, than an equal turnover among the unskilled and, perhaps, almost in direct proportion to the relative skill of the labor. It is important, therefore, that the turnover of shipbuilding employees be reduced to the lowest percentage possible and that every effort be made by employers, employees, and governmental agencies to bring this about.

During the recent winter a large part of the labor turnover, particularly on the Atlantic coast and Great Lakes, was due to the severe weather conditions which, in many instances, made it impossible for men to work in the open on building operations. Lack of proper and adequate housing and transportation facilities in many of the shipbuilding centers has also contributed largely to bring about the relatively high labor turnover still existent in several of the shipbuilding yards. Maladjustment of wages, too, has in several instances favored the so-called "scamping" of labor. This latter factor has induced a comparatively large number of men to quit work in one yard and move to another to accept higher wages. It has also affected daily attendance by encouraging certain of the men to take a day or two off to seek a job elsewhere at higher wages or under alleged or supposedly better conditions in other respects, such as hours of work, better work and living conditions, etc. Fortunately, the Labor Adjustment Board has recently handed down its decision in reference to wages, hours of labor, and certain other conditions, making these uniform and standardized, so far as possible, for the North Atlantic and Gulf coasts.¹

The necessary dilution of shipbuilding labor has operated also to some extent to increase the labor turnover. This has inevitably resulted in the recruiting of a considerable proportion of untrained, inefficient, and discontented laborers. One of the promising remedies for this temporary condition is the instruction and training of the "green" labor in the yards. This training work is rapidly improving as more and more of the experienced foremen are taught just how best to impart the necessary instruction to the men under their supervision. The schools located at Newport News and at Philadelphia aim to do just this. The recently opened six weeks' intensive course in employment management at the University of Rochester is designed to give special training in scientific employment methods to carefully selected men so that the employment departments of factories and plants, including shipyards, engaged on Government war contracts may be able to deal more efficiently with

¹ See pp. 130 to 142.

all the problems with which such departments are confronted. One of the primary aims is to teach employment managers how to select men and assign them to the jobs for which they are best fitted. The more thoroughly employment managers are trained in this direction, the less likely that labor turnover will be traceable to improper and unintelligent methods of employment. A similar course is planned for Harvard and other universities. All of these really constructive efforts to improve the efficiency and contentment of labor operate also to reduce labor turnover.

The local housing and transportation difficulties are being solved as rapidly as is humanly possible in view of the size of the problems involved. There is good reason to hope that in a very few months most of these particular handicaps will be removed.

Not a small part of the labor turnover during the winter months was due to lack of material in the yards for men to fabricate into ships. The shortage of material was in some instances so serious and the delays in delivery so long that employees were let go and had to be replaced when the material finally arrived. This lack of material was in turn often due to a variety of reasons, the principal one being the unusually severe weather conditions, coal shortage, and the badly handicapped railway facilities. These obstacles have now been either entirely removed or the earlier conditions have recently been greatly improved.

In conclusion it may be said that the labor force in the American shipyards, as measured by percentages of average daily attendance and turnover, is certain to become increasingly powerful, efficient, and productive. The constructive program for bringing this about is well under way and there is every reason to believe that in this crisis American labor will do its full and big part and will see to it that the "bridge of ships" is speedily built and kept in good repair.

HOW THE UNITED STATES EMPLOYMENT SERVICE IS MOBILIZING WORKERS.

BY C. F. STODDARD.

Getting the job and the man together is the chief function of the United States Employment Service, recently established in the Department of Labor under the direction of John B. Densmore, formerly solicitor of the department, as director general. State, municipal, and county employment offices have been operated in many States during recent years to take care of demands more or less local, but in the present war emergency, when industries are calling for more labor than can be supplied locally, it is imperative that employment activities on a huge scale should be brought under one coordinating authority in order that the needs of industry may be adequately

served and the prosecution of the War forwarded with all possible speed and efficiency. To work in harmony with existing agencies in the various States and to exercise directing authority, as well as to afford a medium through which all demands for labor and requests for positions may be cleared, is the purpose for which the United States Employment Service was organized.¹

Under its mobilizing and distributing plan the State services are becoming component parts of a national system of labor exchanges, known as the Federal Employment Service under the central supervision of the Department of Labor, but State services joining the federated system do not lose their identity. In the States thus co-operating, employment directors, subject to general supervision by the Director General, through the district superintendents, have been appointed, being generally designated upon recommendation of the council of national defense of each State and after approval by organized capital and labor. In many States the operations of the combined State and United States employment services are directed by a Federal director of employment, appointed by the Department of Labor, with an assistant in management known as the associate director of employment, who is also designated upon the recommendation of the council of national defense of the State. The Federal employment directors in each State, so far as appointed April 30, are as follows:

FEDERAL STATE DIRECTORS OF EMPLOYMENT.

State.	Name.	Address.
Alabama	Geo. N. Terrant	Birmingham.
Arizona	Thomas J. Croaff	Phoenix.
Arkansas	R. R. Keating	Little Rock.
Colorado	Ready Kenchan	Denver.
Connecticut	C. E. Davenport	Hartford.
Delaware	A. G. Bankhart	Wilmington.
Georgia	H. M. Stanley	Atlanta.
Idaho	M. J. Kerr	St. Anthony.
Illinois	Mark L. Crawford	Chicago.
Indiana	W. C. DeMiller	Indianapolis.
Iowa	H. J. Metcalf	Des Moines.
Kentucky	F. L. MeVey	Lexington.
Maine	Chas. S. Hichborn	Augusta.
Maryland	John K. Shaw	Baltimore
Massachusetts	W. A. Gaston	Boston.
Michigan	Jas. T. Lynn	Detroit.
Missouri	W. W. Brown	Jefferson City.
Montana	Scott Leavitt	Great Falls.
Nebraska	Robert Cowell	Omaha.
New Hampshire	E. K. Sawyer	Franklin.
New Jersey	L. T. Bryant	Trenton.
New Mexico	Alvin N. White	Silver City.
New York	P. A. Donohue	New York.
North Dakota	Lindley H. Patten	Bismarck.
Ohio	F. C. Croxton	Columbus.
Oklahoma	C. E. Connally	Oklahoma.
South Carolina	H. L. Tilghman	Columbia.
Tennessee	J. T. Ware	Memphis.
Texas	H. W. Lewis	Smithville.
Utah	P. L. Moran	Salt Lake City.
Virginia	J. B. Doherty	Richmond.
West Virginia	L. B. Spaul	Charleston.
Wisconsin	Eswald Pettet	Madison.

¹ An account of the organization, including the personnel, of the service was given in the MONTHLY REVIEW for March, 1918, pp. 76 to 78.

Branch offices, each in charge of an employment agent, called an examiner in charge, are being established in each State, the number on April 30 being about 300. Through an extensive field service each community is kept in constant touch with the chief office of the Employment Service in the centers of population. Daily and weekly reports from the field, noted hereafter, keep the main office at Washington in intimate authoritative touch with the labor situation in each locality.

In addition to the Federal directors already mentioned, Government supervision is further accomplished by a division of the country into 13 employment districts, each in charge of a district employment superintendent. Primarily the purpose of this plan is to permit the more rapid and wholesale transfers of surplus labor from one section to another that has a shortage. Each district office receives reports from all the public employment offices within the district, keeps in intimate touch with employment conditions, supervises the work of State directors of employment in the States comprising the district, and supervises and carries on the fiscal operations of the service. Clearances of labor between local offices within a State are conducted through the State office, in which the State employment director makes his headquarters, and clearances between States within a district are under the supervision of the district office. Clearances between districts are made through the main office at Washington, where a clearance section has been established under the direction of I. W. Litchfield, of Boston, associate director of the Public Service Reserve. The 13 districts and the superintendents who had been designated at April 30 are as follows:

District 1.—Maine, New Hampshire, Vermont, Massachusetts, and Rhode Island. H. A. Stevens, Boston.

District 2.—New York, Connecticut, and New Jersey. John R. O'Leary, New York.

District 3.—Pennsylvania and Delaware. John C. Saylor, Wilmington, Del.

District 4.—Ohio and West Virginia. James A. Reynolds, Cleveland.

District 5.—Maryland, Virginia, District of Columbia, North Carolina, and South Carolina. Ralph Izard, Richmond, Va.

District 6.—Georgia, Florida, Alabama, Mississippi, and Louisiana. Cliff Williams, Birmingham, Ala.

District 7.—Indiana, Illinois, Michigan, Wisconsin, and Iowa. P. L. Prentiss, Chicago.

District 8.—Kentucky, Tennessee, Missouri, and Arkansas. C. C. Cavanaugh, Little Rock, Ark.

District 9.—Minnesota, North Dakota, South Dakota, and Montana.

District 10.—Nebraska, Kansas, Oklahoma, Colorado, and Wyoming. A. L. Barkman, Kansas City, Kans.

District 11.—Texas and New Mexico. H. A. Lewis, Smithfield, Tex.

District 12.—Arizona, Utah, Nevada, and California. William T. Boyce, San Francisco.

District 13.—Washington, Oregon, and Idaho. Henry White, Seattle.

FORMS AND RECORDS USED.

During the fiscal year 1916-17 the United States Employment Service directed approximately 458,000 persons to employment, and it is now directing an average of 100,000 persons monthly. More than 30,000 employers are now calling upon the Employment Service each month. The War Department and the United States Shipping Board are utilizing the Employment Service in furnishing labor to industries in which they are directly interested.

When applications for work or requests for workers are received, the local agent notes on cards prepared for filing the information necessary to enable him to render the expected service. From the employer he obtains data indicated by the following card, on the reverse side of which he keeps a record of the help sent, under the captions "Persons sent," "Nationality," "Date sent," and "Result":

DEPARTMENT OF LABOR
U. S. EMPLOYMENT SERVICE

EMPLOYER'S ORDER

NUMBER.....

Name		Date	
Address		Telephone No.	
Occupation (State exact nature of work to be done.)		Number wanted	
Wages	Hours	Probable duration of work	
Nationality	Sex	Age limit	Color Married or single
Apply to			
Any strike or lockout existing or threatened?			

The prospective employee furnishes data which is placed on the following card, on the reverse side of which is a space for a record of the positions offered, including the name of the employer, occupation to which sent, date sent, and the result:

Name			Telephone No.	Date
Address			Willing to work out of town?	
Occupation		Wages wanted	Number of dependents	
Also willing to work as—		Wages wanted	Married Single Widowed	Speak English Read English Write English
Age	Race	Birthplace	Citizen of U. S.	How long in U. S.?
Last three employers		Address	Kind of work	Renewals
Remarks:				

DEPARTMENT OF LABOR
U. S. EMPLOYMENT SERVICE
APPLICATION FOR WORK—Males

Each applicant is handed a card of introduction to his prospective employer, the bottom half of this card to be filled in by the employer and returned to the agency sending the worker. The card, in the form of a post card for mailing without postage, is as follows:

THIS CARD TO BE PRESENTED TO EMPLOYER

(No postage required.)

..... Employment Office.
....., 191

To

This will introduce as an applicant
for the position of at
(Wages.)

Transportation to be paid by {Employer } Deducted from wages Directed by
{Employee } Refunded

EMPLOYER, PLEASE FILL OUT SPACE BELOW AND RETURN CARD BY MAIL.

I have hired for the
position of and he went to work....., 191

Name of employer
Address

THE UNITED STATES PUBLIC SERVICE RESERVE.

An important division of the United States Employment Service is the Public Service Reserve¹ organized in every State and county for the purpose of enrolling and classifying the man power of the Nation that is not engaged in military service and is adapted to war industrial work. It enrolls and registers men in every line of pro-

¹ An account of the work of the United States Public Service Reserve was given in the MONTHLY REVIEW for September, 1917, pp. 77 to 79.

fessional and industrial activity who might be called upon in some branch of war work. Between 16,000 and 18,000 technical men have been enrolled. Several thousand lawyers have been registered for war work. The reserve is indorsed by the American Federation of Labor and a large proportion of the national unions have expressed individual approval. It has supplied men of unusual qualifications to manufacturers with war contracts and has furnished men for nearly every Government department, bureau, and war committee. It has directed special workers to the Navy Department, the United States Shipping Board, the Ordnance Office, and other War Department divisions, for aircraft production, and other work. Public Service Reserve directors have been appointed in each State, the names and addresses of these directors appearing on pages 204 and 205.

SHIPYARD WORKERS SUPPLIED.

The United States Public Service Reserve has enrolled more than 265,000 shipyard volunteers, and from this supply will be drawn, through the Employment Service offices, workers to fill special requirements after the needs of the yards have exhausted the applicants for shipbuilding employment at the various branches of the Employment Service. Shipbuilders generally have been notified by the Employment Service that it is prepared to fill all their labor needs, and they have been requested to obtain their workers exclusively through the service. Many have agreed to do so. Compliance by the yards with this request and the cessation of their independent efforts to recruit labor will mean the elimination of the present general confusion in industry caused by the unintentional "stealing" of men by one yard from another, the unnecessary and premature withdrawal of workers from other industries, and the piling up of idle labor in the shipbuilding centers. It is imperative that employers make their calls specific, noting the particular positions for which men are needed, in order that requirements may be filled from among men who apply at Employment Service offices, the purpose being to delay as long as possible the necessity of drawing upon the Public Service Reserve's list of shipyard volunteers. The form of blank which shipyard employers are requested to file with the Employment Service is shown on page 202.

EMPLOYMENT SERVICE SUPPLIES FARM LABOR.

Hardly less important than the construction of ships is the production of food. The ranks of available experienced farm labor have been thinned by the call of the selective draft and farmers have wondered from what source they could draw to assist them in cultivating and harvesting the crops so much needed in the present crisis

This has afforded opportunity for the United States Employment Service to demonstrate again its effectiveness in mobilizing labor and distributing it where needed. The Public Service Reserve, in an intensive campaign, is enrolling men for war emergency farm service—men who are ready to give from one to two days a week to work on farms in their neighborhood, or a month or more wherever they might be needed. The purpose of this is to supplement the numbers who may be able to give all of their time during the farming season, and the enrollment will be drawn upon only as needed to meet the demand. In order to avoid duplication of effort the reserve directors are consulting with their respective State farm-help specialists, and local reserve agents are cooperating with the 2,300 county agricultural agents and seeking their expert advice. The State directors, through each local agent, are also investigating the agricultural housing problem to ascertain whether the farmers have adequate housing facilities and proper living conditions for the labor they are needing.

In addition to the farm workers thus enrolled the United States Boys' Working Reserve¹ has mobilized about 250,000 boys between the ages of 16 and 21 for work on farms this summer. Over 150,000 boys were thus utilized last year, and as a result of favorable experience many farmers have indicated that they will accept boy workers this year. In some States the boys were released early from school, and the New York State Food Commission appropriated \$50,000 to further the boy-on-the-farm movement in that State. Pennsylvania has also appropriated \$50,000 and Connecticut \$25,000 for the same purpose. Approximately 15,000 farmers in one State (Indiana) have requested boys to help them this season. Maine, which last year employed 700 boys, this year will use many times that number.

As an initial step in the efforts of the Employment Service to be of greatest possible help to farmers, arrangements were made early in March with the Post Office Department to designate every third and fourth class postmaster and every rural carrier, approximately 98,000 in number at 55,000 offices, as farm-labor agents for the United States Employment Service. In this way every farming community has been given the advantage of employment service under Federal supervision, and through these agents the farmers have been made acquainted with the opportunities thus afforded of getting such help as they may need during the coming season. It is recognized that the success of this scheme depends largely upon the farmer himself, who must notify the local postmaster of his requirements in time, and be definite as to wages, character of work to be

¹ An account of the organization of the United States Boys' Working Reserve was given in the MONTHLY REVIEW for June, 1917, pp. 991-993. For list of State directors, corrected to Apr. 29, 1918, see p. 204.

performed, length of employment, and living conditions. The United States Employment Service and its cooperating State services are adequately equipped to give him assistance, but they can not supply labor until his needs are known.

Every farmer desiring to make application for farm help is requested to fill in the following blank which he may obtain from the local postmaster or the rural carrier by whom he is served:

FOR USE IN MAKING APPLICATION FOR FARM HELP

U. S. DEPARTMENT OF LABOR.
U. S. EMPLOYMENT SERVICE.
WASHINGTON.

READ CAREFULLY NOTATIONS ON BACK HEREOF BEFORE FILLING THIS BLANK.

Write name and address plainly.

- Date,
Post office,
1. Employer:
(Name.) County of State of
Telegraph office, Railroad station,
2. References:
3. Number of men you wish to hire:
4. (a) Nature of duties:
(State whether truck farm, stock farm, or dairy.)
(b) State number of cows each man must milk:
5. (a) Nationalities acceptable:
(State whether or not knowledge of English is necessary.)
(b) Will English-speaking men of any other nationality be acceptable?
6. (c) Do you desire experienced help or "green hands"?
7. (a) Married or single men preferred:
- (b) Do you require that married men be accompanied by wives?
- (c) Will children be objectionable?
8. (a) Will you advance transportation from points within the United States?
- (b) If so, will amount be deducted later from employee's wages?
- (c) Will you refund the money so deducted after a period of service, and, if so, under what conditions?
8. (a) What money wage } green hand? \$..... \$..... per month;
you pay mar- } (Winter.) (Summer.)
ried man..... } experienced hand? \$..... \$..... per month;
and will house (furnished or unfurnished), garden patch, fuel, milk, etc.,
be provided free in addition to wages?
- (b) Would services of wife be required, and if so, her duties and compensation therefor?
- (c) What wages will } green hand? \$..... \$..... per month;
you pay single } (Winter.) (Summer.)
man..... } experienced hand? \$..... \$..... per month;
and will board, lodging, washing, etc., be furnished free in addition to wages?
- (Yes or no.)
(d) Winter pay to Summer pay to
- (Date.) (Date.) (Date.) (Date.)

[Reverse side.]

9. When will services of this help be required?.....
(State day and month when you desire help to arrive.)
10. Hours of labor:
11. Will employment be permanent?.....
12. Size of farm or place, Under cultivation, No. of men on place,
(Acres.) (Acres.)
13. Do you employ extra hands for any part of the year; if so, how many; for what kind of work; at what pay; when, and for how long a period of time?
14. Remarks:

It is agreed that the undersigned will keep the Service informed as to need of men applied for above, and advise by telegraph (at employer's expense) in case said help is secured through other sources; this in order that men may not be directed and find position filled upon arrival.

[Sign here.]

(NOTE.—Additional sheets may be used if necessary.)

READ CAREFULLY BEFORE FILLING OUT BLANK.

N. B.—The party filling out this blank may return same to the postmaster or transmit same through the rural mail carrier or through the officer in charge of any branch post office, whereupon it will be forwarded to destination free of charge for postage. If transmitted otherwise the usual postage will be required.

In addition to answering carefully all the questions on this blank, your especial attention is called to the following:

QUESTION 4. NATURE OF DUTIES.—Define whether a “farmer” or a “farm laborer” is wanted. A “farmer” will be understood to mean one who is competent to take charge of and operate a farm without supervision. A “farm laborer” will be understood to mean one who has had some experience, but is to work under the immediate direction and supervision of the employer. If a “green hand” (one who has had no experience at farm work, but willing to learn) will be accepted as a farm laborer, it should be so stated. Also make it clear whether you operate a “dairy farm,” “stock farm,” “truck farm,” etc. If immigrant help is acceptable, so state. “Experienced” are those with experience in native land, or in the United States; “green,” those with no farming experience.

QUESTION 5. NATIONALITIES PREFERRED.—As much scope as possible should be allowed in the matter of nationalities which would be acceptable to you. Always state whether or not a knowledge of English is necessary.

QUESTION 6. MARRIED OR SINGLE MEN PREFERRED.—If your preference be for a man and wife, state whether or not a single man will answer, provided we are unable to supply the married couples. This is asked because at times there is a scarcity of the latter.

QUESTION 7. WILL YOU ADVANCE TRANSPORTATION FROM POINTS WITHIN UNITED STATES?—The necessity for this question is due to the fact that many good men apply at our branch offices who would willingly go to distant points, but are unable to do so without aid from the prospective employer. Such advance would, of course, be made through a representative of this division, who would see that the employee was properly ticketed and then mail his baggage check direct to the employer interested, which would serve somewhat as a precaution against an employee going astray.

It must be distinctly understood, however, that the responsibility of the service and its representative ends when the said employee has been placed upon the train or boat. No guaranty is given or implied that he will actually arrive at his destination. (See circular on this subject.)

QUESTION 8. WAGES.—This question must not be left unanswered, because of the fact that an employee wants to know as to the wages he is to receive before accepting an offer, and this point should be definitely stated. If wages are stated at so much per day, it should be made clear whether employee is paid for every day in the month or only for such days as work can be performed. Also approximate pay received per week or month in such case.

All communications relative hereto should be addressed:

U. S. EMPLOYMENT SERVICE,
DEPARTMENT OF LABOR,
WASHINGTON, D. C.

This service is public and no charge is made to employer or employee.

For the information of the local office, this and other information is recorded on the following card which is kept on file, the reverse side of the card being provided with space for noting help sent, showing the name of the applicant, his address, the date sent, and the result:

APPLICATION FOR FARM HELP

U. S. DEPT. OF LABOR
U. S. EMPLOYMENT SERVICE

Name of farmer		Date			
P. O. address		Telephone exchange and number			
Kind of farm (general, stock, dairy, fruit, or truck)		County		Age limit of help wanted	
Experienced men, with families	Number wanted	Kind of work	Date wanted	Length of time wanted	Probable wages
Inexperienced single men					
Experienced older boys					
Inexperienced female workers					
Experienced day workers					
If you can use colored help, give number ; if foreigners, give number and nationality preferred					
Colored		Foreigners			
Number of "help wanted" required to milk			Number of cows milked		
State what is furnished (board, house, garden, etc.)					
For single help					
For married help					
Full directions for reaching farm from nearest city, town, or village					
Transportation expense					

The postmaster or rural carrier is also prepared to assist the farm worker in obtaining employment by furnishing him with the following blank to be filled in and filed with the postmaster:

FARM WORKERS' APPLICATION FOR EMPLOYMENT

U. S. DEPARTMENT OF LABOR
U. S. EMPLOYMENT SERVICE
WASHINGTON

Date.....
 Name..... Post Office.....
 Age..... Height..... Weight..... Race.....
 Where born (name of country).....
 If of FOREIGN BIRTH, how many years have you been in the United States?
 Are you a citizen of the United States?.....
 If married, name of wife and children.....
 Will family accompany you?..... If so, is wife able and willing to accept employment as domestic?.....
 ("Yes" or "No.")

What languages do you speak?.....
 Name and address of last employer.....
 Cause of loss of position.....
 How long employed by last employer.....
 If now employed, state reason for desiring change.....
 In what States will you accept employment?.....
 Wages expected.....
 Are you strong and robust.....
 ("Yes" or "No.")
 State kind of farming you have done, where service was performed, and whether or
 not you can milk.
 (Sign here).....

Supplementing the scheme just outlined, the Secretary of Labor on March 18, 1918, addressed a letter to the editors of 736 daily newspapers in cities of over 20,000 population, many of which have no public employment office, asking each to establish a cooperative farm-labor agency under the Federal Employment Service, to designate a member of his staff as labor agent, to agree to give publicity to local farm-labor demands, and to report weekly to the United States Employment Service. Compliance with this call for patriotic service by 84 newspapers¹ indicates an early completion of a chain of regular and war-emergency farm-labor employment offices covering the entire country. The regular branches of the United States Employment Service, cooperating State and municipal employment offices, subagencies connected with chambers of commerce and boards of trade, and newspapers are serving the cities and larger towns, while the third and fourth class postmasters and the rural carriers and county agents and farm-help specialists of the Department of Agriculture are covering the smaller towns, villages, and rural districts.

REPORTS REQUIRED BY THE EMPLOYMENT SERVICE.

The United States Public Service Reserve is making a month-to-month survey of actual labor conditions in the war industries in order that the full strength of American labor may be applied to war purposes. These monthly labor-status reports keep the Employment Service informed as to the extent to which each manufacturer of war material is doing war work, his present and anticipated labor needs, expected releases of labor, and housing conditions. Immediately upon receipt of a report showing shortage or future needs of labor, the Employment Service office nearest the plant reporting is sent a statement, indicating in detail the number of men and women workers required. The Employment Service utilizes all the available unemployed labor to fill the plant's requirements, and where necessary members of the Public Service Reserve are transferred to the more essential industries. By this means shortages of labor in war plants are kept at a minimum. These reports act as a labor barom-

¹ Up to April 23 this number of papers had replied favorably to the Secretary's letter. The Daily News of Geneva, N. Y., was the first newspaper to reply and has accordingly been given serial No. 1.

eter, enabling the Department of Labor not only to prevent a serious shortage of labor in an essential industry, but also to meet promptly the new demands for labor which follow the rapid expansion of production. The following blank is used in this connection:

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

Please send two copies of this request every Thursday to U. S. Employment Service, Washington, D. C., and a third copy to U. S. Employment Service at

....., 1918.

..... Firm.
 Office address.
 Yard address.
 (Give street, number, city, and State.)

Any strike in progress or pending?

What are conditions as to housing in vicinity of your plant?
 Rent, houses of _____ rooms, per month, \$_____ to \$_____.
 Board and room from \$_____ to \$_____ per week.
 Board only..... to _____ per week.
 Double rooms..... to _____ per week.
 Single rooms..... to _____ per week.

WORKING HOURS: hours per day, per week. Plant now running
 hours per day, hours per week, hours on Saturday.

OVERTIME: Time beyond hours paid for at rate of

PIECEWORK: If any workmen paid on piecework rates, state result compared with
 hour rates in their pay envelopes

NIGHT RATES: hours worked; pay figured as hours, computing night
 rates in.

Number of employees on pay roll on day of report Number quit or laid off
 during week Number hired during week

Will you release any considerable number of employees soon? How many?
 When?

Occupation. (Specify kind of work.)	Men needed.		Rates of pay.				
	Now.	Later.	Day.		Night.		
		When.	No.	Hour.	Week.	Hour.	Week.

The Employment Service is also requiring each branch office to report daily on local employment conditions in specified trades. Weekly reports are also filed by each branch office, these reports noting the number and character of applications for workers and for jobs, the number directed to employment, and the number actually placed. The blank used is as follows:

WEEKLY REPORT

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

Week ending....., 19.... Office at.....

Make out 4 copies at close of business each Saturday; send 1 copy to field director, Washington; 1 to district officer; 1 to State director; 1, file.

Occupation.		Orders.		Applica- tions.	Sent.	Reported placed.
General.	Specific.	Number.	Workers wanted.			
	Total					

REPORT ALL LABOR EXCEPT FARM LABOR ON THIS BLANK.

Other reports required to be filed daily are sent on the following blanks:

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

REPORT OF APPLICANTS NOT PLACED AND WILLING TO LEAVE THE CITY.

City.....

Date..... Superintendent.....

Name of ap- plicant.	Principal occu- pation.	Other expe- rience.	Single, mar- ried, or wid- owed.	Age.	Sex.	Color.	Mini- mum wage de- manded.	Do you recom- mend appli- cant?	Limit appli- cant can pay for trans- porta- tion.

U. S. DEPARTMENT OF LABOR

U. S. EMPLOYMENT SERVICE

REPORT OF ORDERS FOR HELP UNFILLED AND IMPOSSIBLE TO FILL LOCALLY

City.....

Date..... Superintendent.....

Kind of work.	Num- ber wanted.	Probable wages.	Hours.	Sex.	Color.	Age limit.	Dura- tion of job.	Latest date for filling order.	Amount em- ployer will pro- vide for trans- porta- tion.	Probable cost of board.

PLACEMENT OF WOMEN ON THE FARMS.

The women's division of the United States Employment Service, together with the Department of Agriculture and the women's committee of the Council of National Defense, is engaged in working out the question of supplying women for farm work during the war emergency. The Department of Agriculture is ascertaining through its 2,300 county agents in what State and for what work farmers want women, and is securing through its extension service a list of women who might be available as leaders if training camps for women farm helpers were established. The Employment Service, through its women's division and with the aid of the farm-labor division, is registering women for farm work and will place them on farms. The women's committee of the Council of National Defense is taking up the question of training camps for women, the necessary educational and "recruiting" propaganda, and welfare work for women on farms.

The women's division of the Employment Service is receiving weekly reports from the branch offices by which it is informed of the demands for women in various lines of employment in all parts of the country. Reports from the county agents of the Department of Agriculture indicate that a number of States will experiment with woman labor this year on farms, but no general movement to put women on farms is contemplated for the present at least, as farmers will first use the men and boys available.

FEDERAL STATE DIRECTORS OF THE PUBLIC SERVICE RESERVE AND THE BOYS' WORKING RESERVE.

The following is a list of the directors of the United States Public Service Reserve and the United States Boys' Working Reserve, together with their addresses, corrected to April 20, 1918:

FEDERAL STATE DIRECTORS OF THE UNITED STATES PUBLIC SERVICE RESERVE AND OF THE UNITED STATES BOYS' WORKING RESERVE.

State.	Public Service Reserve.		Boys' Working Reserve.	
	Name.	Address.	Name.	Address.
Alabama.....	Ray Rushton.....	Montgomery..	W. Nash Read.....	Montgomery.
Alaska.....	R. E. Robertson.....	Juneau.....		
Arizona.....	Thomas J. Croaff.....	Phoenix.....	Lindley B. Orme.....	Phoenix.
Arkansas.....	W. G. Sprague.....	Little Rock.....	W. J. Jernigan.....	Little Rock.
California.....	Arthur P. Will.....	Sacramento.....	B. H. Crocheron.....	Berkeley.
Colorado.....	Wm. N. W. Blayney.....	Denver.....	Joseph S. Jaffa.....	Denver.
Connecticut.....	Leo A. Korper.....	Hartford.....	Chas. L. Kirschner.....	New Haven.
Delaware.....	Charles Warner.....	Wilmington.....	Joseph Armstrong.....	Wilmington.
District of Columbia.	(1)	(1)	Robt. C. Howard.....	Washington.
Florida.....	Robert Gamble.....	Jacksonville.....	W. F. McCanless.....	Jacksonville.
Georgia.....	James D. Weaver.....	Dawson.....	Joseph T. Derry.....	Atlanta.
Hawaii.....			W. R. Farrington.....	Honolulu.
Idaho.....	O. G. B. Markhus.....	Boise.....	Harvey Allred.....	Boise.
Illinois.....	Chas. A. Munroe.....	Chicago.....	B. D. Butler.....	Chicago.
Indiana.....	N. E. Squibb.....	Indianapolis.....	Isaac D. Straus.....	Indianapolis.
Iowa.....	H. J. Metcalf.....	Des Moines.....	R. K. Bliss.....	Ames.
Kansas.....	A. A. Knapp.....	Topeka.....	W. L. Porter.....	Topeka.
Kentucky.....	F. L. McVey.....	Lexington.....	Philo C. Dix.....	Louisville.
Louisiana.....	F. A. Crippen.....	New Orleans.....	F. A. Crippen.....	New Orleans.

¹ No director appointed; the work is supervised by the central office of the Reserve at Washington.

FEDERAL STATE DIRECTORS OF THE UNITED STATES PUBLIC SERVICE RESERVE AND OF THE UNITED STATES BOYS' WORKING RESERVE—Concluded.

State.	Public Service Reserve.		Boys' Working Reserve.	
	Name.	Address.	Name.	Address.
Maine.....	C. S. Hichborn.....	Augusta.....	J. C. Smith.....	Augusta.
Maryland.....	John K. Shaw.....	Baltimore.....	John Redwood.....	Baltimore.
Massachusetts.....	Wm. A. Gaston.....	Boston.....	Stephen R. Dow.....	Boston.
Michigan.....	James T. Lynn.....	Detroit.....	C. A. Parcels.....	Detroit.
Minnesota.....	D. R. Cotton.....	St. Paul.....	D. D. Lescohier.....	Minneapolis.
Mississippi.....	S. J. Owen.....	New Albany.....	W. C. Trotter.....	Winona.
Missouri.....	C. C. Carson.....	Jefferson City.....	U. W. Lamkin.....	Jefferson City.
Montana.....	Scott Leavitt.....	Great Falls.....	L. R. Foote.....	Helena.
Nebraska.....	G. E. Norman.....	Lincoln.....	L. W. Trester.....	Omaha.
Nevada.....	C. X. Knight.....	Reno.....	Brewster Adams.....	Reno.
New Hampshire.....	C. E. Carr.....	Concord.....	G. H. Whitcher.....	Concord.
New Jersey.....	L. T. Bryant.....	Trenton.....	W. A. O'Leary.....	Trenton.
New Mexico.....	J. H. Wagner.....	Santa Fe.....	J. H. Wagner.....	Santa Fe.
New York.....	W. A. Orr.....	Albany.....	H. D. Sayer.....	New York.
North Carolina.....	T. L. Bland.....	Rocky Mount.....	J. M. Johnson.....	West Raleigh.
North Dakota.....	J. P. Hardy.....	Fargo.....	E. F. Chandler.....	University.
Ohio.....	F. C. Croxton.....	Columbus.....	C. H. Mayhugh.....	Columbus.
Oklahoma.....	H. C. Tyrrell.....	Tulsa.....	A. L. Farmer.....	Tulsa.
Oregon.....	F. T. Griffith.....	Portland.....	J. W. Brewer.....	Portland.
Pennsylvania.....	J. C. Frazee.....	Philadelphia.....	J. C. Frazee.....	Philadelphia.
Rhode Island.....	E. A. Burlingame.....	Providence.....	E. A. Burlingame.....	Providence.
South Carolina.....	H. L. Tighman.....	Columbia.....	S. H. Edmunds.....	Sumter.
South Dakota.....	Charles McCaffree.....	Pierre.....	W. A. Ostrander.....	Brookings.
Tennessee.....	Samuel L. King.....	Nashville.....	Albert Williams, jr.....	Nashville.
Texas.....	H. W. Lewis.....	Smithville.....	H. L. Hoisington.....	Dallas.
Utah.....	P. J. Moran.....	Salt Lake City.....	J. W. Watson.....	Logan.
Vermont.....	R. W. Simonds.....	Montpelier.....	C. C. Barnes.....	Northfield.
Virginia.....	H. P. Carter.....	Alexandria.....	H. P. Carter.....	Alexandria.
Washington.....	Robert Moran.....	Seattle.....	Robert Moran.....	Seattle.
West Virginia.....	S. B. Montgomery.....	Charleston.....	H. G. Young.....	Charleston.
Wisconsin.....	A. H. Melville.....	Madison.....	J. B. Borden.....	Madison.
Wyoming.....	Edw. P. Taylor.....	Cheyenne.....	Edw. P. Taylor.....	Cheyenne.

WORK OF PUBLIC EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT OFFICES IN CANADA.

Data are presented in the following table showing the operations of the public employment offices for the month of March, 1918, and in cases where figures are available, for the corresponding month in 1917. Figures are given from 147 public employment offices in 36 States and the District of Columbia—Federal employment offices in 28 States and the District of Columbia, Federal-State employment offices in 8 States, a Federal-State-county-municipal employment office in 1 State, a Federal-municipal employment office in 1 State, State employment offices in 14 States, State-municipal employment offices in 2 States, and municipal employment offices in 6 States. Figures from 2 Canadian employment offices are also given.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918.

UNITED STATES.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
<i>Alabama.</i>												
Mobile (Federal).....	(1)	33	(1)	397	24	287	(1)	(1)	(1)	70	(1)	53
<i>Arkansas.</i>												
Helena (Federal).....		6		138		21		(1)		(1)		(1)
Little Rock (Federal).....		178		3,579		860		(1)		1,068		1,032
Total.....										1,068		1,032
<i>California.</i>												
Fresno (State).....		531		1,001		611		(1)		962		766
Los Angeles (State-municipal).....	3,614	4,059	6,320	6,415	2,482	2,613	(1)	(1)	5,737	5,722	5,003	4,896
Oakland (State).....	855	1,664	1,047	2,937	592	1,153	461	(1)	1,008	2,385	769	1,931
Sacramento (State).....	309	349	527	1,218	467	771	158	(1)	457	1,099	385	909
San Francisco (State).....	1,623	2,859	2,917	5,950	1,961	2,353	991	(1)	2,765	5,593	1,930	3,815
Total.....									9,967	15,761	8,117	12,359
<i>Colorado.</i>												
Colorado Springs (State).....	544	560	544	560	2 592	2 576	(1)	(1)	(1)	522	508	522
Denver (Federal).....	10	30	8	355	2 96	2 300	(1)	(1)	25	345	6	232
Denver No. 1 (State).....	299	560	293	590	2 354	2 742	(1)	(1)	(1)	392	223	392
Denver No. 2 (State).....	387	559	397	559	2 305	2 372	(1)	(1)	(1)	304	206	304
Pueblo (State).....	351	600	351	600	2 402	2 583	(1)	(1)	(1)	547	343	547
Total.....									25	2,110	1,286	2,057
<i>Connecticut.</i>												
Bridgeport (Federal-State).....	(1)	765	677	903	2 837	2 920	(1)	(1)	(1)	823	607	709
Hartford (State).....	(1)	(1)	938	1,029	2 1,106	2 1,182	(1)	(1)	(1)	(1)	747	829
New Haven (State).....	(1)	(1)	773	795	2 1,233	2 854	(1)	(1)	(1)	(1)	654	704
Norwich (State).....	(1)	(1)	275	160	2 310	2 299	(1)	(1)	(1)	(1)	256	146
Waterbury (State).....	(1)	(1)	165	318	2 222	2 356	(1)	(1)	(1)	(1)	108	289
Total.....									(1)	823	2,372	2,674
<i>Delaware.</i>												
Wilmington (Federal).....	39	10	63	1,590	144	2 1,002	(1)	(1)	171	975	145	900
<i>District of Columbia.</i>												
Washington (Federal) ³	114	135	567	2,348	2 724	1,730	(1)	(1)	510	2,196	491	2,097
<i>Florida.</i>												
Jacksonville (Federal).....	1	15	59	1,150	2 22	2 638	(1)	(1)	2	613	2	346
Pensacola (Federal).....		6		347		2		(1)		1		1
Tampa (Federal).....		4		(1)		2 305		(1)		305		260
Total.....									2	919	2	607
<i>Georgia.</i>												
Atlanta (Federal-State).....		93		1,074		2 800		(1)		627		627
<i>Idaho.</i>												
Moscow (Federal).....	3	34	4	357	2 2	2 32	(1)	(1)	1	32	1	32

¹ Not reported.

² Number applying for work.

³ 1918 figures for men's division only.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from employers.		Persons asked for by em- ployers.		Persons applying for work.				Persons re- ferred to positions.		Positions filled.	
					New regis- trations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
<i>Illinois.</i>												
Bloomington (Federal-State).....		103		137		1 112		(²)		93		92
Chicago (Federal).....	759	3,050	3,987	14,319	43,297	13,708	(²)	(²)	3,024	11,651	2,995	10,361
Chicago (State).....	4,977	4,461	11,161	13,856	10,707	8,605	2,068	6,998	12,119	14,031	9,003	11,699
Danville (Federal-State).....		323		392		1 390		(²)		323		305
Decatur (Federal-State).....		22		107		1 54		(²)		25		19
East St. Louis (State).....	447	789	951	1,277	299	465	632	590	870	1,051	820	1,021
Peoria (State).....	808	940	1,106	1,386	103	164	720	1,037	874	1,197	866	1,196
Rockford (State).....	717	781	1,226	1,199	659	873	237	249	838	973	788	910
Rock Island-Moline (State).....	466	1,100	791	3,877	389	1,189	299	1,174	504	2,254	87	2,092
Springfield (State).....	447	719	519	963	210	286	316	638	478	877	430	763
Total.....									18,707	32,475	14,899	23,458
<i>Indiana.</i>												
Evansville (State).....	107	112	357	462	7	(²)	2	(²)	417	397	326	371
Indianapolis (Federal).....	264	142	511	829	1 603	1,040	(²)	(²)	493	821	455	665
Indianapolis (State).....	1,191	1,043	1,191	1,212	867	959	211	84	1,161	1,031	1,078	990
South Bend (State).....	133	177	418	311	358	206	34	66	340	250	300	231
Total.....									2,411	2,499	2,160	2,227
<i>Iowa.</i>												
Davenport (Federal-State).....		154		578		1 415		(²)		279		159
Des Moines (Federal-State).....	76	261	136	735	105	1 469	26	(²)	125	397	52	186
Sioux City (Federal).....		72		202		1 88		(²)		61		55
Waterloo (Federal).....		100		175		1 212		(²)		76		60
Total.....									125	813	52	461
<i>Kansas.</i>												
Topeka (Federal-State).....	94	48	130	61	119	73	4	2	121	56	100	45
<i>Kentucky.</i>												
Louisville (State).....	234	122	234	103	1 345	1 130	(²)	(²)	234	103	234	103
<i>Maine.</i>												
Portland (Federal).....		2		260		37		(²)		5		(²)
<i>Maryland.</i>												
Baltimore (Federal).....	111	447	159	6,259	1 300	1 6,561	(²)	(²)	208	5,571	203	3,636
<i>Massachusetts.</i>												
Boston (Federal).....	6	414	16	3,372	1 52	111,380	(²)	(²)	6	3,272	6	2,568
Boston (State).....	1,949	1,898	2,189	2,341	1 1,123	1,466	(²)	(²)	3 3,116	3 3,415	1,351	1,493
Springfield (State).....	923	793	1,251	1,195	1 347	1 370	(²)	(²)	3 1,255	3 1,237	847	813
Worcester (State).....	983	937	1,208	1,357	1 495	1 583	(²)	(²)	3 1,288	3 1,378	700	736
Total.....									5,645	9,302	2,904	5,610
<i>Michigan.</i>												
Battle Creek (State).....	47	100	189	475	1 85	490	(²)	75	74	475	74	475
Bay City (State).....	49	22	93	235	1 122	290	(²)	35	69	91	69	91
Detroit (Federal).....	85	93	361	1,003	1 318	1 1,136	(²)	(²)	318	891	318	805
Detroit (State).....	836	1,422	4,196	4,754	(²)	4,622	(²)	132	3,956	4,734	3,956	4,734
Flint (State).....	650	292	650	504	1 650	431	(²)	114	650	504	650	504
Grand Rapids (State).....	425	539	727	1,545	1 722	1,293	(²)	295	634	1,322	634	1,456

¹ Number applying for work.

² Not reported.

³ Number of offers of positions.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica-tions from employers.		Persons asked for by em-ployers.		Persons applying for work.				Persons re-ferred to positions.		Positions filled.	
					New regis-trations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
<i>Michigan—Continued.</i>												
Jackson (State).....	362	370	767	737	1 765	458	(²)	198	754	635	749	583
Kalamazoo (State).....	428	210	543	468	1 428	587	(²)	60	428	431	428	252
Lansing (State).....	52	108	190	701	1 68	627	(²)	108	59	627	59	627
Muskegon (State).....	54	26	155	401	1 138	171	(²)	48	132	188	127	166
Saginaw (State).....	121	79	579	362	1 497	462	(²)	103	466	362	466	362
Total.....									7,590	10,460	7,580	10,055
<i>Minnesota.</i>												
Duluth (State).....	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	1,168	867
Minneapolis (Federal).....	67	54	79	195	1 204	1 297	(²)	(²)	26	88	26	82
Minneapolis (State).....	(²)	1,667	(²)	2,024	(²)	(²)	(²)	1,794	(²)	1,762	1,501	1,503
St. Paul (State).....	(²)	(²)	(²)	1,137	(²)	(²)	(²)	(²)	(²)	729	878	710
Total.....									26	2,579	3,573	3,162
<i>Mississippi.</i>												
Gulfport (Federal).....	3	16	3	238	1 57	1 151	(²)	(²)	(²)	80	(²)	53
<i>Missouri.</i>												
Kansas City (Federal-State).....	984	1,560	1,737	3,614	939	1 4,000	(²)	(²)	1,598	3,205	1,403	2,719
St. Charles (Federal).....		9		9		1 16	(²)	(²)		16		14
St. Joseph (State).....	(²)	1,033	1,072	1,865	1 954	1,120	(²)	(²)	954	1,120	949	1,118
St. Louis (Federal-State).....	585	467	1,086	3,465	503	1,753	(²)	(²)	581	1,619	537	1,499
Total.....									3,133	5,960	2,889	5,350
<i>Montana.</i>												
Butte (municipal).....	(²)	(²)	360	712	1 550	1 870	(²)	(²)	(²)	(²)	305	567
Helena (Federal).....		1		50		1 1	(²)	(²)		1		(²)
Total.....									(²)	1	305	567
<i>Nebraska.</i>												
Lincoln (Federal-State)		228		308		297	(²)	(²)		297		288
Omaha (Federal-State-county-municipal).....	597	1,073	1,122	2,268	1 1,209	1,468	(²)	(²)	1,113	1,331	989	1,216
Total.....									1,113	1,628	989	1,504
<i>New Jersey.</i>												
Jersey City (Federal-State).....	(²)	73	(²)	922	(²)	1 844	(²)	(²)	(²)	364	(²)	309
Newark (Federal-State)	(²)	3,796	(²)	9,243	(²)	112,122	(²)	(²)	(²)	8,100	(²)	6,848
Orange (Federal-State).....	(²)	317	(²)	775	(²)	274	(²)	(²)	(²)	543	(²)	318
Total.....									(²)	9,007	(²)	7,475
<i>New York.</i>												
Albany (State).....	596	689	743	996	480	531	340	319	786	958	405	541
Buffalo (Federal).....	1,220	101	790	997	1,292	1,128	(²)	(²)	1,907	809	1,357	568
Buffalo (State).....	1,276	1,453	1,801	2,749	1,332	1,478	142	265	1,874	2,469	1,391	1,607
New York City (State).....	1,528	2,933	2,061	4,522	1,256	1,978	688	1,126	2,271	4,050	1,401	3,424
New York City (municipal).....	2,876	2,488	3,166	2,703	2,351	1,897	2,388	1,938	3,963	3,224	2,665	2,086
Rochester (State).....	1,739	2,045	2,381	3,007	917	1,409	633	694	1,942	2,318	1,037	1,213
Syracuse (State).....	1,369	1,307	1,899	1,867	891	823	320	341	1,636	1,489	1,091	1,003
Total.....									14,379	15,317	9,347	10,442

¹ Number applying for work.

² Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
<i>Ohio.</i>												
Akron (State-municipal).....	(1)	(1)	2,409	2,754	906	967	1,861	2,332	1,927	2,227	1,657	1,840
Athens (State-municipal).....		(1)		74		26		57		51		37
Canton (State-municipal).....		(1)		626		461		243		564		375
Chillicothe (State-municipal).....		(1)		585		402		306		523		445
Cincinnati (State-municipal).....	(1)	(1)	2,004	2,530	1,749	1,494	3,151	2,890	1,990	2,462	1,366	1,994
Cleveland (Federal).....	48	153	72	1,596	² 88	² 680	(1)	(1)	64	380	19	177
Cleveland (State-municipal).....	(1)	(1)	7,815	8,546	3,135	2,682	9,222	8,722	6,872	7,652	5,520	6,362
Columbus (State-municipal).....	(1)	(1)	2,492	3,914	640	1,020	2,412	3,594	2,209	3,580	1,950	2,836
Dayton (State-municipal).....	(1)	(1)	1,314	2,834	634	1,620	1,244	1,801	1,082	2,458	960	2,202
Hamilton (State-municipal).....		(1)		313		174		52		222		190
Lima (State-municipal).....		(1)		539		319		261		380		330
Mansfield (State-municipal).....		(1)		1,963		861		628		1,381		1,304
Marietta (State-municipal).....		(1)		354		151		157		262		216
Marion (State-municipal).....		(1)		588		376		251		482		487
Portsmouth (State-municipal).....		(1)		903		650		172		694		522
Sandusky (State-municipal).....		(1)		372		189		86		214		148
Springfield (State-municipal).....		(1)		634		408		424		497		300
Stenbenville (State-municipal).....		(1)		754		419		415		648		407
Tiffin (State-municipal).....		(1)		401		337		138		331		279
Toledo (State-municipal).....	(1)	(1)	2,857	3,779	1,098	1,616	3,087	3,754	2,544	3,605	2,122	2,987
Washington Court-house (State-municipal).....		(1)		226		113		60		138		104
Youngstown (State-municipal).....	(1)	(1)	1,309	2,113	791	962	925	1,625	1,273	1,840	1,094	1,643
Zanesville (State-municipal).....		(1)		264		256		178		294		211
Total.....									17,961	30,885	14,688	25,396
<i>Oklahoma.</i>												
Enid (State).....	(1)	146	125	200	² 157	² 164	(1)	(1)	109	157	111	140
Muskogee (State).....	(1)	370	444	430	² 308	² 428	(1)	(1)	299	426	286	317
Oklahoma (State).....	(1)	336	518	751	² 480	² 587	(1)	(1)	476	570	434	486
Tulsa (State).....	(1)	663	1,113	909	1,057	² 824	(1)	(1)	1,060	677	1,060	611
Total.....									1,944	1,830	1,891	1,554
<i>Oregon.</i>												
Portland (Federal).....	1,126	1,972	1,379	7,146	² 1,631	5,870			1,449	5,649	1,377	5,449
Portland (municipal).....	851	2,323	1,308	7,766	270	114					1,178	5,457
Total.....									1,449	5,649	2,555	10,906

¹ Not reported.

² Number applying for work.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
<i>Pennsylvania.</i>												
Altoona (State).....	(1)	374	129	2,162	93	1,395	33	39	91	925	82	863
Erie (State).....		74		973		418		78		409		327
Harrisburg (State).....	(1)	485	634	2,302	231	686	135	190	360	847	323	820
Johnstown (State).....	(1)	47	155	236	93	99	14	7	92	122	75	114
New Castle (State).....		42		71		2 65		(1)		59		59
New Kensington (State).....		59		231		2 223		(1)		211		211
Philadelphia (Federal).....	198	298	466	5,773	2 603	222,296	(1)	(1)	597	20,777	526	20,681
Philadelphia (State).....	(1)	1,283	1,228	8,693	825	11,168	696	380	1,209	8,301	1,002	8,045
Pittsburgh (Federal).....	33	220	746	4,982	2 777	2 849	(1)	(1)	439	794	354	752
Pittsburgh (State).....	(1)	454	1,428	8,309	679	2,426	188	293	732	2,337	670	2,205
Scranton (State).....		29		126		255		1		105		105
Williamsport (State).....		73		3,316		181		2		77		59
York (State).....		93		431		235		5		300		217
Total.....									3,520	35,264	3,032	34,463
<i>Rhode Island.</i>												
Providence (Federal).....		46		1,580		21,177		(1)		842		486
Providence (State).....	164	158	177	180	119	217	143	26	(1)	189	177	180
Total.....									(1)	1,022	177	666
<i>South Carolina.</i>												
Charleston (Federal).....	2	11	7	438	2 37	2 246	(1)	(1)	18	160	18	169
<i>Tennessee.</i>												
Memphis (Federal).....	24	88	414	26,114	2 239	2 3,321	(1)	(1)	205	2,168	20	2,150
<i>Texas.</i>												
Dallas (municipal).....	252	179	477	257	3 307	4 383	22	10	500	298	437	292
Galveston (Federal).....	4	26	7	353	2 31	2 283	(1)	(1)	13	247	13	14
Total.....									513	545	450	306
<i>Virginia.</i>												
Alexandria (Federal).....		26		106		2 15		(1)		8		8
Norfolk (Federal).....	15	152	20	14,973	2 91	2 916	(1)	(1)	70	561	15	301
Richmond (municipal).....	238	157	369	192	2 446	2 285	(1)	(1)	416	261	181	123
Total.....									516	830	196	432
<i>Washington.</i>												
Aberdeen (Federal).....	9	5	38	18	2 152	2 33	(1)	(1)	38	18	38	18
Bellingham (Federal-municipal).....	224	133	418	243	306	2 318	(1)	(1)	332	224	299	293
Everett (municipal).....	(1)	272	(1)	(1)	(1)	(1)	(1)	(1)	(1)	41	261	235
North Yakima (Federal).....	451	494	689	909	2 875	2 904	(1)	(1)	660	803	594	777
Seattle (Federal).....	185	408	322	10,859	2 1,427	2 6,500	(1)	(1)	208	6,030	198	5,208
Spokane (Federal).....	124	226	186	369	2 309	2 921	(1)	(1)	169	345	168	318
Spokane (municipal).....	1,760	1,241	2,150	1,972	25	(1)	5	(1)	2,004	1,925	1,921	1,891
Tacoma (Federal-municipal).....	603	681	1,352	1,737	2 1,443	2 4,050	(1)	(1)	1,271	1,533	1,257	1,453
Walla Walla (Federal).....	175	370	250	458	2 447	2 310	(1)	(1)	225	217	138	205
Wenatchee (Federal).....		65		108		2 52		(1)		50		49
Total.....									4,907	11,186	4,874	10,362
<i>Wyoming.</i>												
Cheyenne (Federal).....		15		780		136		(1)		158		57
Grand total.....									95,396	210,134	85,550	188,038

¹ Not reported. ² Number applying for work. ³ Includes 172 transients. ⁴ Includes 341 transients.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MARCH, 1917 AND 1918—Concluded.

CANADA.

State, city, and kind of office.	Applications from employers.		Persons asked for by employers.		Persons applying for work.				Persons referred to positions.		Positions filled.	
					New registrations.		Renewals.					
	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.	Mar., 1917.	Mar., 1918.
Quebec.												
Montreal (provincial)...	368 (1)	133 17	614 31	434 61	358 2 111	347 2 64	(1) (1)	(1) (1)	469 (1)	407 39	390 24	345 30
Total.....									469	446	414	375

¹ Not reported.

² Number applying for work.

EMPLOYMENT IN SELECTED INDUSTRIES IN MARCH, 1918.

The Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in March, 1918, from representative manufacturing establishments in 13 industries. Comparing the figures for March, 1918, with those from identical establishments for March, 1917, it appears that in five industries there was an increase in the number of people employed and in eight a decrease. Cigar manufacturing shows an increase of 5.3 per cent, while silk, leather manufacturing, and automobile manufacturing show decreases of 9.9 per cent, 8.8 per cent, and 8.6 per cent, respectively.

Eleven industries show an increase in the total amount of the pay roll for March, 1918, as compared with March, 1917. The greatest increase indicated—28 per cent—was in woolen. Six of the 13 industries show an increase of over 20 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1917, AND MARCH, 1918.

Industry.	Estab-lish-ments report- ing for March both years.	Period of pay roll.	Number on pay roll in March—		Per cent of in-crease (+) or de-crease (-).	Amount of pay roll in March—		Per cent of in-crease (+) or de-crease (-).
			1917	1918		1917	1918	
Boots and shoes.....	70	1 week..	63,517	60,296	-5.1	915,519	1,004,423	+ 9.7
Cotton manufacturing.....	55	..do....	56,206	54,796	-2.5	610,500	743,759	+21.8
Cotton finishing.....	18	..do....	15,244	15,084	-1.1	208,832	244,357	+17.0
Hosiery and underwear.....	60	..do....	31,473	30,935	-1.7	326,582	398,659	+22.1
Woolen.....	50	..do....	49,891	50,653	+1.5	666,476	852,858	+28.0
Silk.....	41	2 weeks.	16,443	14,812	-9.9	386,985	385,584	- .4
Men's ready-made clothing..	35	1 week..	24,226	24,564	+1.4	371,241	442,757	+19.3
Iron and steel.....	103	½ month.	207,130	209,404	+1.1	9,021,952	11,154,095	+23.6
Car building and repairing..	31	..do....	30,226	30,150	- .3	1,062,792	1,279,783	+20.4
Cigar manufacturing.....	53	1 week..	18,905	19,909	+5.3	232,477	269,190	+15.8
Automobile manufacturing.	50	..do....	137,093	125,277	-8.6	3,073,893	2,981,051	- 3.0
Leather manufacturing.....	36	..do....	17,861	16,295	-8.8	266,744	238,957	+ 8.3
Paper making.....	50	..do....	27,493	27,542	+ .2	401,099	510,391	+27.2

The table below shows the number of persons actually working on the last full day of the reported pay period in March, 1917, and March, 1918, in identical establishments. The number of establishments reporting on this question is small, and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN MARCH, 1917, AND MARCH, 1918.

Industry.	Estab- lishments reporting for March, both years.	Period of pay roll.	Number actually work- ing on last full day of reported pay pe- riod in March.		Per cent of increase (+) or de- crease (-).
			1917	1918	
Boots and shoes.....	22	1 week....	12,922	11,931	- 7.7
Cotton manufacturing.....	36	...do.....	28,263	27,437	- 2.9
Cotton finishing.....	13	...do.....	10,497	10,456	- .4
Hosiery and underwear.....	19	...do.....	13,042	12,727	- 2.4
Woolen.....	40	...do.....	37,913	39,396	+ 3.9
Silk.....	24	2 weeks....	10,996	9,823	-10.7
Men's ready-made clothing.....	4	1 week....	3,276	3,995	+21.9
Iron and steel.....	83	½ month....	159,575	161,954	+ 1.5
Car building and repairing.....	29	...do.....	26,832	26,351	- 1.8
Cigar manufacturing.....	16	1 week....	4,941	4,850	- 1.9
Automobile manufacturing.....	29	...do.....	83,678	74,889	-10.5
Leather manufacturing.....	19	...do.....	11,269	11,084	- 1.7
Paper making.....	15	...do.....	9,289	9,637	+ 3.7

The next table shows that in 10 of the 13 industries there were more persons on the pay roll in March, 1918, than in February, 1918. Cotton, woolen, and automobile manufacturing show the largest increases—4.6 per cent, 4.3 per cent, and 4 per cent, respectively. Decreases are shown in 3 industries. Men's ready-made clothing shows the largest decrease—3.7 per cent.

Each of the 13 industries reporting show marked increases in the total amount of the pay roll when comparing March with February, 1918. This is not due so much to increases in wage rates as to the increased activity in many plants, which have not run their full capacity during the past few months, owing to a shortage of coal, railroad congestion, unfavorable weather conditions, and, in a few instances, labor disturbances. Woolen, hosiery and underwear, and cotton manufacturing show the largest increases—23.6 per cent, 17.8 per cent, and 15.7 per cent, respectively, while the increases in the other industries range from 2.4 per cent to 14.8 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1918, AND MARCH, 1918.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (-).	Amount of pay roll in—		Per cent of increase (+) or decrease (-).
			February, 1918.	March, 1918.		February, 1918.	March, 1918.	
Boots and shoes.....	71	1 week..	60,767	60,986	+0.4	\$933,308	\$1,016,947	+ 9.0
Cotton manufacturing.....	55	..do....	51,981	54,394	+4.6	639,660	740,215	+15.7
Cotton finishing.....	18	..do....	14,721	15,084	+2.5	222,404	244,357	+ 9.9
Hosiery and underwear.....	57	..do....	29,105	29,495	+1.3	324,424	382,099	+17.8
Woolen.....	50	..do....	48,578	50,653	+4.3	689,834	852,858	+23.6
Silk.....	39	2 weeks..	13,572	13,685	+ .8	304,072	348,561	+14.6
Men's ready-made clothing.....	35	1 week..	25,534	24,581	-3.7	432,465	442,757	+ 2.4
Iron and steel.....	107	½ month..	204,972	208,544	+1.7	10,123,423	11,007,962	+ 8.7
Car building and repairing.....	30	..do....	29,966	29,778	- .6	1,160,831	1,263,235	+ 8.8
Cigar manufacturing.....	56	1 week..	18,996	19,557	+3.0	245,837	265,174	+ 7.9
Automobile manufacturing.....	49	..do....	118,255	122,998	+4.0	2,642,126	2,933,676	+11.0
Leather manufacturing.....	36	..do....	16,199	15,790	-2.5	262,720	281,826	+ 7.3
Paper making.....	49	..do....	25,715	26,625	+3.5	430,921	494,910	+14.8

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for February and March, 1918. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN FEBRUARY, 1918, AND MARCH, 1918.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (-).
			February, 1918.	March, 1918.	
Boots and shoes.....	23	1 week....	12,791	12,675	-0.9
Cotton manufacturing.....	34	..do....	24,326	26,705	+9.8
Cotton finishing.....	13	..do....	10,366	10,456	+ .9
Hosiery and underwear.....	19	..do....	11,672	11,720	+ .4
Woolen.....	39	..do....	35,617	36,843	+3.4
Silk.....	24	2 weeks....	9,099	9,187	+1.0
Men's ready-made clothing.....	5	1 week....	4,173	4,012	-3.9
Iron and steel.....	84	½ month..	161,584	166,236	+2.9
Car building and repairing.....	29	..do....	27,169	26,351	-3.0
Cigar manufacturing.....	19	1 week....	4,792	4,862	+1.5
Automobile manufacturing.....	29	..do....	71,523	73,231	+2.4
Leather manufacturing.....	18	..do....	10,920	10,557	-3.3
Paper making.....	15	..do....	9,879	9,637	-2.5

CHANGE IN WAGE RATES.

In all of the 13 industries there were establishments reporting increases in the wage rates and in one—iron and steel—a decrease between the February and March, 1918, reports. A number of establishments gave no definite answer to the inquiry relative to wage-rate changes, but in such cases it is probably safe to assume that few if any changes were made.

Boots and shoes: Two establishments reported an increase of 10 per cent—one to $66\frac{2}{3}$ per cent of the employees, and the second to cutters with no information as to the number affected. One plant reported an increase but gave no further data. Two plants made a few special increases, while two other plants granted minor increases.

Cotton manufacturing: One establishment reported an increase of about 20 per cent to the entire force. Four plants granted an increase of 10 per cent to all the employees; one, a general average increase of 10 per cent; and another reported a bonus of 10 per cent. One plant gave an increase of 8 per cent but did not state the number affected. A general increase of 6 per cent throughout the mill was granted in one plant. Two-thirds of the force in one establishment received an increase of 5 per cent. One establishment reported an increase to the entire force but did not state the amount of increase.

Cotton finishing: One plant reported an increase of 15 per cent but gave no data concerning the number of the force affected.

Hosiery and underwear: One firm granted a bonus of 16 per cent. Three establishments gave a 5 per cent increase, this affecting the entire force except the foremen and office force in one, while two did not state the proportion of the force affected.

Woolen: One plant reported an increase of 10 per cent affecting all the employees.

Silk: A 12 per cent increase to weavers, or slightly more than 33 per cent of the force, was granted in one plant. Two establishments reported an increase of 10 per cent, affecting 90 per cent of the force in one plant, while the other gave no statement as to the number affected. Another plant gave a bonus of 10 per cent to full-time workers. One establishment reported increases ranging from $5\frac{3}{4}$ per cent to $14\frac{1}{4}$ per cent to approximately 69 per cent of the force. Half the force in one plant was granted an increase of about 10 per cent, and the other half received an increase of approximately 5 per cent. The entire force in one plant was increased from 7 to 10 per cent. Two plants granted an increase of $7\frac{1}{2}$ per cent, affecting the entire force in one, but the other did not state whether or not it was general. One establishment reported an increase of 2 cents per hour to practically the entire force.

Men's ready-made clothing: Two establishments reported an increase—one, 20 per cent to about 29 per cent of the employees; while the other failed to state the amount of increase and the proportion of employees affected.

Iron and steel: Increases in wage rates were reported by 6 plants and a decrease by one plant. Two establishments granted increases of $7\frac{1}{2}$ per cent to men belonging to the Amalgamated Association of Iron, Steel and Tin Workers, which equaled about 40 per cent of the employees in one plant and 25 per cent in the other. One plant

reported increases of from 5 to 15 per cent but made no further statement. Half the force in one plant received an increase of 5 per cent, while 45 per cent of another establishment received a $2\frac{1}{2}$ per cent increase. A decrease of 2 per cent, affecting 40 per cent of the force, was reported by one plant.

Car building and repairing: One plant gave a 15 per cent increase, but did not state the number affected, and a second establishment stated that 75 per cent of the force received an increase of 6 per cent.

Cigar manufacturing: Only one increase—8 per cent to 60 per cent of the force—was reported.

Automobile manufacturing: An increase of 10 per cent was granted to 8 per cent of the force in one plant. One establishment reported an increase of from 2 to 4 cents per hour to about 30 per cent of the employees; one, an increase in the productive average hourly rate of 0.0109 cents; and another reported an increase but gave no data as to the amount or number affected.

Leather manufacturing: One plant granted an increase of 10 per cent to about 10 per cent of the employees. Another reported an increase of 9 per cent affecting 12 per cent of the force. Fifty per cent of the force in one establishment was advanced \$1 per week. One plant reported an increase of $7\frac{2}{3}$ per cent to about two-thirds of its employees.

Paper manufacturing: An increase of 20 per cent was reported by one plant but no statement was made as to the number affected. Three plants reported an increase of 10 per cent—one, to 90 per cent of the force; another, to approximately 23 per cent of the employees; and the third, to about 90 per cent of the employees, with smaller increases to the remaining 10 per cent of the employees. One establishment granted an increase of approximately 3 per cent to the entire pay roll and another reported an increase of $2\frac{1}{2}$ cents an hour to all of the employees.

EMPLOYMENT IN MASSACHUSETTS, OCTOBER TO DECEMBER, 1917.

Massachusetts industries experienced some decrease in the demand for labor at the close of December, 1917, as compared with the demand at the close of September, 1917, according to the Fortieth Quarterly Report on Employment recently issued by the State Bureau of Statistics.¹ This decrease, it is explained, was due principally to less activity in the building trades because of weather conditions and to a closing down of some establishments because of a lack of fuel or raw materials used in manufacture. However, the report notes an increased activity in the industries directly affected

¹ Massachusetts, Bureau of Statistics, Labor Division. Fortieth quarterly report on employment in Massachusetts, quarter ending Dec. 31, 1917. Boston, 1918. 16 pp.

by Government demands, such as shipbuilding, manufacture of military equipment and munitions, and transportation. A certain amount of unemployment is ascribed to a shifting about of a large element of the industrial population, as shown by the "abnormally high rate" of labor turnover in some industries, particularly shipbuilding and railroad work. In the latter instance, it is stated, over 1,000,000 new men were hired to fill about one-third as many positions, which is "about double the normal turnover."

Records on file with the Bureau of Statistics show that during the quarter ending December 31, 1917, there were 98 industrial controversies (97 strikes and 1 lockout). Some of the more important, as measured by duration and number of men affected, occurred in industries having Government contracts. The report mentions several of these strikes, but the figures presented are insufficient to render them readily tabulatable.

Based on reports received from 1,093 labor organizations with a membership of 201,404 it appears that for the quarter ending December 31, 1917, 14,900 members, or 7.4 per cent, were unemployed, of which number 7,131, or 3.5 per cent of all members, were unemployed on account of lack of work or of materials. In the corresponding quarter of 1916, 6 per cent of 171,877 members were unemployed, 2.7 per cent being unemployed because of lack of work or of materials. This indicates a decreased demand for workers as compared with the last quarter of 1916; it also indicates, as stated at the outset, a decreased demand as compared with the preceding quarter of 1917. The following table shows the extent of unemployment of organized wage earners, by trades, for the quarter ending December 31, 1917, as compared with the corresponding quarter of 1916 and the three preceding quarters of 1917:

EXTENT OF UNEMPLOYMENT IN PRINCIPAL INDUSTRIES AND TRADES IN EACH QUARTER OF 1917 AND THE LAST QUARTER OF 1916.

Industry and trade.	Quarter ending Dec. 31, 1917.				Per cent reported as unemployed, quarter ending—			
	Number reporting.		Unemployed.		Dec. 30, 1916.	Mar. 31, 1917.	June 30, 1917.	Sept. 29, 1917.
	Unions.	Members.	Members.	Per cent.				
Building trades.....	319	37,511	6,933	18.5	11.0	16.0	5.8	6.2
Boot and shoe industry.....	95	39,679	1,761	4.4	2.9	6.6	24.3	12.5
Textile industry.....	52	17,462	550	3.1	3.5	4.5	4.2	3.8
Transportation (steam and electric).....	121	50,770	1,044	3.4	2.7	3.8	2.2	2.2
Iron and steel manufacturing.....	82	14,612	524	3.6	3.4	3.5	3.4	2.3
Printing and allied trades.....	46	5,694	171	3.0	4.2	4.8	4.2	3.1
All other industries and trades.....	378	55,676	3,917	7.0	8.4	6.7	2.9	3.9
Total.....	1,093	201,404	14,900	7.4	6.0	7.3	8.4	5.6

The activities of the three public employment offices of the State (located at Boston, Springfield, and Worcester) for the last quarters, respectively, of 1916 and 1917, are presented in the following table:

SUMMARY OF BUSINESS DONE BY MASSACHUSETTS PUBLIC EMPLOYMENT OFFICES DURING FOURTH QUARTER OF 1916 AND OF 1917.

Quarter ending Dec. 31—	Persons applied for,		Offers of positions,		Positions reported filled.				
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	Ratio to positions offered.	Ratio to persons applied for.
1916.....	8,237	5,857	11,221	6,901	4,631	4,477	9,108	50.3	64.6
1917.....	7,418	5,137	10,834	6,215	4,783	4,095	8,878	52.1	70.7

EMPLOYMENT IN NEW YORK IN MARCH, 1918.

The Bureau of Employment of the New York State Industrial Commission, on April 1, 1918, issued the following statement of the placement work done in the five zones of New York State:

All the activities of the different offices of the State bureau of employment increased very largely during the month of March over the month previous. It will be noted in the table appended to this that there has been a large increase in the number of registrations and renewals. This is particularly true of the registrations of male workers. The increase in female workers is 300, and in male workers 1,600, indicating the large proportion of male workers seeking positions.

The increase in farm-hand placements is especially noticeable. Nearly five times as many were placed in March as in February. The State bureau of employment is now in a position to be of great help to the farmers of the State. The New York State Food Commission has collected 32 farm-labor specialists and placed them directly under the supervision of the State bureau of employment. It is the duty of these farm-labor specialists to search out in each of the industrial communities of the State such men as have heretofore done farm work and are now available as farm help. These farm-labor specialists have been placed in the cities of New York, Buffalo, Rochester, Syracuse, Albany, Binghamton, Elmira, Utica, Geneva, Jamestown, Corning, Batavia, Oswego, Auburn, Olean, Middletown, Watertown, Plattsburg, Troy, Schenectady, Kingston, Poughkeepsie, and Oneonta. In addition to these farm-labor specialists, the United States Department of Agriculture is furnishing over 50 men who are to be selected by the County Farm Bureau Association as assistants to the farm-bureau managers located in 55 counties of the State. It will be the duty of these assistant farm bureau agents to devote themselves to the placing of farm labor during the coming season. A plan of cooperation between the county farm bureaus and the State bureau of employment has been worked out, whereby the assistant farm bureau managers are to work in direct cooperation with the farm-labor specialists. The State has been divided into five zones, the headquarters of these zones being respectively in Buffalo, Rochester, Syracuse, Albany and New York City. Farm-labor specialists will be located in the State public employment offices in each of these cities, and each office will be the clearing house for its zone. In this way, direct connection will obtain between the farmers and such available farm-hand supply as can be found throughout the State. A direct chain of organization is effected, commencing with the superintendents of the different employment offices of the State bureau of employment. Each superintendent is responsible for his own zone, the

chain of connection continuing on through the farm-labor specialists and the assistant county farm bureau managers direct to the farmer needing help.

It is hoped that later in the season additional help can be given to the farmers by adding a number of women and boys to the available farm labor supply. To the end that the farmer be given as much aid as possible, very careful selection will be made of the women chosen to be sent out. In the main, these women will work in units (camps) and the work will principally be carried on in the intensive agricultural districts, such as the fruit, berry and vegetable producing sections. The use of woman labor on the farm is not an experiment, because it was successfully carried out in several portions of the State last season. Its success is going to depend largely on the careful selection of the women.

Boys between the ages of 16 and 21 are now being enlisted for farm work, and they will be sent out to camps and also to individual farmers. In both cases, some sort of supervision will be provided. It is hoped that this supervision will principally come from school teachers, who will go with the boys from the large industrial centers, particularly New York City. The department of education has laid down the rules under which boys will be allowed to leave school before the end of the school year. A very large number of boys who have been out of school for some time are included in this enrollment and they will be given the same supervision as the boys coming from school.

OPERATIONS OF NEW YORK STATE EMPLOYMENT OFFICES, MARCH, 1918.

	Persons asked for by employers.			Persons applying for work—registrations and renewals.			Persons referred to positions.			Persons reported as placed.		
	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.
Greater New York.	2,485	2,037	4,522	1,794	1,310	3,104	2,332	1,718	4,050	1,021	1,303	2,324
Syracuse.....	1,214	653	1,867	803	361	1,164	958	531	1,489	637	366	1,003
Rochester.....	1,877	1,130	3,007	1,479	624	2,103	1,542	776	2,318	679	534	1,213
Buffalo.....	1,752	997	2,749	1,377	366	1,743	1,554	905	2,469	861	746	1,607
Albany.....	617	379	996	632	218	850	636	322	958	379	162	541
Total.....	7,945	5,196	13,141	6,085	2,879	8,964	7,032	4,252	11,284	3,577	3,111	6,688
Total, March, 1917.....	5,113	3,778	8,891	5,135	1,864	6,999	5,229	3,281	8,510	3,067	2,258	5,325
Clearing house for Greater New York.....	2,350	600	2,950				2,001	687	2,688	1,297	275	1,572
Total, from opening to Apr. 1, 1918:												
Cities.....	157,367	105,199	262,566	182,420	75,535	257,955	159,822	101,241	261,063	95,201	66,656	161,857
Clearing house for Greater New York..	7,667	4,511	12,178				6,967	4,115	11,082	3,072	1,255	4,327

PERSONS ASKED FOR BY EMPLOYERS AND PLACES FILLED BY NEW YORK STATE EMPLOYMENT OFFICES, CLASSIFIED BY OCCUPATIONAL GROUPS.

Occupational group.	Persons asked for by employers.			Persons reported as placed.			Clearing house.
	Males. ¹	Fe-males. ¹	Total. ¹	Males. ¹	Fe-males. ¹	Total. ¹	
Agricultural products.....	1,083	9	1,092	539	6	545	
Building and construction.....	2,509		2,509	1,278		1,278	1,088
Domestic and hotel service.....	1,124	3,566	4,690	632	2,559	3,191	157
Manufacturing pursuits.....	2,234	1,446	3,680	751	501	1,252	319
Trade and transportation.....	995	175	1,170	377	45	422	8
Total.....	7,945	5,196	13,141	3,577	3,111	6,688	1,572

¹ Exclusive of clearing-house figures.

EMPLOYMENT IN OHIO IN MARCH, 1918.

The following table, issued by the Ohio branch of the Council of National Defense, shows the work of the labor exchanges of Ohio during March, 1918:

OPERATIONS OF FREE LABOR EXCHANGES OF OHIO, MONTH ENDING MAR. 30, 1918.

City.	Persons applying for work.			Per-sons asked for by em-ployers.	Per-sons re-ferred to po-sitions.	Per-sons re-ported as placed.	Per-sons re-ferred to an-other office.
	New regis-trations	Re-newals.	Total.				
<i>Males.</i>							
Akron.....	782	1,273	2,055	1,432	1,241	981	6
Athens.....	25	55	80	67	50	37	.....
Canton.....	414	208	622	540	501	326	.....
Chillicothe.....	319	234	553	470	430	366	11
Cincinnati.....	1,225	2,004	3,229	1,647	1,744	1,374	19
Cleveland.....	1,824	4,658	6,482	4,040	3,688	3,146	.....
Columbus.....	779	2,054	2,833	2,281	2,080	1,498	41
Dayton.....	1,455	1,494	2,949	2,453	2,153	1,954	.....
Hamilton.....	168	38	206	200	203	174	.....
Lima.....	295	255	550	523	334	318	.....
Mansfield.....	772	594	1,366	1,825	1,265	1,194	.....
Marietta.....	118	116	234	268	202	164	1
Marion.....	341	174	515	519	419	359	2
Portsmouth.....	611	120	731	787	614	451	334
Sandusky.....	165	64	229	323	186	131	.....
Springfield.....	375	390	765	580	451	282	1
Stuebenville.....	394	256	650	591	510	365	5
Tiffin.....	329	129	458	333	320	271	14
Toledo.....	1,404	3,207	4,611	3,018	3,064	2,537	59
Washington C. H.....	107	55	162	200	130	97	3
Youngstown.....	883	1,067	1,955	1,543	1,298	1,119	4
Zanesville.....	213	114	327	180	212	149	20
Total.....	13,093	18,559	31,562	23,960	21,125	17,284	511
<i>Females.</i>							
Akron.....	185	1,059	1,244	1,322	986	859	.....
Athens.....	1	2	3	7	1	.....	.....
Canton.....	47	35	82	86	63	49	.....
Chillicothe.....	83	72	155	115	93	79	.....
Cincinnati.....	269	886	1,155	883	718	620	.....
Cleveland.....	858	4,064	4,922	4,596	3,964	3,216	.....
Columbus.....	241	1,540	1,781	1,633	1,500	1,338	.....
Dayton.....	165	307	472	381	305	248	.....
Hamilton.....	6	14	20	23	19	16	.....
Lima.....	24	6	30	16	16	12	.....
Mansfield.....	89	34	123	138	116	110	.....
Marietta.....	33	41	74	86	69	52	.....
Marion.....	35	77	112	69	63	48	.....
Portsmouth.....	39	52	91	116	80	71	.....
Sandusky.....	24	22	46	49	28	17	.....
Springfield.....	33	34	67	54	46	18	.....
Stuebenville.....	25	159	184	163	138	122	.....
Tiffin.....	8	9	17	18	11	8	.....
Toledo.....	212	547	759	761	541	450	.....
Washington C. H.....	6	5	11	26	8	7	.....
Youngstown.....	74	558	632	570	542	533	.....
Zanesville.....	43	64	107	84	82	62	.....
Total.....	2,509	9,587	12,087	11,106	9,389	7,935	.....
<i>Total.</i>							
Akron.....	967	2,332	3,299	2,754	2,227	1,840	6
Athens.....	26	57	83	74	51	37	.....
Canton.....	461	243	704	626	564	375	.....
Chillicothe.....	402	306	708	585	523	445	11
Cincinnati.....	1,494	2,890	4,384	2,530	2,482	1,994	19
Cleveland.....	2,682	8,722	11,404	8,546	7,652	6,362	.....
Columbus.....	1,029	3,594	4,614	3,914	3,580	2,836	41
Dayton.....	1,620	1,801	3,421	2,894	2,458	2,202	.....
Hamilton.....	174	52	226	313	222	190	.....
Lima.....	319	261	580	539	380	330	.....
Mansfield.....	861	623	1,489	1,963	1,381	1,304	.....

OPERATIONS OF FREE LABOR EXCHANGES OF OHIO, MONTH ENDING MAR. 30,
1918—Concluded.

City.	Persons applying for work.			Persons asked for by employers.	Persons referred to positions.	Persons reported as placed.	Persons referred to another office.
	New registrations	Re-newals.	Total.				
<i>Total—Concluded.</i>							
Marietta.....	151	157	308	354	262	216	1
Marion.....	376	251	627	588	482	407	2
Portsmouth.....	650	172	822	903	694	522	334
Sandusky.....	189	86	275	372	214	148	.....
Springfield.....	408	424	832	634	497	300	1
Steubenville.....	419	415	834	754	648	487	5
Tiffin.....	337	138	475	401	331	279	14
Toledo.....	1,616	3,754	5,370	3,779	3,605	2,987	50
Washington C. H.....	113	60	173	226	138	104	3
Youngstown.....	962	1,625	2,587	2,113	1,840	1,643	4
Zanesville.....	256	178	434	264	294	211	20
Total.....	15,503	28,146	43,649	35,066	30,505	25,219	511

LABOR DISTRIBUTION OFFICES IN GERMANY.¹

In order to meet the shortage of labor in time of high pressure, especially of skilled labor in transportation and communication, recourse has lately been had in Germany to a new method, viz, the establishment of special labor and distribution offices (*Arbeiterausgleichstellen*). Such an office, established as a limited liability company, was formed in October, 1917, for the Leipzig district by the Leipzig office of the War Office (*Kriegsamt*) in agreement with the local commercial and industrial circles. The authorized capital of the company amounts to 22,000 marks (\$5,236).

The machinery of the office is as follows:

The company secures for itself a labor nucleus, consisting of 20 hands, among them being some women, whose services are always available, who are paid wages by the company on the customary or agreed-upon scale, and are sent out to work as individual firms, authorities, etc., need them. The employer for the time being pays the company for them, according to the labor supplied, a sum equal to that of the wages and a supplementary sum to cover the administrative expenses of the company. This means that the company, not the individual owner of the establishment to whom the workmen are temporarily assigned, is the actual employer. The company is formed on true business lines, owing to the capital required and the risks involved. Direct connections with the municipal labor exchange have been established, and the whole business of the office is carried on in the premises of the exchange by officials specially appointed for the purpose. That the *Kriegsamt* keeps a watchful eye on the wages to be paid must not be regarded in any way adequate, says the *Correspondenzblatt*. This is also

¹ *Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands*. Berlin, Dec. 22, 1917.

the opinion of the municipal labor exchange, which has unanimously proposed that a representative of labor should be appointed to cooperate in this work.

UNEMPLOYMENT LEGISLATION IN SWEDEN.

Following is a translation of the Swedish law of May 19, 1916, which grants assistance to persons unemployed and without resources, and provides for contributions by the State for that purpose: ¹

ARTICLE 1. When a commune or a landsting (provincial representative body) grants municipal aid to persons without employment, in conformity with the provisions of existing law, it shall be entitled to a contribution from the State, subject to the following provisions: The State contributions are limited to Swedish citizens, or their families, of good morals, domiciled in Sweden, who (1) have completed their fifteenth year; (2) who are unemployed; (3) who within the preceding six months have not been in receipt of public assistance, unless such assistance was given only occasionally or in case of sickness of themselves or of members of the family, and unless they had made every effort to provide suitably for the family, but, by reason of particularly grave circumstances, were forced to accept public aid to provide for the indispensable requirements of the family; (4) who have applied to public labor exchanges for employment, but without result; (5) who by reason of stoppage of work, not due to their own act, lasting at least 6 days after the application for assistance, are in need of such assistance. Assistance shall not be given for the period before the date of application for aid.

ART. 2. The application may be addressed to the committee on assistance, as provided by law, in the commune in which the applicant resides, or, in default of such committee, to the communal authority. The application shall be accompanied by a certificate of the priest and a statement showing the occupation of the applicant, his last working place, length of service, and name of employer. This statement may be made out by the employer, the association of which the applicant is a member, or two other persons. When the applicant is not domiciled in the commune, and therefore can not receive the allowance mentioned below in articles 7 and 8, the competent committee or the communal authority may transmit his application to the commune of his birth.

ART. 3. Upon receipt of an application the committee or communal authority shall endeavor to procure work for the unemployed person. Failing in this and upon establishing the degree of need of the applicant the committee shall notify him relative to the action taken and if assistance is granted, its amount, date on which it begins, and manner of payment.

In determining the amount of assistance to be granted no account shall be taken of the value of personal property, tools, or revenues from saving funds or dwelling, belonging to the applicant.

An allowance made by the employer or from any unemployment fund shall not be a bar to the allowance provided for by this law, but in no case, however, shall the aggregate of these allowances exceed two-thirds of the usual wage paid in the locality to a laborer of the same ability and working in the same occupation.

ART. 4. The allowance is distributed by the committee and the communal authorities. It may be paid either in cash or in kind, wholly or partly, in articles of food, tools, or clothing.

¹ Institut International d'Agriculture. *Annuaire International de Législation d'Agricole*. VI^{ème} année, 1913, p. 1227.

ART. 5. When a person in receipt of an allowance is reemployed, the allowance shall cease. When employment ends the competent authority shall decide upon the date on which allowance shall again begin, and its amount.

ART. 6. When a person in receipt of an allowance leads an intemperate life, or is addicted to drink, the committee or communal authority may decide to suspend the allowance.

The beneficiary must register with the local employment bureau, accept work which may be secured for him, and report all employment subsequently secured, and the date of leaving the locality in which he is employed.

When so ordered by the committee or communal authority, he must diligently attend courses which may be opened for the instruction of unemployed persons. Upon refusal to conform to these provisions further allowance may be withdrawn.

In all cases above mentioned, the allowance may be entirely or partially suspended, either for a stated time or permanently.

ART. 7. Allowance may be made, as a general rule, only to the applicant in the commune of his birth, but it may also be made to another member of his family, provided the latter has an established residence in the commune and can be more easily aided there than in the commune of the applicant's birth.

In case an allowance is refused, travel allowance may be granted to cover expense of return to birthplace, one-half of which will be paid by the State.

ART. 8. ⁽¹⁾

ART. 9. The amount contributed for each person by the State shall be equal to the amount accorded from the communal or landsting funds, but in no case shall the daily allowance exceed 75 ore (18.8 cents) for husband and wife together; 50 ore (12.5 cents) for one person alone over 18 years of age; 30 ore (7.5 cents) for one person alone over 15 and under 18 years of age; and 15 ore (3.8 cents) for each child under 15 years of age.

Only in exceptional cases will State aid be allowed an unemployed person having no family under his charge.

When a person having a family under his charge is employed in a commune other than his home, and his wages are not sufficient to support his family living in his home commune, an allowance not exceeding 50 ore (12.5 cents) per day or 75 ore (18.8 cents) per day when there are children may be made in exceptional cases to his family from the State fund.

¹ Not given in *Annuaire International de Legislation d'Agricole*.

LABOR ORGANIZATIONS.

TRADE-UNIONS IN DENMARK.

At the close of 1916 the trade-unions of Denmark had an enrolled membership of over 189,000, organized in over 1,930 unions. There has been a gradual increase in membership since 1914, accompanied by a slight decline in the amounts paid in trade-union benefits—unemployment and travel benefits, and sick and accident benefits. In 1916 the benefits paid by federations affiliated to the general national federation (*De Samvirkende Fagforbund*) were distributed as follows: 84.8 per cent as unemployment and travel benefits, and 15.2 per cent as sickness and accident benefits.

MEMBERSHIP AND EXPENDITURES OF TRADE-UNIONS IN DENMARK, 1914 TO 1916.

[Statistisk aarvog, 1917. Copenhagen, 1917, p. 160.]

Federations and unions.	Number of organizations in 1916.	Membership.			Expenditures for travel, unemployment, sickness and accident benefits.		
		1916	1915	1914	1916	1915	1914
<i>General Federation of Trade-Unions (De Samvirkende Fagforbund).</i>							
Municipal employees' federation (Arbejderforbund, Kommunalt).....	12	5,173	4,785	4,366	\$155	\$2,289	\$1,780
Women's municipal employees' federation (Arbejderforbund, Kommunalt, Kvindeligt)	28	3,900	3,698	2,838	7,182	5,645	3,089
Danish federation of day laborers (Arbejdsmandsforbund, Dansk).....	240	50,923	43,847	40,156	221,890	228,225	194,608
Bakers' and confectioners' federation (Bageri-og Konditorarbejderforbund).....	43	3,020	2,812	2,512	15,718	16,382	16,576
Barbers', hairdressers' and wig makers' federation (Barber-, Frisør-og Parykmagerforbundet).....	75	1,050	800	478	459	1,094	273
Bookbinders' federation (Bogbinderforbundet i Danmark).....	9	2,005	1,247	1,340	1,853	5,398	10,185
Coopers' federation (Bødkerforbundet i Danmark).....	23	792	774	723	6,929	4,666	8,552
Electrical workers' federation (Elektrikerforbund, Dansk).....	21	1,750	1,596	1,472	4,950	5,977	3,090
Molders' federation (Formetforbund, Dansk).....	48	1,600	1,475	1,475	8,002	9,089	16,640
Horticultural workers' federation (Gartnerforbund, Dansk).....	6	425	313	(¹)	02	(¹)	(¹)
Glass workers' federation (Glasarbejderforbund, Dansk).....	6	461	453	380	5,311	2,546	4,223
Gold and silversmiths' and electroplaters' federation (Guld-, sølv-og elektroplatarbejdernes forbund).....	14	735	615	513	140	523	1,621
Brass workers' and metal workers' federation (Gørtler-og metalarbejderforbundet i Danmark).....	6	421	387	(¹)	321	(¹)	(¹)
Hatters' federation (Hattearbejderforbundet i Danmark).....	3	417	387	(¹)	1,110	(¹)	(¹)
Carriage makers' federation (Karetmagerforbund, Dansk).....	28	910	914	873	1,007	3,089	4,539
Water tenders' and firemen's federation (Kedel-og maskinpasser forbund).....	48	1,774	1,693	1,517	3,618	3,520	3,230
Ceramic workers' federation (Keramisk forbund).....	3	922	805	765	(¹)	75	24
Lithographers' federation (Lithografisk forbund).....	8	495	466	440	997	1,440	2,208
Painters' federation (Malerforbundet i Danmark).....	63	4,635	4,401	4,530	41,814	38,498	35,223

¹ Not reported.

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MEMBERSHIP AND EXPENDITURES OF TRADE-UNIONS IN DENMARK, 1914 TO 1916—
Concluded.

Federations and unions.	Number of organizations in 1916.	Membership.			Expenditures for travel, unemployment, sickness and accident benefits.		
		1916	1915	1914	1916	1915	1914
<i>General Federation of Trade-Unions (De Samvirkende Fagforbund)—Concluded.</i>							
Millers' and mill workers' federation (Mølleriarbejderforbund, Dansk).....	24	630	550	550	\$927	\$851	\$1,105
Paper makers' federation (Papirindustriarbejdernes forbund).....	9	1,234	1,129	1,130	597	603	453
Saddle makers' and upholsterers' federation (Sadelmager- og tapetsererforbund, Skandinavisk).....	43	1,441	1,250	1,186	5,734	3,356	7,457
Shipwrights' federation (Skibstømrerforbund, Dansk).....	20	466	418	400	430	3	.....
Boot and shoe workers' federation (Skotøj-sarbejderforbund, Dansk).....	49	3,570	3,189	2,930	3,092	6,904	8,199
Tailors' federation (Skræderforbund, Dansk).....	73	6,560	5,429	4,415	6,546	11,104	12,487
Slaughter-house workers' federation (Slagteri-arbejderforbund, Dansk).....	64	3,809	3,675	3,514	20,932	23,649	9,771
Blacksmiths' and machinists' federation (Smede-og maskinarbejderforbund, Dansk).....	60	16,034	14,421	13,323	35,412	32,746	46,304
Cabinetworkers' federation (Snedkerforbundet i Danmark).....	78	8,050	7,000	6,900	18,485	61,117	70,665
Stonemakers' federation (Stenarbejderforbund, Dansk).....	19	494	474	480	(1)	308	134
Candy, chocolate and biscuit makers' federation (Sukkervare, chocolate-og biskuitarbejderforbund).....	5	770	624	565	916	899	1,085
Textile workers' federation (Tekstilarbejderforbund, Dansk).....	35	7,745	6,695	5,434	4,929	5,720	19,082
Tobacco workers' federation (Tobaksarbejderforbund i Danmark).....	23	6,950	6,442	5,920	11,068	8,381	21,462
Woodworkers' federation (Træindustriarbejderforbundet i Danmark).....	65	3,141	2,750	2,427	4,861	7,558	9,106
Typographical federation (Typograforbund, Dansk).....	55	4,348	4,110	3,907	47,179	53,694	55,015
Other organizations ²	162	3,872	4,152	4,070	4,417	13,766	18,937
Total.....	1,468	150,522	133,776	121,529	487,584	559,173	509,793
<i>Unions not affiliated with the General Federation.</i>							
Day laborers' federation of Gentofte and Lyngby (Arbejdsmaendenes forbund for Gentofte og Lyngby).....	1	670	800	(1)	(1)	5,853	(1)
Tinners' federation (Blikkenslagerbundet i Danmark).....	27	1,211	1,160	1,100	(1)	9,261	9,272
Brewery and distillery workers' federation (Brygg-og brænderiarbejderforbund).....	44	4,094	3,971	3,914	(1)	2,713	2,546
Druggists' union (Farmaceutforening, Dansk).....	(1)	830	800	(1)	(1)	(1)	(1)
Clerks' and office assistants' federation (Handels-og kontormedhjælp forbund).....	77	5,469	4,630	4,230	(1)	2,424	(1)
Maid servants' federation (Husassistenternes forbund).....	18	785	520	476	(1)	5	.....
Railroad workers' federation (Jernbaneforbund, Dansk).....	18	7,310	5,998	5,830	(1)	3,251	1,806
Waiters' federation (Kølnarforbund, Dansk).....	12	1,473	1,344	1,153	(1)	5,573	4,415
Agricultural workers' federation (Landarbejderforbundet).....	53	1,600	1,160	1,600	(1)	(1)	(1)
Masons' federation (Murerforbundet i Danmark).....	98	6,638	6,401	5,805	(1)	101,811	64,490
Tobacco (chewing) workers' federation (Skraatobaksarbejdernesforbund).....	17	759	702	612	(1)	778	1,005
Marine firemen's federation (Søfyrbødernes forbund).....	(1)	(1)	2,200	1,200	(1)	1,183	(1)
Carpenters' federation (Tømrerforbund, Dansk).....	100	5,253	4,897	4,421	(1)	(1)	(1)
Storage and warehouse workers' union of 1890 (Lager-og pakhusarbejderforening af 1890).....	(1)	(1)	717	652	(1)	973	931
Masons' helpers union of Copenhagen (Murararbejdendamstaforening i København).....	1	985	850	850	(1)	1,011	14,212
Longshoremen's union (Skibsværftsarbejdernes forening).....	1	1,400	(1)	(1)	(1)	(1)	(1)
Other organizations ²	(1)	(1)	4,289	2,791	(1)	2,119	364

¹ Not reported.² Includes all federations having less than 400 members each in 1916.

SWISS TRADE-UNIONS IN 1916.¹

The Swiss "Gewerkschaftliche Rundschau" recently published an extensive report on the activities and situation of the Swiss trade-unions during the year 1916. The numerous statistical data given in this report show that in Switzerland, like in all other European countries, the trade-union movement suffered a considerable setback during the first year of the War but that in 1916 the movement again gained in strength and recovered its membership losses.

The membership, which in the 21 central federations at the end of 1914 was 74,675 (of which 7,451 were female members), had risen at the end of 1916 to 88,648 (of which 10,876 were female members). These figures represent an increase in membership of 13 per cent. During the same period the receipts of the trade-unions increased by 60 per cent and the disbursements by 50 per cent. The largest increases of membership are reported by the metal workers' and watchmakers' federation (21,682, among which were 4,600 female members); the federation of transportation and mercantile workers (3,710), the woodworkers (2,155), and the printing trade workers (1,076).

The total receipts for the year 1916 amounted to 2,164,078 francs (\$417,667.05) and the capital at the end of that year was 3,589,061.48 francs (\$692,688.87). In the total receipts contributions participated with 1,038,027.35 francs (\$200,339.28), initiation fees with 8,202 francs (\$1,582.99), sick fund premiums with 660,710 francs (\$127,517.03), unemployment insurance premiums with 35,322.30 francs (\$6,817.20), and subsidies to the unemployment and sick funds with 67,904.48 francs (\$13,105.56). The decrease in receipts during 1915, which was equivalent to 38 per cent, has been largely made up in 1916.

The total expenditures of the federations in 1916 amounted to 1,716,971.17 francs (\$331,375.44). The principal items of the expenditures were: Sickness benefits, 557,398.85 francs (\$107,577.98); strike benefits, 147,243.90 francs (\$28,418.07); unemployment benefits, 158,060.20 francs (\$30,505.62); death benefits and invalidity pensions, 163,467.95 francs (\$31,549.31); central administration, 304,463.16 francs (\$58,761.39); and publication of the organ of the central federation, 148,091.23 francs (\$28,581.61). Of unemployment benefits the printing trades' workers received the largest amount—84,450 francs (\$16,298.85); the textile workers with 23,911 francs (\$4,614.82), the woodworkers with 11,639 francs (\$2,246.33), and the metal workers with 11,437 francs (\$2,207.34) come next in the order named. The largest amount of strike benefits, 77,381 francs (\$14,934.53), was received by the printing trade

¹ Internationale Korrespondenz. Ausgabe W. Vol. 4, No. 63. Berlin, Jan. 4, 1918.

workers, the metal workers coming next with 27,019 francs (\$5,214.67). It is to be noted that many federations did not make contributions to the international organizations.

With respect to wage movements the year 1916 was a record year, as may be seen from the following table:

WAGE MOVEMENTS IN SWITZERLAND, 1911, 1914, 1916.

	1911	1914	1916
Number of wage movements.....	360	186	814
Number of workers affected.....	39,793	19,249	144,759
Number of organized workers affected.....	27,429	12,350	69,678
Number of workers who obtained wage increases.....			117,955
Total wage increases per week.....			\$61,783.74
Weekly wage increase per worker.....			.52

In 52 cases affecting 10,091 workers shorter hours of labor were obtained. These figured on an average $2\frac{1}{2}$ hours per worker and week, or a total of 24,996 hours per week for all workers affected. Of the 814 wage movements, 34 led to strikes by which 3,329 workers were affected. Most of these strikes were of brief duration and terminated favorably for the strikers.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE.

HEALTH INSURANCE BILL IN THE NEW YORK LEGISLATURE.

The subject of health insurance seems to have attained a position of prominence among the social and labor problems of the day, if the fact that nine State legislatures in 1917 provided for commissions to make investigations and report legislation thereon may be regarded as significant. One is reminded of the early days of the movement for workmen's compensation laws, when State after State took a corresponding step, investigation being followed by legislation in almost every instance. A few health insurance commissions had been provided for earlier, and bills were introduced in some States before last year, but thus far no enactment of law has resulted. The results of the educative processes that have been carried on by the friends of such a measure are becoming evident, however, one of the most interesting being a series of reports by the New York State Federation of Labor indorsing and explaining the bill now before the New York Legislature providing for a compulsory system of health insurance for employees and dependent members of their families. This measure was drafted by a special committee on health appointed at the convention of the State Federation of Labor in 1916, and is the result of more than a year's work by this committee.

Funds maintained by contributions made in equal proportions by employers and employees are provided for, the State bearing only the administrative expenses. The funds are of three classes—local, trade, and establishment—local and trade funds being corporations, controlled by boards of directors, while establishment funds are, as their name indicates, funds connected only with the individual establishments and supported by the employer and employees interested. Each fund is to contribute to a guaranty deposit, to be in the custody of the State treasurer, and to be available, in the discretion of the industrial commission, in cases of epidemic, catastrophe, or other unusual conditions.

Contributions to the funds are to be of an amount sufficient to cover the benefits contemplated by the act, and are to be made by the employer direct for himself and on behalf of his workmen, payments of the latter class being deducted from the wage payments. No employee whose wages do not exceed \$5 per week shall be required to make any contributions, the employer in such cases bearing the

whole expense. If payments are more than \$5 but less than \$9, the employer pays three-fourths of the expense and the employee one-fourth, while employees receiving \$9 or more bear half the expense of the benefits.

Benefits consist of medical, surgical, and nursing attendance and treatment and supplies for the insured workmen and the dependent members of his family, including hospital or sanatorium treatment where necessary; dental treatment for insured persons in so far as necessary extraction and filling of teeth are concerned, with additional work if the funds are sufficient; a cash sickness benefit to insured persons, and a cash benefit to dependent members of an insured person's family while he is in the hospital or sanatorium; medical, surgical, and obstetrical aid and cash maternity benefits for insured women, and medical, surgical, and obstetrical aid for the wives of insured workmen; and a funeral benefit for insured persons, similar benefits being allowed for members of the family if the resources of the fund warrant them. Medical, surgical, and nursing care are limited to 26 weeks of disability in any one year, and may not be furnished for a longer period on account of the same case of disability. Cash benefits begin with the fourth day of disability, weekly payments being paid equal to two-thirds of the insured person's earnings, but not more than \$8 per week nor less than \$5, unless such earnings are under \$5 per week, when the cash benefit is to equal the full weekly earnings. Such benefits are limited to 26 weekly payments in any one year, or for the same case of disability, but this may be extended to not more than 52 weeks if the fund is found to be adequate. Maternity benefits cover a period of 8 weeks, and are at the same rate as the regular sickness benefit; these are to be paid only on certification by the medical officer that the beneficiary is not engaged in gainful employment during the period of payment. Funeral benefits are limited to \$100.

Administration is to be by the industrial commission of the State, which is to divide the State into districts, supervise the establishment of trade funds, approve the commencement of business by any fund on a showing of its readiness therefor and a submission of an appropriate constitution for the guidance of the directors of such fund. Local and trade funds will be supervised by boards of not more than 7 members, each board to consist of an equal number of directors chosen by employer members and employee members, and one director additional chosen by a majority vote of these representatives. The board of directors appoints all officers and employees of the fund and fixes their salaries, makes rules and regulations for carrying out the purposes of the fund, and makes contracts with legally qualified physicians, surgeons, dentists, nurses, hospitals, etc., for services in connection with the activities of the fund.

Every employee, by which is meant any person in the service of another under any contract of hire, express or implied, oral or written, is to be a member of the trade fund of the industry or trade in which he is employed if such is in existence in his district, and if not he will be a member of the local fund of the district. Membership is automatic, and without regard to the physical condition of the workman; but the foregoing provisions do not apply to members of establishment funds. Persons employed for brief periods are members, each employer making his proper deductions and contributions, but the problem of the casual employee is not solved by the act, "employees whose employment is not in the usual course of the trade, business, profession, or occupation of the employer," being excepted. Provision is made for periods of unemployment by giving a sort of paid-up insurance for a period of one week for each four weeks of contribution, after which the workman may continue his insurance by paying the full cost, i. e., a contribution equal to the contribution of an employer and the employee. The industry or trade hazard may be made a basis of graded contributions, and if an establishment is found to be abnormally productive of cases of sickness, an additional contribution may be required from the employer without right of deduction from the earnings of his employees; on the other hand, if the sickness hazard of any establishment is below the normal, the employer may have the benefit of a reduced contribution on his part. No person can receive benefits until after three months' payments have been made, though having once become a member it is possible to maintain a continuous membership by voluntary contributions or by the action of trade-unions caring for their members during times of unemployment.

The bill is admittedly the result of an effort on the part of organized labor to draft a measure which would "be advantageous to the cause of the wage earners." On the other hand, the committee was positive in its rejection of suggestions by a number of members of the conference that the State should bear other than the administrative costs, or that the employer should be required to pay a larger proportion or even all of the benefit costs. An earlier bill was objectionable to organized labor in its proposal to make fraternal organizations, of which a considerable number of wage earners are members, a part of the administration of a sickness insurance system. This bill also contained a provision limiting the aggregate benefits payable from the State fund and any fraternal or union fund to an amount not exceeding the wages of the beneficiary. The present measure proposes a smaller benefit from the State fund, but leaves the employee free to carry as much fraternal or union benefit insurance as he desires, and receive the allowances from every source in full, whether it exceeds his wages or not. This plan commended itself especially to union labor

by reason of the fact that the contributions to the State fund for a smaller benefit would be less burdensome, and thus less likely to interfere with the maintenance of trade-union funds. Emphasis is placed on the medical benefit provided by the proposed law, since few trade-unions in the State furnish such benefits, and it is believed that the preventive results of a thorough medical service will go far toward reducing the amount of wages lost through sickness. The keeping of a roster of physicians from which a selection may be made instead of the employment of a single physician or physicians by the employer was also stressed, as avoiding one of the unsatisfactory features of the compensation law of the State.

In connection with this indorsement of the principle of compulsory health insurance by the New York State Federation of Labor, it is of interest to notice a circular letter of March 2, 1918, from the president of the California Federation of Labor in which the same attitude is expressed. An opponent of the movement in California had made the statement that the American Federation of Labor is opposed to health insurance. As to this the letter says in part, "The American Federation of Labor is a democratic organization. We have taken no action as yet, as an organization, in the matter of health insurance. In eleven States organized labor has gone on record for it, the New York Federation of Labor recently passing it without one dissenting vote. Organized labor is on record here in California for health insurance, because we believe that it offers the same protection against the risks of illness that industrial accident insurance now gives against the hazards of industrial injury."

OPERATION OF WASHINGTON'S NEW MEDICAL SYSTEM.

A notable experiment in the field of medical administration under workmen's compensation laws was made in the State of Washington last year. This State, which had previously not required employers to furnish any medical service whatever, amended its law so as to provide for practically unlimited medical and hospital service, one-half of the cost of which was to be borne by the employees. The distinctive feature of the Washington law, however, was its provision for medical administration through local medical aid boards under the supervision of a State board. This medical provision went into effect July 1, 1917. A review of the first three months' experience has just been issued as part of the sixth annual report of the State industrial insurance department.¹

Briefly, the law provides for a State medical aid board composed of the medical adviser of the industrial insurance department and

¹ Sixth annual report of the industrial insurance department for the 12 months ending Sept. 30, 1917. Olympia, Wash., 1918, pp. 52-56.

one representative each of the employers and employees. The board is authorized to divide the industries of the State into five classes according to hazard. Employers subject to the act are assessed from one to three cents for every working day for each employee, and contributions to the State medical fund are required once a month. Deductions from the employee's wages are authorized by the law. The State board is also authorized to promulgate rules, issue a maximum medical fee bill, approve physicians' and hospital bills, and approve contracts between employers and employees as to hospital benefit funds. In case such a hospital fund is maintained by an industrial establishment the employer and employees must each bear one-half of the cost, and in addition the employer must contribute 10 per cent of his share to the State medical fund, of which the employees are again required to pay one-half. The immediate administration of the medical service, however, is under the supervision of the local medical aid boards. Each of these boards, composed of one representative each of the employer and employees, must provide care and treatment for the injured, report the beginning and termination of disability and the cause of the injury, and also certify the medical bills. In case of disagreement the local board shall appeal to the State medical board.

The State board was immediately confronted with several problems, some of which involved interpretation of the law while others were concerned with administrative difficulties. The first question which presented itself to the board was the classification of industries. No statistics covering the cost of medical treatment were available and the board consequently was compelled to make its classification on the basis of compensation costs, on the assumption that there will be a definite ratio between the average compensation paid per claim per industry and the average cost of medical treatment. Subdivision of the five classes, however, is not permitted, according to the opinion of the attorney general. Under the law as it stands, the careless employer can not be penalized by being placed in a higher group. The other establishments in this class must, in a measure, pay for his accidents unless they maintain so high a standard of accident prevention as to overcome the natural hazard of the industry and justify the board in giving them a lower rate by placing them in the next lowest class.

The contract hospital system presents another problem. Under the law an employer who has obtained the consent of a majority of his workmen may enter into a written contract for their medical treatment, such contract to be submitted to the medical aid board for approval, and to remain in effect for the period of time stipulated therein, but not over three years. The board is authorized to disap-

prove a contract only in case the medical treatment provided does not meet the requirements contemplated by the act. Under the law the employees are required to pay one-half of the medical cost, but the attorney general has held that this provision does not prohibit the employer from requiring employees to contribute a flat amount each month. Several defects of the contract system are pointed out. One is that the medical aid board is prevented from obtaining the necessary statistics to make a proper reclassification. This reclassification then can apply only to firms not under contract. Complaint, too, has been made that employers obtain their employees' consent by means of fraud. One such instance came to the notice of the board but the attorney general again ruled that the board had no power to cancel the contract, remedy for this situation lying in the courts. One clause of the law provides that the acceptance of employment by any workman is tantamount to an acceptance of any existing contract under the law to which the employer is a party. A situation is conceivable—in fact, has arisen—in which a large majority of the present employees were not a party to the original contract. They are therefore bound by the contract although a majority may not favor the contract system.

One of the most difficult problems the State board was called upon to solve is the local medical aid board situation. The framers of the law evidently intended that there should be a local board at each plant. Such local boards were workable in the larger plants but were utterly impracticable in the case of the smaller employers. The board, therefore, divided the State into districts and established a local board in each locality where a physician resides. The larger cities were divided on an industrial basis, six such districts being established in Seattle and five each in Tacoma and Spokane. The State board experienced great difficulty in having the local boards appointed. The employers as a rule refused to serve on the boards because they could not spare the time from their business and since the law allows only \$3 a day the workmen did not want to give up good-paying jobs to attend to local board work.

Under the law the injured employees, except in the case of contract hospitals, are permitted to select their own physicians. This has given rise to another difficulty. A workman sustaining a minor injury will usually fail to notify the local board or his employer of his accident. He merely visits a physician to have the wound dressed, and then either returns to work or goes to another locality to look for employment. Consequently the local board first hears of the case when the physician's bill is presented for certification. This means that the board is required to look up the man and investigate the case before it can take action on the bill and that the industrial insur-

ance commission has trouble in securing a report from the employer verifying the case. In an attempt to correct this the medical board has requested the physicians throughout the State to advise an injured man to report the case to the local aid board at once. This has relieved the situation to some extent, though considerable difficulty is still experienced. The doctors also complain that they are unable to find the local board members because they are generally employed in some other occupation and are not easily reached.

There are in force at present 1,155 approved hospital contracts covering approximately 76,000 employees.

REPORT OF WORKMEN'S COMPENSATION BOARD OF NOVA SCOTIA.¹

The Nova Scotia compensation law of 1915 came into effect by a proclamation of the governor in council on January 1, 1917, following a three months' period of organization. This act superseded an earlier law which had been in operation for about six years. It is compulsory as to an enumerated list of important industries, while those not enumerated may be included on the request of the employer. The board listed over 4,000 industries, many of which were found not to fall within the designated classes, while others were either of such a temporary character, or employed such a small number of workmen, that they were excluded by action of the board. Where a numerical basis was used, the nature of the industry was also considered, so that the exclusion number as a rule ranged from one to five employees; this exclusion, however, was without prejudice to the right of the employer to apply for inclusion under the act.

A central fund is contemplated by the law, discretion being given the board to adopt either a current cost plan or a capitalized reserve plan. The latter plan was adopted, the premiums collected for each year being of an amount sufficient not only to cover the actual disbursements for the year, but also to provide a reserve for future payments for accidents occurring in that year. An accumulation for disaster reserves and the cost of administration are also to be provided for by the annual assessments. The board reports some nervousness at first on the part of employers as to what the rates would be but the rates established were said to be generally satisfactory, and were received "as a relief from the uncertainty and fear which previously existed."

Nine classes of industries were made, and separate income and expenditure accounts are maintained for each. On the basis of income, the most important of these classes is that of coal mining (class 1), this class contributing 47 per cent of the total assessments for the

¹ Report of Workmen's Compensation Board, 1917. Halifax, 1918, 15 pp.

year. The next class in importance is class 5, iron and steel, including manufacture and work; this class contributed 24 per cent of the assessments. Next are class 9, transportation, not including shipping and navigation, which contributed 10 per cent, and class 3, lumber and woodworking, which contributed 4.8 per cent. Expenditures of class 1 amounted to 49 per cent of the total, and of class 5 to 23 per cent, these corresponding closely to the percentages of income. In class 9, however, the expenditures were but 5 per cent of the total expenditures, as against 10 per cent of the income, while in class 3 the expenditures were 8.3 per cent of the total, as against an income of 4.8 per cent. The result of this discrepancy between income and expenditures in class 3 is a deficit in the provisional balance amounting to \$22,855. A deficit of \$10,275 appears also in class 7, building and construction, and of \$8,152 in class 6, manufacturing and operating not otherwise specified; but taking all classes there is a balance of \$68,011.

It is interesting to note that the assessments in class 1, coal mining, were adequate to meet a catastrophe which occurred some seven months after the law went into effect, resulting in the death of 65 workmen, and entailing a burden upon the fund of this class of approximately \$120,000. Despite this, the fund shows a provisional balance somewhat in excess of \$18,000. The year 1918 opens with an added burden due to a still greater calamity in the way of a coal mine disaster producing 88 fatalities, though this of course does not figure in the balances for the year. The most serious catastrophe of all, the great Halifax Harbor explosion, will not devolve upon the compensation fund, being taken care of by the relief commission appointed by the Dominion Government; the losses due to this explosion amount, on a compensation basis, to about \$850,000, according to this report.

The total assessment income for the year amounted to \$812,367, and the total expenditures, including reserves, to \$754,055. Administration expenses met from the fund amounted to \$22,872, or 2.8 per cent of the total assessments. However, the Government contributed \$5,034 to the administration expenses, which would bring the total cost of administration up to 3.4 per cent of the assessment income.

No general provision is made for medical and surgical aid, but the board is authorized to arrange for special surgical operations or special medical treatment in cases where it appears that such service will conserve the accident fund. This discretion was exercised in a single case, the instance being that of a coal miner whose eye was struck by a piece of coal, a corneal ulcer resulting, causing total blindness of the injured eye. A similar accident had happened to the other eye some

20 years previously, so that the man was entirely blind. Consultation with a specialist led to an operation with the idea of making artificial pupils, the result being that the workman reports himself able to see as well as ever and has resumed his employment at full wages. The expenses of this operation are given as \$201.90, which, with the compensation paid, amounts to less than \$500; the capitalized value of a permanent benefit for total incapacity, such as would have been required if the operation had not been performed, is given at \$4,800, so that as the result of the operation the workman has become an efficient member of society with his self-respect retained, while the fund is saved \$4,300, a striking illustration of the importance of thorough, efficient, and liberal provision in this field.

STATE INSURANCE IN QUEENSLAND.

A system of state life insurance was organized in Queensland by the insurance act, 1916. It has been effective since February 1, 1917. It is administered by the State Insurance Office, which also has taken over the administration of the accident insurance of the State established under the workmen's compensation act, 1916, and a fire and a miscellaneous accident insurance business.

The treasurer of the State of Queensland submitted the following report of the business of the office to the legislative assembly: ¹

Income (received and due):	Number.	Premiums.
Workers' compensation policies issued.....	36,687	£188,551 (\$917,583.44)
Fire policies issued.....	5,184	8,164 (39,730.11)
Miscellaneous accident policies issued.....	74	361 (1,756.81)
Total policies issued.....	41,945	197,076 (959,070.35)
License fees, interest, etc.....		5,493 (26,731.68)
Total income.....		202,569 (985,802.04)
Outgo (paid and provided for):		
(a) Claims—		
Workers' compensation.....	7,849	116,091 (564,956.85)
Fire.....	3	744 (3,620.68)
Miscellaneous accident.....	3	71 (345.52)
Total claims.....	7,855	116,906 (568,923.05)
(b) Expenses—		
Workers' compensation department.....		23,680 (115,238.72)
Fire, including taxation.....		3,251 (15,820.99)
Miscellaneous accident.....		147 (715.38)
Section 27.....		1,020 (4,963.83)
Total outgo.....		145,004 (705,661.97)

¹ Parliamentary debates, Queensland, 3d sess., 20th Parliament, 1917, p. 1400.

The expenses have been properly apportioned between the various departments, and reserves have been established for outstanding claims and liabilities.

£4,335 (\$21,096.28), the balance of the fire and miscellaneous accident accounts, has been reserved to cover outstanding liabilities in these departments.

£52,153 (\$253,802.57), the balance of the workers' compensation account, which represents the net profit in this department for the year, after providing for all liabilities, has been dealt with as under:

	Pounds Sterling.	
Balance of preliminary expenses written off.....	5,584	(\$27,174.54)
Transferred to general reserve.....	20,000	(97,330.00)
Bonus to policy holders.....	18,717	(91,086.28)
Carried forward.....	7,852	(38,211.76)

The office has invested the sum of £50,000 (\$243,325) in 4½ per cent Government debentures, which were purchased at par.

The sum of £18,717 (\$91,086.28), which was paid in bonuses, was distributed on the basis of 10 per cent on ordinary and 50 per cent on household workers' compensation policies this year, an amount which it is hoped to increase next year.

It must not be overlooked also that, in addition to the actual profits earned and distributed by the office, the statutory reductions in fire and accident rates imposed upon insurance companies by the insurance act of 1916 have saved at least another £50,000 (\$243,325) per annum to the insuring public.

It is satisfactory to note that the office is receiving the support of all sections of the public in the fire and miscellaneous accident departments, in which a very conservative underwriting policy is being followed, the benefit of which policyholders should receive in the way of substantial cash bonuses in the near future.

INDUSTRIAL POISONS AND DISEASES.

CAUSATION AND PREVENTION OF TRINITROTOLUENE (TNT) POISONING.

BY ALICE HAMILTON, M. D.

In the following pages I have tried to give a summary in non-technical language of a pamphlet just published in London by the Medical Research Committee of the National Health Insurance.¹ Dr. Benjamin Moore with two assistants, T. A. Webster and Dr. G. A. Wyon, undertook on behalf of this committee a thorough research into the causation and prevention of trinitrotoluene poisoning, by means of animal and human experiments and through close observation of actual factory procedure and of the health of men and women exposed in different ways to TNT. The result is a mass of information which will be of great interest and value to physicians and to men in charge of munition plants in the United States.

As an indication of the changes in methods of protection against poisoning which this investigation calls for, the following conclusions may be cited:

1. TNT is absorbed through the skin, and that is the only channel of absorption which is of any practical importance.

2. Consequently elaborate systems of exhaust ventilation to carry off fumes are not necessary, for there is no case on record of poisoning from TNT fumes alone. The wearing of respirators is not advised, since the amount of dust that can be breathed in is too small to be harmful. Dust is dangerous only as it falls on the skin or clothes or on surfaces that must be handled.

3. When TNT is swallowed deliberately by experimenters, the effect is as slight as when the same amount is inhaled.

4. TNT readily makes its way through the skin and is absorbed, setting up in susceptible persons a slowly increasing intoxication.

5. Therefore the prevention of TNT poisoning depends on two factors—first, strict cleanliness of the factory premises, so that there will be as little actual contact with TNT as possible, and second, close watch of workers to eliminate that minority which has a low resistance to TNT. Since, however, it is impossible entirely to protect the skin from contact with TNT in manufacturing and in shell-filling operations, the importance of the second factor becomes

¹ Great Britain. National Health Insurance, Medical Research Committee. The causation and prevention of trinitrotoluene (TNT) poisoning. Special Report Series No. 11. London, 1917, 85 pp.

evident. In spite of the best efforts to do away with all skin contamination there will be inevitably some contact with the poison, and though the majority of workers will be able to tolerate the small amount they absorb, a certain minority will be unable to resist its effects, and it is this group of workmen that must be discovered and removed before actual injury has taken place.

In a word, the prevention of TNT poisoning depends on cleanliness of the work place and ever-watchful medical supervision.

INTRODUCTION.

The explosive TNT was well known before the war, but was supposed to be innocuous; indeed, the particular advantages claimed for it were its high stability, so that it could be relied upon not to explode till intentionally detonated, and its low toxicity. Both properties are possessed by TNT, but not to the degree supposed, and, as a result of too great a reliance upon them, there have been disastrous explosions and fatal forms of poisoning in connection with the manufacture and use of this substance during the War. The work of Dr. Moore and his assistants was undertaken in August, 1915, at the request of the medical inspectors of factories, for they had discovered serious symptoms leading to toxic jaundice among workers with TNT, and the rapidly increasing use of this explosive made the situation one of grave anxiety.

In the absence of specific knowledge of this poison the health authorities could only reason from other similar poisons and consequently the Home Office had recommended precautions against the inhalation of dust and fumes and against skin absorption. It is certain that these precautions did much to keep down the number of fatal cases of poisoning, but it was most desirable to ascertain the actual mode of entrance of the poison in order to know which safeguards were necessary and which nonessential. This work was undertaken by Dr. Moore and continued through 1915, 1916, and 1917.

The first recorded death from TNT occurred in the manufacture of the explosive, in February, 1915, the second in a shell-loading factory in August of that year. Then the cases increased rapidly, reaching their height in the autumn of 1916, but after that the effect of protective measures began to show and in spite of a great increase in the numbers of workers exposed the number of cases fell decidedly. In July and August, 1917, there were only 17 cases with 7 deaths, as compared with 53 cases and 13 deaths in the same months of the preceding year.

As is the case with other nitrocompounds, an immediate and obvious result of TNT absorption is a chemical change in the red coloring matter of the blood corpuscles and a consequent damage to the oxygen-carrying functions of the blood. This shows itself in a darker

color of the blood and in pallor or duskiness of the skin with blueness of the lips—"cyanosis." The failure of oxygen transport and the consequent oxygen famine is shown by breathlessness and air hunger on exertion. If the fresh entry of poison be prevented, what has entered is eliminated and the red blood corpuscles are rapidly restored, the process being greatly aided by abundant fresh air. This explains the beneficial results of several successive holidays for TNT workers.

Cyanosis is an abnormal condition but by itself it does not kill. The fatal results of TNT poisoning have been due to a destruction of liver substance, the so-called "toxic jaundice," and more rarely to a profound anemia, "aplastic anemia" in which the blood-forming organs fail to produce new red corpuscles. At present both forms are incurable and rapidly fatal diseases when once established, and therefore the question of their early detection has been one of the chief practical problems of industrial medicine during the War.

CONSTITUTION AND PROPERTIES OF TRINITROTOLUENE.

The material known as TNT is mainly composed of one of the three isomeric trinitrotoluenes, that one called symmetrical because the three NO_2 groups are symmetrically arranged on the toluene nucleus. The commercial variety contains also insignificant quantities of the other two isomers and a variable percentage of mono and di nitrotoluenes, together with small amounts of nitrated methanes and other substances. The pure product is a hard crystalline powder, almost odorless, melting at 82°C . at which temperature it sublimates slowly. At atmospheric temperatures its vapor pressure is low and, as will be shown below, practically none is present in factory air as vapor.

The question has often been discussed whether all the manifestations of TNT sickness are due to absorption of pure TNT or are due to one or more of the impurities commonly present. Some have suggested that trinitrotoluene causes the cyanosis and the minor form of poisoning, but that toxic jaundice may be caused by some impurity and aplastic anemia by still another.

Though it is very difficult to prove that all these effects are due to trinitrotoluene and to it alone, yet it can be said as a result of experiments on animals and on men with the pure body and with the impurities that all these effects can be set up by the pure substance and that probably all are closely connected in their mode of causation. Pure TNT causes cyanosis and workers exposed to it alone have also developed toxic jaundice and died, while there is no evidence that workers with crude TNT have been any more severely affected than workers with the purer qualities. Samples of the various impurities found in crude TNT were placed at the disposal of Dr. Moore and tested, but none of them showed a higher degree of toxicity than trinitrotoluene itself. A very poisonous compound, tetranitrome-

thane, is present in the crude product, but only in minute quantities, about 0.12 per cent, and even this is in great part removed before TNT reaches the shell-loading factories.

CHANNELS OF ABSORPTION.

Fume inhalation.—The preventive measures at first adopted were directed against the inhalation of fumes and dust, the breathing of operatives was incomed by the use of respirators even in places where the air was almost guiltless of dust, and time, labor, and money were expended on elaborate systems of fan ventilation in factories situated in open country where the natural ventilation was excellent.

In the effort to test the fume theory of poisoning, different kinds of animals were exposed for days to the strongest fumes of heated crude TNT but showed no effects. The experiments were repeated inside the factory, cages being suspended over melting pans in a position where exposure to fumes was worse than that endured by any workman, but even after months of such treatment the animals continued fat and healthy. Kittens were the only animals that developed cyanosis after excessive exposure, cats being especially susceptible to TNT.

Swallowing dust or inhaling dust.—The reason for the earlier belief that fume rather than dust was the causative agent in TNT poisoning was that the earlier cases appeared exclusively among workers with hot molten TNT and not among those who were exposed to dust in large quantity. A few months later, however, there occurred the death of a worker filling "exploder bags" with pure dry TNT, who had never been near molten TNT. In consequence of this a new series of experiments was instituted to test the influence of dust when inhaled and when swallowed.

A sample of these laboratory experiments, selected from many, will suffice. Two rabbits were each given 100 milligrams of TNT with their food daily except Sundays, from October 15 till December 31, 1915, and both not only survived but put on weight. Only when such doses as 500 milligrams, enormously disproportionate to anything which an operative could swallow at work, were given by the mouth was it possible to kill the animal, and then only after three or four rapidly repeated doses.

The investigators then administered to themselves doses of TNT, taking 10 or 15 milligrams daily—amounts about equaling those which air analysis had shown might be taken up from the factory air. Chemical test of the urine showed the presence of TNT in the system, but also showed that it was usually entirely eliminated within 12 hours.

A number of analyses were made of air collected from various parts of several factories and the amount of TNT estimated, taking

as a basis the air breathed in by an adult during a 10½-hour shift. For instance, a factory was selected in which girls were pressing amatol blocks and in which a fatal case of TNT poisoning had recently occurred. The inlet for the air drawn for examination was placed within a foot of the head of a girl serving beside the box of powder. It was found that the maximum amount of TNT absorbable from the air would be 14 milligrams. In a second experiment in another part of the same factory 12 milligrams was the maximum amount, and in a third only a little over 8, the average being 11 milligrams. These observations showed quite conclusively that the amount of TNT entering the system through inhalation is almost negligible. However, it seemed best to extend the investigation so as to be certain that no risk could be run by dispensing entirely with respirators, and for this purpose six girls were induced to wear elaborate Siebe-Gorman respirators, furnished with a long wide rubber tube to bring in air from outside the workshop. The tests made of the urine of these girls showed no decrease in the amount of altered TNT being excreted, although they were wearing the most complete respiratory protection that could be suggested.

Absorption through the skin.—The above experiments having shown of how small importance is absorption from the air by swallowing or breathing, the investigators determined to make experiments in skin absorption upon themselves, exposing only the hands or the feet to the poison. They protected themselves from all other contact with TNT, they proved by the urinary test that their systems were free from the poison, and then they rubbed TNT into the palms of the hands or dusted it into the socks. Dr. Moore produced in himself all the symptoms of a minor attack of TNT illness, with a marked frontal headache, nausea, intermittent abdominal pain, and a feeling of malaise and drowsiness which persisted about two days. It was two weeks before his urine was free from TNT and then he repeated the experiment with the same results. The other two obtained distinct reactions in the urine but slighter than did Dr. Moore, and they suffered no symptoms.

Several experiences in the factories pointed also strongly to the importance of skin absorption of TNT. For instance, two cases of toxic jaundice occurred in women who merely handled dust-covered material, such as shells or waxed blocks, but were not exposed to dust or fume in the air. Another case occurred in the pressing of TNT pellets from pure dry TNT, and a visit showed that the work was carried on in small isolated sheds under almost open-air conditions and that there was no molten TNT near. But the hands of the workers were deeply stained and oily and a test for the presence of TNT in the urine was positive.

The investigators then endeavored to see if by completely protecting the hands they could prevent the absorption of TNT, but it proved to be almost impossible to keep the hands of factory operatives entirely free from contact with TNT. Only in the case of one girl of unusual intelligence and enthusiasm did they manage to keep the hands chemically clean for over a week. This necessitated having her come to the laboratory at the beginning and end of each working period, so that her hands could be tested with alkaline alcohol¹ to make certain that no TNT had penetrated to the skin. Then rubber gloves were put on and bandaged so that no powder could fall in between the glove and hand. The bandage reached from wrist to elbow and protected wrist and forearm, while an ordinary pair of cotton gloves was worn over the rubber gloves to protect them from injury. For nearly a fortnight they were able to keep her hands continually clean, as shown by the alkaline alcohol test. This girl had already been under observation, being one of those who wore the Siebe-Gorman respirator in the former experiment. During the period when she was wearing the respirator and her hands were unprotected her urinary reaction had varied between 2 and 4, which is about the shop average. On the days when her hands were chemically clean the urine showed only slight traces of TNT or none at all.

The difficulty encountered in keeping the hands of operatives chemically clean from TNT induced the experimenters to try the effect of actual factory work on themselves. Accordingly Dr. Moore and a voluntary coworker, Miss M. G. Francis, worked for a week on one of the same machines as used by the factory employees and under similar conditions in the same shop. All protection to mouth and nose was dispensed with, but the hands were thoroughly protected by leather gloves next the skin and rubber gloves outside of these, and at the termination of each working period a negative result was obtained on testing the skin of the hands with alkaline alcohol. On two of the days of the experiment there was a high wind which blew TNT powder into the air and caused the two experimenters to suffer severely from sneezing and running from nose and eyes, yet at the end of the day's shift neither of them showed more than a slight urinary reaction, and this only for a few hours, while the usual employees working alongside had on the average at least five times the intensity of reaction in the urine, although wearing respirators, as was the rule at that time. Their hands, however, were heavily laden with TNT, as could easily be seen when they took off their gloves, while those of the two experimental workers were clean.

Summary.—Dr. Moore sums up as follows the results of his researches into channels of absorption of TNT.

¹ Alkaline alcohol produces with TNT a bright pink color.

The analysis of the air of one of the chief workshops where most of the cases of toxic jaundice and fatalities have occurred shows very little TNT dust or fume, so that in the investigators' opinion this can not be an important factor.

It has been shown that because too little stress has been laid on the danger of skin absorption, not enough effort is being made to keep all processes clean. As a result persons engaged in cleaning soiled shells with oily rags are often cyanosed and there have been several cases of toxic jaundice among them.

Chipping off and rubbing with oil does not completely remove TNT from the outside of the shells and these go on to the so-called "clean shell store" covered with a film of oily TNT. As a result cyanosis and jaundice have appeared among the operatives in this department and among those who load filled shells onto railway trucks.

Comparative statistics show that those employees who work close to molten TNT have as good a record as to health and attendance as do other workers much more remote from fumes.

Only a minute trace of TNT appeared in the urine of the investigators after remaining for an entire shift close to the point where the molten amatol was poured, and an analysis of the air yielded only 6 milligrams as the amount that could be breathed by a worker during one shift.

Analyses of the records of fatal and nonfatal cases show that a large proportion were shell cleaners and truckers who were exposed to skin contact but only slightly exposed to dust or fume inhalation.

The factory in which these observations were made had at that time the highest incidence both of minor TNT illness and of notified cases of toxic jaundice and deaths from toxic jaundice. It has since become one of the healthiest in the country and the change is attributed to two factors—all the processes are carried out with greater cleanliness, and a medical officer patrols the workshop in order to detect cases of poisoning in the early stages.

DETECTION OF TNT POISONING.

T. A. Webster, one of Dr. Moore's coworkers, devised a test for the presence of modified TNT in the urine, a test which has proved of the utmost value not only for the protection of individuals threatened with TNT poisoning, but also in aiding research into the channels of absorption of TNT. The experiments given above were all checked up by the application of this test to the urine. The test depends upon the fact that the modified TNT which has passed through the system is not removed from the urine by ether as is unmodified TNT, but if the urine be first mixed with an equal volume of 20 per cent sulphuric acid solution and then shaken out with ether, the ether separated and washed free of acid with water, the pink color charac-

teristic both of TNT and of the modified form will appear when alkaline alcohol is added. No accurate way of making the test quantitative is known at present, but each observer must establish for himself a standard for judging various degrees of intensity.

The urines of practically all workers in TNT contain this substance, but in some there is only a minute trace, in others an intense reaction. There may be a high reaction where there is no sign of TNT poisoning; and, on the other hand, there may be poisoning with only a moderate reaction.

The substance is not TNT, but is formed from it by the reduction of one of the nitro groups giving dinitro-hydroxylamino toluene. It has been isolated from the urine of rabbits and a monkey to whom TNT had been administered, and also from human urine after the oral administration of TNT, and from the urine of workers in TNT factories.

The action of TNT on the blood is the same as that of a large class of bodies, including the organic nitro and amino compounds, which possess the common characteristic of acting primarily on the blood, changing the hemoglobin to a varying degree into a mixture of NO-hemoglobin and methemoglobin. Since these can not function as oxygen carriers, it follows that when more than a certain proportion of hemoglobin has been altered by the action of the poison oxygen starvation appears, the symptoms increasing when any exertion is attempted. This is the stage of minor TNT illness and the symptoms complained of are very similar to those of mountain sickness, such as breathlessness, tightening in throat and chest, difficulty in breathing, dizziness, drowsiness, nausea, abdominal pains, appetite at first stimulated, then lost.

The changes in appearance observed before any jaundice occurs are also due to the changes in the blood. A drop of blood obtained by pricking shows a venous blue color, which does not soon turn to scarlet when absorbed by blotting paper—a quite characteristic effect which may be useful for diagnostic purposes. There is a normal number of red blood cells and a normal amount of hemoglobin, but evidence of destruction and regeneration of red blood cells is shown by the dark color of the urine during an attack of poisoning and by bile-stained serum.

A rare form in TNT poisoning is aplastic anemia in which without any change in the appearance of the red blood corpuscles there is a profound loss, the number of red cells falling in one case to 1,200,000 per cubic millimeter, and the hemoglobin percentage to 30. The appearance in such cases is that of pernicious anemia, but the examination of the blood elements and of the organs shows that it is a failure of function of the blood-forming tissues only, as a result of TNT absorption.

The general appearance of a person suffering from an early stage of TNT sickness is relied upon by experienced physicians to give warning of a condition requiring attention. There is a pale face, lacking in expression, lips that can scarcely be described as cyanosed, but of an ashen blue color and the same color is seen on the gums. There may be a faint trace of yellow in the whites of the eyes, but the rest of the skin shows no jaundice. When these are observed the physician should question the worker and he is then likely to be told of abdominal pains, dizziness, sleepiness, breathlessness, headache or nausea, and dark-colored urine, but this history may or may not be given, according to whether the worker feels like resting or keeping on with work. The physician must really depend upon the evidence of his own eyes and this can be done well only by those who have experience, not by a visiting physician who sees the workers once a week or once a fortnight. The excitement of going to see the doctor is often enough to disguise the symptoms and it is much better to have the foreman or welfare worker draw attention quietly to those that are suspected. Dr. Moore is emphatic in his belief that medical supervision of such factories as these can be satisfactory only when the physician "patrols" the plant at frequent intervals, familiarizing himself with the workers as they appear normally and thus being able to detect those slight changes which show to the experienced eye the beginning of ill health.

TOXIC JAUNDICE.

Much of the report deals with that serious form of poisoning known as toxic jaundice. Dr. Moore regards both jaundice and fatal anemia as secondary results of the same action of the poison as that which causes the symptoms of cyanosis. His reasoning is based upon experimental evidence and upon a close study of the histories of actual cases. It is unnecessary to go into this controversy here, and it would not be possible to do justice to it in a short review like this. Those who are interested in the question are referred to the complete pamphlet. The important matter from the point of view of prevention is that cyanosis and its accompanying pallor form the best danger signal we possess that liver and bone marrow are in the firing zone and so long as there is in the country a sufficient supply of people insusceptible to TNT, susceptible individuals ought to be removed. It is accordingly unsafe to wait for jaundice as the danger signal. The safe way is to look upon cyanosis as the signal, whether or not we believe that the jaundice is due to a direct effect on the liver or is a later stage of the condition giving rise to the cyanosis.

The action of TNT in forming methemoglobin has as its sequence increased blood destruction, and the products of destruction must be disposed of by the liver and kidneys, while the blood must be regener-

ated by the red marrow. For instance, if four times the normal amount of hemoglobin is katabolised by the liver cells, four times the normal amount of bile pigments will be formed, but if the liver cells can excrete into the bile this increased amount there will be no jaundice and the only effect noticed will be increased biliary pigments in the feces and probably a darkening of the urine. But the liver cells will be working at four times their normal rate. The iron of the hemoglobin may be stored in the liver or sent out at fourfold rate to the red bone marrow to supply the increased demand of new blood corpuscles for iron. This means that the red marrow also has to work at fourfold the normal rate. Now, if the liver fails under this strain there will be jaundice; if the bone marrow fails, aplastic anemia. There may also be a partial breakdown of both liver and red marrow with both anemia and jaundice, or one may succeed the other. A secondary effect is the stimulation of the kidney to excrete through the urine the bile pigments which the liver is unable to get rid of. If this is incomplete the blood serum becomes loaded with bile pigment and the concentration may increase until plasma and all serous fluids become bile stained, and then jaundice is established.

In the great majority of TNT workers a compensatory balance is established, there is no critical breakdown in liver or red marrow or kidney, but any individual who absorbs freely is always in danger. Some intercurrent illness or indiscretion may just tip over the balance and establish a condition which will run down hill of itself when once set going. Such a person ought obviously to be removed and this weeding out of the susceptible should be kept up till the workshops are filled only with those individuals who do not yield to the poison.

Dr. Moore gives a striking instance of the disastrous result which may follow neglect to take seriously what seems to be a case of minor TNT sickness. At one of his visits to a factory the welfare supervisor called his attention to a girl who had typical blue lips and a marked pallor but no yellow in the eyes. On questioning she admitted her appetite was poor, that she had a little nausea, but had never vomited, that she had slight abdominal pains, but not enough to make her stop working. She was told that she had a mild attack and should take some time off, whereupon she began to weep and said she was the only support of an old and infirm father. This conversation occurred on a Monday and it so chanced that there was to be a four days' munition workers' holiday beginning on Wednesday evening. She begged to be allowed to continue at work for the next two days and this was agreed to, provided she would not start work again after the holiday unless she was better. On Wednesday, however, her eyes showed a decided yellow and when she presented herself on Monday morning after the holiday she had a general

jaundice. She was immediately sent into the hospital and at first did not seem very ill in spite of the deep jaundice, indeed she was quite bright and cheerful, but a few days later she grew much worse, became delirious, then comatose, and died. At the post-mortem examination the usual changes of toxic jaundice due to TNT poisoning were found. A clearer case than this of cyanosis and minor TNT illness passing on into toxic jaundice and death could not be found.

PREVENTION OF POISONING.

Ventilation.—In each factory dust-extraction experiments should be made and it will generally be found that many proposed schemes of forced ventilation need not be carried out. The vast majority of TNT workshops are clean, airy, naturally well ventilated, one-story buildings in which analyses show a negligible quantity of TNT dust.

Prevention of skin absorption.—The knowledge that the main absorption occurs through the skin of the hands indicates three lines of action, namely: (1) Keeping clean all that the hands can touch; (2) protecting the hands; (3) detecting those hands which are permeable and keeping their owners away from TNT work.

The provision of machinery to take the place of human labor in shell loading is a matter of the greatest urgency, both because the individual worker will be protected from direct contact with the poison and because the number employed will be smaller. For those who must come in contact with it, protective clothing, gloves, and boots must be provided. The most important of these is the hand covering. These investigators spent much time in designing gloves and glove attachments of various kinds and materials but all broke down in practice. They could protect themselves and a few workers under experiment, but no attempt to drill a band of workers to carry out the same excessive precautions all the time succeeded. Once the TNT gets underneath the gloves as it does with all workshop gloves hitherto tested, the glove is worse than useless, for it holds the powder in closer contact with the skin, induces perspiration, and makes the skin soft and permeable, so that except for very rough work which hurts the skin of girls' hands, bare hands are preferable to gloved ones and in the few cases where gloves must be worn they should be loose, thick, leather ones.

The other portions of workshop clothing ought to be designed to protect the skin and the "bloomer suit" has become very popular for woman munition workers and is much to be preferred to any form of skirt. The legs of the bloomers should end over long Wellington boots. Low shoes should not be allowed, for when worn the skin of the girls' feet becomes decidedly yellow. This is a quite unnecessary area of absorption to add to hands and face. The

work clothing of TNT workers must be kept apart from their home clothing.

Many experiments were made with solvents for TNT and protective varnishes for the skin. Acetone, which is the best solvent, was barred out by its present scarcity, but a mixture of xylenes proved to be a good solvent and a group of 24 girls were instructed to wash their hands in it each day on leaving work. The results proved disappointing, the color of the hands was lighter, but the urinary reaction seemed to run on its usual course. It may be that the solvent made the layers of epidermis more permeable and thus increased absorption. It did actually remove all TNT from the outer layers of the skin as shown by the failure of the alkaline alcohol test.

In spite of this failure, however, Dr. Moore recommends that all workers seriously ill with TNT should when they leave work have the skin thoroughly cleansed, if possible with acetone, for only in that way can continued absorption of the poison be prevented.

They turned their attention next to protective varnishes which could be applied to the skin before starting work and removed at the end of the day. Solutions of acetate of cellulose and collodion such as are used in the various liquid court plasters on the market proved useless, because they would peel off, but finally a water soluble "casein varnish" free from fats and oils was found to give excellent results. The improvement was visible to the girls themselves. Girls were selected who showed the stain on face and hands most deeply and under the use of the varnish the stain almost disappeared in two or three weeks. This preparation also protects against tetryl stain. It is not unsightly in use, as it sinks into the skin and disappears. It has at present one defect, that when kept it tends to thicken and then sometimes lathers and does not become invisible on the skin. When this occurs some of the girls object to using it. In time improvements may be devised which will make it resist hot weather better and not be removed by perspiration, but experience has already shown that for dusty TNT employment protection of the skin of face and hands by a varnish is feasible and that when the skin is thus protected there is a great fall in the amount of TNT absorbed as shown by urinary tests.

Early detection and removal of specially susceptible persons.—There has been some controversy as to whether the same person should be allowed to remain for many months on TNT work even if no symptoms of poisoning are observed. Dr. Moore believes that anyone who has worked for a year or more without symptoms has shown himself unsusceptible and should be kept at work as a most valuable asset to the factory. On the other hand, a person who has been ill more than once during a working period of five or six months should be

watched most carefully and laid off at once on the appearance of any considerable cyanosis. In fact he would prefer to remove such susceptibles altogether. He attributes most of the improvement in the healthiness of TNT factories in Great Britain to the cooperation of management and medical staff in this process of weeding out.

A prophylactic measure which has received a very widespread application is that known as alternation of labor: Dr. Moore used to be a hearty supporter of this policy but has changed his views, not because he does not still believe that it is good for the individual worker to have a fortnight of safe work alternate with a fortnight of TNT work, but because there are objections to it from the point of view of the workers as a whole, because there are considerations of output involved, and finally because there are other means by which the end can be achieved with equal certainty and at much less cost. For alternation of employment, double the number of workers must be employed to work on dangerous material and since the output is not nearly so good under alternation as under continuous employment, the total number of exposures to TNT poisoning is more than double and therefore the difficulty of weeding out the oversusceptible is more than double. Again, the risk of exposure to each individual is by no means reduced to half, for tests made show that the girls working during a fortnight on alternative work do not show the clearance in the urine that is shown by four days of complete holiday. Evidently even while they are "off TNT" they still come in contact with it either through soiled clothing or through soiled woodwork, boxes, trucks, or shells.

Another objection is that this alternation prevents the rapid training of workers in speedier and more skillful methods. The speedier the rate of working, the smaller the number of hands required, the less dust produced, the less molten TNT spilled about, and the less danger of poisoning for everyone. In place of alternation Dr. Moore would put increased medical care for the smaller number of workers and permanent weeding out of the susceptible.

TREATMENT OF CASES.

It ought to be very rare in the future that cases pass unnoticed through cyanosis into toxic jaundice. When this has occurred, as well as in all cases of severe cyanosis, the first essential is a complete removal from all contact with TNT. It is not sufficient simply to instruct the patient and send him home, for these people have little realization of the seriousness of their illness, indeed even after jaundice has appeared they may feel cheerful and well. They carry home TNT on hair, hands, and clothing and in the course of time their furniture and bedding have become contaminated. Such cases,

therefore, ought as a rule not to be treated at home but in a hospital by a physician experienced in TNT cases.

It ought to be emphasized particularly that this is true of the first few days of incipient jaundice, for at this stage the case looks less serious than it does later when the jaundice deepens, and the physician may be inclined to wait a few days and see how the case develops with home treatment and visits to the consulting room, but these days are the all-important ones, far more so than those after jaundice has become deep, for then the physician can but watch and wait and is powerless to give much help. The very first appearance of jaundice shows that compensation is failing and a fight is going on between degeneration and regeneration in the liver cells, with degeneration slowly gaining and no longer enough sound tissue left to carry on the normal functions. If the attack by the poison is prolonged a little more the fight will be decided against the patient. This is the point at which prompt action taken by the physician in completely cutting off contact with the poison makes all the difference.

The patient should be removed at once from the factory to a hospital, all clothing which has been in contact with his body removed, he should be given a warm bath, dried, and wherever the skin has been exposed it should be thoroughly cleaned from all traces of TNT by scrubbing with pledgets of absorbent cotton soaked in acetone or ether until no pink color shows with alkaline alcohol. Special attention should be paid to the palms of the hands. The nails should be cut short and carefully manicured and the roots of the hair cleaned, especially on the scalp. The patient should then be put to bed in a well-aired room and given a purgative. The bowels must be moved as soon as possible and kept open. The urinary secretion and perspiration ought then to be stimulated by a simple saline mixture and this should be kept up for two or three days until Webster's reaction is no longer obtained in the urine and the test remains negative, even after the saline is discontinued.

Fresh vegetable food and fruit are desirable and alkalies should be given, as there is a certain amount of acidosis in some cases.

In slighter cases of cyanosis the patient need not be kept in bed, but an open-air treatment should be given either reclining in the fresh air or with moderate exercise, not enough to bring on breathlessness. In a few days these cases clear up as the methemoglobin breaks up. If, however, the patient be then allowed back on TNT work, he must be carefully watched and if the symptoms recur he must be given a permanent discharge.

According to the report, no person who has ever had toxic jaundice is under any circumstances allowed to go back to TNT employment or to any sort of work in the same factory with TNT workers.

RESOLUTIONS OF THE NEW YORK ACADEMY OF MEDICINE ON OCCUPATIONAL DISEASES.

At a meeting of the New York Academy of Medicine, March 7, 1918, resolutions offered by the public health committee in regard to the industrial disease problem were adopted, as follows:

1. That the matter of the need of instruction in the recognition, treatment and prevention of occupational diseases should be brought to the attention of the authorities of the medical schools of New York City, with a request that a special course be given through at least one term, with particular reference to the numerous poisonous substances used in war industries and their deleterious effects.

2. That special clinics be organized under the auspices of the medical schools in order that occupational diseases may be studied and treated under competent guidance and supervision.

3. That consideration be given to the desirability of the establishment of special clinics, under the auspices of teaching institutions and health agencies, in the neighboring towns of New York City, where large manufacturing and munition plants are located, with a view of facilitating the utilization by the men and women employed in these factories, of the thus established medical opportunities.

4. That the representatives of the large hospitals and dispensaries be impressed with the importance of recording accurately the details of occupation of all patients entering the institutions and collecting data regarding them, and the need of providing adequate facilities for their treatment.

5. That the importance of early recognition of occupational poisons be brought to the attention of medical practitioners of this city, and that they be urged to report such cases promptly to the city department of health in order that better follow-up supervision may be provided.

6. That the medical press be requested to give more space to the discussion of occupational diseases than they have hitherto.

7. That proper educational facilities be established by the State industrial commission and the New York City department of health in order that the large number of men and women working in hazardous trades should understand the nature of the hazards and know how to avoid them and to seek early medical advice when the first symptoms of poisoning appear.

8. That the excellent work done by the division of industrial hygiene of the bureau of preventable diseases of the New York City Health Department be encouraged and means provided for its extension.

9. That the manufacturers be impressed with the importance of safeguarding the health of employees through adequate medical supervision, efficient factory sanitation and the prevention of occupational diseases.

10. That the Federal Government, in the interest of the conservation of the health and efficiency of the workers be requested to cooperate in the effective supervision over the conditions prevailing in factories producing munitions of war and other allied products, through the corps of experts associated with the United States Public Health Service.

The following resolutions relating to associated out-patient clinics were adopted March 20, 1918:

Whereas, there exists a great deal of "occupational disease," and

Whereas, cases of occupational disease are oftentimes not properly diagnosed in the out-patient clinics, and

Whereas it is the duty of the clinics to help in providing the sick with competent medical advice: Therefore,

Be it resolved, That in the interest of the sick and the industrial efficiency of the workers, the attention of the boards of trustees of dispensaries situated in the industrial sections of the city, be called to the need of the early recognition of occupational disease, and that in order to facilitate the work of the physicians in this task, detailed records should be taken as to the occupation of all patients;

That adequate facilities be provided for the treatment of occupational diseases and industrial poisonings; and

That an interest in the study of occupational diseases should be stimulated among the physicians connected with the dispensaries.

DANGERS IN THE MANUFACTURE AND INDUSTRIAL USES OF WOOD ALCOHOL.

The New York State Industrial Commission has caused to be issued an illustrated pamphlet, prepared by the division of industrial hygiene of the State department of labor, setting forth the dangers encountered in the manufacture and industrial uses of wood alcohol.¹ The investigation and the publication of the results thereof were prompted by a belief that little information has been made available in popular form for those who are obliged to work with material containing wood alcohol, and in order that workers may fully realize the dangers from inhaling its vapors or when the liquid comes in contact with the skin. "Complete knowledge of its deleterious effects upon the health must be given to every person handling it, as well as full protection. This is the only guarantee against skin inflammation, blindness, and death." Based on the investigation pursued in this connection, recommendations for the necessary precautions to avert evil effects are made, and if the improvements suggested are carried out "employers will not only protect the health of their employees, but will also conserve much of the product which is now being wasted. Nor will the adoption of the simple rules recommended involve great expense."

Wood alcohol is described as the most dangerous and most prevalent industrial poison of the alcohols used in the various trades. Continuing, the report says:

It produces toxic effects whether taken internally, inhaled through the lungs, or when coming directly in contact with the skin. Impairment of vision, complete loss of eyesight, and even death result from drinking as well as from inhaling wood alcohol. People working in places where large quantities of wood alcohol were used constantly have died from inhaling the fumes. So dangerous is this poison that in some cases death occurred when persons were subjected only a day or two to the fumes of wood alcohol. Direct action of wood alcohol upon the skin when used externally, although not quite as disastrous, has its serious consequences. It produces inflammation of the skin, and in extreme cases death of the affected organ.

¹ New York. Department of labor. Division of industrial hygiene. Dangers in the manufacture and industrial uses of wood alcohol. Special bulletin issued under the direction of the industrial commission. No. 86, December, 1917. [Albany, 1917.] 17 pp. Illustrated.

It appears that there are 28 establishments in New York State engaged in the production of this extremely dangerous poison; 400 men are employed. In the process of distillation gases and vapors escape, being a source of danger to the plant or causing irritation to the eyes of the workmen, as well as constituting a loss of product. The report thus briefly describes the manufacture of wood alcohol:

To secure the destructive distillation of wood it is placed in oval or cylindrical iron or steel retorts or ovens and subjected to heat. The retorts are set in brickwork and each retort is provided with a heavy cast-iron, tightly-fitting door. A stack leads from each furnace to the outer air, and an outlet or delivery pipe leads from each retort to a condenser into which the vapor containing wood alcohol and other substances is conducted. The cord wood, from which the alcohol is made, is carefully stacked in the retort until the chamber is completely filled.* * * Coal is used for fuel to heat the retorts. When sufficient heat is applied destructive distillation of the wood takes place. The gaseous products pass over, most of them condensing in their progress. What is known as the permanent gas, however, passes along and is utilized for fuel beneath boilers or furnaces. * * *

In the course of manufacture the condensed liquid is neutralized with lime, thereby becoming converted into acetate of lime. The acetate of lime is then dried in kilns. They are usually located on the top of retorts so that the radiant heat from the retorts can be utilized for the drying process. The acetate of lime must be spread out by hand shoveling. Employees doing this work are exposed to a temperature ranging from 90° to 100° during the summer. The temperature of the floor upon which the workmen stand is even higher. * * *

Tar is one of the by-products in the manufacture of wood alcohol. The lime and alcohol stills, condensers, mixing tubs, and vats for separating the tar from the liquid are invariably located in the still house. Condensers were found that discharged noncondensed gases into the workroom. These gases are injurious to health and should be carried outside the workroom. * * *

It is very important to prevent large quantities of gas from entering the still house. During winter months, when every aperture is closed in order to keep the still house fairly warm, the escape of gases and vapors from mixing vats and other sources causes amblyopia, or temporary blindness, to workers engaged in these still houses.

The report enumerates a number of industries in which wood alcohol is extensively used particularly as a solvent for gums, dyes, and resins, and as a basic material for the manufacture of various dyes used in the manufacture of leather. It is used in many industries where shellac is used, notably in hat making, dyeing and stiffening of artificial flowers, making picture frames, applying varnish to the interior of beer vats, shellacking knots in boards, varnishing furniture, pianos, pencils, toys, and wooden patterns.

Investigation was made of such industries known to be using wood alcohol, and the physical defects of some of the workers were noted. In some factories it was found that the use of wood alcohol has been lessened and in others its place has been taken largely by denatured alcohol, that is, grain alcohol to which wood alcohol or other substances have been added, but which is in most respects as harmful to health as wood alcohol. In the manufacture of artificial flowers

the physical defects of 20 workers were noted, consisting of dermatitis, or skin inflammation, anemia, nearsightedness, and conjunctivitis, or inflammation of the delicate membrane which lines the lids and covers the eyeball. The history of a number of cases is given.

It is suggested that the present State labor laws are inadequate to meet existing conditions connected with the use of wood alcohol, and the industrial commission proposes the following rules which it believes would practically eliminate the dangers described:

1. In any factory where the amount of wood alcohol exists in the atmosphere to the extent of 1 part per 10,000 volumes of air, means of ventilation shall be provided to remove same as far as possible.
2. All jugs, bottles, cans, barrels or other receptacles in which wood alcohol is stored shall be properly labeled "Wood alcohol—poison." (Skull and crossbones.)
3. In processes where wood alcohol is used by employees, which requires that the hands of the operators come in direct contact with this material, impervious gloves shall be furnished by the proprietors of such factories, who shall see to it that they are kept in good condition.
4. Whenever it is necessary to enter an inclosure, tank, or still in which vapors of wood alcohol are present, a gas helmet or other device shall be provided by the proprietor and worn by the person obliged to enter such inclosure, tank, or still. Fresh air, free from contamination, shall be supplied through a hose within the helmet. All vats, pans, cans, or other receptacles containing wood alcohol shall be provided with tight covers.
5. Whenever wood alcohol is used or manufactured in the process as an incident of the business carried on, a painted sign shall be kept posted in all such workrooms, calling attention to the dangerous nature of wood alcohol. * * *
6. A runboard or walk should be provided in each kiln for the use of employees on which to stand while spreading the acetate of lime being dried, thus enabling them to occasionally step from the highly heated material.

REGULATIONS CONCERNING DANGEROUS OR OBJECTIONABLE ESTABLISHMENTS IN FRANCE.¹

Factories, workshops, foundries, warehouses, work yards, and all industrial or commercial establishments considered dangerous or objectionable, whether to the safety or salubrity of the neighborhood, to the public health, or to agricultural operations, are subject to the supervision of public authority under the following provisions:

These establishments are divided into three classes, according to the degree of the danger or objectionable features inherent in their operation.

Establishments of the first class must be located outside of populated districts; the second class includes those in which this measure need not be so rigidly enforced, but for which such measures must be taken as will render them safe and unobjectionable; the third class includes all establishments but slightly dangerous or objectionable to

¹ Journal Officiel de la République Française, Dec. 21, 1917, p. 10443. Paris. Law of Dec. 19, 1917.

the neighborhood, or public health, but are subject to the general provisions taken to assure public comfort and health in the neighborhood where located.

Establishments of the first and second classes may begin operation only when, upon the request of the owners or interested persons, the prefect has authorized them to do so. The third class, before opening, shall file a written declaration of intentions with the prefect.

The classification shall be determined by a decree issued under the authority of the State council. The minister of commerce and industry shall determine the regulations and conditions imposed by this law relative to the form of request for authority to begin operations, and relative to information and plans required to be submitted in support of the application. After a request has been submitted in the case of the first and second class establishments, a committee is designated to investigate the nature of the industry proposed, its degree of danger to public health, or its objectionable features, etc. Notice of such proposed investigation is posted in the territory where the establishment is to be located. The investigation is open for one month, at least.

If the operation is authorized the permit shall specify the conditions under which operations shall be conducted and which are deemed necessary for protection of the interests above mentioned. Supplementary orders imposing further measures of safety may be issued.

The plans submitted are examined by the labor inspection service, and if found not to conform to legal provisions and regulations concerning the health and safety of employees the prefect shall arrest the delivery of the permit until such time as satisfactory modifications have been made.

In all permits issued the rights of third parties are reserved, who may enter complaint before municipal authorities (*conseil de prefecture*), provided they have not renounced their right to do so, or unless they acquired ownership of the lands after the decrees were issued.

When the application is for a new industry, or new processes, or in localities which may be utilized for dwellings, permits may be issued for a limited period only, subject to renewal.

Permits are forfeited unless the establishments begin operation within a specified time.

Establishments of the third class are subject to such general rules and regulations as may be issued or modified from time to time by the prefect of each department. The general rules may be modified to meet the special conditions found in a particular establishment. Establishments of this class in operation before the passage of this

law are not required to apply for permits, but are subject to the general rules and regulations.

The inspection service is under the supervision of the prefect, who acts concurrently with the inspectors of dangerous establishments.

In departments where the number and importance of these establishments require such service, or when two or more departments shall unite to form an inspection district, each department bearing its share of the expense, the prefect may name inspectors.

Every inspector is sworn not to divulge or to use, directly or indirectly, even after the establishment ceases operation, any secret of manufacture or process of operation.

Establishments are open to the inspection service at all hours during operation.

Notice must be filed with the public authorities in case of change in ownership, any additional lines of work classed as dangerous undertaken, transfer to another locality, any change in the condition of lands occupied, extension of operations; and under certain of these changes an application for a new permit is required.

Authorized establishments ceasing operations for at least two consecutive years, establishments in operation at the time of the passage of this law ceasing operation for at least one year, and those destroyed by fire, explosion, or other accident due to its technical process of operation must secure new permits before resuming operations.

INDUSTRIAL ACCIDENTS.

CONFERENCE OF SAFETY ENGINEERS OF UNITED STATES GOVERNMENT ESTABLISHMENTS.

A conference of the safety engineers of the United States navy yards, arsenals, and other Government establishments was held at the Norfolk Navy Yard March 14 and 15, 1918. This was the third of a series of conferences of Government safety engineers called together for the better organization and standardization of methods for accident prevention in Government plants, including not only direct safe-guarding, but also construction, safe practices, and safety education generally.

The appointment of safety engineers in Government establishments, which, within a year, has extended to 20 different plants, is the result of a safety survey of the Government navy yards and arsenals made by the Federal Employees' Compensation Commission soon after its appointment in 1917. The survey was made in order that the commission might have knowledge of the conditions under which the work in Government establishments is carried on, of the hazards of the work, and of the possibilities of accident prevention by the development of methods which have proved so successful in recent years in industrial establishments. The officials in charge of the various establishments cooperated most heartily in the survey. Most of them were fully alive to the practical usefulness of accident-prevention work in an emergency like the present, when avoidable accidents might readily result in the loss of highly skilled men whose services could not be replaced.

The conference was chiefly devoted to the discussion of safety standards to be adopted for immediate use in the Government plants. Standards were adopted covering the following items:

1. Building construction.
2. Power plants and prime movers.
3. Power transmission apparatus.
4. Remote control apparatus.
5. Elevators.
6. Cranes.
7. Fire appliances and equipment.
8. Lighting.
9. Wash, toilet, and locker rooms.
10. Eye protectors.
11. Safety specifications to accompany proposals.
12. Inspection reports.
13. Unsafe practices.
14. Plant rules and regulations.

As a result of the earlier conferences and of the work of committees appointed at those conferences, drafts of tentative standards had been placed before the conference for discussion. Preliminary to the conference, a special committee of three engineers had been assigned the task of reviewing the entire body of tentative rules and standards, in cooperation with members of the staff of the Bureau of Standards and a representative of the United States Bureau of Labor Statistics. As a result, the conference was able to reach an agreement on practically all points with the minimum amount of discussion.

It is planned that the standards worked out in the conference shall be issued by the Bureau of Standards with adequate illustrations to form one of the bureau's series of standard manuals, which began with the publication of its "National Electrical Safety Code." Some of the standards, especially those relating to construction and to safety specifications for new equipment, have already been adopted and put into effect at some of the plants.

In addition to the consideration of standards, the conference also discussed at some length methods of education for accident prevention, organization of safety committees, and the recording and reporting of accidents. Forms were adopted for current records of accidents and for monthly reports.

The conference was attended by safety engineers representing the navy yards, arsenals, and other Government establishments. Representatives of the United States Employees' Compensation Commission, the Bureau of Standards, the Bureau of Labor Statistics, and the Shipping Board were also present. The conference was in charge of Mr. A. H. Young, director of the American Museum of Safety, who has been serving as chief safety adviser to the Employees' Compensation Commission in its efforts to secure the adoption in Government establishments of the most efficient accident prevention methods.

HAZARDS OF BLAST-FURNACE OPERATION.¹

The United States Bureau of Mines has recently issued a report on the "Occupational hazards at blast-furnace plants and accident prevention," by Frederick H. Willcox, metallurgical engineer of the bureau. The study is based on records of accidents at blast furnaces in Pennsylvania in the year 1915, and was prepared under a cooperative agreement with the Pennsylvania Department of Labor and Industry.

¹ Occupational Hazard at Blast-furnace Plants and Accident Prevention, by Frederick H. Willcox. Bulletin 140, U. S. Bureau of Mines. Washington, 1917, 155 pp.

This report contains the most detailed and careful study yet made of the experience of a highly hazardous department of the iron and steel industry. The author has the advantage of engineering knowledge and of blast-furnace experience and has accordingly discussed his material in a way to afford immediate and practical help to the furnace manager who desires to deal with his safety problems intelligently.

Several sections in the beginning of the report are devoted to the development of the blast-furnace plant. It is there pointed out very clearly that the exigencies of production in themselves forced attention to strength of construction, modification of design, and modified practice, and that these things, while designed to increase production, introduced factors of safety of the utmost importance.

The changed character of blast-furnace labor is noted. There can be no doubt that the inexperienced immigrant has been a factor in high accident rates, but the experience of the blast furnaces as here outlined emphasizes the fact that the presence of the inexperienced man is no excuse for a continuing high accident rate. When the management does its duty with any sort of efficiency by instructing the men in proper methods of work and providing proper tools and apparatus the rates drop at once.

Following the general discussion of the first several sections of the report there is a review of the blast-furnace accidents in Pennsylvania during 1915. The method pursued is to give a descriptive statement regarding a selected group of accidents from a given locality in the plant, and to follow this by comment and suggestion regarding methods of prevention. For example, under the general heading "The furnace front" are subheads such as "Cinder notch," "Tapping hole," etc. Under "Tapping hole" accidents are described such as—

- (1) Keeper was loading gun before cast, shoveling in clay while the helper operated the valve. Clay plugged in the bottom of the funnel and keeper put in hand to push clay down. Plunger came back and cut off end of middle finger; or
- (2) The casting crew were drilling open the tapping hole when the iron rushed out and splashed up, striking a helper's face and eyelids.

The use of such descriptions makes it possible to point out the specific things which were done or should have been done in view of such an occurrence.

This method of presentation has the great advantage of definiteness of treatment. It has also the weakness that the necessary volume of descriptive statements makes it difficult to discover the information which may be desired in a given case for which it is desired to provide a remedy.

In summarizing his description of blast-furnace accidents, the author notes that "falls, together with railroad equipment and asphyxiation, account for most of the fatal injuries." This remark emphasizes in an interesting manner the results of "engineering revision" whereby the hazard of hot metal, which in earlier days stood out far beyond all others, has been reduced and as a death hazard brought almost to the vanishing point.

Regarding the tabulated data it is to be regretted that it was not possible to determine the amount of employment in the Pennsylvania blast furnaces in 1915 and thus to have been able to compute true accident rates.

In discussing responsibility for accidents the author says "the classification of accidents according to responsibility is unsatisfactory." It might be added that any attempt to present the matter by means of a percentage tabulation is so involved in possible error as to be undesirable. To illustrate, suppose the percentages assigned to the worker and to the employer are steadily decreasing. A necessary correlative of this change will be an increase in the percentage attributable to industrial hazard. It will be an extraordinarily well informed person who will not interpret this increased percentage as representing increasing hazard, when in fact the hazard may be stationary or even growing less. In any fluctuating interrelated group such chances of wrong interpretation will inevitably occur.

The list of safeguards is excellent and its careful study would repay any safety man concerned with blast furnaces. A careful checking up fails to disclose any material omission, while no other published material contains, so far as can be determined, all that is found here. The sections on the relation of prevention work to the employee present a sane and workable program. Especially good is the outline of follow-up work for the guidance of blast-furnace safety committees.

This volume will doubtless become and remain for some time the working manual of the safety man in blast-furnace work.

ACCIDENTS AT METALLURGICAL WORKS IN THE UNITED STATES, 1916.

The third report of the United States Bureau of Mines on accidents at metallurgical works, recently issued as Technical paper 201,¹ shows a reduction in fatal accidents at both smelters and ore-dressing plants, but an increase in the number of nonfatal injuries. This latter is due, it is explained, not so much to an increasing hazard as

¹ Accidents at metallurgical works in the United States during the calendar year 1916. Compiled by Albert H. Fay, U. S. Bureau of Mines, Technical paper 201. Washington, 1918. 18 pp.

to the more complete returns received. One hundred and fifty plants, including copper, lead, zinc, and quicksilver smelters, as well as refineries, made returns; the iron blast furnaces are not included in the report. The total number of men reported employed was 66,194 as compared with 49,891 in 1915, and 43,007 in 1914.

The number of fatalities reported was 33 by ore-dressing plants, 36 by smelters, and 14 by auxiliary works, including shops, yards, etc. The number of nonfatal injuries reported by ore-dressing plants was 3,184, by smelters, 9,656, and by auxiliary works, 2,240. Classified on a 14-day basis, to accord with many of the State workmen's compensation laws, the report makes the following showing:

1. Fatal.....	83
2. Serious (time lost, more than 14 days):	
(a) Permanent disability—	
Total.....	17
Partial.....	200
(b) Others.....	3,443
3. Slight (time lost, 1 to 14 days, inclusive).....	11,420
Total.....	15,163

The following table shows the actual number of men employed, the number of 300-day workers, and the fatality and injury rates at metallurgical works in 1914, 1915, and 1916, the three years covered by the reports of the Bureau of Mines on this subject:

SUMMARY OF LABOR AND ACCIDENTS AT METALLURGICAL WORKS IN THE UNITED STATES, 1914, 1915, AND 1916.

Industry and year.	Day's work performed.	Employees.		Killed.			Injured.		
		Actual.	On 300-day basis.	Actual.	Per 1,000 employees.	Per 1,000 300-day workers.	Actual.	Per 1,000 employees.	Per 1,000 300-day workers.
Ore-dressing plants:									
1914.....	4,567,529	15,128	15,225	23	1.52	1.51	1,434	94.79	94.19
1915.....	5,732,184	18,564	19,107	30	1.62	1.57	2,095	112.85	109.65
1916 ¹	7,041,083	22,365	23,470	33	1.48	1.41	3,184	142.37	135.66
Smelting plants: ²									
1914.....	9,700,769	27,879	32,336	33	1.18	1.02	5,673	203.49	175.44
1915.....	10,878,486	31,327	36,262	38	1.21	1.05	5,718	182.53	157.69
1916 ¹	14,809,046	43,829	49,363	36	.82	.73	9,656	220.31	195.61

¹ Not including auxiliary works, as shops, yards, etc.

² Not including iron and steel.

Tables giving causes of accidents indicate that at the ore-dressing plants machinery was responsible for 33 per cent of all fatalities and 18 per cent of all injuries; that 6 per cent of the fatalities were due to falls of persons, whereas at smelters the fatalities due to this cause represented 25 per cent of the total; and that fatalities due to flying or falling objects represented 11 per cent at smelters and 3 per cent

at ore-dressing plants. It also appears that haulage systems caused 17 per cent of the fatalities at smelting plants and 21 per cent at ore-dressing plants; that 6 per cent of the nonfatal injuries at ore-dressing plants were due to haulage, whereas at smelters 10 per cent were due to this cause; and that at smelting plants burns from hot metal, slag, etc., claimed 11 per cent of the fatalities and 25 per cent of the nonfatal injuries.

ACCIDENTS IN MINES AND QUARRIES IN OHIO, 1916.

Statistics of mines and quarries in Ohio for the year ending December 31, 1916, are presented in a pamphlet recently issued by the division of investigation and statistics (Report No. 31) of the industrial commission.¹ There are five sections, the first dealing with coal mines and showing production, number of employees, days of operation, average wages, total annual wage and salary payments, and accidents; and the other four sections dealing with fire-clay mines, gypsum mines, limestone quarries, and sandstone quarries, the data covering production, number of employees, days of operation, classified weekly wages, total annual wage and salary payments, and hours of labor per week.

Although 108 fatal accidents were reported to the inspector of mines during 1916, the report tabulates only those for which awards were made under the workmen's compensation law, numbering 86. Of this number 8 were for deaths which occurred in 1915. The total amount awarded in these 86 cases for death benefits, medical and hospital, and funeral expenses, was \$173,384.96,² or an average of \$2,016.10 each. Sixty per cent of the fatal accidents were caused by falls of stone, slate, or coal. Ninety-eight accidents resulting in permanent partial disabilities, and 3,462 accidents resulting in temporary disabilities are enumerated, the total expenditures for all fatal and nonfatal accidents aggregating \$382,620.96, distributed as follows: For death benefits, \$159,669; for compensation, \$166,618; for medical and hospital expenses, \$44,915;³ and for funeral expenses, \$11,418.96. This, of course, does not take into consideration the time lost on account of these accidents, which the report estimates to be equivalent to the entire time of 2,991 men for one year.

The 98 awards for accidents resulting in permanent partial disabilities represented an expenditure of \$50,238.² Compensation and

¹ Ohio Industrial Commission. Department of investigation and statistics. Report No. 31. Statistics of mines and quarries in Ohio, 1916. Columbus, 1918. 84 pp.

² Exclusive of medical and hospital expenses paid by firms carrying self insurance under the State plan.

³ Exclusive of any additional expenditures for medical and hospital attention by employers who carry self insurance under sec. 22 of the workmen's compensation act and who are required to furnish medical and hospital care without cost to the injured person.

medical and hospital bills amounting to \$156,690¹ were paid in 2,793 cases of temporary disability lasting more than 7 days, while in 669 cases of temporary disability lasting less than 7 days the total medical and hospital expense was \$2,308. Under the law no compensation may be awarded in cases of disability lasting 7 days or less. Of 3,462 temporary disability accidents 80.7 per cent resulted in disabilities of more than one week, and 1,106, or 32 per cent, resulted in disabilities of more than 5 weeks.

The following table gives a summary of all coal-mine accidents for which awards were made by the industrial commission during 1916:

NUMBER AND AMOUNT OF AWARDS AND TONS MINED PER AWARD UNDER THE OHIO WORKMEN'S COMPENSATION LAW DURING THE YEAR 1916.

Result of injury.	Number of awards.	Tons mined per award. ²	Payments made. ¹	
			Amount.	Average.
Fatal.....	86	401,472	\$173,384.96	\$2,016.10
Permanent partial disability.....	98	352,312	50,238.00	512.63
Temporary disability.....	3,462	9,973	³ 158,998.00	45.93
Total.....	3,646	9,470	382,620.96	104.94

¹ Exclusive of medical and hospital expenses paid by firms carrying self-insurance under the State plan.

² Based on a total production of 34,526,552 short tons.

³ Of this amount, \$2,308 was spent for medical and hospital service in 669 cases lasting 7 days or less and therefore not entitled to compensation.

The report makes no mention of accidents in fire-clay mines, gypsum mines, limestone quarries, and sandstone quarries.

BIRTH RATES AND MORTALITY STATISTICS.

VITAL AND SICKNESS STATISTICS FOR GERMANY AND AUSTRIA DURING THE WAR.

GERMANY.

The question of the birth rate and infant mortality in Germany during the War has been treated very thoroughly in three publications by Dr. Rott, senior physician and superintendent of the Auguste-Victoria Home for the combating of infantile mortality.¹ The *Soziale Praxis* (Dec. 6, 1917) thus summarizes these three publications.

In the first of these publications Dr. Rott proves, with the help of extensive and clear statistical matter, that the increased infantile mortality in town and country during the first year of the War was followed by a considerable decrease in 1915, while at the same time there was a decline in the birth rate. Dr. Rott endeavors by detailed inquiry to ascertain what reasons exist for the variation and decline of infantile mortality, and whether and to what extent the decline of infant mortality is connected with and is attributable to the decline in the birth rate. He comes to the conclusion that the increased mortality in 1914 was to be ascribed to the hot summer, bad economic conditions, and want of employment. On the other hand, the decrease in the number of children born alive seems to have been not without influence on the number of infant deaths. The systematic relief afforded by the imperial maternity and nursing allowance has brought about the decline of the mortality figures.

In the three periods in 1915 which have been compared by Dr. Rott the number of children born alive in 18 towns declined by 31,008, or 23.8 per cent, and this decline was accompanied by a decline of 34.9 per cent in infant mortality. Dr. Rott's views as to the extension of social welfare work in peace time are for the most part met by proposals well known.

In the second publication he pays special attention to the public institutions for the care of infants and young children, and emphasizes the necessity of providing nursing rooms in factories, crèches, and day nurseries, which are becoming more and more necessary, owing to the increase in the number of gainfully engaged women. As a

¹ Geburtenhäufigkeit, Säuglingssterblichkeit und Säuglingsschutz, by Dr. Rott. Berlin, 1917. (An essay on the birth rate, infantile mortality, and the protection of infants during the first two years of the war.)

Frauenarbeit und Kinderschutz. Berlin, 1917. (Women's labor and the protection of children.)

Die Mitwirkung der Krankenkassen bei der Mutter-Säuglings- und Kleinkinder-fürsorge. Reprinted from the "Ortskrankenkasse." Dresden, 1917. Vol. 1. (A treatise on the cooperation of the sick funds in the care of mothers, infants, and young children.)

further condition for the public care of infants Dr. Rott advocates registry offices for nurseries and public control by trained persons of day nurseries.

In the third publication he dwells expressly on the future cooperation of the sick funds of the workmen's insurance system in the great aim of improving the national hygiene.

The *Kommunale Praxis*¹ gives the following figures and other particulars relating to the movement of the population between 1913 and 1916 in Berlin—Friedenau, one of the constituent suburbs of Greater Berlin, which is inhabited largely by officials, merchants, small shopkeepers, etc. On December 31, 1913, the population numbered 44,869, and on December 31, 1916, it was 44,809, showing a decline during this period of 0.13 per cent. There was a regular decrease from year to year in the number of males, amounting in the end to 693, while the number of households increased by 1,402. There was an excess of births over deaths in 1914 of 280, but in 1915 the deaths were more numerous by 84, and in 1916 by 183. The influence of the War showed itself most strongly in the statistics relating to occupations; thus, the number of officers increased by 15.4 per cent, while that of domestic servants, who were formerly the most numerous class of the population, declined by 23.7 per cent; women largely took the place of men as teachers.

Even more significant as to the influence of the War are the figures for illnesses with a fatal termination. Thus under this heading "Congenital debility" appears in 1913 eighteen times, in 1914 seventeen times, and in 1915 twenty-six times. Deaths due to tuberculosis rose from 16 in 1913 to 21 in 1916. Those due to organic diseases of the heart numbered 14 in 1914, 38 in 1915, and 34 in 1916; while arteriosclerosis was responsible for 29 deaths in 1913, 30 in 1914, 89 in 1915, and 75 in 1916. Old people most readily fall victims to the hardships accompanying war. Nervous troubles also show an increase, which is evidently to be attributed to the War, from 0 in 1913-14 to 7 in 1915, and 8 in 1916. Equally unmistakable is the influence of the War in fatal cases of stomachial and intestinal catarrh (dysentery) and other affections of the stomach and intestines. The number of these rose from 0 to 2 in 1914, 19 in 1915, and 24 in 1916. It is to be noted that the highest figures are recorded not for 1916 but for 1915. The same is the case also with the fatal diseases which developed from violent injuries, which number 253 in 1915 and only 182 in 1916. (These figures do not include all the men from the army who died in the Friedenau military hospital, but only those who were finally reported to the police authorities in Friedenau.) The total number of deaths rose from 307 in 1913 to 318 in 1914 and

¹ *Kommunale Praxis*. Berlin, Jan. 19, 1918.

583 in 1915, and fell to 495 in 1916. The lower figures for 1916 lead one to the conjecture that by this time the weaker had already been eliminated by a process of natural selection.

The number of births fell from 725 in 1913 to 312 in 1916, or 57 per cent. The number of marriages fell in the same period 36.6 per cent. At the same time infant mortality increased; the per cent of children who died in their first year was 6.2 in 1913, 7.5 in 1914, 9 in 1915, and 9.4 in 1916.

In this connection the following figures, as published by the *Handelsblad*,¹ relating to the birth and death rates in various large German cities, may be of interest. The statistics are for four weeks, the last half of December, 1917, and the first half of January, 1918:

	Birth rate.	Death rate.
Berlin.....	9.2	9.5
Hamburg.....	7.0	18.4
Cologne.....	13.4	20.7
Leipzig.....	6.5	15.9
Dresden.....	7.9	16.4
Frankfort-on-the-Main.....	8.3	9.7
Düsseldorf.....	9.4	12.4
Nuremberg.....	10.4	14.8
Chemnitz.....	8.1	17.9
Breslau.....	14.0	22.9
Stettin.....	12.5	17.2
Hanover.....	10.8	17.9

The preceding figures show that in all of these 12 cities the death rate greatly exceeded the birth rate. In four of them the excess is over 100 per cent, viz, in Hamburg 163 per cent, in Leipzig 145 per cent, in Chemnitz 121 per cent, and in Dresden 108 per cent.

For the purpose of comparison the rates in some cities of Great Britain and of neutral countries are given below. The British figures are for the week ended January 5, 1918:

	Birth rate.	Death rate.
London.....	20.4	21.3
Birmingham.....	24.0	14.4
Liverpool.....	25.4	20.5
Glasgow.....	22.3	15.4
Edinburgh.....	13.2	15.5
Dublin.....	25.4	18.8
Amsterdam.....	22.3	15.0
Copenhagen.....	21.1	13.3
Christiania.....	17.4	13.9
Stockholm.....	19.0	12.1
Berne.....	19.8	12.0

¹ *Handelsblad*. Amsterdam, Jan. 30, 1918.

AUSTRIA.

The *Neue Freie Presse*¹ states that general statistics of births, deaths, and marriages in Austria have not been published since the outbreak of the War, but from an examination of the municipal returns in those Provinces which have not been ravaged by invasion, Prof. H. Rauchberg (Prague) shows that while the death rate remains much the same, the birth rate has so seriously diminished that the number of deaths greatly exceeds the number of births. The figures given for lower Austria and Bohemia are:

NUMBER OF BIRTHS AND DEATHS IN LOWER AUSTRIA AND BOHEMIA, 1913 AND 1916.

	Births.	Deaths.	Difference.
Lower Austria:			
1913.....	73, 103	60, 010	-13, 093
1916.....	43, 950	66, 225	+22, 275
Bohemia:			
1913.....	175, 965	127, 221	-48, 744
1916.....	87, 401	122, 276	+34, 875

The birth rate has fallen in lower Austria 39 per cent, in Bohemia 49.7 per cent, in Moravia 48.1 per cent. As the fall continued in 1917, the number of births in that year can hardly amount to half the normal. Before the War the excess of births over deaths in Austria was about 300,000 a year; now the position is reversed. "If this goes on, Austria must perish," is the conclusion of Prof. Rauchberg.

The *Zeit*² reports that the number of cases of infectious diseases among the civil population notified in Vienna fell in December, 1917, to 1,475. The mortality during that month was greater than in the first two years of the War. Altogether 3,455 persons died, as compared with 3,267 in November, 1917, and 2,935 in December, 1916.

In a later issue the same daily states³ that a conference of physicians in West Bohemia met recently to consider a report on famine edema or "war dropsy." The cause of it is a watering of the blood through insufficient nourishment, superinduced by overwork and cold. In the Saxon Erzgebirge, where the daily ration actually contains 1,400 calories per capita, the disease does not occur. In Austria the food cards represent 1,000 calories per capita per day, but these are not always obtainable. In the Bohemian Erzgebirge, up to October, 1917, 25,000 cases of "war dropsy" were noted, of which 1,000 ended fatally. The amount of food must be increased so as to supply 1,200 to 1,400 calories a day. A circular has been issued by the governor of Bohemia directing the raising of the flour ration for persons suffering from "war dropsy" from 500 to 725 grams (1.1 to 1.6 pounds) per week.

¹ *Neue Freie Presse*. Vienna, Feb. 2, 1918. ² *Die Zeit*. Vienna, Feb. 2, 1918. ³ *Idem*, Feb. 12, 1918.

HOUSING AND WELFARE WORK.

HOUSING AND THE LAND PROBLEM.

BY LEIFUR MAGNUSSON.

The most important problem connected with the housing question is the land problem, namely, how to increase the available supply of building land, and how permanently to keep the price of it within the means of the workingman.

Employers in this country have attempted to solve the problem by moving their establishments from the congested urban centers to outlying rural and semirural districts where land is available at more moderate prices. As evidence of this movement of industry the United States census of manufactures shows from census to census an increasing proportion of the population, the number of establishments, and the number of wage earners outside of the limits of certain metropolitan districts which are in reality single industrial areas. Furthermore, a recent survey of company housing undertaken by this bureau shows that company housing developments are either new town developments or are located in the suburbs of larger cities, indicating the extent to which industrial decentralization underlies company housing. The primary reason pointed out by employers for this movement away from the cities has been a desire for more land as well as cheaper land, emphasized by them in such expressions as "lower taxes, lower rentals, and avoidance of congestion," while community benefits naturally flowing from more land and cheaper land are expressed as a desire for more light and air and quieter surroundings.¹

GROWTH OF SPECULATIVE PROFITS IN COMPANY TOWNS.

Employers admittedly have not solved the land problem in connection with their housing enterprises by merely migrating from the city to the country districts. The study which the bureau made of company housing shows among other things that there has been only slight attempts on the part of employers as a whole to control the uses to which land may be adapted by careful town planning, that there has been little or no positive action taken to prevent overcrowding, and that no method has been devised either wholly or partly successful in controlling speculation in company towns. Some employers, in fact, have encouraged the element of speculation in offering their houses to the workman. Possibilities of the future

¹ For a similar movement of German industry, see p. 72, above.

growth of the company town are pointed out, "whether you buy to hold for an increase, or to build a home to live in or to rent." The buyer is lured by "\$3 cash and \$2 per week until paid, no interest, no taxes for three years."¹

While in general increased land values in company towns have not been reflected in increased rents, such increases in land values have naturally occurred in some company towns. An instance in point is Morgan Park, Duluth, Minn., which has been developed by the United States Steel Corporation. The land was originally virgin land, having only an agricultural value. In 1906 the assessed value of 1,250 acres within the area purchased by the steel corporation was \$29,500, or \$23.60 per acre, according to the records of the office of the tax assessor of the city of Duluth, Minn. As land is assessed by the city at 40 per cent of its "full and true" value, the value per acre at that time was probably about \$59. Of the approximate 190 acres in the town site of Morgan Park, the 141 acres which had been improved by the end of 1916 have been assessed at \$720 per acre; and the additional 49 acres improved in 1917 have been assessed at \$1,000 per acre. This would make the average assessed value of the actual 189 acres for which the figures apply about \$791 per acre, or a "full and true" value of \$1,975 per acre at the present time. This is \$375,250 for the whole tract of 190 acres comprising the town site. However, it should be stated that thus far much of this value is the result of improvements put in by the Morgan Park Co.

Private investigators have shown quite definitely in two company towns—Gary, Ind., and Lackawanna, N. Y.—which were intensively studied for that purpose the amount of "unearned increments" which have been created in those towns.²

In Gary, Ind., the price paid for land per acre averaged about \$814. The total and final cost, therefore, of the 9,000 acres bought there by the United States Steel Corporation may roughly be stated at \$7,200,000. The area in Gary which was not bought by the corporation was 9,749 acres. A liberal estimate of \$75 per acre in 1906 has been placed upon this less desirable land. The total cost of the latter is therefore \$731,175. This would make the value of the total land area of Gary approximately \$8,000,000 at the time of the purchase by the Steel Corporation in 1906. The value of this land in 1915, as

¹ On the other hand, it is only fair to point out that in the large majority of cases speculation in land has not as yet generally developed in company towns because of the prevailing practice of employers to rent and not to sell land and houses to their workmen. Rents are generally low and have not been increased for a period of years; in fact in some instances it would have been desirable to increase rentals and to improve the surroundings and general maintenance of the property with the increased return.

² The studies in question were made by special investigators for the New York committee interested in conserving land values for community purposes. One of these studies has been printed: *The Unearned Increment in Gary (Ind.)*, by Robert Murray Haig. (Pol. Science Quart. N. Y. Columbia University Press, March, 1917.)

ascertained from its assessed valuation, which is about 20 per cent of its actual value, was about \$40,020,725. The value of the steel plant yards should be deducted as the steel company can not realize any increase in the value of these. Thus the value of the town site of Gary, Ind., in 1906 was \$6,414,455 and its selling value in 1915, \$33,455,900, an increase of \$27,031,445.

To arrive at the unearned increment, however, certain deductions must necessarily be made for values which have been created or added to the land since 1906. These include (1) expenses of layout and administration by the Gary Land Co., (2) advance payment of taxes on nonrevenue producing property, and (3) local improvements. Interest has not been deducted because the ground rents have been assumed to represent a fair return upon the original outlay; and another factor not considered is the effect of the price level upon the increment. Some of the increase has been due to a decline in the purchasing power of money, the wholesale price index of the Bureau of Labor Statistics¹ standing at 88 in 1906 and 100 in 1915, or an increase of 14 per cent. Considering all these allowances, with the exceptions noted, a deduction of \$5,225,713 is made by the investigator from the apparent increase in value of \$27,031,445. "The amount of the increment which might have been conserved is thus found to be \$21,805,732," an amount which, it is concluded, errs on the whole in the direction of reducing the unearned increment.

At Lackawanna, N. Y., near Buffalo, where the Lackawanna² Steel Co. created a new city on vacant land in 1899, the land was worth not over \$770,000, but the steel company had to pay \$1,407,000 for the 1,438 acres which it purchased. The remaining 2,414 acres (also within the city site) were estimated as worth \$1,279,000. The total value then was \$2,686,000. If the plant land on which no speculative value can be realized is excluded the value was \$1,983,000. Adding assessments for local improvements and other real additions to its value, the total value in 1899 was \$2,228,000.

Lackawanna is a city of over 14,000 population and the value of the town site land is now estimated at \$9,016,000, leaving a net increment of \$6,788,000, which has gone to private owners and speculators.

Thus company controlled towns, no less than all other cities, have suffered from the land speculator who withholds land from the market until such time as an effective demand shall give him the

¹ Bulletin No. 200, p. 13.

² A Memorandum to the Steel Corporation: A Plan for the Conservation of Future Increments of Land Values at Ojibway and for Conversion of the Same into Additional Revenues for Community Purposes. For private circulation. The chairman of this committee is Lawson Purdy, head of the department of taxes and assessments, New York City, and its secretary is Richard S. Childs, general manager of the Bon Ami Co., New York City. This memorandum has been used by the Bureau of Labor Statistics by special permission.

price he asks; and the population of the company town again faces the problem which it faced within the congested city—namely, how to prevent or minimize the dissipation of land values to private land owners, and how to secure the greatest amount of social return in terms of health and recreation and better community surroundings.

PLANS FOR THE DIVERSION OF LAND VALUES FOR COMMUNITY PURPOSES.

In order to secure the ends in question it is necessary to devise new methods which have not yet been tried out in housing enterprises except to a limited extent. These methods, however, involve no new principles as will be noted from the description of them.

Improved company housing.—Directly, or indirectly through a subsidiary or controlled company, the employer acquires land or uses plant land, and constructs houses for his employees. He has the advantage of securing land in outlying districts at its agricultural value. Control of his labor, stabilizing it, and securing a steady supply of labor, and not speculation are to be the objects sought. There is also the advantage of wholesale operations. The employer may rent or sell his houses. If the employer rents his houses he may keep his rents moderately low or he may charge average prevailing rentals and use his returns to improve his property and secure certain social and community benefits to his employees. If he sells, he may do so at cost, plus interest, and on favorable terms, thereby attracting his employees. He may prevent easy speculation by a system of selling for restricted usages, recognized as cumbersome, however, and difficult of execution. Only by a system of permanent ownership or control, adoption of the principle of limited return, and application of rentals to community purposes will he be able to divert the increases in community values to the benefit of the community.

But company housing has this disadvantage, that it gives no control to, or places no responsibility upon, the members of the community. The bureau in its investigation discovered only one employer who proposed giving the employees a measure of control in the housing undertaking. That employer suggested the placing of a representative of the men on the board of trustees of the fund which the company proposed to provide for the construction and sale of houses to its men. But such representation obviously is not sufficiently far-reaching to effect the objects under discussion here.

Perhaps in the long run the only way in which company development can be successfully made to conserve all land values for the community is by adoption of the method sketched by the committee on new industrial towns, presented as a memorandum to the Steel Corporation and suggested for its guidance in the development of its

new steel town of Ojibway, Canada.¹ The plan is of such interest as to make it seem worth while to present it in detail.

When the time comes for admitting the private builders and opening the lots to acquisition and settlement, the Steel Corporation, it is proposed, should organize the "Ojibway Land Co.," select its first board of directors, turn over to it in convenient installments the title to the land (not including plant land) and all the uncompleted contracts for streets, sewers, etc., and accept in return the land company's serial mortgage bonds, equivalent to the cost of the land and improvements, up to date, plus a small profit, say 3 per cent, inasmuch as the purpose of the steel company is primarily to secure labor and not to make a profit. The land company would then make up its tentative rental price list for the lots and would make the following

ANNOUNCEMENT.

No land will be sold. Title will remain in the land company and be handled as a community investment. When the city is well established, the board of directors of the land company will be selected by popular election.

Any responsible person may select and become the tenant of any lot or lots in Ojibway not previously taken and a rental will be charged proportionate to the value thereof and roughly equivalent to what other persons are known to be willing to pay.

Rentals will be readjustable from time to time like tax valuations, with due consideration of the completion of local improvements, the growth of the neighborhood, the population of the city, etc., with the intent of charging whatever the leaseholds are worth and of securing for the community, as represented by the land company, approximately all the "economic ground rent." The readjustments of rental will be made uniformly and scientifically on a frontage basis, and no leaseholder's rent will be raised or decreased except as part of a general readjustment affecting all the land in the neighborhood the value of which has altered, and applicable impartially to his neighbors as well as to himself.

These ground leases will be for five years on business streets and 15 years on residential streets, the leaseholder, his heirs, or assigns having perpetually the preference in renewals. Buildings on such leaseholds will not "fall in" or become the property of the land company, as is the usual procedure in land leases if the leaseholder declines to renew.

If the leaseholder declines to renew, the land company may allow him to remain in possession upon payment month by month of the newly established ground rental until a new lessee is found who will take over the building and pay its fair market value or a 6 per cent rental thereon, whereupon the leaseholder must vacate.

If the leaseholder declines to renew, and vacates, the land company may offer the land and building together for a five-year (or 15-year) lease at not less than the regular land rent plus 6 per cent of the fair market value of the building (said value being subject to an appropriate annual allowance for depreciation), the owner meanwhile being free to find a tenant at better terms if he can before the land company finds one at the fixed rate. Such a tenant will be pledged to pay the land rent to the land company direct and the building rent direct to the owner. The owner will be free

¹ A Memorandum to the Steel Corporation: A Plan for the Conservation of Future Increments of Land Values at Ojibway and for Conversion of the Same into Additional Revenues for Community Purposes. For private circulation.

to dispossess the tenant for nonpayment of the building rent, and the tenant, although not thereafter occupying the premises, will still be liable to the land company for the land rent until the lease expires. The land company will also be free to dispossess the tenant for nonpayment of land rent and the tenant will still be liable to the owner of the building for the building rent till the lease expires.

While the property is without a leaseholder, the land company will receive no ground rent and the owner no income from, or use of, the building, and they thus become partners in their desire to find a new tenant. The land company also retains the option of purchasing the building of a leaseholder who declines to renew at its market value as impartially determined by a fair jury of three arbitrators, and renting or reselling it.

It will thus be seen that no man who builds in the city can have any hope of profit or fear of loss in the changing of value that the lapse of time may bring to his land. He will pay a rent greater than ordinary taxes, a rent somewhat less, however, than the amount he would otherwise pay in taxes, mortgage interest, and interest on his equity combined. He will not have to raise any principal to invest in land.

He benefits further by the fact that none of his ground rent goes to banks and private capital, but all goes into the land company's treasury to be reexpended for the benefit of himself and his fellow townspeople.

The land company will take no profits and all the income will be used in some way for the benefit of the people living in the land company tract.

The right is reserved of enacting new rules from time to time controlling the use of the land in the interest of the general public welfare and of the protection of the land values.

There remains the vital question of how we can make it safe for a tenant to erect costly permanent buildings. Obviously if the character of a neighborhood changes radically by reason of the growth of the city, a building may become obsolete in that location and an encumbrance, fit only to be torn down to make way for a type of building more suited to the altered demands of the neighborhood.

This difficulty we meet by careful city planning, and building regulation which so diminishes this hazard that there will be less danger of such premature obsolescence of buildings in this city than there is under ordinary conditions elsewhere.

We restrict every street as to the use of the land for stores, factories, or residences, respectively, and as to the height of buildings, percentage of the lot that may be covered, and minimum value of the building that may be erected thereon. Thus the man who builds a home will know positively that no stores or factories can invade his neighborhood, no cheaper houses can come in to spoil his street, no mansions will come in to inflate his rental, no high apartment will be allowed to cut off his light. The man who builds a store can make sure that he is or is not in the path of retail expansion, according to his preferences and ambitions.

Thus we plan to avoid congestion and the scrapping of buildings before their time.

The essential features of this method of procedure are: (1) No sale of land; (2) title by occupancy only through a system of ground leases; (3) periodical adjustment of values of leases to keep pace with demand for favorable sites as population increases; (4) use of all rentals for the maintenance of the property and community improvement; (5) application of the principles of classification of land for special uses and of building restrictions in order to maintain the character of the different sections (business and residence) of the community. All the principles here involved, it is pointed out, are those familiar to real estate operators, except that perhaps of periodi-

cal valuation of leases. This principle, however, is now being suggested in the water-power leasing bill before Congress, and would seem to present no great difficulties of application.

The Massachusetts Homestead Commission in its first annual report of 1914 described methods of housing work which would embody the principles of limited dividend, wholesale operations, and participation by the resident. A special committee was appointed and this committee outlined four methods of procedure, each method embodying one or more of these principles. The two methods proposed by the committee which embody the principles of limited dividend or collective participation by the resident or both may be here described.

Improved housing company.—The limited dividend company, here termed as noted, has been known in this country and elsewhere for a number of years. It has been the practice to limit dividends to 5 per cent and to distribute any surplus for community development after ordinary maintenance and depreciation have been provided against. These companies are organized as ordinary stock companies except in the matter of limiting dividends. Speculative profits are eliminated. Houses are usually rented only; if sold, of course, the speculative element is again introduced. The disadvantages of such companies have usually been that they have had to buy land already at a high value with small prospects of sufficient rents to leave any over for community development; neither investment nor speculative capital has been forthcoming because of a limitation of dividends; and the residents, unless they were stockholders, have had no voice in the affairs of the company. There has been lacking interest and responsibility on their part.

Copartnership homes company.—This form of organization is an application of the financial features of the English Garden City movement to America. The description of this form of organization as given by the Massachusetts committee ¹ is presented in full:

The object of this company would be to promote the cooperative ownership of homes by a method favorable alike to resident and investor. Suitable land, accessible to the city, would be acquired, and substantial, sanitary, and convenient homes would be built. The district would be planned along advanced garden suburb lines, with restriction of the number of houses per acre and provision for allotments for gardening, community playgrounds, and other social activities. Economies could be effected through wholesale operations and the elimination of speculative profit.

A prospective resident would be approved and would take up at least two shares of common stock. He would pay a reasonable rental and share all surplus profits. Dividends on rent and common stock would be credited in common stock until the value of 20 shares is reached, outside capital being gradually retired. The cost of repairs would be deducted from the twelfth month's rent and the remainder remitted, thus further encouraging care in the use of property. The resident could invest his savings

¹ Massachusetts: First annual report of the Homestead Commission, 1914. Boston, 1914. pp. 23-24.

in the company stock at 5 per cent. Ownership being common, not individual, he is secured from loss if he has to move away.

Capital is provided at a low rate, due to wholesale operations, the security of collective ownership, and the low rate of depreciation resulting from the great incentive to care for the property. Common stock may be drawn upon for arrears or repairs due to neglect.

The directors would ultimately be elected by common stockholders, but preferred stock will be represented until common stock is about one-half paid up. Shares should be 500 common and 1,500 preferred, of \$100 each. Common stock should be paid not less than 10 per cent upon allotment and installments of \$1 per month per share. Dividends should not exceed 5 per cent. Preferred stock should be paid in full, dividends not to exceed 5 per cent, cumulative. It may be retired at par on a year's notice. First mortgages at 5 per cent will be placed on completed houses up to 60 per cent of their value. A reserve fund would be established after preferred dividends are paid at the rate of 1 per cent per annum until it equals the value of the stock. With 2,000 shares subscribed, 250 houses can be built. The committee should secure options and call a meeting when about one-fifth is subscribed.

The Massachusetts committee points out the following advantages:

To the resident: 1. He gets a home at a rental not higher and probably less than elsewhere, and is encouraged to take care of it by having his twelfth month's rent remitted, less the cost of repairs.

2. He gets a house with a garden and plenty of fresh air, a house well built and sanitary, with some individuality, in which he can take pride. He lives in a neighborhood where all are equally desirous of keeping up the property.

3. He shares in the economies effected through wholesale buying of land and materials, building houses in numbers, efficient management, saving in legal expenses, and the elimination of speculative profit.

4. He can invest his savings in the company at 5 per cent.

5. The unearned increment goes to benefit each resident member, for with increase in values he will get either a dividend on rent or rent below market value.

6. He secures practically all the surplus profits after fixed charges are paid in the form of a dividend on his rent, with credit in common stock until his total holdings equal 20 shares, after which they are paid in cash.

7. He lives in a social atmosphere, with new and vital interests and collective friendships in the community. He has a mutual interest in common recreation facilities—playgrounds, halls, etc.

8. Ownership is common, not individual, thus providing security from the risk of loss if a resident has to leave, as he has no liability beyond the shares he holds, on which he may continue to receive dividends or which he may dispose of [the company agreeing to purchase all shares].

9. Capital is provided at a cheaper rate than by any other sound system, due largely to wholesale operations. Outside capital is gradually retired by savings.

To the investor: 1. The company by collective ownership and responsibility offers an exceptional security.

2. The greater the surplus the less the risk, and it is to the interest of the residents, who receive surplus profits, to take care of the property, thereby lessening depreciation, to find tenants for empty houses, and to pay rent punctually. British and continental experience proves that this individual interest equals in value 1 per cent per annum on the capital.

3. The common stock forms a fund on which the company can draw if necessary for temporary arrears in rent, or repairs due to neglect, thus eliminating such losses from the items charged against preferred stock, which the outside investor holds.

The financial scheme as outlined is as follows:

1. The business of the company shall be carried on by a board of directors, ultimately to be elected by the holders of common stock; but until the common stock is about one-half paid in the holders of preferred stock shall be entitled to an equitable representation (see Memorandum).

2. The authorized capital stock of the company shall be \$200,000. The value of each share shall be \$100. There shall be 500 shares of common stock and 1,500 shares of preferred stock.

3. Common stock shall be paid for at a rate of not less than 10 per cent upon allotment, and the remainder in installments of not less than \$1 per month per share, until fully paid up, and shall be entitled to dividends not to exceed 5 per cent, payable quarterly, after all other obligations of the company are paid. Dividends shall be applied as payments on stock until the equivalent of 20 shares is fully paid up. Not more than 20 shares shall be held by any one person. Shares shall be transferable, subject to approval by the directors of the company.

4. Preferred stock shall be paid in full, not less than 10 per cent at the time of subscription, and 30 per cent each succeeding month thereafter, and shall be entitled to dividends as stated on the certificates, but in no case exceeding 5 per cent cumulative, payable quarterly, out of net earnings. Holdings are not limited and are transferable. Preferred stock may be retired in any part at par on a year's notice by the directors of the company.

5. First mortgages at 5 per cent will be placed by the company as rapidly as houses are completed, covering 60 per cent of the value.

6. After all interest on mortgages, etc., and dividends on preferred stock are paid the company shall establish a reserve fund and shall pay into it at the rate of 1 per cent of the outstanding capital stock per annum, until it equals the value of the stock.

With the total issue of 2,000 shares taken up about 250 houses can be built. As soon as sufficient subscriptions are received options will be secured on suitable estates.

The first annual meeting will be called within one month from the time that \$15,000 on stock is paid in and a total of \$40,000 subscribed.

The company will make it practicable for a family in moderate circumstances to live in a healthful home and in attractive surroundings at the least cost and to maintain it in part through the use and sale of garden products raised on adjacent land. The undersigning committee should invite subscriptions to common or preferred stock. A form for subscriptions should accompany the prospectus.

The business of the company shall be carried on by a board of five directors, who shall be elected annually at the annual meeting by the holders of common stock, each holder being entitled to one vote, provided, however, that no holder of common stock shall be entitled to a vote until he has fully paid for one share of common stock, or an equivalent value on two or more shares; and provided, further, that if at any annual meeting the total amount paid in on common stock by common stockholders entitled to vote is less than five-thirtieths of the total amount paid in on preferred stock, the holders of preferred stock shall be entitled to elect one of the five directors; if such total is less than four-thirtieths they shall be entitled to elect two directors and if less than three-thirtieths, three directors; if less than two-thirtieths, four directors; and if less than one-thirtieth, all five directors. In such election each holder of preferred stock shall be entitled to one vote for every fully paid share of preferred stock that he holds."

Government control or ownership.—It is quite evident that the Government, municipal, State, or Federal, may either substitute itself for any one of the controlling organs in the above forms of

housing organization or it may superimpose itself over them as a controlling or fostering institution; that is, it may either carry on housing work itself directly, or it may merely assist or direct, lend funds, supervise the controlling agencies and create the necessary rules and regulations to secure any or all of the desired ends in relation to the better housing of the workingman. Finally, the Government itself may merely initiate the housing work and subsequently turn its conduct over to a company or to the community to continue it in the interests of the community.

AGRICULTURAL CAMP HOUSING.

BY LEIFUR MAGNUSSON.

Lack of farm labor and the need of organizing to the best advantage the existing supply for war emergency purposes have emphasized employment conditions on farms, particularly housing conditions. Especially is there great lack of practical information as to methods of housing the labor supply so essential at the harvest seasons. Persons actually in touch with the situation are convinced that much of the trouble in holding labor on large farms and plantations is due to a lack of proper housing for them, while those who have adequately housed their tenants or seasonal labor are convinced of the advantages gained.¹ The California Commission of Immigration and Housing has determined in connection with the riot which occurred on the hop ranch near Wheatland in that State on August 3, 1913, "that probably the most important contributory factor was the poor housing and sanitary accommodations afforded the workers."²

Because of the larger individual farms, and because of their scattered location and consequent isolation, the problem of transporting farm labor from place to place and of holding a seasonal labor supply has been aggravated in this country. Furthermore, there has been developed no practice in village or community settlements in relation to agriculture. The rural towns and villages of this country are mainly small trading centers for the active farmers and residence centers for the retired farmers. The villages of this country are not communities of actual farmers and farm laborers who work from the village as a center as is frequently the case in Europe. In the latter case housing is much simplified as compared with the difficulties encountered under present conditions of farming in the United States. It is only in certain localities in the South that the farmer's family lives in the city or town

¹ Cf. *World's Work*, New York, vol. 27, Dec., 1913, pp. 230-235.

² Advisory pamphlet on camp sanitation and housing, Commission of Immigration and Housing of California [4th rev. ed.], p. 5. San Francisco, 1915.

and maintains its farm as an adjunct to the city or town life.¹ There has, therefore, as a rule been very little coordination or dovetailing of town and rural occupations. Hence, there has been necessary an exceptionally large movement of migratory labor in this country to supply the seasonal demands of agriculture.

Aside, principally, from what has been done by the State of California, through its Commission on Immigration and Housing, and by the Public Health Council of the State of New York, little consideration has been given to the proper care and housing of this seasonal migratory labor. Several States, it may be noted in passing, have made investigations as to labor camp conditions, all of which investigations confirm the existence of deplorable conditions in such camps²—lack of sanitation, poor food, or lack of variety in food, frauds in commissary charges, scrip payment of wages, withholding of wages due, and other similar practices. The problem of camp regulation and inspection has been almost wholly neglected.

ESSENTIAL NEEDS OF A LABOR CAMP.

Besides adequate wages and reasonably short hours of labor, the points to be considered in securing proper conditions of labor in labor camps are: (1) Clean and wholesome food served in sanitary mess rooms; (2) decent individual sleeping places; (3) washing, laundry, and bathing facilities; (4) medical aid; and (5) provision for recreation.

Different circumstances will determine how to meet these essential requirements of every properly conducted labor camp. Consideration should be given to the racial type of labor to be employed and housed; to differing climatic conditions; and to the character of the country—i. e., topography—where the camp may happen to be located. Thus, Greek and Italian labor may require different handling from Negro labor. Camp construction in the North will differ essentially from that in the South, and, furthermore, different types of camps may be necessary in the same part of the country for different seasons of the year. The topography of the country may make it practicable to use a portable style of camp house if the character of the work to be done is of such nature. Nearness of villages in the locality may render possible some form of billeting of the labor supplying the villages in the locality where, for instance, the harvesting is being carried on. It may be possible under such circumstances to make use of local transportation facilities to move the labor from the

¹ Holmes, G. K., *Movement from city and towns to farms* (Year Book of the Department of Agriculture, 1914, p. 273).

² Among the States which have made investigations are California, Minnesota, Ohio, New York, Utah, and Wisconsin. A somewhat broad and comprehensive investigation of migratory labor and labor camp conditions was made by P. A. Speck for the Commission on Industrial Relations, 1913-1915. This report is not available, however, in published form.

village to the surrounding country where the harvest work is going on. This is the method of the Y. M. C. A. boys' camps and is described below. Furthermore, there is no reason why it should not be possible for the farmer to make use of old or abandoned buildings, repairing and remodeling them in such a way as to make them quite habitable, as was done by the peach farmers in Nassau County, N. Y., during the season of 1917.¹

METHODS OF ORGANIZATION.

No problem in organization is present in the housing and caring for the agricultural laborer on the small farm where one or two hands in addition to the family of the owner operate the farm. Under such circumstances the farm help is accommodated as a part of the farm operator's family. Problems of organization arise when a large supply of labor is needed, either continuously, as on the large plantations of the South and Southwest and on the large ranches of the Middle and Far West, or seasonally, as in connection with certain crops in all localities.

The seasonal labor recruited in large groups may be organized in any one of the following ways: (1) Under direction and control of the employer or farm operator who may himself provide the necessary accommodations, and supply the food—in a word, care for and maintain the camp and its necessary adjuncts; (2) contracting out to a lessee who may enter into some form of agreement with the owner benefited to supply all or part of the necessary equipment, and who acts as manager on his own account; (3) philanthropic form of management and operation through a military form of organization; (4) billeting of laborers in villages and use of existing means, or provision of new means, of transportation to the place of work;² (5) cooperative organization and care of laborers by the village members themselves acting through some constituted form of organization of their own.

The types of houses or camp accommodations which may be provided under any one of the forms of organization adopted may be of several kinds: (1) Portable camp structures; (2) tents; (3) bunk houses of either permanent or temporary structure; (4) barracks; (5) individual dwelling houses of various kinds; and (6) old or abandoned buildings remodeled in any of these forms. The type of camp accommodations adopted will vary with the circumstances or purposes for which they are desired. Thus, portable camps are most suitable where it is necessary to move a labor gang about from place to place.

¹ Cf. New Jersey State Agricultural College, Extension Bulletin, December, 1917 (vol. 1, No. 18) New Brunswick, N. J.

² A radius of 7 or 8 miles may be worked in this fashion by the use of automobile truck transportation. (Convict labor camps for road work, by J. E. Pennybacker. Washington, 1916. U. S. Department of Agriculture, Bulletin No. 414, p. 66.)

Portable camps also have greater durability than tents and offer greater protection from the weather.¹ Tents are adaptable under the same circumstances and also for summer use. Bunk houses in all cases are somewhat permanent and substantial structures.² Barracks may be of various kinds, consisting either of long rows, divided into one or two room partitions, or large commodious buildings in which individual sleeping cots instead of bunks in tiers may be placed. Dwelling houses of a permanent character are, of course, the most desirable, but are usually adaptable only where labor is to be permanently employed, as on large tenant farms.

SANITARY STANDARDS FOR LABOR CAMPS.

Sanitary standards for labor camps and similar work places have been worked out by various authorities. Perhaps the most extensively quoted and used are those recommended by the California Commission of Immigration and Housing.³ The United States Reclamation Service has followed these fairly closely for its construction camps on the reclamation projects.⁴ The Public Health Council of the State of New York has elaborated a sanitary code, one chapter of which is devoted to camp sanitation,⁵ and recently the divisional committee on village and public sanitation of the National Committee on Welfare Work, which is a subcommittee of the committee on labor of the advisory commission of the Council of National Defense, has outlined certain minimum standards to be followed in the laying out of seasonal labor camps and other industrial housing developments in rural and semirural districts.⁶ A member of the staff of the United States Public Health Service has also covered the same field,⁷ while the Chief of the Division of Road Economics of the Office of Roads (Department of Agriculture) has made an extensive study of convict-labor camp organization and maintenance.⁸

More recently the State of Ohio has made an investigation and proposed recommendations in relation to labor camps,⁹ and Wiscon-

¹ For a discussion of the merits of different types of structure reference is made to J. E. Pennybacker's *Convict labor for road work*, U. S. Department of Agriculture, Bulletin No. 414, p. 127 et seq.

² For a description of a semipermanent, nonportable bunk-house camp, see *MONTHLY REVIEW* for April, 1918, pp. 7 to 11.

³ Advisory pamphlet on camp sanitation and housing, Commission of Immigration and Housing of California [4th rev. ed.], San Francisco, 1915. 56 pp.

⁴ U. S. Reclamation Service. *Sanitary Regulations*. (Manual of the Reclamation Service, Washington, 1917, vol. 1, pp. 116-122.)

⁵ The sanitary code established by the Public Health Council of the State of New York, Chap. V. (In 36th annual report of the State Department of Health, 1915.)

⁶ Report of the Committee on Village and Public Sanitation with Special Reference to Housing. Washington, D. C., 1917. (Unpublished, 54 typewritten folios.)

⁷ Camp sanitation, by W. F. Draper. (In U. S. Public Health Service, Miscellaneous Publication No. 17. Prevention of disease and care of the sick. Washington, 1917, pp. 58-63.)

⁸ *Convict-labor road work*, by J. E. Pennybacker. Washington, 1916. 218 pp. (U. S. Department of Agriculture, Bulletin No. 414.)

⁹ Preliminary survey of labor camps in Ohio, the Industrial Commission of Ohio. (Bulletin of the Industrial Commission of Ohio, Columbus, 1917, vol. 4, No. 11, 22 pp.)

sin¹ and Pennsylvania provide for the inspection of labor camps. While the rules and regulations drafted by these State departments and other authorities are not made with reference to agricultural labor camps, yet the problems of this latter type of camp do not differ essentially from those of the other type of camps.

The principal requirements of good labor camp construction and sanitation, as based upon the foregoing authorities, have been brought together in the following paragraphs:

Camp location.—The principal essential of camp location is well drained ground and accessibility to a drinkable water supply. Consideration should be given to advantageous exposure to sunlight and prevailing winds.

Camp layout.—Camp buildings, tents, and portable houses should be arranged in rows so that the surroundings may be easily kept clean. Kitchen, mess, and commissary houses should be at some distance—50 to 100 feet—from the sleeping quarters. Stables and corrals should be at least 600 feet from the kitchen and mess house and 500 feet from sleeping quarters. Toilets should be at least 75 feet from sleeping quarters and 200 feet from mess and kitchen quarters; minimum standards of 50 feet are suggested by some authorities. Incinerators for kitchen garbage, if used, should be near the kitchen and mess and 75 feet from sleeping quarters.

Water supply.—A plentiful supply of wholesome water should be provided for drinking, cooking, and bathing purposes. (1) The supply should be free from organic contamination; (2) ground water supplies from wells must be covered at the top to insure against pollution; (3) wells should be located with reference to surface drainage and old wells not properly located condemned and new ones constructed; (4) If only contaminated or even questionable water is available, it should be purified by filtration or boiling; (5) all privy vaults should be at least 200 feet from the water supply and so located that pollution of water is impossible; (6) there should be frequent analysis; (7) if stored, water should be in tightly closed receptacles and drawn off by faucet; (8) use of individual drinking cups should be encouraged.

Sleeping quarters.—Floors should be kept in such repair as to be sanitary, and, if of wood, should be elevated from the ground to permit air circulation underneath. Roofs and sides should be water-tight, and windows and doors provided with screens. All windows should be so arranged as to open easily.

The California Commission of Immigration and Housing, the United States Reclamation Service following, recommends 500 cubic feet of air space for each person. Ohio recommends not less than

¹ Labor camps in Wisconsin, Industrial Commission of Wisconsin, Madison, 1914, 48 pp.

400 cubic feet. Not less than 200 cubic feet is proposed for each child under 14 years of age. A floor area of at least 50 square feet per person is recommended. These are the desirable standards unless there exist some permanently open means of ventilation such as a complete open side of a building or tent, open ends, or open top.

Bunks, if used, should preferably be of steel, and no triple tiers should be permitted except under unusually favorable circumstances. There should be 2-foot aisles between bunks, and bunks should be not nearer than 1 foot from the floor.

Kitchen and mess houses.—Here the essential is careful screening and closed communication between the two—kitchen and mess room. Doors leading into the outer air should have screened vestibules. The rooms should be well aired and lighted.

Sanitary disposal of waste.—For disposal of garbage every camp should be provided with galvanized iron (or other metal) water-tight cans, with tightly fitting lids to keep out flies and vermin. These containers should be emptied at least twice a week. Waste receptacles should be provided near the sleeping quarters.

All garbage should be disposed of either by burning, by burying, or by feeding to hogs. It should not be fed to chickens as these will not consume it all. If buried, shallow trenches are preferable to deep pits. Burning, however, is generally the most approved method.

Toilets.—The only kind of privies which may be classed as sanitary are those with either removable receptacles (tonneaux or box privies, pail system, incinerating system, etc.), or stationary receptacles from which the contents are removable. The use of privies built over holes in the ground and repeatedly moved and the pits filled are condemned. All toilets should be thoroughly screened and fly proof and well ventilated. Separate toilets for the sexes should be provided, placed at least 50 feet apart and conspicuously marked. Cleanliness in the care of all toilets is to be insisted upon. Daily use of crude oil, chloride of lime, or dry earth on the surface of the pit is recommended. Paper should be provided in all toilets.

Toilet seats should be provided in the proportion of one to every 10 to 20 persons, and 40 persons in the case of shifting camps.

Bathing facilities.—There should be provision in or near sleeping quarters for bathing, as tubs, shower or shelter built on a stream. There should be one facility for each 20 persons. Showers are most preferable, being cheaper to install and more sanitary. Waste water from baths should be carefully drained away.

Soap and towels should be provided without charge. Roller towels, if used, should be changed frequently; use of individual towels is strongly recommended; paper towels are suitable.

Maintenance and cleanliness.—Open manure piles should be eliminated; and stables and stalls near camps kept thoroughly cleaned.

All floors should be cleaned and swept at least twice a week. Kitchen and mess room should be swept daily. Dry sweeping should be discouraged.

Cuspidors with water should be placed in all living quarters and cleaned daily.

A special separate room attached to the bunk house should be provided for washing and drying clothes.

The washing of the laundry of the laborers in the camps should be directed by the person in charge of the camp, who should hire a wash woman or man to be compensated by each laborer in proportion to the washing done for him.

All persons engaged in preparing and handling food should be medically examined with particular attention as to whether or not they have suffered from typhoid or tuberculosis within recent years, or whether they have some other communicable disease. Any person afflicted with such a disease should be kept away from the kitchen and mess house.

All perishable foods should be protected from putrefaction and insects.

Each large camp should have one or more able-bodied men giving their entire time to the care and maintenance of the camp.

Sick house.—In camps of 50 or more persons a fly-proof and mosquito-proof house should be provided to receive the sick.

Recreation room.—In camps of 50 or more a special room, kept clean and well lighted, with tables and benches, should be provided for recreation—reading and writing facilities and games. The employer or farm operator should provide newspapers and books in this recreation room.

EXAMPLES OF CAMP ORGANIZATION AND CAMP CONSTRUCTION.

The farm cadet camps which were organized to assist in harvesting the crop of the 1917 season may serve as an example of the military form of camp organization. A description of the farm cadet camps on Long Island has been given by the Secretary of the Nassau and Suffolk Counties (L. I.) Y. M. C. A.¹

Organization.—Each labor camp when filled to capacity consists of 49 cadets, 9 officers, and 2 cooks. Each squad of 7 cadets is under the direction of a squad leader. Directing the 7 squad leaders are an assistant director and a camp director. The camps have been organized on a military basis, each squad leader having the rank of

¹ Rural Manhood, devoted to the country work of the Y. M. C. A. in village, town, or country. New York, International Committee of Y. M. C. A.'s, 1917, vol. 8, No. 7 (September), pp. 288-292.

corporal or sergeant, the director corresponding to the captain of the company, and his assistants having the rank of lieutenant.

In addition to this permanent camp organization a movable labor force has been organized and termed the flying squadron. This consists of one squadron of picked cadets, selected each week from the various camps on the basis of efficiency in farm labor. Each squad has a leader, a director, and a cook. They are equipped with an automobile with a special body to carry the cadets, and a trailer, which is provided with a built-in water tank, ice box, and facilities for carrying tents and the personal equipment of the squadron. The purpose of this squadron is to furnish emergency labor on farms too remote from the permanent camp to permit daily transportation of the cadets. The director of this flying squadron spends a part of his time in any particular district to determine the possible need of a permanent camp in that locality and to obtain information concerning acreage, crops, cattle, etc.

Equipment.—Each camp is equipped with seven 12 by 14-foot wall tents with flies, each one of which provides the quarters for a squad. Each tent has a wooden floor and built-in bunks. The headquarters tent, for office purposes and sleeping quarters for the director, is 14 by 16 feet. Here are kept all records, athletic equipment, library, and telephone. A mess tent 18 by 60 feet provides not only a dining room but an auditorium for lectures and entertainments, a reading room, and the like. Another small tent is provided for sleeping quarters for the cooks. A wood cook shack, 18 by 20 feet, equipped with oil ranges and storage facilities for supplies, is thoroughly screened and offers every necessity for providing wholesome food. An outdoor incinerator which is burned out every day disposes of the garbage. An ice-box, built after the style of a cyclone cellar, holds perishable supplies. The latrines are modeled after the Army plan and are burned out and inspected daily by the camp sanitary officer. Shower baths are provided for the cadets' use. The water supply is carefully analyzed before the camp is located.

Commissary department.—In order to secure an adequate amount of the right kind of food at the minimum cost, a commissary department is established with an experienced man in charge. Daily menus are sent out from the central office to all of the camps. Supplies, so far as possible, are bought at wholesale and distributed to the various camps. In this way it has been possible to supply a menu planned by an expert dietitian at the minimum cost.

METHODS OF THE FARMERS OF NIAGARA COUNTY, N. Y.

During the season of 1917 there developed an extraordinary demand for labor to harvest the peach crop of Niagara County, N. Y.¹ The farmers early held a meeting and agreed upon a wage of \$2 per day and board for the peach harvest season. Through their own county agent they procured their labor after notifying him definitely how much labor they needed, and when and for how long they would need it.

The boarding and lodging accommodations were simple. In some cases a shed was fitted out as a bunk and boarding house. Frequently boarding accommodations were provided in a separate tent or another shed. Some of the bunks were fitted out with clean straw on the floor, others with straw ticks, some with cots, still others with beds. (As to the use of straw on the floors, there may be some doubt as to its suitability from a sanitary point of view.)

In one case triple deck beds² were made by the farmer himself. These had posts 2 by 3 inches by 8 feet, reaching from floor to ceiling; the beds were 30 inches wide and 6 feet long, with boards 6 inches wide on the sides. Heavy woven wire, such as is used for corn cribs, served as springs, and on this the mattress was placed.

The building in which these beds were provided was 40 feet long and 20 feet wide, and had plenty of windows for ventilation. It accommodated 36 men on the second floor, and the lower floor was used as a mess room and kitchen. It is estimated that such a building could be erected for less than \$2,000.³

AN ORCHARD CAMP IN MARYLAND.

The Tonoloway Orchard Co., of Hancock, Md., has given the bureau a description of its method of housing and caring for its orchard help. The company has 800 acres in apples, and provides camp quarters for about 150 men, accommodated in two camps. The following description applies to one of the camps, the other being similar in every way.

The camp consists of separate sleeping quarters, one for cold weather and the other for warmer weather. The tents for warm and moderate weather are forty in number. Each tent is occupied by two persons. Each occupant is provided with an army cot and army blanket. The bunk houses for colder weather are three in number, each accommodating 15 to 25 men. These bunk houses are built of frame, one story, 9 feet high, with outside dimensions 12 by 20

¹ Farm labor (New Jersey State Agricultural College. Extension Bulletin, New Brunswick, N. J., December, 1917, vol. I, No. 18.)

² Triple deck bunks, however, it may be noted, are not recommended by sanitarians.

³ Farm labor. Op. cit. p. 31.

feet. The bunks are of 2 by 4 feet pine, have heavy springs in the frame, and have straw ticks.

A rest building, 16 feet wide by 20 feet long, and having a 9-foot ceiling, is provided. The rest building contains a shower bath, two or three tables, and benches. Certain daily papers and magazines are provided.

The mess-room building is 50 feet long by 25 feet wide, with ceiling of the first floor 10 feet high. The room has eight windows. It seats 75 men. The second story of the mess room is occupied by the camp manager and his family, which includes cooks and waitresses.

The kitchen is 16 by 12 feet. Two doors connect the mess room and the kitchen. The kitchen is equipped with hot and cold water connections and a large hotel range for cooking. The kitchen has three large windows.

The camp manager has entire charge of the camp, ordering provisions, the care of sleeping quarters, etc.

THE PORTABLE HOUSES OF THE PENNSYLVANIA RAILROAD CO.

The Pennsylvania Railroad Co., in securing labor to carry out its large construction projects and ordinary railroad track work, has brought several thousand men from the Southern States and installed them in camps at different places in Philadelphia and other points on the system. The company owns at the present time a large variety of bunk houses, consisting of converted freight cars, abandoned houses, and the like. After experimenting with various kinds of accommodations for its seasonal help, the company adopted a portable type of building. These buildings are described by Mr. A. E. Owen, former chairman camp committee, Pennsylvania Railroad.¹

The buildings are constructed of the ordinary tongued-and-grooved white pine, and built in 10-foot sections. Each building when complete is 20 feet wide, with sloping roofs, and approximately 15 to 16 feet high from the floor to the ridgepole; the floors are built on piers about 18 inches from the ground. The entire exterior of the buildings is covered with a pebble-dash roofing paper. By this method it is a simple matter to increase or decrease the size of a building; it can be stored quite conveniently or may be moved from one location to another without serious difficulty, which gives it adaptability for emergency use.

In order to conform to the fire regulations these buildings are lighted by electricity, and each building is equipped with the proper number of fire extinguishers; screens for windows and doors are also provided.

¹ Bunk houses, boarding houses, and labor camps. (In *Housing Problems in America: Proceedings of the Sixth National Conference on Housing*, Chicago, Oct. 15, 16, and 17, 1917. New York, National Housing Association, 1917, pp. 102-105.)

A regular standard double-deck bunk is used in these dormitories, and each bunk is supplied with two blankets, pillows, pillowcases, and sheet. The blankets, mattresses, and pillows are frequently aired and sprayed with an approved insecticide, pillowcases and sheets are sent to the laundry, and floors are scrubbed at least twice a week with disinfectant solution and mopped or swept at least once a day. The cuspidors are cleaned daily and a disinfectant solution left in the cuspidors. Wherever it is possible a separate locker, which contains soap and individual towel, is provided for each man.

In each of these buildings stationary washstands are provided, hot and cold water furnished, and, where camps are sufficiently large and drainage available, shower baths are provided.

In the larger camps a separate building is used for a commissary or store. This plan is gradually being carried out in the smaller camps, it being understood that the commissary storerooms are fashioned after the same general construction which is used in the bunk house; the kitchens are equipped practically on the same plan as hotels. Bills of fare have been introduced, with menus of a variety of wholesome food. Good cooks are secured to prepare this food properly, which is served by waiters, and a second helping is permitted.

The camps are being enlarged to include recreation rooms, where the men may gather and pass their time when not out on the tracks. There are various forms of amusements provided, but as yet standard plans have not been drawn up, owing to the various nationalities represented and the different forms of amusements required.

The medical department has also been enlarged to look after the general sanitation of the camps as well as the health of the men.

HOUSING AFTER THE WAR IN SCOTLAND.

The Scotch royal commission on housing, the report of which appeared late in 1917 and was reviewed in the December issue of the MONTHLY REVIEW, declared, among other things, that the State must assume full responsibility for housing after the War. Preferably the State should operate through the local authorities and should place upon them the responsibility of seeing to the provision of buildings.

At that time it was estimated that there would be a shortage after the War exceeding 100,000 houses. A subsequent inquiry carried out by the Local Government Board of Scotland, through the local authorities, confirmed this estimate.

In connection with all housing schemes undertaken by the municipal authorities, a certain amount of loss, small or great, has always

fallen upon the taxpayers; and as building costs are at present 70 to 100 per cent higher than they were in prewar years—and doubtless will remain high for some years to come—the housing problem is considered to be too difficult for either private enterprise or municipal authorities to solve. State assistance being acknowledged as necessary, the Scottish Local Government Board, after consultation with the cabinet and treasury, has made certain proposals for financial assistance to municipalities during the period immediately following the War. The scheme proposed is outlined in a circular issued March 18 of this year by the local government board for Scotland.¹ No new legislation is required to carry out this scheme; it will be carried out under the housing of the working classes act, 1890.

Under the plan in question it is proposed that the municipality shall meet the full cost of the housing scheme out of its own funds by means of a loan. For a period of seven years the State Treasury, it is recommended, shall pay 75 per cent of the estimated annual deficit, which will undoubtedly rise in connection with the construction of these houses. At the end of that period, a valuation of the property is to be made, and the State will then assume responsibility for 75 per cent of any excess in the amount of the outstanding capital charges over and above the value of the property.

Municipalities are to be responsible for the remaining 25 per cent of the loss, if any. In exceptional cases, however, the State will extend its assistance beyond the three-quarters of the estimated losses.

All housing schemes to which the State renders financial assistance must be approved by the Local Government Board, viz: Approval of the site, of the location of the houses, of the cost of the land, of the conditions on which the land is acquired, of the layout of the site, of the plans, specifications and estimates, of the rentals proposed to be charged, and of the estimated annual maintenance expenditure on the scheme.

While there is considerable latitude in regard to the types of houses which local authorities may erect, it is provided that as far as is reasonably possible not more than twelve houses shall be placed on an acre of land, and that each house or dwelling shall have not less than three rooms.

It is a condition of any financial assistance given by the State that the erection of the houses shall be commenced within two months from the date of the approval of the loan by the Local Government Board, and that the houses shall be completed by a specified date,

¹ Provision of housing for working classes after the War. Edinburgh, 1918. 4 pp. (Housing and Town Planning, No. 1, 1918.)

² A similar plan is proposed by the Local Government Board of England.

and that such number of houses as the Local Government Board may determine shall be completed within 12 months from the date of the announcement of the beginning of construction.

NEW MINISTRIES OF PUBLIC WELFARE AND PUBLIC HEALTH IN AUSTRIA.

THE MINISTRY FOR PUBLIC WELFARE.

According to the *Soziale Praxis*,¹ the ministry for public welfare (*Ministerium für Soziale Fürsorge*) recently created in Austria will be divided into five main departments in charge of the following activities:

1. Child and juvenile welfare work.
2. Care of war invalids and of survivors of men fallen in the War.
3. Social insurance.
4. Industrial and protective labor legislation.
5. Housing.

As a general rule, all five departments are to be animated by the idea that "a constant harmonious cooperation of the Government administration with autonomous bodies and with directorates of public welfare institutions, societies, foundations, etc., is to be effected." The main object of the new ministry is to insure the energetic care of the public welfare in general, as well as the improvement of the condition of the working classes and of people of small means.

As guiding principles for the individual departments, the following points of view are worthy of notice:

For the care of children and young persons, other ministries shall, as in the past, be regarded as competent—the newly established ministry of public health for questions of hygiene, the ministry of public worship for education and instruction, the ministry of justice for questions relating to guardianship and criminal jurisdiction; but nevertheless a kind of central office is to be formed within the ministry for public welfare by means of a special children's bureau (*Jugendamt*).

Stress is to be laid on the dual nature of the care of the disabled soldiers and those bereaved by the War, i. e., to the fact that the pensions to which they are entitled must be supplemented by social measures. The question of soldiers' homesteads is to be considered in connection with the general housing problem.

As regards social insurance, the creation of old-age and invalidity insurance after the German pattern is in contemplation and, again following the German pattern, value is attached to the cooperation of

¹ *Soziale Praxis und Archiv für Volkswohlfahrt*, vol. 27, No. 5. Berlin, Nov. 1, 1917.

sick funds and of the carriers of the forthcoming old-age and invalidity insurance in all efforts for combating epidemics and promoting public hygiene.

In the same way the resources of the social insurance system are to be made available in part for housing work. For alleviating the scarcity of small dwellings after the War the Emperor Francis Joseph I Jubilee Fund, created in 1908, is also to be employed.

The very important problem of industrial and protective labor legislation, which has hitherto been dealt with by the socio-political section of the ministry of commerce, is now to be handed over to the new ministry for public welfare. In addition to the very important problem of protective labor legislation, special attention shall in the future be given to the development of industrial labor legislation and to the establishment of working and wage conditions consonant with the spirit of the age. The new ministry is to take over from the ministry of the interior all problems relating to employment and unemployment and in connection therewith that of the protection of emigrants.

THE MINISTRY OF PUBLIC HEALTH.

According to the *Neue Freie Presse*,¹ the preliminary work in connection with the creation in Austria of a ministry of public health had progressed to such a point that on November 29, 1917, the actual proposals of the Government were laid before the lower house. They were referred to the committee on constitution, and it was expected that immediately after the Christmas recess they would receive parliamentary indorsement and that the new ministry would come into being about the beginning of spring.

With the establishment of the ministry of public health, which is to be housed in a building in the heart of Vienna, the care of the public health in accordance with wishes entertained for years, and publicly expressed, especially by the medical profession, will be given an independent and responsible position corresponding to its importance both for individuals and the community at large.

In the new ministry all activities which contribute to the public health will be collected and centralized. As its main task the ministry of public health will undertake the administration of all matters concerned with the care of the public health for which hitherto the ministry of the interior has been the competent authority. Moreover, a number of duties will be transferred from other departments to the new ministry.

The sphere of activity of the new ministry will comprise the following matters in particular: Combating infectious diseases and epidemics, especially tuberculosis, venereal diseases, and alcoholism;

¹ *Neue Freie Presse*. Vienna, Dec. 25, 1917.

cooperation of hygiene with veterinary science in all matters touching the preservation of the health of human beings; the hygiene of towns and communes, of buildings and dwellings; matters connected with watering places and bathing resorts; hygienic conditions of trains and ships; quality of the food supply; vocational and industrial hygiene; first aid; treatment and care of invalids, e. g., in hospitals, nursing homes, lunatic asylums, homes for the fallen; the hygiene of prisons, pharmaceuticals and therapeutics; burials; hygienic care of disabled soldiers; matters appertaining to charitable efforts; and statistics as to hygiene.

ARBITRATION AND CONCILIATION.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MARCH 15 TO APRIL 14, 1918.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between March 15, 1918, and April 14, 1918, in 91 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE
DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION,
MAR. 15 TO APR. 14, 1918.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, molders, Niles-Bement-Pond Co., Ridgeway, Pa.	37	200	Adjusted.
Strike, machinists, American Engineering Co., Philadelphia.	250	1,000	Pending.
Strike, machinists, Fayette Plumb Tool Co., Wellston, Mo.			Do.
Controversy, Jeanesville Iron Works, Hazleton, Pa.	1,500		Adjusted.
Strike, asbestos pipe coverers, shipyards, Philadelphia.	350		Do.
Controversy, Public Service Corporation and electrical workers, Detroit, Mich.	120	400	Services of commissioner not required at this time.
Controversy, American Shipbuilding Co., Lorain, Ohio.	2,200		Adjusted.
Lockout, roofers, Kenneth W. Jacobs Co., Milwaukee, Wis.			Pending.
Controversy, Chas. Weitz Sons and linemen, Des Moines, Iowa.			Do.
Strike, A. B. Clippingers' Sons, Kansas City, Kans.	60		Adjusted.
Walkout, Crown Cork & Seal Co. and pattern makers, Baltimore, Md.	7		Do.
Controversy, Crown Cork & Seal Co. and unskilled laborers, Baltimore, Md.	700	2,500	Do.
Threatened strike, miners, Lansford, Pa.	7,000		Do.
Strike, bituminous coal miners, United Big Vein Coal Co., Mount Savage, Md.	30		Do.
Controversy, The Otis Steel Casting Co. and molders and coremakers, Cleveland, Ohio.	90	710	Men decided to remain at work. General manager refused Government mediation.
Strike, Brooklyn Eastern District Terminal.			Adjusted.
Controversy, Rochester Bridge Co., Rochester, Ind.			No controversy in existence.
Threatened strike, iron miners, Sloss-Sheffield Iron & Steel Co., Russellville, Ala.	550	1,000	Pending.
Controversy, Metal Products Co. and machinists, die makers, lathe hands, toolmakers, and shaper hands, Cleveland, Ohio.	150	1,600	Adjusted.
Controversy, Wheeling Can Co. and machinists, Wheeling, W. Va.	16		Do.
Controversy, Wheeling Mold & Foundry Co., and machinists, Wheeling, W. Va.			Adjusted before commissioner's arrival.
Strike, electrical workers, Mackle Construction Co., Atlanta and Fort McPherson, Ga.	7	1,000	Pending.
Strike, garment workers, St. Louis, Mo.	3,100	4,000	Do.
Rice-Stix & Co.			
Ely-Walker Co.			
Elder Manufacturing Co.			
New Era Manufacturing Co.			
Paul E. Wolf Co.			

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 15 TO APR. 14, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Prest-o-lite Co. and machinists, Indianapolis, Ind.	6	200	Adjusted.
Threatened strike, longshoreman, New York	.....	.....	Pending.
Controversy, Gibson Consolidated Copper Co. near Miami, Ariz.	30	100	Adjusted.
Controversy, Morris Machine Co., Baldwinville, N. Y.	132	168	Do.
Controversy, Western Union Telegraph Co. and operators, Birmingham, Ala.	6	.....	Pending.
Strike, boiler makers, five firms, Indianapolis, Ind.	25	50	Adjusted.
Strike, St. Louis Sewing Co., St. Louis, Mo.	900	1,100	Pending.
Controversy, Grand Trunk R. R. Co., Portland, Me.	2	5,000	Adjusted.
Strike, Atlas Ball Co., Philadelphia, Pa.	400	426	Do.
Strike, molders, Hart & Crouse Foundry Co., Utica, N. Y.	130	160	Pending.
Lockout, Hill Creek Coal Co., Richlands, Va.	.....	.....	Do.
Controversy, Carter-Seaboard Coal Co., Richlands, Va.	85	115	Do.
Controversy, Fort Pitt Bridge Co., Canonsburg, Pa.	461	39	Do.
Controversy, Ashland Iron & Mining Co., Ashland, Ky.	.....	.....	Mill closed down to investigate cause of off standard of iron; no discord between company and men; men to resume work when called.
Strike, Head Drilling Co., Los Angeles, Cal.	120	.....	Adjusted.
Lockout, molders, Hawkeye Foundry Co., Waterloo, Iowa.	79	.....	Pending.
Controversy, Employing Electrotypers' Association and employees, Chicago.	450	.....	Do.
Strike, molders, National Transit Co., Oil City, Pa.	92	.....	Adjusted.
Controversy, Santa Barbara Telephone Co., Santa Barbara, Cal.	.....	.....	Adjusted before commissioner's arrival.
Strike, engineers, firemen, and switchmen, Nevada Consolidated Mining Co., Ely, Nev.	.....	.....	Case handled by governor and labor commissioner of Nevada.
Controversy, Bond Machine Co., Wilmington, Del.	66	5	Pending.
Strike, gas-house workers, Providence Gas Co., Providence, R. I.	126	300	Men accepted company's offer and returned to work as places were found for them.
Strike, iron workers, Buffalo Dry Dock Co., Buffalo, N. Y.	800	700	Men returned to work pending adjustment of wage scale.
Controversy, General Electric Co., Erie, Pa.	.....	.....	Pending.
Controversy, Plains Iron Works and other contract shops, Denver, Colo.	210	.....	Do.
Strike, Globe Stove & Range Co., Kokomo, Ind.	.....	.....	Adjusted.
Strike, freight handlers, Philadelphia & Reading R. R. Co., Port Richmond, Philadelphia.	125	.....	Do.
Strike, molders, Whiting Foundry & Equipment Co., Harvey, Ill.	75	200	Unable to adjust.
Strike, mill men, Crucible Steel Co., Harrison, N. J.	140	3,000	Adjusted.
Threatened strike, cereal-mill workers, American Hominy Co., Terro Haute, Ind.	26	94	Do.
Controversy, Trenton Smelting & Refining Co., Trenton, N. J.	60	5	Pending.
Strike, metal polishers and job platers, 13 shops, Los Angeles, Cal.	52	8	Do.
Strike, lead burners, DuPont Powder Co., Wilmington, Del.	12	.....	Do.
Strike, Merchants Shipbuilding Corporation and machinists, Bristol, Pa.	90	.....	Do.
Strike, National India Rubber Co., Bristol, R. I.	4,500	.....	Adjusted.
Strike, tire builders, Goodyear Tire & Rubber Co., Akron, Ohio.	62	.....	Pending.
Controversy, Lyons-Atlas Co. and machinists, Indianapolis, Ind.	8	392	Adjusted.
Strike, steel workers, Simonds Manufacturing Co., Lockport, N. Y.	58	350	Pending.
Threatened strike, waiters, hotels, Baltimore, Md.	200	Do.

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STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 15 TO APR. 14, 1918—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, carpenters, Pekin, Ill.....			Adjusted through Ordnance Division, Washington.
Controversy, Fort Des Moines Base Hospital and linemen, Des Moines, Iowa.....	4		Adjusted.
Lockout, carpenters, Memphis, Tenn.....	300		Pending.
Controversy, Great Lakes Engineering Co., Ashtabula, Ohio.....	200	600	Men continuing at work pending expected increase in wages.
Strike, bottle workers, C. L. Flaccus Glass Co., Tarentum, Pa.....	75	350	Pending.
Threatened strike, painters and decorators, Los Angeles, Cal.....	1,200	300	Adjusted.
Strike, Mallinckrodt Chemical Co., St. Louis, Mo.....			Pending.
Controversy, Pelton & Crane Co. and metal polishers, Detroit, Mich.....			Adjusted.
Controversy, stockyards, Wichita, Kans.....			Do.
Controversy, Enterprise Tool Co. and machinists, tool makers, helpers, etc., Cleveland, Ohio.....	100		Pending.
Strike, building trades on Government work, Norfolk, Va.....			Adjusted.
Controversy, Steimle-Turret Machine Co., Madison, Wis.....	3	250	Pending.
Controversy, Gisholt Machine Co., Madison, Wis.....	1,600		Adjusted.
Controversy, Richards Manufacturing Co. and machinists, Manitowoc, Wis.....	2		Pending.
Controversy, Aluminum Goods Co., Manitowoc, Wis.....	15		Do.
Controversy, laundry workers, West End Laundry, Lange Laundry, St. Louis, Mo.....			Do.
Controversy, electrical workers and contractors, Wheeling, W. Va.....	35		Do.
Strike, Kanawha Coal Co., Kanawha Valley, W. Va.....	800		Do.
Controversy, garment workers, Chicago, Ill.....	3	4,000	Adjusted.
Controversy, S. F. Bowser & Co., Fort Wayne, Ind.....	1,500		Do.
Strike, American Print Works, Fall River, Mass.....			Pending.
Strike, Arnold Print Works, North Adams, Mass.....			Do.
Strike, hod carriers and laborers, New York.....	10,000		Do.
Strike, building trades, Lorain, Ohio.....	700	1,000	Plumbers, sheet-metal workers, and electricians signed agreements; bricklayers, carpenters, and painters deadlocked. Commissioner withdrew from case.
Strike, American Car & Foundry Co., Chicago, Ill.....	800		Adjusted.
Controversy, pattern makers, Pittsburgh, Pa.....			Pending.
Threatened strike, General Electric Co., Pittsfield, Mass.....			Adjusted.
Strike, sheet-metal workers, St. Louis Metal Ware Co., St. Louis, Mo.....			Pending.
Controversy, Cleveland Worm & Gear Co. and machinists, Cleveland, Ohio.....			Adjusted.
Strike, sheet-metal workers, Handlan Buck Railways Supply Co., St. Louis.....	75		Pending.
Controversy, Jewish bakers and employers, New York.....	2,500		Do.
Controversy, George A. Ohle & Co. and machinists and machine shop workers, Newark, N. J.....	45	15	Adjusted.
Strike, machinists, tinsmiths, and iron workers, Hospital Supply Co., New York.....	120	25	Pending.
Strike, Newborn & Co., New York.....			Do.
Controversy, Smalley, General Co. and machinists, Bay City, Mich.....			Do.
Controversy, American-British Co. and machinists, Providence, R. I.....			Do.
Strike, laborers and tin house employees, Standard Tin Plate Co., Canonsburg, Pa.....	500		Adjusted.
Controversy, Schwartz Wheel Co., Philadelphia.....			Pending.
Controversy, Depere Manufacturing Co., Madison, Wis.....			Do.
Controversy, Swift & Co., St. Joseph, Mo.....			Do.
Lockout, Smith & Drum Co., Philadelphia.....	60		Adjusted.
Controversy, Mahoning & Shenango Ry. & Light Co., Youngstown, Ohio.....			Pending.
Strike, United States Metals Refining Co., Chrome, N. J.....			Do.
Strike, American Smelting & Refining Co. and Raritan Copper Co., Perth Amboy, N. J.....			Do.
Lockout, sheet-metal workers, United States Aero Propeller Co., Milwaukee, Wis.....			Do.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR., 15 TO APR. 14, 1918—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Norwalk hospital, Norwalk, Cal.....			Pending.
Controversy, typographical union, Denver, Colo.....			Do.
Strike, track laborers, Philadelphia & Reading R. R. Co., Port Richmond, Philadelphia.....	40	(1)	Adjusted.
Threatened strike, freight handlers, Philadelphia & Reading R. R. Co., Broad and Callowhill streets, Philadelphia.....	60	135	Do.
Strike, Southern Pacific shops, New York.....			Pending.
Controversy, S. P. Manufacturing Co., Cleveland, Ohio.....			Do.
Strike, molders, Menefee Foundry Co., Fort Wayne, Ind.....			Adjusted.
Controversy, H. C. Cragg Manufacturing Co., Washington.....			Pending.
Controversy, textile workers, Sanford, Me.....	1,200		Do.
Controversy, hatters, Danbury, Conn.....			Do.
Controversy, building trades and contractors, Marsh Aviation Training School, Alessandro, Cal.....	250	500	Adjusted.
Strike, Atlas Brass Foundry Co., Blacklick, Pa.....			Pending.
Strike, American Range & Foundry Co., Cleveland, Ohio.....			Do.
Threatened strike, dock truckers, Seattle, Wash.....			Do.
Strike, John Wood plant, Conshohocken, Pa.....			Adjusted.
Controversy, structural iron workers on cantonment, Des Moines, Iowa.....			Pending.
Strike, carriage, wagon, and automobile workers, Chicago.....	800		Do.
Strikes and lockouts, Billings, Mont.....			Do.
Sympathetic strike, Waco, Tex.....			Do.
Strike, Leslie & Elliott Co., Paterson, N. J.....			Do.
Strike, machinists, Marine Repair Shops & Marine Rail- ways, Norfolk, Va.....			Do.
Strike, Marshall Foundry Co., Blacklick, Pa.....	500		Adjusted.
Strike, molders, Frank Nealon Co. and others, Pitts- burgh, Pa.....			Pending.
Controversy, stevedores, Norfolk, Va.....			Do.
Strike, Plum Tool Co., St. Louis, Mo.....			Do.
Strike, garment workers, several shirt factories, St. Louis, Mo.....			Do.
Strike, Samuel Cupples Envelope Co., St. Louis, Mo.....			Do.
Strike, Ornament, Wire & Iron Co., St. Louis, Mo.....			Do.
Strike, Kroger Groceries and Meat Stores, St. Louis, Mo.....			Do.
Threatened strike, Hudson and Manhattan Tubes, New York.....			Do.
Strike, South Norwalk, Conn.....			Do.
Controversy, Merchants & Evans Co. and machinists, Philadelphia.....			Do.
Controversy, electrical workers in Central and Northern California and Light & Power and Street Railroad cor- porations.....			Do.
Controversy, Thomas Iron Co., near Wharton, N. J.....			Do.
Controversy, sheet-metal workers, Aeroplane Propeller Works, Chicago.....			Do.
Controversy, Hartford & New York Transportation Co. and longshoremen, New York.....			Do.

1 Philadelphia division.

The following cases noted as pending in the March 15 statement have been disposed of:

- Strike, laundry workers, Kansas City, Mo. Adjusted.
- Sympathetic strike of various trades at Kansas City, in which 15,000 were directly involved and 60,000 indirectly involved. Adjusted.
- Controversy, Wireless Specialty Co., Boston, Mass. Unable to adjust.
- Strike, retail clerks, St. Louis. Adjusted.
- Strike, stove mounters, Detroit, Mich.; Michigan Stove Co., Art Stove Co., Penin-
sular Stove Co., and Detroit Stove Works. Adjusted.
- Controversy, Kroeschell Bros. Ice Machine Co. and machinists, Chicago. Adjusted.
- Controversy, French Creek Foundry Co., Franklin, Pa. Adjusted.
- Controversy, Franklin Foundry Co., Franklin, Pa. Adjusted.

- Lockout, flint-glass workers, Empire Cut Glass Co., Flemington, N. J. Adjusted.
 Controversy, Mississippi River & Bonne Terre R. R., Bonne Terre, Mo. Adjusted.
 Strike, Thurlow Steel Co., Philadelphia. Adjusted.
 Controversy, waiters, Washington hotels. Ten adjusted, one pending.
 Strike, machinists and pipe fitters, Hercules Powder Co., San Diego, Cal. Adjusted.
 Controversy, Los Angeles & Salt Lake R. R. Co., Los Angeles, Cal. Report submitted to Director General of Railroads.
 Controversy, Huntington Lumber & Supply Co., Huntington, W. Va. Adjusted.
 Strike, silk-mill workers, Allegany County, Md. Questions in dispute submitted to president of company and president of United Textile Workers of America for adjustment.
 Strike, sheet-metal workers, The Clothel Co., Bayonne, N. J. Adjusted.
 Controversy, machinists, Perth Amboy, N. J. Adjusted.
 Lockout, Ross Gear & Tool Co., Lafayette, Ind. Adjusted.
 Controversy, The Willys-Overland Co., Toledo, Ohio. Adjusted.
 Threatened strike, blacksmiths and helpers, American Car & Foundry Co., Wilmington, Del. Adjusted.
 Controversy, Toledo Machine & Tool Co. and machinists, Toledo, Ohio. Adjusted.
 Strike, tobacco workers, Liggett & Myers Co., St. Louis, Mo. Adjusted.
 Controversy, Standard Gauge & Steel Co., Beaver Falls, Pa. No controversy in existence.
 Strike, drug clerks, Denver. Adjusted.

STRIKES AND LOCKOUTS.

STRIKES AND LOCKOUTS IN CANADA, 1901 TO 1916.

In a brief introductory summary, preceding numerous tables which comprise the major portion of a recent report on strikes and lockouts in Canada,¹ it is stated that in the period 1901 to 1916 there were 1,594 strikes involving 9,430 employers, 398,391 employees, and a time loss estimated at 10,920,539 working days. Particular comment is made upon the "comparatively slight industrial disturbance in Canada since the outbreak of the War." It appears that there were only 7 strikes in the period from August 1 to December 31, 1914, less than 300 employees being affected; that in 1915 there were 43 strikes affecting 9,140 employees and causing a time loss of 106,149 days, "the smallest amount of disturbance from the standpoints of number of disputes, time loss, and percentage of the total population involved ever recorded"; that in 1916 the number of disputes increased to 75, that year being third in the record as to minimum of trouble; that in the 1911-1915 period the number of disputes (449) was lower than in either of the two preceding quinquennial periods, the number of employees affected (127,959) being slightly higher than during either of the two preceding five-year periods, while the time loss of 4,969,739 days "was much the heaviest of the three five-year periods."

From the standpoint of number of disputes the report, which deals particularly with the period 1911 to 1915, shows that industrial unrest in that period was greatest in the building, metal and shipbuilding, clothing, and transport trades in the order named, and "it is noteworthy that this order prevailed throughout the three quinquennial periods." The mining industry, however, seems to have been responsible for the greatest amount of time loss—51.7 per cent of the total days. "The mining industry has contributed a constantly increasing share of the country's industrial unrest." Most of the 449 disputes occurring in this five-year period were due to questions of wages and hours, about 70 per cent of the disputes and 63 per cent of the time loss being due to this cause. As to the result of these strikes, 139, or 30 per cent, terminated in favor of employees; 164, or 36 per cent, in favor of employers; 79, or 17 per cent, were compromised; and in 67 cases the result was indefinite. In 196 (43.7 per cent) of the disputes settlement was effected by direct negotiation between the parties or their representatives.

¹ Canada. Department of Labor. Strikes and lockouts in Canada, 1901-1916. Ottawa, 1918. 138 pp.

As to settlement of disputes in the entire period, 1901 to 1915, inclusive, the proportions are substantially the same as indicated for the period 1911 to 1915, namely, 31 per cent in favor of employers, 34 per cent in favor of employees, and 14 per cent compromised.

The following table gives a summary of the data pertaining to industrial disputes occurring in the period 1901 to 1915, inclusive:

SUMMARY OF DATA PERTAINING TO INDUSTRIAL DISPUTES IN CANADA, BY INDUSTRY AND BY QUINQUENNIAL PERIOD, 1901 TO 1915, INCLUSIVE.

Industry and period.	Number of disputes.	Per cent of total disputes in each period.	Number of establishments concerned.	Number of employees affected.	Time loss.	
					Working days.	Per cent of total in each period.
Fishing:						
1901-1905.....	6	1.0	13	13,300	189,600	7.7
1906-1910.....	4	.8	5	677	8,488	.3
1911-1915.....	3	.7	37	2,750	55,000	1.1
Total.....	13	.9	55	16,727	253,088	2.4
Lumbering:						
1901-1905.....	13	2.3	13	2,640	9,490	.4
1906-1910.....	15	2.9	22	2,921	61,587	1.9
1911-1915.....	7	1.6	35	2,825	141,570	2.8
Total.....	35	2.3	70	8,386	212,647	2.0
Mining:						
1901-1905.....	37	6.6	43	27,732	647,172	26.3
1906-1910.....	50	9.8	106	33,997	1,510,307	46.0
1911-1915.....	29	6.5	103	26,231	2,570,688	51.7
Total.....	116	7.6	252	87,960	4,728,167	44.1
Building:						
1901-1905.....	143	25.6	1,728	22,680	610,586	24.8
1906-1910.....	123	24.1	2,735	27,319	474,028	14.4
1911-1915.....	128	28.5	1,655	26,507	557,194	11.2
Total.....	394	25.9	6,118	76,506	1,641,808	15.3
Metal:						
1901-1905.....	95	17.0	188	10,580	208,953	8.5
1906-1910.....	75	14.7	369	8,337	218,961	6.7
1911-1915.....	103	22.9	298	13,763	237,022	4.8
Total.....	273	18.0	855	32,680	664,936	6.2
Woodworking:						
1901-1905.....	33	5.9	82	3,055	60,813	2.5
1906-1910.....	14	2.7	39	1,303	14,472	.4
1911-1915.....	6	1.3	50	690	31,377	.6
Total.....	53	3.5	171	5,048	106,662	1.0
Printing and publishing:						
1901-1905.....	18	3.2	84	1,100	9,590	.4
1906-1910.....	10	2.0	31	316	4,119	.1
1911-1915.....	4	.9	42	329	4,605	.1
Total.....	32	2.1	157	1,745	18,314	.2
Textiles:						
1901-1905.....	15	2.7	14	4,456	42,751	1.7
1906-1910.....	21	4.1	24	14,436	236,783	7.2
1911-1915.....	9	2.0	9	2,478	27,090	.5
Total.....	45	3.0	47	21,370	306,624	2.9

SUMMARY OF DATA PERTAINING TO INDUSTRIAL DISPUTES IN CANADA, BY INDUSTRY AND BY QUINQUENNIAL PERIOD, 1901 TO 1915, INCLUSIVE—Concluded.

Industry and period.	Number of disputes.	Per cent of total disputes in each period.	Number of establishments concerned.	Number of employees affected.	Time loss.	
					Working days.	Per cent of total in each period.
Clothing:						
1901-1905.....	51	9.1	200	8,968	196,797	8.0
1906-1910.....	56	11.0	106	6,076	105,531	3.2
1911-1915.....	51	11.4	156	21,454	587,739	11.8
Total.....	158	10.4	462	36,498	890,067	8.4
Food, liquors, and tobacco:						
1901-1905.....	41	7.3	94	2,153	16,201	.7
1906-1910.....	21	4.1	73	1,160	15,761	.5
1911-1915.....	15	3.3	55	1,176	31,722	.6
Total.....	77	5.1	222	4,489	63,684	.6
Leather:						
1901-1905.....	9	1.6	14	324	3,596	.1
1906-1910.....	11	2.2	34	548	13,434	.4
1911-1915.....	3	.7	4	80	2,570	.1
Total.....	23	1.5	52	952	19,600	.2
General transport:						
1901-1905.....	43	7.7	83	18,970	411,778	16.7
1906-1910.....	54	10.6	112	21,622	573,396	17.5
1911-1915.....	39	8.7	145	12,553	212,139	4.3
Total.....	136	9.0	340	53,145	1,197,313	11.2
Miscellaneous:						
1901-1905.....	22	3.9	45	3,296	36,053	1.5
1906-1910.....	17	3.3	49	1,477	24,255	.7
1911-1915.....	32	7.1	158	2,019	35,073	.7
Total.....	71	4.7	252	6,792	95,381	.9
Unskilled labor:						
1901-1905.....	33	5.9	31	3,842	18,619	.8
1906-1910.....	40	7.8	42	5,990	19,402	.6
1911-1915.....	20	4.5	33	15,104	475,950	9.6
Total.....	93	6.1	106	24,936	513,971	4.8
Grand total.....	1,519	100.0	9,159	377,234	10,712,262	100.0
All industries:						
1901-1905.....	559	136.8	2,632	123,096	2,461,999	123.0
1906-1910.....	511	133.6	3,747	126,179	3,280,524	131.6
1911-1915.....	449	129.6	2,780	127,959	4,969,739	146.4
Total.....	1,519	100.0	9,159	377,234	10,712,262	100.0

1 Based on total for 15-year period.

IMMIGRATION.

IMMIGRATION IN JANUARY, 1918.

The number of immigrant aliens admitted into the United States during the year 1917 was 152,960, as compared with 355,767 for the year 1916, a decrease of 202,807, or 56.9 per cent. During 1917 the decrease from the preceding month for January, February, and March was 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted showed an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures of May showed a decrease of 48.9 per cent. The figures for June indicated an increase of 5.5 per cent over those for May. During July only 9,367 immigrant aliens were admitted. As compared with the figures for July, those for August showed an increase of 7.3 per cent. In September the number fell to 9,228, or 139 smaller than the number admitted in July. As compared with August, the figures for September showed a decrease of 8.2 per cent. In October there was an increase over the September arrivals of 57, or 0.6 per cent. The admissions in November numbered only 6,446, a decrease of 30.6 per cent from the number admitted in October. In December there was an increase of 8.4 per cent. In January, 1918, there was a decrease of 9 per cent as compared with December, 1917.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS,
1913 TO 1917.

Month.	1913	1914	1915	1916	1917	1918	
						Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	6,356	19.0
February.....	59,156	46,873	13,873	24,740	19,238		
March.....	96,958	92,621	19,263	27,586	15,512		
April.....	136,371	119,885	24,532	30,560	20,523		
May.....	137,262	107,796	26,069	31,021	10,487		
June.....	176,261	71,728	22,598	30,764	11,095		
July.....	138,244	60,377	21,504	25,035	9,367		
August.....	126,180	37,706	21,949	29,975	10,047		
September.....	136,247	29,143	24,513	36,398	9,228		
October.....	134,440	30,416	25,450	37,056	9,285		
November.....	104,671	26,298	24,545	34,437	6,446		
December.....	95,387	20,944	18,901	30,902	6,987		

¹ Decrease.

Classified by races or nationality, the number of immigrant aliens admitted into the United States during specified periods and in January, 1918, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN JANUARY, 1918 BY RACE OR NATIONALITY.¹

Race or nationality.	Year ending June 30—			July, 1917, to January, 1918.	January, 1918.
	1915	1916	1917		
African (black).....	5,660	4,576	7,971	3,755	187
Armenian.....	932	964	1,221	179	28
Bohemian and Moravian.....	1,651	642	327	50	3
Bulgarian, Serbian, Montenegrin.....	3,506	3,146	1,134	75	7
Chinese.....	2,469	2,239	1,843	1,165	119
Croatian and Slovenian.....	1,942	791	305	20	.....
Cuban.....	3,402	3,442	3,428	835	29
Dalmatian, Bosnian, Herzegovinian.....	305	114	94	10	.....
Dutch and Flemish.....	6,675	6,443	5,393	998	144
East Indian.....	82	80	69	41	5
English.....	38,662	36,168	32,246	6,961	979
Finnish.....	3,472	5,649	5,900	1,346	83
French.....	12,636	19,518	24,405	3,874	418
German.....	20,729	11,555	9,682	1,289	223
Greek.....	15,187	26,792	25,919	1,939	156
Hebrew.....	26,497	15,108	17,342	2,579	405
Irish.....	23,503	20,636	17,462	2,592	350
Italian (north).....	10,660	4,905	3,796	628	62
Italian (south).....	46,557	33,909	35,154	3,648	428
Japanese.....	8,609	8,711	8,925	6,008	1,112
Korean.....	146	154	194	140	15
Lithuanian.....	2,638	599	479	69	4
Magyar.....	3,604	981	434	16	.....
Mexican.....	10,993	17,198	16,438	1,668	28
Pacific Islander.....	6	5	10	7	1
Polish.....	9,065	4,502	3,109	386	72
Portuguese.....	4,376	12,208	10,194	1,570	32
Roumanian.....	1,200	953	522	117	17
Russian.....	4,459	4,858	3,711	815	101
Ruthenian (Russniak).....	2,933	1,365	1,211	30	3
Scandinavian.....	24,263	19,172	19,596	5,763	388
Scotch.....	14,310	13,515	13,350	2,840	353
Slovak.....	2,069	577	244	24	1
Spanish.....	5,705	9,259	15,019	4,171	447
Spanish-American.....	1,667	1,881	2,587	1,255	74
Syrian.....	1,767	676	976	126	15
Turkish.....	273	216	454	16	2
Welsh.....	1,390	983	793	149	30
West Indian (except Cuban).....	823	948	1,369	393	19
Other peoples.....	1,877	3,388	2,097	168	16
Total.....	326,700	298,826	295,403	57,715	6,356

¹ The total number of departures of emigrant aliens in January, 1918, was 6,661.

PUBLICATIONS RELATING TO LABOR.

OFFICIAL—UNITED STATES.

MASSACHUSETTS.—*Bureau of Statistics. Labor division. Fortieth quarterly report on employment in Massachusetts, quarter ending December 31, 1917. Boston, 1918. 16 pp.*

This report is noted on pages 215 to 217 of this issue of the MONTHLY REVIEW.

— *Public document No. 36. Thirty-first annual report on the statistics of manufactures for the year 1916. Boston, 1918. 131 pp.*

Establishments covered number 9,829. By industry the greatest increase in wages paid and in the number of wage earners was in the manufacture of foundry and machine-shop products, namely, 58 per cent and 43.9 per cent, respectively.

The average number of wage earners employed each month is given as 682,621 (an increase of 14.5 per cent over 1915), the number registered on December 16, 1916, being 719,198, or approximately 10 per cent increase over the corresponding date in 1915. Classified weekly wages were obtained for 771,205 wage earners, and the following table indicates the general upward trend of wages in 1916 as compared with 1915:

PER CENT OF WAGE EARNERS IN EACH SPECIFIED WAGE GROUP, 1916 AS COMPARED WITH 1915.

Item.	1915				1916			
	Number.	Per cent receiving—			Number.	Per cent receiving—		
		Under \$8.	\$8 to \$15.	\$15 and over.		Under \$8.	\$8 to \$15.	\$15 and over.
Adult males.....	465,655	6.4	54.7	38.9	514,202	2.0	46.7	51.3
Adult females.....	190,077	34.5	61.0	4.5	203,136	19.2	72.7	8.1
Young persons under 18.....	47,471	79.3	20.4	.3	53,867	59.7	39.6	.7

— *Homestead Commission. Proceedings of the fifth annual city and town planning conference of Massachusetts planning boards. Bulletin No. 8, November, 1917. [Boston.] 36 pp.*

The principal topics considered at this conference were: City and town planning urgent in war time; districting or zoning for height, size, etc.; assessments of betterments; establishing building lines; adopting building codes; excess condemnation.

MICHIGAN.—*The housing code of Michigan. Act No. 167, Public Acts of 1917. [Lansing, 1917.] 31 pp.*

NEW YORK.—*Department of Labor. Division of industrial hygiene. Dangers in the manufacture and industrial uses of wood alcohol. Special bulletin issued under the direction of the industrial commission. No. 86, December, 1917. [Albany, 1917.] 17 pp. Illustrated.*

This bulletin is noted on pages 252 to 254 of this issue of the MONTHLY REVIEW.

OHIO.—*Industrial Commission. Department of investigation and statistics. Report No. 31. Statistics of mines and quarries in Ohio, 1916. Columbus, 1918. 84 pp.*

According to this report, the production of coal in 1916 (34,526,552 short tons) was 52.6 per cent greater than in 1915, and 21.2 per cent greater than the average produc-

tion for the preceding five-year period. The number of workers reported as engaged in mining in 1916 was 41,632 (not including 245 engaged in stripping coal), of whom 3,511 were employed in pick mines and 38,121 were employed in machine mines. Pick miners worked an average of 182 days each, and the loaders in machine mines averaged 197 days each, the average for each being somewhat greater than in 1915. The average production per pick miner in 1916 was 659 tons as compared with 591 tons in 1915, and the average per loader (including drillers and shooters) increased from 841 tons in 1915 to 1,359 tons in 1916. The average daily wages paid to miners ranged from \$1.38 paid to 728 trappers, to \$4.42 paid to 3,161 machine runners and helpers. The average wages of 23,266 loaders (including drillers and shooters) was \$3.26 per day. The report gives the total wage and salary payment for the 789 mines reporting on this point for the year 1916 as \$27,810,534, of which \$27,478,784, or 98.9 per cent, was paid to wage earners.

Statistics on accidents are noted in a special article on pages 262 and 263 of this issue of the MONTHLY REVIEW.

RHODE ISLAND.—*Twenty-third annual report of the factory inspector, made to the general assembly at its January session, 1917. Greenfield, T. Morey & Son [1917].*

Covers the year ending December 31, 1916, during which 7,027 inspections were made of factories employing 182,793 persons, of whom 6,839 were children under 16 years of age. There are 2,823 accidents noted, 26 being fatal. Four of the fatal and 940 of the nonfatal accidents were caused by machinery in establishments coming under the supervision of the factory inspector. Of these 944 accidents, 564, or 59.7 per cent, resulted in cut, bruised, or jammed fingers. The report includes the names of establishments, by towns, showing the nature of the business, the number employed, and the sanitary conditions in each case.

WASHINGTON.—*Industrial Insurance Department. Sixth annual report for the 12 months ending Sept. 30, 1917. The Workmen's Compensation Act. Olympia, 1918. 77 pp.*

That portion of this report giving the operation of the State's new medical system is noted on pages 230 to 233 of this issue of the MONTHLY REVIEW.

UNITED STATES.—*Department of the Interior. Bureau of Mines. Accidents at metallurgical works in the United States during the calendar year 1916. Compiled by Albert H. Fay. Technical paper 201. Washington, 1918. 18 pp.*

This report is noted on pages 260 to 262 of this issue of the MONTHLY REVIEW.

— — — *Bureau of Mines. Bulletin 140. Occupational hazard at blast-furnace plants and accident prevention, based on records of accidents at blast furnaces in Pennsylvania in 1915. By Frederick H. Willcox. Washington, 1917. 155 pp. Illustrated.*

See pages 258 to 260 of this issue of the MONTHLY REVIEW for an extended digest of this report.

— *Department of Labor. Bureau of Industrial Housing and Transportation. Standards recommended for permanent industrial housing developments, March, 1918. Washington, 1918. 15 pp.*

These standards for permanent buildings to be constructed for the housing of industrial war workers were adopted by the bureau in consultation with a group of housing experts and others interested in housing. The standards relate to the arrangement and construction of the different types of houses which may be erected for war workers. The different types of houses considered as acceptable are the following: (1) Single-family house; (2) two-family house (i. e., two-flat and not the semidetached house, which latter is termed a single-family house, semidetached); (3) single-family house with rooms for lodgers or boarders; (4) lodging house for men; (5) hotel for men; (6) lodging house for women; (7) hotel for women; (8) tenement house; (9) boarding house.

"These standards are not intended as inflexible requirements, but any plans which fail to conform to them are not likely to be accepted unless supported by very strong reasons. Local building codes, housing laws, and similar ordinances are to be followed except where they permit of lower standards than herein set forth."

UNITED STATES.—*Department of Labor. Bureau of Immigration. United States Immigration Service Bulletin, published monthly under direction of the Commissioner General of Immigration. Washington, 1918. Vol. 1, No. 1.*

Replaces former monthly statistical bulletin. Contains immigration statistics, decisions affecting the enforcement of the immigration and Chinese-exclusion laws and personal notes of the service.

— *Public Health Service. Industrial efficiency; the bearings of physiological science thereon; a review of recent work. By Frederic S. Lee, Ph. D. Reprint No. 448 from the Public Health Reports, Jan. 11, 1918 (pp. 29-35). Washington, 1918. 7 pp.*

— *Mitigation of the heat hazard in industries, by J. A. Watkins. Reprint No. 441 from the Public Health Reports, Dec. 14, 1917 (pp. 2111-2121). Washington, 1918. 10 pp.*

A statement of the subtopics indicates the scope of this paper, which was read before the Section on Industrial Hygiene of the American Public Health Association, Washington, D. C., October 19, 1917: Physiological considerations, including heat production, heat loss, and effects of high temperature and humidity on the body; symptoms produced by exposure to heat, including acute symptoms, chronic symptoms, and effect of radiant heat; mitigation of heat hazard, including removal of source of heat, protection of workers, to increase rate of heat loss, relation of humidity to heat loss, air motion, water drinking, bathing, reduction of the amount of heat produced by the body, and influence of diet.

— *Morbidity statistics of war industries needed. By B. S. Warren and Edgar Sydenstricker. Reprint No. 452 from the Public Health Reports, February 1, 1918 (pp. 127-132). Washington, 1918. 6 pp.*

Since "morbidity statistics, as an index of a population's health, are regarded without question as one of the most needed instruments and one of the most desired goals of preventive medicine," and "efficiency in the prevention of diseases among industrial workers was never more clearly indispensable than now," the authors of this pamphlet make a strong plea for "a dependable current index of the health of the workers, such as a properly administered system of morbidity statistics will afford." The minimum requirements for useful statistics of morbidity, it is suggested, should be (1) exposure, in years or in months, of the workers who should be classifiable according to sex, age, and occupation; and (2) cases of sickness (at least those causing disability), including (a) sex, age, and occupation of persons affected, and (b) cause of sickness with time of onset, length of disability, and nature of termination. A number of reasons are given why it would be practicable to secure statistics measuring up to these requirements.

— *The lighting of industrial establishments. The need for supervision, with a suggested system of maintenance rating for artificial lighting equipment. By Davis H. Tuck. Reprint No. 429 from the Public Health Reports, October 19, 1917 (pp. 1761-1764). Washington, 1917. 3 pp.*

Shows how to measure efficiency of maintenance of an establishment's artificial lighting equipment, and emphasizes the desirability of keeping all lighting units clean and in good repair. "By adopting such practices a large economic waste could be avoided and losses due to decreased production, inferior products, accidents, and defective eyesight minimized."

OFFICIAL—FOREIGN COUNTRIES.

ARGENTINA.—*Camara de Diputados de la Nación. Proyecto de Código de Seguro Nacional con Exposición de Motivos y Proyecto de Ley Basica. Buenos Aires, 1917. 539 pp.*

This volume contains the text of a proposed law authorizing a commission to prepare a code of national insurance, including maternity, sickness, old-age, unemployment, widows' and orphans', and accident insurance, and the report of a committee to which the proposed law was referred. One chapter is devoted to a discussion of the present stage of development of mutual aid associations. These have attained considerable importance, especially among Italian and French residents. According to data collected by the census of 1914, there were 1,203 associations for mutual aid or insurance, having a registered membership of 507,637. Of these members but 65,188 were citizens of Argentina. An extended discussion of the situation relative to social insurance is found under the title "Our popular system of social insurance" (*Nuestra Previsión Popular*).

AUSTRALIA.—*Bureau of Census and Statistics. Official yearbook, containing authoritative statistics for the period 1901-1916, and corrected statistics for the period 1788 to 1900. No. 10-1917. Melbourne, 1917. xl, 1198 pp.*

—[*Department of the Treasury.*] *War pensions. Statement for the 12 months ended June 30, 1917. Melbourne, January 22, 1918. 4 pp.*

Shows a total of 41,348 pensions claimed during the year ending June 30, 1917, with 45,191 pensions current at that date. Of this latter number, 15,916 were payable to incapacitated members of the forces, and 29,275 to dependents. The total expenditure for pensions was £1,212,631 17s. 6d. (\$5,901,273), not counting the expenditure in New Zealand, which is not reported. The average fortnightly rate of war pensions at the date mentioned was approximately £1 9s. 4d. (\$7.14) for all pensions.

CANADA.—*Department of Labor. Strikes and lockouts in Canada, 1901-1916. Ottawa, 1918. 138 pp.*

This report is noted on pages 297 to 299 of this issue of the MONTHLY REVIEW.

CANADA (NOVA SCOTIA).—*Workmen's Compensation Board. Report, 1917. Halifax, 1918. 15 pp.*

This report is noted on pages 233 to 235 of this issue of the MONTHLY REVIEW.

DENMARK.—*Danmarks statistik. Statistik aarbog, 1917. Utgivet af det statistiske departement. Copenhagen, 1917. 256 pp.*

Statistics of trade-unions taken from this report are presented on pages 223 and 224 of this issue of the MONTHLY REVIEW.

FRANCE.—[*Assemblée. Sénat. Commission de l'armée.*] *Rapport fait au nom de la Commission de l'armée, chargée d'examiner la proposition de loi, adoptée par la Chambre des Députés, tendant à l'obligation de la rééducation professionnelle des blessés et des mutilés de la guerre appelés à bénéficier de la loi sur les pensions militaires, by Paul Strauss, Sénateur. Paris, 1916. 78 pp. (No. 261. Sénat. Année 1916. Session ordinaire. Annex au procès-verbal de la séance du 4 juillet, 1916.)*

This report discusses steps taken in 1914, 1915, and 1916 for founding and promoting schools of vocational reeducation for the disabled in the War, and gives an outline of their systems of organization as well as a list of the reeducation centers, including the number of men which can be accommodated and the general courses of training offered in each. It urges agricultural reeducation as a national necessity, and describes the work of the military health service and the employment service of the Ministry of War in relation to disabled soldiers. One chapter is devoted to an account of the creation of the National Office of Disabled and Retired Soldiers, with its three branches and their various functions. Special training of the blind and deaf and the employment of the disabled are also considered. The report closes with a comparison of the text of the bill as passed by the Chamber of Deputies with

that proposed by the Commission of the Senate, with comment upon the changes made.

FRANCE.—*Bureau d'études de l'information diplomatique. L'effort économique de la France pendant deux ans et demi de guerre.* Paris, Berger-Levrault, 1917. 142 pp.

These studies, illustrated by statistical tables, deal with several phases of French economic effort during the first two and one-half years of the War. In the first study the general financial situation at the outbreak of hostilities is discussed and the measures taken to meet the great and sudden demands upon the treasury are enumerated. Through private and official initiative, France has been able not only to solve the agricultural problems of lack of labor and need of increased food production, but also to increase her equipment and to prepare for the future. The part of the French railways in the transportation of troops and war material, of merchandise and of food for the civil population constitutes the third study, while organized relief for refugees in France, including an account of the principles governing the administration of this assistance and the employment of the refugees forms the fourth. The fifth and last study, the industrial effort of France during the War, considers the effect of the War upon the general industrial situation, including labor, unemployment, and production.

GREAT BRITAIN.—*Home Office and Board of Trade. Collection of pamphlets on the substitution of women in industry for enlisted men. Pamphlets Nos. 1 to 27.* [London, 1917.]

The following trades are dealt with in these pamphlets: China and earthenware; pottery (coarse ware) and brick; india-rubber works; color, paint, and varnish; wool industry; paper making; cotton; hosiery manufacturing and finishing trade; wood-working; leather tanning and currying; soap and candle; glove; heavy clothing; tobacco manufacture; flour milling; boot and shoe manufacture; chemical industries; sugar refineries; silver and electroplate; oilseed and feeding-cake industry; glass bottle and flint glass; gas works; leather (case and fancy leather); municipal services; light clothing; brush; printing, bleaching, and dyeing (cotton).

— [Local Government Board.] *Seventy-ninth annual report of the registrar general of births, deaths, and marriages in England and Wales.* (1916.) London, 1918, xcii, 492 pp. Price, 5s. net.

— *Manuals of emergency legislation. Defense of the Realm Regulations, consolidated and revised to January 31, 1918.* Edited by Alexander Pulling, C. B. London, 1918. xi, 88 pp. Price, 6d. net.

— *Ministry of Pensions. The first home of recovery for our nerve-shattered sailors and soldiers. A description of the work that is being done at Golders Green, London, NW 4.* [London, 1917.] 14 pp. Illustrated.

This pamphlet tells how discharged sailors and soldiers suffering from chronic nervous troubles caused by war strain are restored to health and to efficiency in a home established by the Government, in cooperation with the British Red Cross Society, as the first model institution of its kind.

— — *Instructions and notes on the treatment and training of disabled men.* London, 1917. 63 pp. Price, 3d. net.

— *Ministry of Reconstruction. A list of commissions and committees set up to deal with questions which will arise at the close of the War.* London, 1918. 34 pp. Price, 4d. net.

These commissions are presented under 15 groupings, as follows: Trade development; finance; raw materials; coal and power; intelligence; scientific and industrial research; demobilization and disposal of stores; labor and employment; agriculture and forestry; public administration; housing; education; aliens; legal; miscellaneous.

— *National Health Insurance. Medical Research Committee. The causation and prevention of trinitrotoluene (TNT) poisoning. Special report series No. 11.* London, 1917. 85 pp. Price, 1s. net.

This report is noted on pages 237 to 250 of this issue of the MONTHLY REVIEW.

IRELAND.—*Registrar General. Fifty-third detailed annual report of the registrar general for Ireland, containing a general abstract of the numbers of marriages, births, and deaths registered in Ireland during the year 1916. Dublin, 1917. 59 pp. Price, 9d. net.*

NETHERLANDS.—*Directie van den Arbeid. Verslag over het haventoezicht uitgeoeffend in 1916. Uitgegeven door het Departement van Landbouw, Nijverheid en Handel. Leiden, 1917. 115 pp. 3 charts.*

A report of the conditions of labor in the longshoremen's trade in Holland. There are presented data as to accidents, hours of labor and Sunday work, conditions growing out of the War, and a special chapter on the age distribution of longshoremen. A special law has been in force in the Netherlands since November 1, 1916, for the protection of this class of workmen.

SWEDEN.—*Livsmedelsförbrukningen inom mindre bemedlade hushåll åren 1914 och 1916 av K. Socialstyrelsen. Stockholm, 1917. 77 pp.*

For a digest of this study of the changes in the character of food consumption in Sweden, see pages 109 to 112 of this issue of the MONTHLY REVIEW.

UNOFFICIAL.

ANDREWS, JOHN B. *Labor laws in the crucible: Measures necessary for effectiveness during and after the War. Reprinted from the Survey for February 16, 1918. 8 pp.*

ASSOCIATION NATIONALE FRANÇAISE POUR LA PROTECTION DES FAMILLES DES MORTS POUR LA PATRIE. COMITÉ JURIDIQUE. *Le droit pendant la guerre: guide juridique et pratique pour les familles des victimes de la guerre et leurs conseils. Paris, Marchal et Godde, 1916. 216 pp.*

A practical guide to war-time legislation, for the families of victims of the War and their counsel, prepared by the juridical section of the National French Alliance for the purpose of simplifying the tasks of advocates, solicitors, notaries, teachers, presidents of industries, secretaries of mayors, and others called upon to give advice to families of men killed in the War.

BABCOCK, GEORGE D., IN COLLABORATION WITH REGINALD TRAUTSCHOLD. *The Taylor system in Franklin management: Application and results. New York, The Engineering Magazine Co., 1917. 245 pp. Industrial Management Library.*

BAILEY, WILLIAM B., AND CUMMINGS, JOHN. *Statistics. Chicago, A. C. McClurg & Co., 1917. 153 pp. Bibliography.*

This book has been prepared for the use of those who desire some knowledge of the fundamentals of statistics, and for those who find it necessary to gather primary statistical facts, plan tables, tabulate the raw material, and present it to the public in such shape that it can be used for intelligent analysis and comparison. The chapters include the following titles: Gathering the raw material, Editing schedules, Tabulation, Ratios, Averages, Graphic Representation, Correlation.

BANKERS' TRUST Co.—*Report of special committee appointed to investigate increased living costs. New York, December 15, 1917. 22 pp.*

The report of a committee of bankers appointed to determine the amount of compensation to be distributed to employees for the six months ending December 31, 1917, in consideration of the recognized increase in the cost of food, clothing, and rent and fuel. Mostly statistical.

BELLOM, MAURICE. *Le préapprentissage. Étude suivie d'une proposition de loi. Paris, 1917. 30 pp.*

This treatise considers the cause, consequence and remedies for decadent apprenticeship, and discusses the character and application of preapprenticeship from a technical and financial point of view. It includes a proposed law covering the subject in consonance with the views of the author. It advocates the placing of children of both sexes, at the time they leave the primary schools in workshops where they may receive such general (nonspecialized) occupational training as will prepare them on reaching the age for entering an apprenticeship to choose with care the line of work

in which they wish to receive specialized training. The author argues that such training is not possible in the schools, but is obtainable only in shops especially designed for this purpose. The proposed law provides that such shops must be established by regularly constituted societies and specifies, among other things, that training shall be free of charge; that only children of wage earners (salariés) are to be admitted; that competitive requirements are not to be demanded; that the course of training shall cover two years; and that no primary school certificates shall be required.

BLACKMAR, F. W. *Lawrence Social Survey. Report of F. W. Blackmar, director, and E. W. Burgess, field surveyor, University of Kansas, to the Lawrence Social Survey Committee, Lawrence, Kans. Topeka, Kansas State Printing Plant, 1917. 122 pp.*

Eight organizations in Lawrence, Kans., cooperated to make possible this survey under the direction of the department of sociology of the University of Kansas. The committees of investigation which carried the work through numbered 10, viz, city planning, municipal administration, trade and industry, recreation, education, churches, delinquency, dependency, housing, and public health and sanitation, the titles of which indicate practically the scope of the findings of the survey.

Lawrence had a population of 12,884 in 1915 according to the State decennial census. The average size of its families is 3.58 members. Fourteen per cent of its population is of the colored race, and about 5 per cent foreign born. Data concerning the occupations represented among the registered voters of the community indicate the following distribution: Professional, 10.8 per cent; business, 13.9; employees (clerical and sales), 10.2; skilled laborers, 20.8; unskilled laborers, 23.9; and miscellaneous (not specified, students and retired), 20.4 per cent.

Weekly wage rates for May, 1914, for 419 men employed in Lawrence industries show that over one-half were receiving \$11.50 or less per week—that is, no one in that group received as much as \$600 a year. These figures, besides, do not include losses from unemployment, sickness, or other causes, which produce an estimated loss of 6.5 per cent in wages each week. "If this computation corresponds with the facts, we find that over two-thirds of the Lawrence wage earners receive less than \$600 a year. Few persons would contend that \$600 is sufficient to provide a comfortable livelihood in Lawrence." Responsibility for low wages and a low standard of living is divided. "One factor that is local is the practical absence of collective bargaining in Lawrence," and another is the recurring problem of unemployment.

Housing conditions in several sections of the city and in isolated cases were found to be "a menace to the community," calling for power on the part of the community to destroy insanitary, uninhabitable houses, and to enforce certain minimum standards as to the percentage of a lot which may be covered by a house, the size of rooms, overcrowding and sanitary requirements.

BORDEN, RIGHT HON. SIR ROBERT. *The War and the future: Being a narrative compiled from speeches delivered at various periods of the War, in Canada, the United States, and Great Britain, with an introductory letter to the compiler, Percy Hurd. London, New York, and Toronto, Hodder and Stoughton, 1917. 164 pp.*

BRICKLEY, WILLIAM J., M. D. *The relation of alcohol to accidents. Reprinted from the Boston Medical and Surgical Journal, May 20, 1915. 11 pp.*

BRIEUX [EUGÈNE]. *Nos soldats aveugles. Note pour les directeurs des écoles de rééducation professionnelle. Second edition with added notes. Paris, Librairie Delagrave, 1917. 36 pp.*

Practical suggestions regarding the reeducation of blind soldiers in different vocations, with an earnest plea for general interest in their return to civil life under the most favorable conditions possible.

CAMUS, JEAN, AND OTHERS. *Rééducation fonctionnelle et rééducation professionnelle des blessés. Paris, Librairie J. B. Baillié et Fils, 19, rue Hauteville, 1917. 231 pp. Illustrated.*

A collection of articles on phases of the functional and vocational reeducation of the wounded, with a preface by Justin Godart, assistant secretary of state of the military health service.

CASUALTY ACTUARIAL AND STATISTICAL SOCIETY OF AMERICA. *Proceedings, October 31 and November 1, 1917. Vol. iv, Part I, No. 9. 230 Fifth Avenue, New York. [1918]. 247 pp.*

Contains an address by the president, James D. Craig, on "The war insurance act," and papers on the following subjects by the persons indicated: The theory and practice of law differentials, by I. M. Rubinow; Premiums and reserves of the Swiss accident insurance institution, by Joseph H. Woodward; Note on the construction of mortality tables by means of compound frequency curves, by Anne Fisher; Manufacturers' and contractors' public liability insurance, by G. F. Michelbacher; Some essentials of sickness statistics, by Edwin F. Kopf.

CHAMBER OF COMMERCE OF THE UNITED STATES. *Committee on Industrial Relations. Labor adjustment for war service. Washington, March 29, 1918. 4 pp.*

This pamphlet is a report of the committee on industrial relations regarding the arrangements which have been made in Rochester, N. Y., to adjust requirements for workers and to deal with related questions presented by a large increase in industrial activity occasioned by Government war contracts, the problem being to meet the situation without interrupting production through unrest and discontent among employees.

CLARKE, IDA CLYDE. *American women and the world war. New York and London, D. Appleton & Co., 1918. 545 pp.*

Records the beginnings of the massed effort of American women inspired by the present War. A chapter on Women in industry considers the rôle of the 2,000,000 women in factories in this country affected by the War, under the headings of Standards of industry for Government contracts, adopted by the National Women's Trade-Union League of America, committee on women's work in war time; Employment agencies and transportation; Cooperation with the Secretary of Labor; Federal inspection; Government shoe contracts; Women's work in war; and National labor standards.

COLE, G. D. H. *The world of labor. A discussion of the present and future of trade-unionism. 3d edition. London, G. Bell and Sons (Ltd.), 1917. 443 pp. Bibliography.*

The aim of this book is "to take the social problem at its most urgent, and the theory of syndicalism at its strongest point, and to endeavor to follow out, as clearly as possible, the forces that are going to the making, out of the mere fighting organization of the trade-unions, of something that has a claim to more than sympathy with its uphill fight * * * in the belief that the trade-unions are tending to establish a sovereignty of their own, limited no doubt in its sphere, but real and absolute within its proper competence."

CONFERENCE OF MAYORS AND OTHER CITY OFFICIALS OF NEW YORK STATE. *City planning. Proceedings of the eighth annual conference, Buffalo, June 12, 13, and 14, 1917. [1918.] Price \$1.*

CONSUMERS' LEAGUE OF THE CITY OF NEW YORK. *Report for 1917. New York, 105 East 22d Street, 1918. 20 pp.*

Under the catch title "Campaigning against industrial evils," the report discusses the maintenance of labor standards, gives the results of a study of the hours of women employed in restaurants, of the practice of returning goods, and of the manufacture of soldiers' uniforms in tenements, announces the organization of the Junior Board, gives the results of its publicity work and of its cooperation with semi-official bodies, and a report of the bureaus.

DEAN, ARTHUR D. *Our schools in war time and after. Boston, Ginn & Co. 1918. 335 pp. Illustrated.*

According to the author, who is professor of vocational education, Teachers College, Columbia University, and supervising officer, Bureau of Vocational Training, New York State Military Training Commission, "an evaluating test for each of our school subjects has at last been found. The test is the capacity of the subject to respond to a national need or a national ideal." This test is applied to a study of schools in their relation to the War and the community in chapters on Bringing the War into the schools, War and community uses of our schools, The field for industrial and trade schools, Our colleges and technical institutes, The opportunity for manual and household arts, The work impulses of youth, Organized boy power *v.* military drill, Red Cross and other community work, Reeducation of the disabled, Farm cadets, The organization of a cadet camp, and A summarized program of action. The chapter on Reeducation of the disabled gives an account of the work of training disabled soldiers in England, France, and Canada, with the United States plan for rehabilitation and reeducation.

FOXWELL, A. K. *Munition losses. Six months as principal overlooker in danger buildings.* London, New York, and Toronto, Hodder & Stoughton, 1917. 156 pp.

An effort "to give the general public an insight into the life of the munition worker," based upon the author's experience in the Woolwich arsenal during the third year of the War.

FRASER, HELEN. *Women and war work.* New York, G. Arnold Shaw, 1918. 308 pp. *Illustrated.*

Account of the activities of British women in war work, including chapters on Women and munitions, The protection of women in industry, which latter considers the welfare of women in factories in two divisions—intramural and extramural; "The women's land army," which now numbers over 258,300 whole and part time workers engaged in agricultural work, and a final chapter on Reconstruction.

GROEBEN, WILLIAM E. *Modern industrial housing.* Philadelphia, Ballinger and Perrot, architects and engineers, 1918. 24 pp.

"In selecting a house-building policy, the industrial employer would probably choose the one employed by our larger industrial corporations as herein described, because it appears to be the only satisfactory solution of the present problem, in which he must either limit his production or build houses for his employees. It is well to recognize the moral and economic importance of creating around industry the most favorable conditions for work, rest and recreation. The writer has herein undertaken to set forth clearly and concisely the salient problems confronting industrial employers, housing corporations, and communities, with the idea of assisting those who contemplate the erection of industrial houses in arriving at a practical method of procedure."

GULICK, SIDNEY L. *American democracy and Asiatic citizenship.* New York, Charles Scribner's Sons, 1918. 257 pp.

Part I—Political. Contains chapters on The new Asia and its significance for America; Japan: Her problems and claims; China: Our treaties and our treatment; An historical sketch of legislation dealing with immigration; An historical sketch of legislation dealing with naturalization; Democracy and citizenship; The rights and duties of nations; A policy and a program for constructive immigration legislation; and Criticisms criticised. Part II—Statistical. On Chinese in the United States; Japanese in the United States; Situation on the Pacific Coast; Situation in the Hawaiian Islands; Conclusion.

JAFFA, M. E. *Food standards.* Berkeley, University of California, College of Agriculture, Agricultural Experiment Station. 4 pp.

Tables showing the kinds and amounts of food which may be considered as a safe minimum for health and efficiency and the cost of a minimum diet for different ages.

JEWISH AGRICULTURAL AND INDUSTRIAL AID SOCIETY. *Annual report for 1917.* New York, Evening Post Job Printing Office, Inc. [1918]. 46 pp.

JOINT COMMITTEE ON LABOR PROBLEMS AFTER THE WAR. *A million new houses after the War. A statement on the housing problem as affected by the War, and some suggestions.* London, Cooperative Printing Society Limited, 1917. 8 pp. Price 1d.

Considers different phases of the problem under the heads of The extreme urgency, The extent of the shortage, What will happen when the rent restriction act expires? Who is to build the new cottages? The Government policy, What the Government ought to be called upon to do at once, and The cost.

— *The problem of demobilization. A statement and some suggestions, including proposals for the reform of employment exchanges.* London, Cooperative Printing Society Limited, 1916. 8 pp. Price 1d.

Besides the reform of employment agencies, the other subjects considered are The numbers to be dealt with, The order of discharge, What the Government has promised to do, What for the munition workers? The machinery for finding new situations, The trade-union as employment agency, The need for employment exchanges, and The provision for unemployment.

LABOUR PARTY [GREAT BRITAIN]. *Labour problems after the War.* [London] The Labour Party, 1 Victoria Street, SW 1, 1917. 15 pp.

Resolutions which were carried unanimously at the annual conference of the Labor Party held at the Albert Hall, Manchester, in January, 1917, regarding the subjects of demobilization, the machinery for securing employment, the restoration of trade-union conditions, the prevention of unemployment, the maintenance of the standard of life, the legal minimum wage, the nationalization of railways, the nationalization of mines, agriculture, taxation, franchise, the position of women after the War, and education and child welfare.

LUSK, GRAHAM. *Food in war time.* Philadelphia and London, W. B. Saunders Co., 1918. 46 pp.

In three parts: I. A balanced diet; II. Calories in common life; III. Rules of saving and safety. The major parts of the books have appeared under articles entitled "Food in war times," in the Scientific Monthly, and "Calories in common life," in Saunders' Medical Clinics of North America.

MACDONALD, SARAH. *Simple health talks with women war workers.* London, Methuen & Co. (Ltd.), 1917. 84 pp. Illustrated.

This little volume is by the late matron of the Salford Maternity Training School and has an introduction by Ethel Basil Jayne, G. B. E., inspector general of women's welfare for Sir W. G. Armstrong, Whitworth & Co. (Ltd.).

MACTAVISH, J. M. *What labor wants from education.* [London], The Workers' Educational Association, 14, Red Lion Square, Holborn, W C, 1916. 10 pp. Price 1d.

MICHELL, H. *Profit sharing and producers' cooperation in Canada.* Kingston [Ontario, Canada], The Jackson Press, 1918. 26 pp. *Bulletin of the departments of history and political and economic science in Queen's University, Kingston, Ontario, Canada.*

A detailed study of Canadian experiments in profit sharing, labor copartnership, and producers' cooperation. Of the three systems, Canada has had 13 experiments in the first category, 9 in the second, and 8 examples of the third.

MORTON, JOHN A. J. *The industrial counterpoise as the foundation for social harmony and universal peace.* [London,] The Athenaeum Press [1917]. 126 pp. Price 1s. 6d. net.

The expansion of a proposition published as an anonymous suggestion in 1903 in the form of a brochure entitled "A scheme for a national minimum wage and the extermination of poverty."²

NATIONAL CHILD WELFARE ASSOCIATION, INC. FOUNDERS COMMITTEE. *A personal message concerning children in war time.* New York, 1917. 32 pp. Illustrated.

NATIONAL CONSUMERS' LEAGUE. *The case against nightwork for women. Court of Appeals, State of New York. A summary of "facts of knowledge" submitted on behalf of the people. Prepared April, 1914, by Louis D. Brandeis and Josephine Goldmark. New York, 1918. 452 pp.*

This edition is a revision to March 1, 1918, of the edition of 1914, with a new introduction by Josephine Goldmark treating of Labor laws in war time; Nightwork in the United States; The reversal of the New York "Williams" decision; New material on women's work—1. Greater morbidity of working women; 2. Infant mortality and the employment of mothers; 3, Health and output in nightwork.

NATIONAL HOUSING ASSOCIATION. *Housing betterment; a journal of housing advance issued quarterly by the National Housing Association [New York], February, 1918.*

— *Housing problems in America. Proceedings of the Sixth National Conference on Housing, Chicago, October 15-17, 1917. 105 East 22d Street, New York City. 462 pp.*

A summary of the proceedings of this conference as respects industrial housing was published in the MONTHLY REVIEW for December, 1917, pp. 215-218.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Hours of work as related to output and health of workers. Cotton manufacturing. Research report No. 4. March, 1918. 15 Beacon St., Boston. 64 pp.*

— *Strikes in American industry in war time, April 6 to October 6, 1917. Research Report No. 3, March, 1918. Boston, 15 Beacon Street, 1918. 20 pp.*

NATIONAL UNION OF WOMEN'S SUFFRAGE SOCIETIES. *Women and reconstruction: Some considerations relating to the position of women after the War. [London] National Union of Women's Suffrage Societies, 1917. 28 pp. Price 1s. 6d. net.*

An attempt to outline the situation which will arise after the War in its relation to the position of women and their enfranchisement.

NOLEN, JOHN. *Industrial housing; better homes for less money; the economic advantages of better planning and of residential decentralization. Cambridge, Mass., 1918. 16 pp.*

— *War-time housing and community development; report to the Chamber of Commerce, Wilmington, Del. Cambridge, Mass., 1918. 28 pp.*

A housing survey of the war-time needs of Wilmington, Del., together with recommendations for methods of meeting the present housing shortage.

OPERATIVE COTTON SPINNERS' PROVINCIAL ASSOCIATION. *Thirty-eighth annual report for the year ending December 31, 1917, together with the financial statement for the year ending December 15, 1917, and a summary of the accounts. Bolton [England, 1918]. 144 pp.*

Comments on the cost of living and the advances in wages during 1917, stating that affecting operatives generally "advances of wages have kept pace with the rising cost of living," but that "the inadequate advances obtained in 1915 and 1916 have, however, left a good deal of leeway to make up. * * * Our piecework prices are now 40 per cent over standard." There were 1,082 claims for weekly compensation filed for incapacity resulting from injuries received while spinners and piecers were following their employment. The amount of compensation paid totaled £5,126 7s. 1d. (\$24,947.40). Unsuccessful attempts to gain the 8-hour day are noted. The report includes the financial statement, a statement of the superannuation fund, and a brief review of the cotton trade in 1917.

OTIS, STANLEY L., COMPILER. *Tables of comparative benefits of various compensation laws. Revised and enlarged. Chicago and New York, The Spectator Co., November, 1917. 23 pp. Price, 50 cents.*

PATRIC, GLADYS. *A study of the housing and social conditions in the Ann Street District of Los Angeles, Cal., under the direction of the Department of Sociology of the University of Southern California. Los Angeles Society for the Study and Prevention of Tuberculosis [1918]. 28 pp.*

PENTY, ARTHUR J. *Old worlds for new. A study of the post-industrial state.* London. George Allen & Unwin (Ltd.), Ruskin House, 40 Museum Street, WC 1, 1917. 186 pp.

A series of articles, revised and published in book form, all but four of which appeared in the Daily Herald (London) immediately before the outbreak of the War. The author develops his theory of a guild system in industry in chapters on The Fabian compromise; On reasoning from fact; The economic, moral, and political contradictions of collectivism; The mediæval guild system; National guilds and the general strike; The abolition of the wage system; The evil of large organizations; The division of labor; Machinery and industry; Machinery and society; The ultimate base of industrialism; The place of handicraft; The ethics of consumption; The tyranny of the middleman; The strike for quality; The elimination of the middleman; The decentralization of industry; The redistribution of population; The reabsorption of the professions; The trade designer; The profession of architecture; The destructive consumption of surplus wealth; On property; The leisure and work states; and Conclusion.

ROSE, MARY SWARTZ. *Every-day foods in war time.* New York, Macmillan, 1918. 117 pp.

Started in response to a request for "a war message about food," this book is an effort to suggest methods to make it easier "to save wheat, meat, sugars, and fats" and to make out an acceptable bill of fare without excessive cost.

SPEEK, PETER ALEXANDER. *The single tax and the labor movement.* Madison, Wis., 1917. 180 pp. *Bulletin of the University of Wisconsin, No. 878. Economics and political science series, vol. 8, No. 3, pp. 247-426.*

The single-tax movement has always had kinship with the labor movement, but not until the appearance of a volume entitled as above has the connection been definitely stated in the title of a book. This volume describes briefly the rise of the single tax and the growth of the Central Labor Union of New York, within whose ranks was fought out the decisive battle between the theories of socialism and the single tax. There is described from original sources "the political uprising of organized labor," which occurred about 1886 and culminated in Henry George's mayoralty campaign in New York City; the organization of a political party representing the interests of labor; the division within that party caused by a contest for its control between the socialists and the single-tax followers of Henry George; the defeat of the socialists within the party at the Syracuse convention of August, 1887; the launching of the Progressive Labor Party as a result of the split; and the final elimination of both labor parties from American politics.

THOMSON, W. ROWAN. *The premium bonus system. A scheme for stimulating and increasing the productive capacity of industrial resources.* Glasgow, McCorquodale & Co. (Ltd.), Caxton Works, 1917. 99 pp.

An explanation of the Rowan premium bonus system of payment by results as applied to engineering and shipyard trades and the general run of industrial occupations, with a comparison of its advantages and methods with those of other systems for the same purpose. The author is a member of David Rowan & Co., marine engineers, Glasgow.

TODD, ARTHUR JAMES. *Theories of social progress.* New York, Macmillan, 1918. 579 pp. *Bibliography.*

TOOGOOD, GEORGE EDSON. *The principles of industrial administration.* London, A. Brown & Sons (Ltd.) [1917]. 56 pp. Price 1s. net.

Includes an introduction by W. L. Hichens and a special chapter on The Ministry of Munitions and ethical values in industry.

UNITED STATES STEEL AND CARNEGIE PENSION FUND. *Manager's seventh annual report for 1917.* [Pittsburgh.] 8 pp.

Reports 3,013 active pension cases on January 1, and 2,933 on December 31, 1917, \$712,506.65 being dispensed for pensions during the year; 46 active accident benefit cases on January 1 and 42 on December 31, 1917, \$14,988.25 being the amount of disbursements. The total disbursements during the year, including administration expense, were \$743,270.29, the expense of administration being 2.12 per cent of this amount.

VAUGHAN, ERNEST. *La rééducation professionnelle des soldats aveugles.* Paris, Levé 1915. 117 pp. *Illustrated. Reprinted in 1917. Paris, Ollendorff.*

The author suggests some practical methods of employing those blinded in the War. While it is always advantageous for the men to continue in their prewar employments if possible, there are many industries and occupations, allied or otherwise, which may be taught instead. Among them are brush making, mattress making, chair caning, telephone operating, massaging, shoemaking, basketry, farming, etc. Brush making is most quickly learned by the blind. The establishment of district workshops in which the blind may learn manual trades suited to their capabilities and sufficient as a means of livelihood is advocated, the salaries to be the same as those in similar private industries. The author also emphasizes the teaching of the Braille alphabet as of first importance. There is a list of State professional schools which have been opened in various places, and also an appendix containing an account of a school of printing for the blind at Ronchin-Lille, a discussion of books for the blind, and a description of some changes effected in the Braille characters.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION, WAR WORK COUNCIL, HOUSING COMMITTEE. *Report to the Secretary of War, January, 1918, on housing for women in war work.* New York, 600 Lexington Avenue. [1918.] 20 pp.

Contains suggestions based on an investigation of the subject of housing women war workers in the United States, with plans for three types of buildings to meet the suggested requirements, prepared by Mr. Duncan Candler. These designs were made with a view to the permanent value of the buildings, so that after they cease to be needed for women workers they can be adapted to family use. The first type is being used in a permanent structure which the Young Women's Christian Association is now building as a demonstration in Charleston, S. C., for girls working in the naval uniform factory.

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

The publication of the annual and special reports and of the bi-monthly bulletin was discontinued in July, 1912, and since that time a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively beginning with No. 101, and up to No. 236 they also carry consecutive numbers under each series. Beginning with No. 237 the serial numbering has been discontinued. A list of the series is given below. Under each is grouped all the bulletins which contain material relating to the subject matter of that series. A list of the reports and bulletins of the bureau issued prior to July 1, 1912, will be furnished on application.

Wholesale Prices.

- Bul. 114. Wholesale prices, 1890 to 1912.
- Bul. 149. Wholesale prices, 1890 to 1913.
- Bul. 173. Index numbers of wholesale prices in the United States and foreign countries.
- Bul. 181. Wholesale prices, 1890 to 1914.
- Bul. 200. Wholesale prices, 1890 to 1915.
- Bul. 226. Wholesale prices, 1890 to 1916.

Retail Prices and Cost of Living.

- Bul. 105. Retail prices, 1890 to 1911: Part I.
Retail prices, 1890 to 1911: Part II—General tables.
- Bul. 106. Retail prices, 1890 to June, 1912: Part I.
Retail prices, 1890 to June, 1912: Part II—General tables.
- Bul. 108. Retail prices, 1890 to August, 1912.
- Bul. 110. Retail prices, 1890 to October, 1912.
- Bul. 113. Retail prices, 1890 to December, 1912.
- Bul. 115. Retail prices, 1890 to February, 1913.
- Bul. 121. Sugar prices, from refiner to consumer.
- Bul. 125. Retail prices, 1890 to April, 1913.
- Bul. 130. Wheat and flour prices, from farmer to consumer.
- Bul. 132. Retail prices, 1890 to June, 1913.
- Bul. 136. Retail prices, 1890 to August, 1913.
- Bul. 138. Retail prices, 1890 to October, 1913.
- Bul. 140. Retail prices, 1890 to December, 1913.
- Bul. 156. Retail prices, 1907 to December, 1914.
- Bul. 164. Butter prices, from producer to consumer.
- Bul. 170. Foreign food prices as affected by the War.
- Bul. 184. Retail prices, 1907 to June, 1915.
- Bul. 197. Retail prices, 1907 to December, 1915.
- Bul. 228. Retail prices, 1907 to December, 1916.

Wages and Hours of Labor.

- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- Bul. 118. Ten-hour maximum working-day for women and young persons.
- Bul. 119. Working hours of women in the pea canneries of Wisconsin.
- Bul. 128. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912.
- Bul. 129. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912.
- Bul. 131. Union scale of wages and hours of labor, 1907 to 1912.
- Bul. 134. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912.
- Bul. 135. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912.
- Bul. 137. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912.
- Bul. 143. Union scale of wages and hours of labor, May 15, 1913.
- Bul. 146. Wages and regularity of employment in the dress and waist industry of New York City
- Bul. 147. Wages and regularity of employment in the cloak, suit, and skirt industry.
- Bul. 150. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913.

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

Wages and Hours of Labor—Concluded.

- Bul. 151. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912.
- Bul. 153. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913.
- Bul. 154. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913.
- Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
- Bul. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.
- Bul. 163. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913.
- Bul. 168. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1913.
- Bul. 171. Union scale of wages and hours of labor, May 1, 1914.
- Bul. 177. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914.
- Bul. 178. Wages and hours of labor in the boot and shoe industry, 1907 to 1914.
- Bul. 187. Wages and hours of labor in the men's clothing industry, 1911 to 1914.
- Bul. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.
- Bul. 194. Union scale of wages and hours of labor, May 1, 1915.
- Bul. 204. Street railway employment in the United States.
- Bul. 214. Union scale of wages and hours of labor, May 15, 1916.
- Bul. 218. Wages and hours of labor in the iron and steel industry, 1907 to 1915.
- Bul. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.
- Bul. 232. Wages and hours of labor in the boot and shoe industry, 1907 to 1916. [In press.]
- Bul. 238. Wages and hours of labor in woolen and worsted goods manufacturing, 1916. [In press.]
- Bul. 239. Wages and hours of labor in cotton goods manufacturing and finishing, 1916.
- Bul. 245. Union scale of wages and hours of labor, May 15, 1917. [In press.]

Employment and Unemployment.

- Bul. 109. Statistics of unemployment and the work of employment offices in the United States.
- Bul. 172. Unemployment in New York City, N. Y.
- Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
- Bul. 183. Regularity of employment in the women's ready-to-wear garment industries.
- Bul. 192. Proceedings of the American Association of Public Employment Offices.
- Bul. 195. Unemployment in the United States.
- Bul. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, January, 1916.
- Bul. 202. Proceedings of the conference of the Employment Managers' Association of Boston, Mass., held May 10, 1916.
- Bul. 206. The British system of labor exchanges.
- Bul. 220. Proceedings of the Fourth Annual Meeting of the American Association of Public Employment Offices, Buffalo, N. Y., July 20 and 21, 1916.
- Bul. 223. Employment of women and juveniles in Great Britain during the War.
- Bul. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- Bul. 235. Employment system of the Lake Carriers' Association.

Women in Industry.

- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- Bul. 117. Prohibition of nightwork of young persons.
- Bul. 118. Ten-hour maximum working-day for women and young persons.
- Bul. 119. Working hours of women in the pea canneries of Wisconsin.
- Bul. 122. Employment of women in power laundries in Milwaukee.
- Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
- Bul. 167. Minimum-wage legislation in the United States and foreign countries.

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Women in Industry—Concluded.

- Bul. 175. Summary of the report on condition of woman and child wage earners in the United States.
- Bul. 176. Effect of minimum-wage determinations in Oregon.
- Bul. 180. The boot and shoe industry in Massachusetts as a vocation for women.
- Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
- Bul. 193. Dressmaking as a trade for women in Massachusetts.
- Bul. 215. Industrial experience of trade-school girls in Massachusetts.
- Bul. 223. Employment of women and juveniles in Great Britain during the War.

Workmen's Insurance and Compensation (including laws relating thereto).

- Bul. 101. Care of tuberculous wage earners in Germany.
- Bul. 102. British National Insurance Act, 1911.
- Bul. 103. Sickness and accident insurance law of Switzerland.
- Bul. 107. Law relating to insurance of salaried employees in Germany.
- Bul. 126. Workmen's compensation laws of the United States and foreign countries.
- Bul. 155. Compensation for accidents to employees of the United States.
- Bul. 185. Compensation legislation of 1914 and 1915.
- Bul. 203. Workmen's compensation laws of the United States and foreign countries.
- Bul. 210. Proceedings of the Third Annual Meeting of the International Association of Industrial Accident Boards and Commissions.
- Bul. 212. Proceedings of the conference on social insurance called by the International Association of Industrial Accident Boards and Commissions.
- Bul. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children.
- Bul. 240. Comparison of workmen's compensation laws of the United States. [In press.]
- Bul. 243. Workmen's compensation legislation in the United States and foreign countries. [In press.]

Industrial Accidents and Hygiene.

- Bul. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories.
- Bul. 120. Hygiene of the painters' trade.
- Bul. 127. Dangers to workers from dusts and fumes, and methods of protection.
- Bul. 141. Lead poisoning in the smelting and refining of lead.
- Bul. 157. Industrial accident statistics.
- Bul. 165. Lead poisoning in the manufacture of storage batteries.
- Bul. 179. Industrial poisons used in the rubber industry.
- Bul. 188. Report of British departmental committee on danger in the use of lead in the painting of buildings.
- Bul. 201. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [Limited edition.]
- Bul. 205. Anthrax as an occupational disease.
- Bul. 207. Causes of death by occupation.
- Bul. 209. Hygiene of the printing trades.
- Bul. 216. Accidents and accident prevention in machine building.
- Bul. 219. Industrial poisons used or produced in the manufacture of explosives.
- Bul. 221. Hours, fatigue, and health in British munition factories.
- Bul. 230. Industrial efficiency and fatigue in British munition factories.
- Bul. 231. Mortality from respiratory diseases in dusty trades. [In press.]
- Bul. 234. Safety movement in the iron and steel industry, 1907 to 1917. [In press.]
- Bul. 236. Effect of the air hammer on the hands of stonecutters. [In press.]

Conciliation and Arbitration (including strikes and lockouts).

- Bul. 124. Conciliation and arbitration in the building trades of Greater New York.
- Bul. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements.
- Bul. 139. Michigan copper district strike.
- Bul. 144. Industrial court of the cloak, suit, and skirt industry of New York City.
- Bul. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City.
- Bul. 191. Collective bargaining in the anthracite coal industry.
- Bul. 198. Collective agreements in the men's clothing industry.
- Bul. 233. The Industrial Disputes Investigation Act of Canada. [In press.]

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

Labor Laws of the United States (including decisions of courts relating to labor).

- Bul. 111. Labor legislation of 1912.
- Bul. 112. Decisions of courts and opinions affecting labor, 1912.
- Bul. 148. Labor laws of the United States, with decisions of courts relating thereto.
- Bul. 152. Decisions of courts and opinions affecting labor, 1913.
- Bul. 166. Labor legislation of 1914.
- Bul. 169. Decisions of courts affecting labor, 1914.
- Bul. 186. Labor legislation of 1915.
- Bul. 189. Decisions of courts affecting labor, 1915.
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- Bul. 213. Labor legislation of 1916.
- Bul. 224. Decisions of courts affecting labor, 1916.
- Bul. 229. Wage-payment legislation in the United States.
- Bul. 244. Labor legislation of 1917. [In press.]

Foreign Labor Laws.

- Bul. 142. Administration of labor laws and factory inspection in certain European countries.

Vocational Education.

- Bul. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City.
- Bul. 147. Wages and regularity of employment in the cloak, suit, and skirt industry.
- Bul. 159. Short-unit courses for wage earners, and a factory school experiment.
- Bul. 162. Vocational education survey of Richmond, Va.
- Bul. 199. Vocational education survey of Minneapolis.

Labor as Affected by the War.

- Bul. 170. Foreign food prices as affected by the War.
- Bul. 219. Industrial poisons used or produced in the manufacture of explosives.
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- Bul. 230. Industrial efficiency and fatigue in British munition factories.
- Bul. 237. Industrial unrest in Great Britain.

Miscellaneous Series.

- Bul. 117. Prohibition of nightwork of young persons.
- Bul. 118. Ten-hour maximum working day for women and young persons.
- Bul. 123. Employers' welfare work.
- Bul. 158. Government aid to home owning and housing of working people in foreign countries.
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- Bul. 174. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915.
- Bul. 208. Profit sharing in the United States.
- Bul. 222. Welfare work in British munition factories.
- Bul. 242. Food situation in Central Europe.

