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## COST OF LIVING IN THE DISTRICT OF COLUMBIA.

### SECOND ARTICLE—SUMMARY OF FAMILY EXPENDITURES.

In the October number of the MONTHLY REVIEW a brief study was presented of the incomes of the 2,110 families covered by the bureau's investigation of the cost of living in Washington for the year 1916. This brief summary presents a corresponding study of the expenditures of these families especially as to the extent to which the expenditures for the different primary needs may be considered sufficient to maintain a reasonably healthy family life.

The material for the study consists of the general schedules obtained from 1,481 white and 629 colored families and of detailed expenditure schedules furnished by 782 white and 277 colored families. As explained last month, the information was obtained entirely through personal visits by special agents of the bureau. Schedules were secured in a fair proportion from every district of the city, so as to obtain a representative cross section of workers' families in the District. Only those families were included in which the principal breadwinner worked for wages or, if paid a salary, received not more than \$1,800 a year. No families were taken which had not resided in the District of Columbia for all of the year 1916.

In the study published last month it was intimated that a large proportion of families, both white and colored, in Washington received incomes inadequate to maintain normal family life in comfort, or even decency. If the income is insufficient, it needs no elaborate statistical computation to prove that expenditure is also insufficient. The different devices adopted by different families in their efforts to purchase a dollar's worth of necessities with 65 or 90 cents is most interesting. Nevertheless, our interest in and sympathy with the families struggling to bear up under the crushing load of poverty should not make us forget that many families are far above the poverty line and are therefore able to buy all the comforts and many of the discomforts of modern life in a city.

## FOOD.

The schedules show clearly that a very considerable proportion of the low-income families of Washington do not buy enough food to maintain the family members in health and strength. It was impracticable in this study to go into the physiological and hygienic aspects of food consumption. That matter was made the object of a special dietary study of some 30 families, the results of which will be given later. It needs no statistical demonstration to prove that a family which buys insufficient food is either underfed or, what is perhaps as bad or worse, is fed at the expense, voluntary or involuntary, of some other family.

Authorities do not agree entirely upon what are the necessary food requirements of persons in various employments and of different ages. Certain minimum standards, however, can not well be questioned on the ground of undue liberality, such, for instance, as the minimum food cost standards worked out in 1907 by Prof. F. P. Underhill, of the Sheffield Laboratory of Physiological Chemistry, using as a basis the earlier dietary investigations of the United States Department of Agriculture.

These studies showed that, in New York City in the year 1907, an adult male could not be maintained in health at a less expenditure for food than 22 cents per day.<sup>1</sup> The retail index numbers for food issued by the Bureau of Labor Statistics show a rise in food prices of approximately 40 per cent between 1907 and 1916. Adding 40 per cent to 22 cents gives 31 cents as the minimum per day in 1916. An average of 31 cents per day is equivalent to \$2.17 per week or \$113 per year. The unit here is the adult male. It is commonly agreed that women and children require less food than do men. The scale of equivalents used in the present study was the one used in former cost of living studies made by the bureau. It is assumed that a woman requires 90 per cent as much food as a man; a child 11 to 14 years, 90 per cent; a child 7 to 10 years, 75 per cent; a child 4 to 6 years, 40 per cent; and a child of 3 years or under, 15 per cent.<sup>2</sup> By using this scale, the food costs of different families can be reduced to the cost per equivalent adult males. It is necessary to reduce expenditures for food to a common denominator, else we can make no accurate comparison of food consumption and expenditures for

<sup>1</sup> The details of this study are printed in Chapin's Standard of Living in New York City, Appendix VI. A comparison of the retail prices of food, as given in the retail price reports of the United States Bureau of Labor Statistics shows no important differences between the prices in New York and those in Washington in 1916. The reports for Oct. 15, 1916, show meats and dairy products to be substantially the same price in both cities; flour appears as about 10 per cent higher in Washington; potatoes as about 18 per cent lower. (See Bul. 228.) On Sept. 15, 1917, the average retail prices of 16 out of 28 articles were higher in Washington than in New York. (See pp. 70 and 73, below.)

<sup>2</sup> See eighteenth annual report of the Commissioner of Labor, 1903, Cost of Living and Retail Prices of Food.



families of differing composition. For example, suppose the schedules show that family A spends \$690 a year for food, while family B spends only \$250. We can not guess as to the sufficiency or insufficiency of the food purchases until we study the composition of the two families. Family A, we find, consists of man and wife, the wife's mother, two sons aged 20 and 18, and three other children aged 14, 12, and 10 years, respectively. Family B, we find, consists of a widowed mother, a girl of 22, and a grandson of 6 years. Is family A well nourished? Is family A better nourished than family B? In order to answer these questions we must adopt some means for reducing the consumption of the adults of both sexes and the children of various ages to a common unit. Using the scale given above, we find that family A should consume as much food as 7.35 adult men. Dividing \$690, the amount spent for food, by 7.35 gives \$94, the expenditure per adult male per annum. Similarly family B has the equivalent of 2.2 adult males, which gives a yearly expenditure for food for adult males of about \$113. According to this showing, family A doesn't get enough to eat while family B gets the minimum requirement.

Such minimum standards of food requirements as these do not seem too liberal. Most practical housewives would no doubt consider them as entirely too low. Moreover such scientifically prepared standards assume a correspondingly scientific knowledge of food values and of food buying, and assume also an entire absence of waste—factors which can not be expected of the average housewife.

Nevertheless, even when such low standards are taken, and no allowance is made for waste and lack of knowledge of food values, a very large number of the families covered by this investigation fell below the "minimum of subsistence" line and many fell far below. Thus, of the 245 families with incomes of less than \$600 per year, over two-thirds (72 per cent) were unable to spend for food as much as \$112.50 per year—i. e., 31 cents a day—per equivalent adult male. Of the 562 families with incomes between \$600 and \$900 per year, more than one-half (51 per cent) spent less than the minimum amount upon food. Even in the case of the 488 families with incomes between \$900 and \$1,200 per year, more than one-third (34 per cent) fell below the above standard of food expenditure. The colored families showed worse conditions than the white families, but the more favorable position of the latter was not very marked.

It is evident that the members of many of the families reporting could not have had sufficient food for proper nourishment. Some families, owing to exceptional circumstances, were able to feed themselves on less than the minimum here used as a rough guide. Other

families lived as parasites maintained willingly or unwillingly by others in more favorable circumstances, but cases of this kind were exceptional.

The following summary table groups the families scheduled according to the amounts spent on food during the year:

## EXPENDITURES FOR FOOD PER EQUIVALENT ADULT MALE, PER FULL YEAR, 1916.

Income group.	Number of families.	Per cent of families spending, per equivalent adult male per year--									
		Under \$75.	Under \$87.50.	Under \$100.	Under \$112.50.	Under \$125.	Under \$137.50.	Under \$150.	Under \$162.50.	Under \$175.	\$175 and over.
Under \$600:											
White.....	65	29.2	38.5	49.2	60.0	73.8	80.0	87.7	92.3	95.4	4.6
Colored.....	180	40.6	52.8	66.1	76.7	88.3	91.7	93.9	96.7	98.3	1.7
Total.....	245	37.6	49.0	61.6	72.2	84.5	88.6	92.2	95.5	97.6	2.4
\$600 and under \$900:											
White.....	270	8.5	18.1	28.1	41.9	53.0	65.9	77.0	84.1	90.4	9.6
Colored.....	292	16.8	34.9	49.0	69.3	67.8	74.3	81.8	88.4	92.8	7.2
Total.....	562	12.8	26.9	39.0	51.4	60.7	70.3	79.5	86.3	91.6	8.4
\$900 and under \$1,200:											
White.....	375	2.1	5.9	17.3	29.6	40.8	52.5	63.2	73.1	81.3	18.7
Colored.....	113	12.4	23.9	36.3	49.6	63.7	71.7	77.0	81.4	88.5	11.5
Total.....	488	4.5	10.0	21.7	34.2	46.1	57.0	66.4	75.0	83.0	17.0
\$1,200 and under \$1,500:											
White.....	400	1.3	5.0	11.3	21.0	30.8	45.5	55.3	64.5	73.3	26.7
Colored.....	26	15.4	23.1	30.8	50.0	53.8	61.5	73.1	76.9	76.9	23.1
Total.....	426	2.1	6.1	12.4	22.8	32.2	46.5	56.3	65.3	73.5	26.5
\$1,500 and over:											
White.....	371	.3	1.6	4.9	11.1	21.8	34.8	48.2	60.9	69.8	30.2
Colored.....	18	5.6	11.1	16.7	33.3	44.4	50.0	66.7	77.8	77.8	22.2
Total.....	389	.5	2.1	5.4	12.1	22.9	35.5	49.1	61.7	70.2	29.8
Total all groups:											
White.....	1,481	3.8	8.2	15.9	26.2	37.0	49.8	60.9	70.6	78.5	21.5
Colored.....	629	22.4	36.9	49.9	61.8	71.7	77.6	83.6	88.7	92.5	7.5
Total.....	2,110	9.3	16.8	26.1	36.8	47.3	58.1	67.6	76.0	82.7	17.3

## CLOTHING.

What constitutes adequate clothing is even more difficult to determine than adequate food requirements. It may be said without hesitation, however, that a large proportion of the families included in this investigation were not supplied with necessary and respectable clothing and were financially unable to keep themselves so clothed. As in the case of food, the precise number of families and individuals in this situation can not be determined, as no satisfactory wardrobe standards have ever been worked out. But from the present and previous studies on this subject it is quite possible to arrive at some approximately correct conclusions.

Most, if not all, of the clothing standards so far offered have placed the minimum clothing costs too low. If clothes are to be regarded with rigorous utilitarianism as a convenient camouflage to conceal

nakedness or as a mere cocoon for conserving the animal warmth of the body, perhaps the amounts allowed for clothing expenditures in previous cost of living reports may be accepted as adequate. If the workingman is to participate fully in the life and development of the community, he can not be clothed as a mere hewer of wood, nor his wife as a mere domestic housekeeping animal. To fall below the level of decency in dress, fixed not by the individual but by the community, constitutes a practical bar to almost all healthy forms of social life and development.

Of the estimates of minimum clothing necessities made by previous studies, the most liberal is that of the New York State Factory Investigating Commission submitted in 1915.<sup>1</sup> These placed the necessary cost of clothing of a workingman's family in New York City as follows: For the man at work, \$50 per year; a woman in the home, \$38.50; a boy 13 years of age, \$32; and a girl 13 years of age, \$24.75, with corresponding lower costs for younger children. That these estimates are not unduly generous is indicated by the following table, which shows the detailed items in the estimates as made for a man at work and a woman in the home.<sup>2</sup>

Clothing for one year for a man.	Clothing for one year for a woman in the home.
Hats.....	Hat.....
Overcoat, one-fourth of \$15.....	Coat, one-fourth of \$12.....
Suit.....	Skirt.....
Shoes, 1½ pairs, \$3.50, and re- pairs.....	Shirt waists, 3, at 50 cents.....
Socks.....	Wash dresses.....
Underclothing.....	Underwear.....
Shirts, 4, at \$1.....	Corsets.....
Collars.....	Corset covers.....
Ties.....	Petticoat.....
Nightshirts.....	Stockings.....
Rubbers.....	Shoes, 1½ pairs, \$3.50, and re- pairs.....
Gloves.....	Rubbers.....
Umbrella.....	Umbrella.....
Overalls.....	Gloves.....
Work shirts.....	Nightdresses.....
Incidentals, suspenders, garters, handkerchiefs, etc.....	Aprons.....
	Incidentals.....
50.00	38.50

<sup>1</sup> Fourth report of the New York State Factory Investigating Commission, 1915, vol. 4, appendix 7, pp. 1660-1665. For other estimates see—Report on condition of woman and child wage earners (S. Doc. No. 645, 61st Cong., 2d sess.) Vol. XVI, Family budgets of typical cotton-mill operatives; R. C. Chapin, The Standard of Living in New York City, 1909; Report on the increased cost of living for an unskilled laborer's family in New York City, prepared by Bureau of Personal Service of the Board of Estimate and Apportionment, 1st report, 1915, 2d report, 1917.

<sup>2</sup> Fourth report of the New York State Factory Investigating Commission, 1915, vol. 4, appendix 7, pp. 1661-1662.

As regards these estimates the commission states that a man at work can "barely clothe himself on \$50 a year," and that a woman's wardrobe, made possible by the expenditure of \$38, is "all too scant." The estimates, as will be noted on examination, presuppose the purchase of the cheapest grades of clothing and the most rigid economy in their use. They make almost no allowance for anything more than the most primitive needs.

These estimates may, therefore, be taken as conservative standards of necessary clothing costs. They were made originally for New York City, but may be fairly applied to Washington, as retail clothing prices were certainly no lower in Washington in 1916 than in New York in 1915.<sup>1</sup>

It appears that the average expenditures for clothing in 1916, by the white families with incomes of less than \$900 a year were, for husbands, only \$26.01 and for wives, only \$17.60. For colored families the expenditures were slightly less—for husbands, \$20.72, and for wives, \$16.29. Even for the families with incomes between \$900 and \$1,200 the average clothing expenditures were only \$34.36 for the husbands and \$26.94 for the wives in white families, and \$28.92 for husbands and \$25.23 for wives in colored families. These averages are far below the cost standards described above as absolutely necessary minimum expenditures for healthy and decent clothing. For the sake of brevity this analysis has been limited to husbands and wives. The expenditures for children were correspondingly low.

A more detailed analysis of this subject is shown in the following table, which classifies the families by income groups and by classified expenditure groups.

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<sup>1</sup> See United States Bureau of Labor Statistics' bulletins on retail prices, Nos. 197 and 228.

## EXPENDITURES FOR CLOTHING FOR HUSBANDS AND WIVES FOR FULL YEAR 1916.

## HUSBANDS.

Income group.	Number.	Per cent spending for clothing—						
		Under \$10.	Under \$20.	Under \$30.	Under \$40.	Under \$50.	Under \$60.	\$60 and over.
<b>Under \$600:</b>								
White.....	12	41.7	66.7	91.7	91.7	100.0	100.0	.....
Colored.....	32	37.5	59.4	81.3	93.8	100.0	100.0	.....
<b>Total.....</b>	<b>44</b>	<b>38.6</b>	<b>61.4</b>	<b>84.1</b>	<b>93.2</b>	<b>100.0</b>	<b>100.0</b>	<b>.....</b>
<b>\$600 and under \$900:</b>								
White.....	115	13.9	39.1	59.1	74.8	84.3	95.7	4.3
Colored.....	125	18.4	46.4	68.0	87.2	95.2	97.6	2.4
<b>Total.....</b>	<b>240</b>	<b>16.2</b>	<b>42.9</b>	<b>63.7</b>	<b>81.3</b>	<b>90.0</b>	<b>96.7</b>	<b>3.3</b>
<b>\$900 and under \$1,200:</b>								
White.....	168	6.0	23.8	44.6	61.9	78.6	84.5	15.5
Colored.....	57	12.3	36.8	54.4	73.7	84.2	91.2	8.8
<b>Total.....</b>	<b>225</b>	<b>7.6</b>	<b>27.1</b>	<b>47.1</b>	<b>64.9</b>	<b>80.0</b>	<b>86.2</b>	<b>13.8</b>
<b>\$1,200 and under \$1,500:</b>								
White.....	212	1.9	7.5	25.5	43.4	59.9	75.0	25.0
Colored.....	11	.....	27.3	36.4	45.5	63.6	90.9	9.1
<b>Total.....</b>	<b>223</b>	<b>1.8</b>	<b>8.5</b>	<b>26.0</b>	<b>43.5</b>	<b>60.1</b>	<b>75.8</b>	<b>24.2</b>
<b>\$1,500 and over:</b>								
White.....	203	1.5	6.9	14.8	25.6	37.9	51.7	48.3
Colored.....	7	.....	14.3	28.6	57.1	71.4	71.4	28.6
<b>Total.....</b>	<b>210</b>	<b>1.4</b>	<b>7.1</b>	<b>15.2</b>	<b>26.7</b>	<b>39.0</b>	<b>52.4</b>	<b>47.6</b>
<b>Total, all groups:</b>								
White.....	710	5.4	17.3	33.5	48.6	63.7	74.4	25.6
Colored.....	232	18.1	44.0	63.8	81.9	90.9	95.3	4.7
<b>Total.....</b>	<b>942</b>	<b>8.5</b>	<b>23.9</b>	<b>41.0</b>	<b>56.8</b>	<b>69.6</b>	<b>79.5</b>	<b>20.5</b>

## WIVES.

<b>Under \$600:</b>								
White.....	25	44.0	76.0	92.0	92.0	96.0	100.0	.....
Colored.....	57	52.6	75.4	94.7	98.2	100.0	100.0	.....
<b>Total.....</b>	<b>82</b>	<b>50.0</b>	<b>75.6</b>	<b>93.9</b>	<b>96.3</b>	<b>98.8</b>	<b>100.0</b>	<b>.....</b>
<b>\$600 and under \$900:</b>								
White.....	131	34.4	58.8	77.9	92.4	93.1	98.5	1.5
Colored.....	139	34.5	61.9	79.9	87.1	93.5	97.8	2.2
<b>Total.....</b>	<b>270</b>	<b>34.4</b>	<b>60.4</b>	<b>78.9</b>	<b>89.6</b>	<b>93.3</b>	<b>98.1</b>	<b>1.9</b>
<b>\$900 and under \$1,200:</b>								
White.....	185	10.8	36.8	60.5	76.2	88.1	95.7	4.3
Colored.....	59	16.9	44.1	64.4	84.7	88.1	96.6	3.4
<b>Total.....</b>	<b>244</b>	<b>12.3</b>	<b>38.5</b>	<b>61.5</b>	<b>78.3</b>	<b>88.1</b>	<b>95.9</b>	<b>4.1</b>
<b>\$1,200 and under \$1,500:</b>								
White.....	220	9.1	28.2	46.8	60.9	72.3	85.9	14.1
Colored.....	12	8.3	16.7	41.7	66.7	75.0	83.3	16.7
<b>Total.....</b>	<b>232</b>	<b>9.1</b>	<b>27.6</b>	<b>46.6</b>	<b>61.2</b>	<b>72.4</b>	<b>85.7</b>	<b>14.3</b>
<b>\$1,500 and over:</b>								
White.....	211	1.4	11.4	25.1	38.9	49.3	67.3	32.7
Colored.....	8	.....	12.5	12.5	50.0	62.5	62.5	37.5
<b>Total.....</b>	<b>219</b>	<b>1.4</b>	<b>11.4</b>	<b>24.7</b>	<b>39.3</b>	<b>49.8</b>	<b>67.1</b>	<b>32.9</b>
<b>Total, all groups:</b>								
White.....	772	12.8	32.4	50.9	64.9	74.1	85.8	14.2
Colored.....	275	32.4	57.5	76.0	86.9	92.0	96.4	3.6
<b>Total.....</b>	<b>1,047</b>	<b>18.0</b>	<b>39.0</b>	<b>57.5</b>	<b>70.7</b>	<b>78.8</b>	<b>88.5</b>	<b>11.5</b>



A study of this table shows an extremely low expenditure for clothing in most income groups. It is only among the families receiving incomes of \$1,500 per year or over that the minimum standards referred to (\$50 for a man and \$38.50 for a woman) were reached by the majority of families. Many of the families fell far below these standards. Thus, among all white families one-third of the male heads (33.5 per cent) spent less than \$30 per year on clothing and one-third of the female heads (32.4 per cent) spent less than \$20 per year.

In considering the above figures, two qualifications must be made. First, gifts of second-hand clothing are not estimated. Such gifts were noted by the agents, but their value could not be guessed at. A total of 83 white families and 128 colored families report gifts of second-hand clothes. Gifts of new clothes were given a value and included as a part of income. Second, some items of clothing expenses are not equally distributed over successive years. A coat bought in 1912 may still be doing service in 1916. On the other hand, another family may have bought in 1916 certain articles which are intended to last until 1919. Enough families were scheduled to balance excessively small and excessively large expenditures.

#### HOUSING CONDITIONS.

Housing conditions were found to be good, and in many cases very good, among the great majority of the families covered by this investigation. Congested districts in Washington are confined to the back alleys, and tenements such as exist in the larger industrial cities are unknown. The bad conditions that were found to exist were largely individual; that is to say, were dependent upon the individual house, landlord, or family.

Among the total of 2,110 families scheduled, 1,527, or 72 per cent, had an average of one person or less per room, and were thus free from overcrowding. Another group of 335, or 16 per cent, had an average of over one but not over one and one-half persons per room, and thus were on the line where it may be said that overcrowding begins. Of the remaining 248 families, 92, or 4 per cent of the total, had over one and one-half persons per room, and 156, or 7 per cent of the total, were subrenting part of their houses or living in joint occupancy with other families. It is among this group that serious overcrowding is most likely to occur. A further analysis of this subject will have to wait upon a more complete tabulation of the data in the bureau's possession.

As regards the ownership of houses, it was found that of the 1,833 who remained in the same house or apartment the full year 442 families, 24 per cent of the total, owned their houses and 1,391, or

76 per cent, rented. Of the families renting, 1,218 lived in separate houses and 173 lived in apartments.

#### SICKNESS.

Sickness, requiring expenditure for medical attention, occurred in the great majority, almost 90 per cent, of the families scheduled. Its distribution was almost uniform among the different income groups, both white and colored. The actual amounts expended for this purpose, however, varied greatly. In general the average expenditure per case of sickness increased rapidly with the income of the family group. Thus, among the families with incomes of less than \$600 the average expenditure for sickness by the families in which sickness occurred was \$12; in the \$900 to \$1,200 income group the corresponding average was \$40; while among those families with incomes of over \$1,500 per year this average increased to \$59. This rapid increase in medical expenditure with increased income indicates that among the poorer families sickness is endured without calling in a doctor, with results that are undoubtedly detrimental to the health of the individual sufferers and the welfare of the community.

Closely related to the item of sickness is that of funeral expense in case of death. In 36 of the 1,059 families for which information on this subject was obtained, death had occurred during the year. The average outlay for funeral expenses by these 36 families was \$123.57. One family, with a total income of less than \$600 per year, spent \$135 on one funeral. But such cases of display are exceptional, and, at best, the cost of death is a serious item to all families of small income.

#### AMUSEMENT AND RECREATION.

Among almost all of the families of low incomes amusements which cost money are rarely indulged in. Out of 83 families with incomes of less than \$600 per year only 35 incurred any direct expenditure for amusement, the average being \$2.79 per year for all members of the family, and only 15 reported any expenditure for vacations, the average being \$8.69. With increased income the expenditures for these purposes of course become larger in amount. But even among the families with incomes of \$900 to \$1,200, only 193 out of 246 had any expense for amusement, the average being \$9.27 per year for all members of the family, and only 67 reported any expense for vacations, the average for this item being \$25.40.

As regards the need and minimum cost of amusement, the New York State Factory Investigating Commission, in its report upon the cost of living in that State, made the following remarks:<sup>1</sup> "Amusement is a necessity in a normal life. The joyless life can hardly be

<sup>1</sup> Fourth report, 1915, vol. 4, appendix VII, p. 1667.

said to be receiving as much as is sacrificed in maintaining a bare existence. Amusement is imperative, also, in order that efficiency may be realized, for it is only a mind freshened by social contact or by diversion from cares that is in fit condition to cope with the problems of industry or to meet the crises which frequently come in managing children. For these reasons it has been deemed wise to include as part of the minimum cost of living for a normal family an allowance of \$50 for recreation and amusement. This is less than \$1 per week or less than 20 cents per person per week—really a very small sum.”

#### INSURANCE, CAR FARE, AND OTHER INCIDENTALS.

Food, clothing, shelter (including fire and light), medical care when sick, and some amusement when well, constitute perhaps the primary needs of human existence. But, without practicing a thrift that is in the end harmful, no family can avoid a number of minor household expenses for other purposes. House furnishings must be renewed from time to time; some car riding is usually unavoidable; soap, towels, and similar items must be bought. Church affiliation and membership in trade-unions, beneficial lodges, and other social or religious organizations almost always make some demand upon the purse.

In this day, life, health, and accident insurance for the breadwinner of the family are so important, both from the standpoint of society and of the individual, as to warrant classification as necessities. In almost all the families one or more members were insured against some one or more of life's hazards, although the amount carried was usually very small. The average expenditure for all forms of personal insurance made by 1,059 families in all income groups was \$51.65 per annum. In the income group under \$600 the white families spent in 1916 an average of \$26.05 and the colored families \$31.92. In view of the extravagant rates charged for so-called “casualty,” “health,” and “industrial” (funeral) insurance, and the fact that workmen's families are necessarily limited to the purchase of these most expensive and least adequate and satisfactory forms of insurance, it will be readily seen that the insurance protection carried by these families is very limited.

Almost every family purchased a daily newspaper. This was usually the only form of literature upon which money was spent. Further details regarding the amount and distribution of expenditures upon these various items are shown in the table following:

NUMBER OF FAMILIES REPORTING SICKNESS, AMUSEMENT, INSURANCE, AND VARIOUS INCIDENTALS AND AVERAGE AMOUNT EXPENDED FOR THESE PURPOSES.

[845]

Income group.	Total families.	Sickness.		Funeral.		Amusement.		Vacation.		Insurance.				Charity.		Religion.	
		Families.	Average expenditure.	Families.	Average expenditure.	Families.	Average expenditure.	Families.	Average expenditure.	Furniture.		Life.		Families.	Average expenditure.	Families.	Average expenditure.
										Families.	Average expenditure.	Families.	Average expenditure.				
Under \$600:																	
White.....	26	19	\$10.03	1	\$135.00	14	\$2.52	5	\$6.87	2	\$3.78	22	\$26.05	2	\$6.50	13	\$7.52
Colored.....	57	46	12.83	.....	.....	21	2.98	10	9.60	6	3.14	55	31.92	2	.88	43	5.57
Total.....	83	65	12.01	1	135.00	35	2.79	15	8.69	8	3.30	77	30.24	4	3.69	56	6.02
\$600 and under \$900:																	
White.....	136	117	25.52	5	68.00	99	8.44	34	13.05	13	3.91	122	37.25	20	19.31	103	9.07
Colored.....	140	118	16.20	6	49.75	94	4.19	33	14.97	22	4.68	138	38.82	14	10.16	118	8.26
Total.....	276	235	20.84	11	58.05	193	6.37	67	13.99	35	4.39	260	38.08	34	15.54	221	8.63
\$900 and under \$1,200:																	
White.....	186	167	42.31	3	101.00	154	10.01	50	28.18	30	4.24	174	44.73	29	4.73	151	12.11
Colored.....	60	48	32.84	5	59.40	39	6.36	17	17.18	12	4.49	57	44.44	13	7.62	52	11.36
Total.....	246	215	40.19	8	75.00	193	9.27	67	25.40	42	4.31	231	44.66	42	5.63	203	11.92
\$1,200 and under \$1,500:																	
White.....	222	198	43.16	6	118.00	195	15.80	85	29.50	40	3.99	208	60.38	63	10.89	186	17.61
Colored.....	12	11	28.95	.....	.....	10	7.53	3	7.00	2	7.10	12	52.84	3	15.33	12	15.78
Total.....	234	209	42.42	6	118.00	205	15.39	88	28.73	42	4.14	220	59.97	66	11.09	198	17.50
\$1,500 and over:																	
White.....	212	191	59.57	8	230.25	197	21.22	106	55.24	41	3.78	202	75.08	81	16.78	191	19.42
Colored.....	8	7	35.21	2	262.50	7	13.09	3	17.67	.....	.....	7	84.39	3	57.00	8	69.00
Total.....	220	198	58.71	10	236.70	204	20.94	109	54.21	41	3.78	209	75.39	84	18.21	199	21.41
Total, all incomes:																	
White.....	782	692	43.59	23	144.70	659	14.68	280	36.61	126	3.97	728	55.80	195	13.24	644	15.29
Colored.....	277	230	20.19	13	86.19	171	5.10	66	14.48	42	4.52	269	40.41	35	13.14	233	10.93
Total.....	1,059	922	37.75	36	123.57	830	12.70	346	32.39	168	4.11	997	51.65	230	13.22	877	14.13

NUMBER OF FAMILIES REPORTING SICKNESS, AMUSEMENT, INSURANCE, AND VARIOUS INCIDENTALS AND AVERAGE AMOUNT EXPENDED FOR THESE PURPOSES—Concluded.

Income group.	Organizations.				Car fare.		Furniture.		Books and newspapers.		Liquor.		Tobacco.		Other incidentals.		Average expenditure—all incidentals.
	Labor.		Other.		Families.	Average expenditure.	Families.	Average expenditure.	Families.	Average expenditure.	Families.	Average expenditure.	Families.	Average expenditure.	Families.	Average expenditure.	
	Families.	Average expenditure.	Families.	Average expenditure.													
Under \$600:																	
White.....			2	\$3.60	24	\$11.16	14	\$7.17	19	\$5.23	1	\$8.00	10	\$9.53	25	\$20.73	\$83.95
Colored.....	1	\$3.00	7	6.71	49	12.41	45	14.34	33	4.18	7	6.16	23	8.08	55	14.64	91.92
Total.....	1	3.00	9	6.02	73	12.00	59	12.64	52	4.56	8	6.39	33	8.52	80	16.54	89.43
\$600 and under \$900:																	
White.....	36	10.52	18	6.61	130	18.18	109	20.65	117	5.59	38	14.72	96	11.96	136	32.08	164.38
Colored.....	9	5.93	20	9.96	132	16.33	125	22.20	111	5.40	37	14.48	97	10.14	140	22.87	144.13
Total.....	45	9.60	38	8.38	262	17.25	234	21.48	228	5.50	75	14.60	193	11.05	276	27.41	154.11
\$900 and under \$1,200:																	
White.....	49	12.98	23	8.99	182	21.81	152	32.99	173	7.43	45	19.08	125	15.14	185	49.70	232.54
Colored.....	4	9.75	22	9.30	60	19.46	56	27.25	56	7.31	19	11.17	45	14.09	59	48.98	212.88
Total.....	53	12.73	45	9.14	242	21.23	208	31.45	229	7.40	64	16.74	170	14.87	244	49.53	227.75
\$1,200 and under \$1,500:																	
White.....	83	15.62	67	7.67	220	25.20	198	47.02	214	10.71	47	37.70	157	16.27	222	86.97	333.83
Colored.....			5	8.62	11	25.05	10	35.66	11	7.21	3	73.00	8	10.90	12	37.51	234.12
Total.....	83	15.62	72	7.73	231	25.20	208	46.47	225	10.53	50	39.82	165	16.01	234	84.43	328.72
\$1,500 and over:																	
White.....	87	17.75	84	10.85	208	31.86	195	52.19	209	15.66	51	24.48	139	21.14	212	158.38	490.28
Colored.....			4	13.00	8	35.51	8	24.63	8	19.08	2	125.50	4	21.95	8	134.58	541.36
Total.....	87	17.75	88	10.94	216	31.99	203	51.10	217	15.79	53	28.30	143	21.16	220	157.51	492.14
Total, all incomes:																	
White.....	255	15.12	194	9.06	754	24.57	658	40.20	732	10.38	182	24.43	527	16.38	780	85.84	314.37
Colored.....	14	6.81	58	9.41	260	17.27	244	22.54	219	6.29	68	18.55	177	11.18	274	30.74	163.05
Total.....	269	14.68	252	9.14	1,014	22.72	912	35.47	951	9.44	250	22.83	704	15.07	1,054	71.52	274.95

[843]



**TREND OF ACCIDENT FREQUENCY RATES IN THE IRON AND STEEL INDUSTRY DURING THE WAR PERIOD.**

BY LUCIAN W. CHANEY.

There is properly much interest in the effect of war conditions upon the occurrence of industrial accidents. No branch of industry has been more rapidly expanding under these conditions or working under higher tension than the iron and steel industry. It is therefore particularly appropriate to present at this time such data as the Bureau of Labor Statistics has gathered showing the accident experience in this industry since the outbreak of the war.

The returns now available cover something more than 50 per cent of the industry. They come from plants so distributed both geographically and industrially that they may be accepted as representative.

The following table presents the trend of frequency rates of fatalities and of all accidents. The table is extended back to 1913 for the reason that a fair comparison is not possible unless periods of similar industrial stress are brought into relation. In the years now covered by the bureau's studies there are four periods of high industrial tension, namely, 1907, 1910, 1913, and 1916, extending with slight diminution into 1917. In these years the fatality frequency rates per thousand 300-day workers have been as follows in the iron and steel industry: 1907, 2.20; 1910, 1.50; 1913, 1.34; 1916, 1.11. It should be remembered that this is the experience of the industry as represented by the plants from which data were collected. Particular hazardous employments show a more striking decline.

The fatality rates and the frequency rates of all accidents from 1913 to 1917, as given in the table, are shown by overlapping years ending with March, June, September, and December. This method of showing the accident rates by years ending with different months gives a more complete view of the changes occurring than is possible by any presentation by months or even by successive calendar years. A still more complete showing of the progressive changes is afforded by Table 3 (p. 16), in which the years ending with each month of the period are presented.

18988°—17—2

TABLE 1.—FREQUENCY RATES OF FATALITIES AND OF ALL ACCIDENTS IN THE IRON AND STEEL INDUSTRY, 1913 TO 1917.

Year ending with—	Number of 300-day workers. <sup>1</sup>	Fatalities per 1,000 300-day workers.	Total accidents per 1,000 300-day workers.
December, 1913.....	153,098	1.34	181.0
March, 1914.....	146,522	1.29	168.4
June, 1914.....	137,816	1.09	154.7
September, 1914.....	128,023	.81	138.9
December, 1914.....	117,214	.70	130.4
March, 1915.....	111,881	.63	118.0
June, 1915.....	111,794	.65	114.0
September, 1915.....	117,933	.85	118.6
December, 1915.....	133,627	.86	124.5
March, 1916.....	148,221	.96	131.8
June, 1916.....	160,819	1.09	134.1
September, 1916.....	168,790	1.02	135.5
December, 1916.....	175,013	1.11	133.2
March, 1917.....	178,937	1.15	128.5
June, 1917.....	182,587	1.08	121.6

<sup>1</sup> A 300-day worker is the equivalent of one who works 10 hours per day for 300 days.

The changing frequency rates both for fatalities and for all accidents as shown by the table are very noteworthy. They indicate that in this great and basic industry the influences tending to accident reduction have been reasonably successful.

Following the table step by step it will be noted that from December, 1913, there is a steady decline both in the fatality rate and in the frequency rate for all accidents, extending to March, 1915, for fatalities, and to June, 1915, for all accidents. This parallels very closely the decline in industrial activity shown by decreasing employment. From the low point in 1915 rising accident rates are the rule until about September, 1916, at which time decline begins in the total rate and later in the fatality rate. This decline is a very notable fact since it occurs in the face of a still rising tide of employment. These facts are presented graphically in Charts A and B (pp. 18 and 19), which show, respectively, the relation of employment to fatality and of employment to frequency of all accidents.

Since a varied industry like iron and steel may have very different conditions in its constituent units, the material collected by the bureau has also been classified according to the nature of the product. This is less satisfactory than a departmental classification, such as by blast furnaces, steel works, and rolling mills, for example, but an attempt to secure the latter would involve much additional labor and necessarily delay publication. For the sake of prompt presentation it seems desirable to offer the classification here given. Table 2 presents six groups of plants, four producing fabricated products, sheets, wire products, and tubes, and two producing miscellaneous steel products.

TABLE 2.—FATALITY RATES IN PLANTS PRODUCING SPECIFIED PRODUCTS, 1913 TO 1917.

Year ending with—	Fatality rates per 1,000 300-day workers in plants producing—					
	Fabricated products.	Sheets.	Wire products.	Miscellaneous steel products A.	Miscellaneous steel products B.	Tubes.
December, 1913.....	0.62	0.70	0.86	1.84	1.50	0.58
March, 1914.....	.64	.78	.61	1.86	1.48	.61
June, 1914.....	.57	.59	.31	1.77	1.22	.50
September, 1914.....	.49	.44	.24	1.30	.83	.45
December, 1914.....	.49	.20	.04	1.21	.87	.45
March, 1915.....	.55	.27	.09	.89	.95	.43
June, 1915.....	.60	.38	.27	.67	1.34	.38
September, 1915.....	1.05	.43	.47	.82	1.41	.57
December, 1915.....	1.01	.48	.48	.88	1.42	.55
March, 1916.....	1.07	.58	.71	1.11	1.12	.53
June, 1916.....	1.09	.64	.76	1.42	1.22	.48
September, 1916.....	1.01	.60	.63	1.45	1.11	.35
December, 1916.....	1.17	.65	.83	1.63	1.19	.33
March, 1917.....	1.11	.60	.89	1.63	1.33	.33
June, 1917.....	1.29	.51	.76	1.44	1.33	.40

There is considerable diversity in the experience of the plants producing the different products. Four of the six groups, sheets, miscellaneous steel products A, miscellaneous steel products B, and tubes, have the same general movement in fatality rates as the industry as a whole, although variations in detail are not always the same in the several groups. In wire products the high point occurs early in 1917 and is slightly higher than the high rate of 1913. The marked exception brought out by this classification is in fabricated products which, after some decline during the depression of 1914, maintain a pretty steadily rising fatality rate, the high point being the year ending with June, 1917.

Table 3 gives in detail the total accident frequency for the plants producing the various products. The lower portion of the table giving the number of 300-day workers is introduced to give an idea of the size of the plants from which the information comes.

TABLE 3.—TREND OF ACCIDENT FREQUENCY RATES, 1913 TO 1917, IN PLANTS PRODUCING SPECIFIED PRODUCTS.

Year ending with—	Accident frequency rates per 1,000 300-day workers in plants producing—						
	Fabricated products.	Sheets.	Wire products.	Miscellaneous steel products, A.	Miscellaneous steel products, B.	Tubes.	Total. <sup>1</sup>
December, 1913.....	300.9	184.9	177.9	212.8	123.1	81.5	181.0
January, 1914.....	288.7	179.7	169.6	210.4	118.3	76.9	176.0
February, 1914.....	276.6	176.6	164.2	208.0	115.6	72.1	171.9
March, 1914.....	263.6	173.0	159.4	205.8	116.7	67.4	168.4
April, 1914.....	254.5	169.7	159.3	201.9	106.4	63.6	164.0
May, 1914.....	236.0	164.9	157.6	196.6	102.7	60.4	159.5
June, 1914.....	226.6	161.0	152.9	188.3	100.0	57.2	154.7
July, 1914.....	215.6	157.3	148.7	181.7	91.1	51.9	149.7
August, 1914.....	200.0	148.3	146.6	173.3	92.9	48.1	143.7
September, 1914.....	189.5	142.1	143.9	167.1	88.1	45.0	138.9
October, 1914.....	184.9	141.7	140.4	160.6	85.2	41.8	134.9
November, 1914.....	178.5	141.8	140.2	155.4	82.1	39.5	132.1
December, 1914.....	176.9	141.5	138.6	152.0	82.7	37.5	130.4
January, 1915.....	170.9	140.7	136.1	145.3	80.8	35.5	127.1
February, 1915.....	165.3	139.9	131.6	136.1	83.1	33.4	123.1
March, 1915.....	164.9	135.4	131.0	130.4	81.3	30.7	118.0
April, 1915.....	159.9	134.2	129.5	126.8	79.1	27.9	112.2
May, 1915.....	159.9	128.9	129.9	126.2	75.2	27.1	114.9
June, 1915.....	153.6	125.3	132.9	128.1	69.9	26.1	114.0
July, 1915.....	147.9	120.0	135.4	130.5	65.4	26.3	112.8
August, 1915.....	152.6	117.1	138.5	134.9	60.3	28.8	114.3
September, 1915.....	156.7	115.5	149.8	140.3	61.3	30.0	118.6
October, 1915.....	155.5	114.1	154.2	145.5	62.9	31.4	120.8
November, 1915.....	159.1	114.3	154.4	151.2	66.4	32.2	122.8
December, 1915.....	160.4	111.8	157.2	155.8	69.0	32.3	124.5
January, 1916.....	160.3	110.9	157.9	164.1	73.5	33.4	127.3
February, 1916.....	159.9	111.0	158.4	172.5	76.1	34.0	129.8
March, 1916.....	158.3	111.8	159.9	179.3	75.9	34.9	131.8
April, 1916.....	158.2	111.2	158.8	183.6	76.1	36.2	132.7
May, 1916.....	161.8	110.5	158.8	186.1	78.3	36.5	133.8
June, 1916.....	163.6	109.4	156.5	188.2	81.0	36.7	134.1
July, 1916.....	162.3	109.7	154.5	193.0	82.5	37.2	135.4
August, 1916.....	164.1	108.4	153.2	197.9	85.6	37.0	136.3
September, 1916.....	160.4	107.2	149.2	200.1	86.2	36.7	135.5
October, 1916.....	160.3	105.6	146.7	202.8	86.9	36.6	135.1
November, 1916.....	157.2	104.3	147.9	203.6	86.1	36.2	134.8
December, 1916.....	156.2	102.0	144.5	202.7	84.6	37.1	133.2
January, 1917.....	158.7	102.3	141.4	201.5	82.1	36.1	131.7
February, 1917.....	159.3	100.9	139.1	199.6	79.7	36.2	130.1
March, 1917.....	161.9	99.4	136.6	196.4	78.5	35.6	128.5
April, 1917.....	162.8	96.8	135.1	193.9	77.4	34.8	126.7
May, 1917.....	161.9	96.5	132.6	190.9	76.0	34.6	124.7
June, 1917.....	159.8	97.0	127.7	186.7	73.4	34.6	121.6

## NUMBER OF 300-DAY WORKERS.

June, 1914.....	8,817	16,841	25,575	41,744	18,922	19,944	137,816
June, 1915.....	6,706	15,759	22,434	35,670	13,477	13,329	111,794
June, 1916.....	8,276	21,906	31,377	45,673	23,000	21,031	160,819
June, 1917.....	10,110	25,504	32,928	49,893	27,046	24,880	182,587

<sup>1</sup> Includes some plants not shown in detail.

This table illustrates a method of presentation which has been found most effective when it is desired to trace progressive changes. It is possible to construct such a table whenever the amount of employment and the accidents are recorded by intervals less than one year. In Table 1 the record is quarterly; in Table 4 it is monthly. It is frequently the case that important conditions exist in years other than the calendar year. For example, the year ending with July, 1915, is the period of lowest accident frequency. The rise which follows does not culminate with a calendar year but with the year ending with August, 1916.

The calendar years or any other series of successive years can be easily isolated from the table if desired. For example, taking the years ending with December gives the calendar years with their rates as follows: 1913, 181 cases per 1,000 300-day workers; 1914, 130.4 cases; 1915, 124.5 cases; 1916, 133.2 cases. In a similar manner, successive years ending with June could be compared, e. g., June, 1914, 154.7 cases; June, 1915, 114 cases; June, 1916, 134.1 cases; June, 1917, 121.6 cases. From such a table annual periods characterized by particular conditions can be abstracted and compared with periods in which other conditions prevailed. By using six months instead of a year other interesting facts and relations might be brought out.

The charts which follow present the facts graphically. Chart A shows the relation of employment to death frequency; Chart B shows employment and the total accident rate; Charts C and D should be considered together, Chart C giving the course of employment in the plants producing the different products, and Chart D giving the course of the total accident rates in the same plants.

These charts are plotted by a method which projects the percentage of change, from period to period, rather than the amount. On the ordinary chart the distance from 100 to 200 is one hundred times as great as that from 1 to 2. On a percentage chart, such as here used, the distances are identical. Stated in general terms, this means that on a chart plotted on the percentage basis a given vertical distance in any part of the chart always represents the same percentage of change.<sup>1</sup>

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<sup>1</sup> Renewed interest in this method of charting has resulted from the appearance in the publications of the American Statistical Association, June, 1917, of an article by Prof. Irving Fisher of Yale University. Such charts have been called "logarithmic." Prof. Fisher suggests the simpler and more suggestive name of "ratio" charts.



TREND OF EMPLOYMENT AND FATALITY RATES, YEAR ENDING WITH SPECIFIED MONTH.

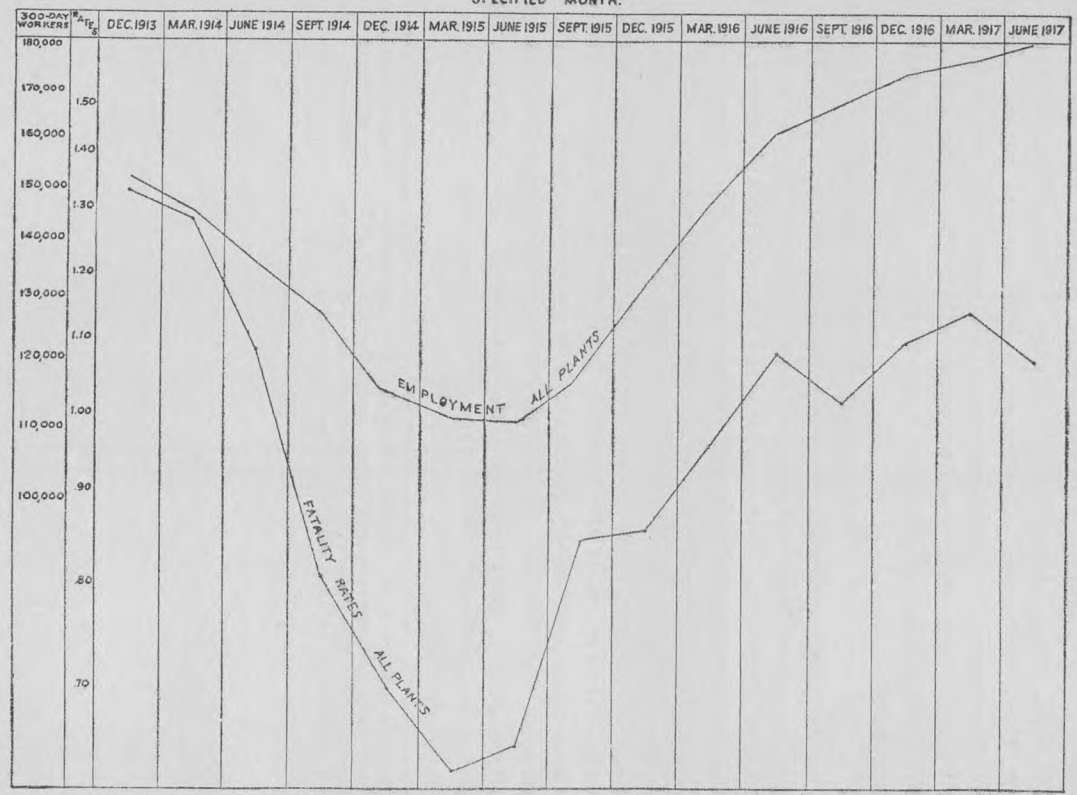


CHART A.

18921

TREND OF EMPLOYMENT AND ACCIDENT FREQUENCY, YEAR ENDING WITH SPECIFIED MONTH.

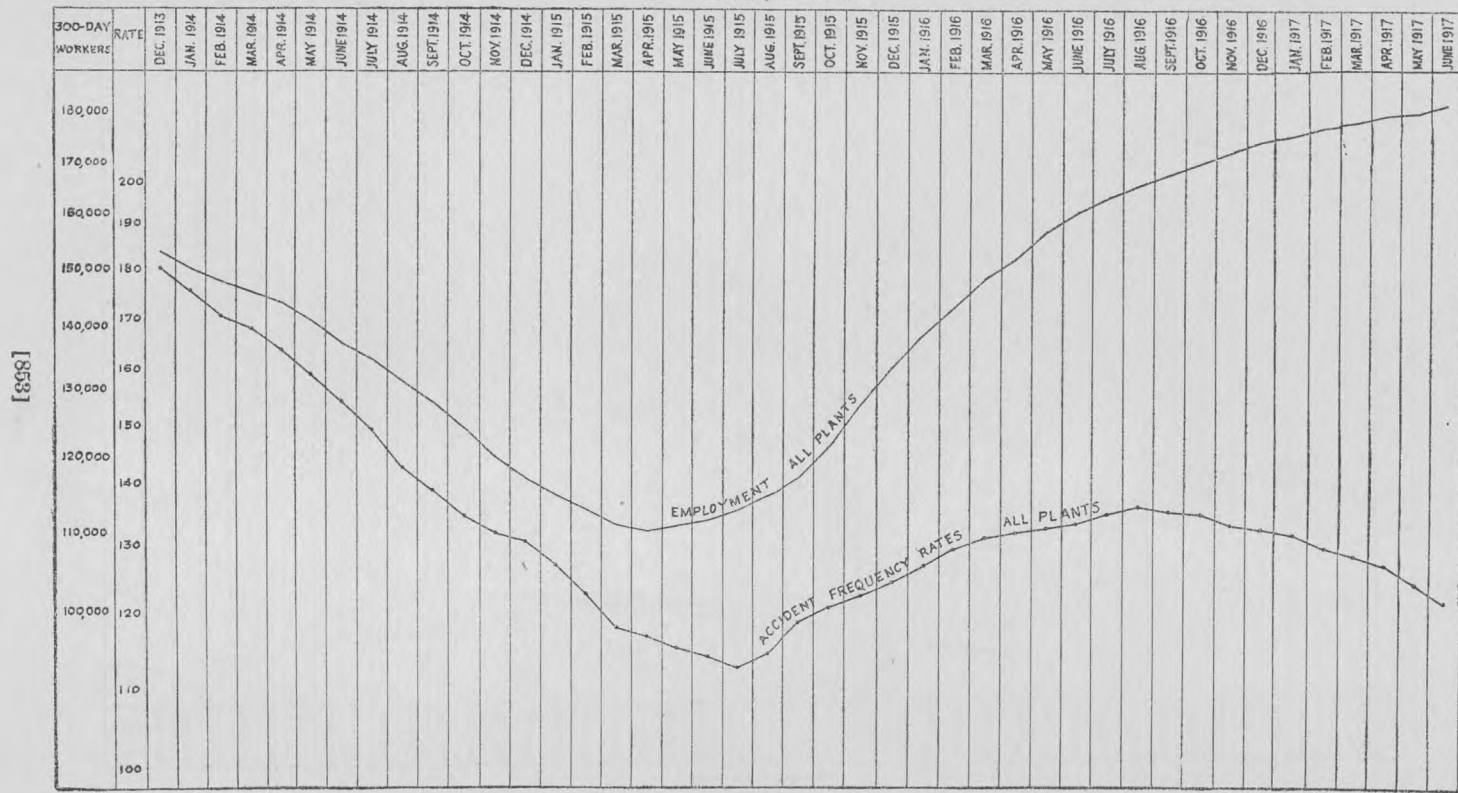


CHART B.

[858]

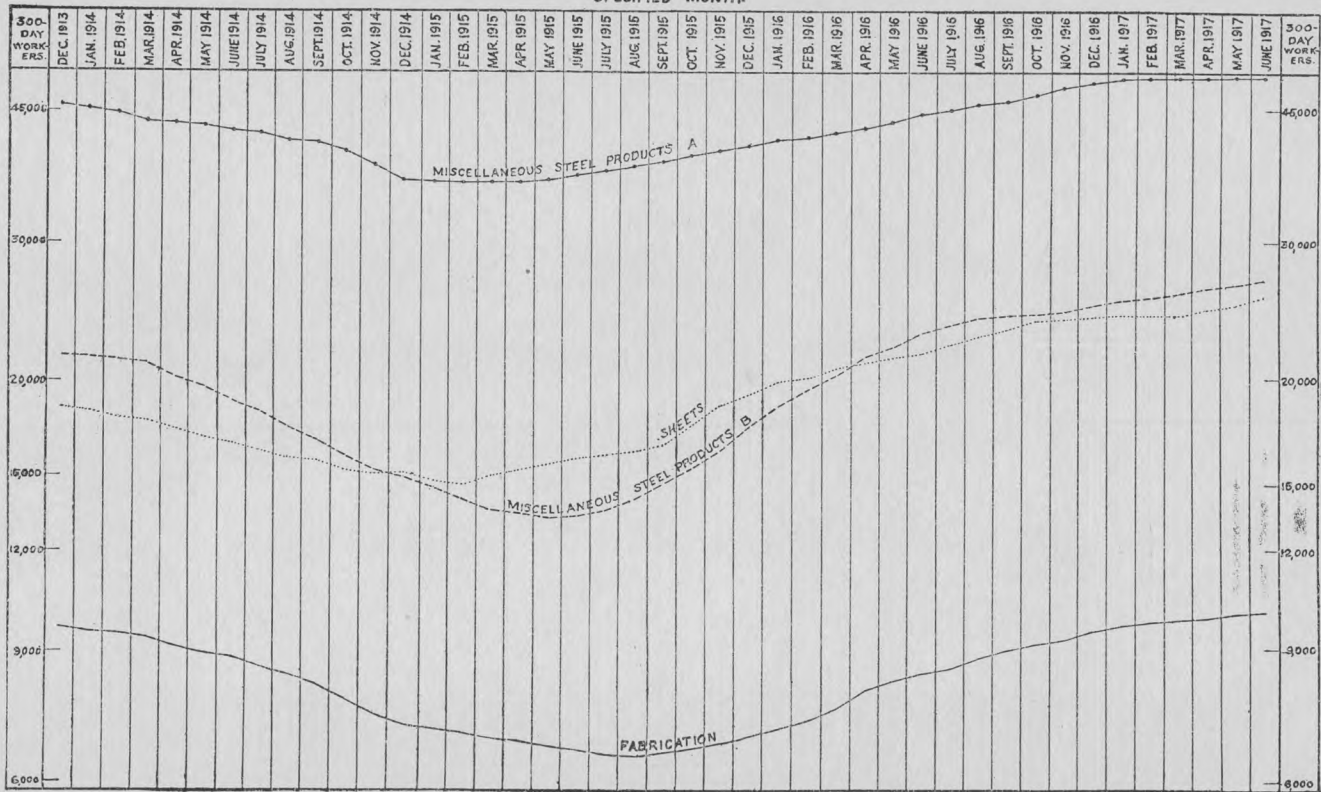
NUMBER OF 300-DAY WORKERS FOR YEAR ENDING WITH  
SPECIFIED MONTH.

CHART C.

[854]

18561

ACCIDENT FREQUENCY RATES FOR YEAR ENDING WITH  
SPECIFIED MONTH.

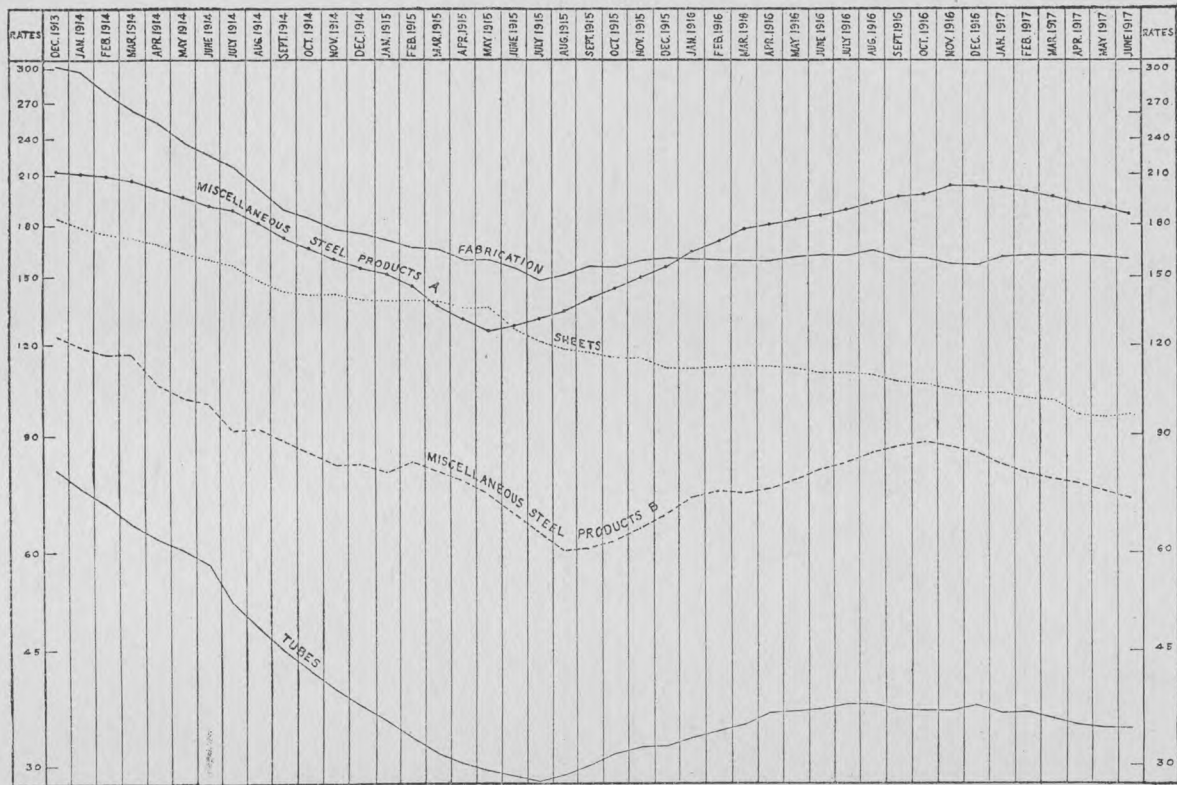


CHART D.

On comparing Chart A with Chart B it will at once appear that the death frequency varies in a more pronounced manner than the total accident frequency. In spite of this naturally greater fluctuation, always likely to occur when the number of cases considered is small, the form of the fatality curve is strikingly similar to that of total accident frequency. Beyond question, there are some fundamental causes underlying this similarity.

The entirely evident factors in determining the form of these accident curves are industrial conditions and accident-prevention effort. The fact, constantly recurring, that accident rates rise with recovery from depression and fall again with declining industrial activity, indicates the importance of the industrial factor. The equally constant fact that each successive rise has not reached the altitude of the preceding one shows that this rising rate is controllable in some considerable degree. The extent of this control remains to be determined. That it can be held in check to an extent not yet imagined is indicated by all recent studies.

Charts C and D bring out the fact that the variations noted above are characteristic of each of the groups of plants which make up the industry. They also indicate the different inherent hazard of varying types of productive activity. The fact that Miscellaneous Steel Products B shows a lower frequency for all accidents than Fabrication, although its death frequency, as shown in Table 2, p. 15, is considerably higher, is in accord with the normal differences in these industrial groups. The point most emphasized by Chart D is, however, that in all the groups accident-prevention efforts were effective in keeping the rates of 1916 below those of 1913.



## PIECE-RATE WAGE SYSTEMS IN THE MEN'S CLOTHING INDUSTRY.

BY BORIS EMMET, PH. D.

The standardization of the methods for piece-rate making is of great importance in this highly competitive industry for two reasons: First, because only through such standardization could the rates of wages for identical occupations in the various establishments of the same industry within a certain locality or manufacturing center be equalized, and, second, because such standardization, if properly and impartially carried out, would undoubtedly eliminate many of the serious, sometimes even disastrous, piece-rate controversies between employees and employers now occurring rather frequently.

The question of equalization of wage rates for identical processes of manufacturing is of great moment in the ready-to-wear clothing trades. This is so in view of the fact that there are in these trades a great many small employers, technically known as contractors and subcontractors, who, on account of their inefficient manufacturing methods are compelled to underpay their help, maintaining very low standards of safety and sanitation, while their efficient competitors pay a living wage and count on making legitimate profits through superior manufacturing and selling methods. An equalization in wage rates would undoubtedly eliminate from the industry many of the inefficient employers and raise thereby the level of competition. The ability to organize, manufacture, and sell, and not the policy of paying the lowest possible wage, would then become the basis of competition.

Regarding the elimination of piece-rate controversies, a time standardization of operations would result in a diminution of the number of such controversies, for the reason that in most of the better managed establishments there exist minimum hourly rates for each operation, irrespective altogether of changes in the styles which might occur. With the establishment of time standards for operations piece rates could be arrived at almost automatically by multiplying the time standard set for a specific operation by the hourly rate for that operation.

The question of piece rates was of small moment in the days of individual bargaining. Employers then set piece rates without consulting the wishes of their employees on the theory that the employees

had "the freedom of choice" and could refuse to work for rates which they might consider unfair.

The introduction of collective bargaining during recent years, however, brought with it an active participation of workers in piece-rate making. The majority of the collective agreements now in operation in the ready-to-wear clothing trades specify that piece rates are to be set by the employer in consultation with representatives of his employees, constituting a shop piece-rate committee. On account of the absence of definitely established time or money standards for the various processes of manufacturing this collective piece-rate making consisted until very recently of a series of haggling processes. The employees, on the one hand, were in the habit of asking much more than they actually expected, while the employer, on the other hand, was accustomed to offer at first much less than he was ready to grant. Each hoped to bluff the other into making the utmost concession. By the process of haggling, employees slowly reduced the rate asked for and the employer gradually increased his offer until finally piece rates were fixed.

During the busy seasons, and with the rush of orders for immediate delivery, the employer under this system was at a great disadvantage, being obliged to concede almost anything for which his employees asked. The employees, however, were under a similar disadvantage during the dull seasons. Employment being scarce, they were compelled to work for any piece rate offered or go unemployed. The parties soon realized that such methods of piece-rate determination were extremely unsatisfactory. Gradually, improvements in methods were introduced.

The various methods of piece-rate determination or wage systems described below are presented for the purpose of showing the improved methods used in piece-rate making in three of the largest and best known men's clothing establishments in this country. The aggregate number of employees of these three firms is over 11,000.

ESTABLISHMENT NO. 1.

The relations between this firm and its 3,100 employees are governed by a collective agreement with the Amalgamated Clothing Workers of America, originally signed January 3, 1916, and renewed for a two-year period January 3, 1917.

The agreement establishes three separate and distinct agencies—a trade board, a wage board, and a board of arbitration.

The trade board is composed of 15 members, seven elected by the employees from their own number and who are affiliated with the Amalgamated Clothing Workers of America, seven representatives of the company, and an impartial chairman chosen by both

parties. All complaints except those relating to wage questions are to be referred to this board.

The wage board is composed of five members, two representing the company, two the employees, and the fifth being the chairman of the trade board referred to above. The wage board has exclusive jurisdiction over questions involving rates of wages and earnings.

The board of arbitration consists of three members, one representing the firm, one the Amalgamated Clothing Workers of America, and the third being chosen by mutual agreement of these two. Either of the parties concerned may appeal from any decision of the trade on the wage board to this board of arbitration. All decisions rendered by the board of arbitration are final and binding upon both parties throughout the life of the agreement.

Nine-tenths of the workers of this establishment are paid by the week. Established weekly rates are subject to increase provided the productivity of the worker exceeds the standard of output set by the company on his work. Every operation on each of the various products of the company is standardized in terms of time and money. The time standard is arrived at by time study and observation, liberal allowances being made for delays attributable to factors not within the control of the worker. The money standard is arrived at by multiplying the time standard by a specific rate, the latter being the average earnings per hour over a number of weeks of a group of operatives.

The company keeps records showing the actual weekly output of each employee. At the end of the week the actual money value of the work involved in each employee's output is computed on the basis of the standard described above. This value is known as the "amount earned" and is sought for the purpose of comparing it with the weekly wages paid to the worker. If the "amount earned" exceeds the weekly wage which he receives he is credited with a "gain." Such "gains" serve subsequently as a basis for the granting of increases in weekly rates to the employee. If, however, the "amount earned" is less than the weekly rate a "loss" corresponding to the difference is registered on the worker's record. The names of employees with frequent "losses" on their record are brought to the attention of the shop representative of the union (the shop chairman), whose duty it is to take up the matter with each worker in question, calling to his attention the necessity of increasing his efforts. If still further "losses" appear the matter is brought to the attention of the wage board. In such instances the employee concerned is requested to appear before the board to state the reasons for his inability to maintain the prevailing standard of efficiency. If his explanation appears reasonable to the board the matter

is closed. Failure to present a satisfactory explanation results usually in disciplinary action by the wage board, in the form of short suspension, or, in very extreme cases, in discharge. As a matter of fact, discharges for "losses" occur very infrequently, the usual disciplinary action being limited to a reprimand or, in more extreme cases, to suspension for a short period of time.

It is the custom of those in charge of the labor department of this firm to inspect, from time to time, the individual records of employees in order to grant increases to those deserving them. Increases of wages may also come through requests on the part of the workers. Such requests usually take the form of complaints, and are made through the office of the union. If the company declines to grant an increase requested, the matter is referred officially to the wage board. Very frequently, however, the representatives of the parties on the wage board reach an informal understanding without the assistance of the impartial chairman, that is, by mutual agreement and without the formal action of the board as such. In cases where the representatives of the two parties on the board are unable to reach an agreement, the impartial chairman is called upon to render a decision.

The following table shows the increases granted during the six-month period ending July 1, 1917, classified by agencies which granted them, that is, according to whether the increase was granted voluntarily by the company, informally by representatives of the two parties on the wage board, or by a formal decision of the wage board.

INCREASES GRANTED TO WEEK WORKERS DURING THE SIX-MONTH PERIOD ENDING JULY 1, 1917, BY DEPARTMENTS.

Department.	Average number employed.	Number of individual increases granted.	Increases granted by—					
			Company.		Members of wage board informally.		Formal decision of wage board.	
			Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Cutting.....	277	266	216	81.2	5	1.9	45	16.9
Trimming.....	112	116	88	75.9	7	6.0	21	18.1
Shop A.....	1,035	1,140	1,000	87.7	70	6.1	70	6.1
Shop B.....	215	157	91	58.0	7	4.4	59	37.6
Shop C.....	124	115	70	60.9	19	16.5	26	22.6
Shop D.....	304	227	211	93.0	11	4.8	5	2.2
Shop E.....	228	248	240	96.8	.....	.....	8	3.2
Total.....	2,295	2,269	1,916	84.4	119	5.2	234	10.3

During the six-month period ending July 1, 1917, the average number of employees in the manufacturing department of this establishment was 2,295. During this period a total of 2,269 individual increases were granted—that is, practically each of the employees of the company received one increase during this period.

These increases augmented the weekly pay roll of the company by \$2,347, the average increase thus having been slightly over \$1 per week. Of the 2,269 increases, 1,916, or 84.4 per cent, were granted voluntarily by the company; 119, or 5.2 per cent, were brought about informally through mediation by the representatives of the two parties on the wage board; and 234, or 10.3 per cent, were ordered by a formal action of the wage board.

## ESTABLISHMENT NO. 2.

There is no collective bargaining in this establishment, which employs about 800 women. The wage payments on all of the manufacturing processes are on a piecework basis, the actual biweekly earnings of the operatives being computed by multiplying the piece rate by the number of pieces produced. Two factors enter into the determination of a piece rate—the time allowance and the class rate. The time allowance for every operation is arrived at by careful time study. The time result thus arrived at is interpreted in terms of so many pieces per hour. To determine the piece rate for any particular operation the hourly rate of the operation is divided by the number of pieces produced in one hour. In all, seven class rates are in existence. These are as follows:

Class 1.....	25 cents per hour.
Class 2.....	30 cents per hour.
Class 3.....	35 cents per hour.
Class 4.....	40 cents per hour.
Class 5.....	45 cents per hour.
Class 6.....	50 cents per hour.
Class 7.....	55 cents per hour.

It was stated by the management that in arriving at these class rates the following factors were taken into consideration: (1) The best local market rate for similar work; (2) the relative amount of skill required to perform the operations; (3) the needs of the worker. It was further stated that as a matter of fact the rate finally determined upon is usually "about 25 per cent greater than what is thought to be the best local market rate for similar work."

The relative amount of skill involved in specific operations for purposes of rate classification is arrived at by time study and careful observation and by consultations with the superintendents and shop instructors concerned.

The needs of the workers are taken into account by a rule specifying minimum rates of 20 cents and 32 cents per hour, respectively, for female and male employees, without regard to the nature of the work performed.



Only females are employed on operations classified as one, two, and three. On operations four, five, and six both males and females are employed, and on operation seven, only males. The initial or starting rate for inexperienced hands is 20 cents per hour on operations classified under one, and 22 cents per hour for those under two, three, and four, subject, of course, to the minimum per hour specified above for males. No beginners are hired for operations classified as five, six, and seven.

Specific operations are kept in the same class as long as the methods used and the time required remain unchanged. It was stated, however, that by virtue of the progressive manufacturing methods employed by this establishment operations are frequently so modified that they can be removed from one class to another and thereby made subject to the rate of the new class. Such removals do not, however, result in any pecuniary loss to the employee concerned, because in such instances it is the policy of the company to guarantee to the employee concerned a certain minimum as a retainer. The amount of this retainer is the difference between the new rate set and the old rate. This retainer is paid to the employee until he is transferred to an operation on which he can earn at least as much as he did prior to the change.

The newly hired worker receives the initial rate of the class in which his specific operation falls until he is able actually to earn 30 per cent of the standard class rate. Upon arriving at this point he is put on a so-called "retainer" basis, the retainer being an amount guaranteed him in addition to his actual piecework earnings. The amount of this retainer for the first week is 70 per cent of the standard class rate per hour plus 2 cents. The amount of the retainer is reduced by 2 cents each successive week on all operations except pressing, in which case it is reduced 5 cents, until it is wiped out. Thus the learner on the retainer basis is able for the first week to make actually more than the standard rate for his class of work, and, if his operating skill during the succeeding weeks increases faster than 2 cents per hour (5 cents in the case of pressers), he will be able to continue to make more than his class rate as long as he remains on the retainer basis. This system is designed to encourage the learners and at the same time leave some incentive for bringing their operating skill up to the standard.

For the purpose of determining exactly the amounts of time involved in specific operations scientific time tests are resorted to. These studies are made under the immediate direction of a competent time-study man. Only highly efficient employees are selected as test hands. The previous efficiency record of the test hand must be continuous and uniform, the latter being easily evident from his or



her earnings over a certain number of weeks. The dexterity of the test hand and the ability to correctly follow instructions are also considered in the selection.

For the purpose of closer time study each operation is broken up into numerous component elements. Each element is timed separately in the order of its regular appearance in the course of the operation; that is, the tests are continuous for each complete operation. From 40 to 50 separate tests are usually resorted to in order to arrive at the final time allowed. The results of one such test may be cited as an illustration. It was necessary to determine the exact amount of time involved in an operation known as "pockets tacked on trousers." This operation, for which a time allowance of 0.84 minute was subsequently established, was split into 11 distinctly separate elements, as follows: (1) Pick up trouser, place in lap, open, place left leg in machine; (2) tack underside of side pocket; (3) move trouser over, tack lower part of side pocket; (4) move trouser over, tack left side of back pocket; (5) move trouser over, tack right side of back pocket; (6) place left leg on ledge, pick up right leg, place in machine; (7) tack left side of back pocket; (8) move trouser over, tack right side of back pocket; (9) move trouser over, tack upper part of side pocket; (10) move trouser over, tack lower part of side pocket; (11) place right leg on top of left, fold, place pair on lower deck of table.

The entire operation, as well as each of the elements involved in it, was timed by 40 successive experiments.

After recording the test results, averages based upon all performances for each of the 11 elements were calculated. The sum of the averages for all these elements was 0.795 minute. This time was then established as the average time for the entire operation in question.

The pure or flat time involved in each operation is known as the standard time. It varies from the average time shown above, being based in a great majority of instances upon the modal performance time—that is, the time within which each of the elements of the operation is performed most frequently. Seven-tenths of one minute was found to be the standard time for this operation.

In order to arrive at the final time allowed, or "allowed time," certain factors which delay the work and which are not within the control of the operative have to be considered. The number of these factors varies, of course, with the specific operation in question. In this instance certain time allowances were made for (1) changing the work, (2) personal needs, (3) needle and bobbin, and (4) extra machine time, the last two involving adjustments that the operative has to make in the bobbin and threading of the needle, and in the

oiling, fixing belt, etc., of the machine. The percentage of the pure or standard time allowed for each of these unavoidable delays was 5, the total being 20 per cent, or 0.14 minute. Thus the "allowed time" for this operation was established as 0.84 minute, i. e. the standard time, 0.70 minute, plus 0.14 minute.

Aside from the cutting, 91 different operations, each of which is performed by a different operative, containing in the aggregate 653 separate elements, are involved in the making of a stock sack coat. The standard time for the manufacture of one of these garments is 79.1 minutes, with an additional time allowance for unavoidable delays of 14.52 minutes, making the total or final time allowed 93.62 minutes. This is equivalent to the continuous work of one operative for slightly over one and one-half hours. The making of a pair of ordinary trousers involves 43 operations performed by as many different operatives and takes 33½ minutes; that is, is equivalent to the continuous work of one operative for a period of slightly over one-half of one hour.

The management of this establishment realizes that such time standard will appear as unusual to persons familiar with the low efficiency standards usually found prevailing in the men's ready-to-wear clothing trades. Standards such as these could not possibly be attained without a highly effective working organization and scientific methods of management. The effectiveness of the working organization of this establishment is achieved, it was stated, through the existence of the following: (1) standardization of equipment of machines, tools, and accessories; (2) proper placement of equipment; (3) efficiency and speed of machines; (4) motion studies of operations resulting in an elimination of wasted effort; (5) installation of accurate methods for the routing and handling of product; (6) functional foremanship, which in this instance expresses itself in the existence of specialized foremen in charge of production, quality, inspection, and detailed and careful instruction.

#### ESTABLISHMENT NO. 3.

Rate making in this establishment, which employs 7,500 workers, is governed by the provisions of a collective agreement between the firm and its employees represented through the Amalgamated Clothing Workers of America.

The method for the settlement of grievances, including those involving piece-rate controversies, under this agreement is as follows: When a grievance arises in any of the numerous shops of the company the complainant is obliged to report promptly to the shop representative of the union. This union representative, called the shop chairman, then takes up the matter with the shop superintendent, and these two endeavor to adjust the difficulty. In the event that the shop chairman is not satisfied with the action of the super-

intendent he reports to the union office, giving all the details of the case in dispute. The official representatives of the union and of the company, to whom the complaint is then referred, are known as deputies. When shop officials report a disputed complaint to their respective deputies, the latter make a detailed investigation on the premises by visitation or by taking testimony and endeavor to adjust the matter. In the event of failure to agree on the part of the deputies they are required to certify the case to the trade board for trial, agreeing, if possible, on a statement of the facts involved in the controversy.

The trade board is the primary board for the adjustment of all grievances, and has original jurisdiction over all disputed matters arising under the agreement and the decisions relating thereto, considering and disposing of all controversies when regularly brought before it.

Decisions of the trade board may be appealed from to the board of arbitration, which consists of three members, one of whom is chosen by the union and one by the company, the third member, who is also chairman of the board of arbitration, being chosen by the mutual consent of the parties. This board has full and final jurisdiction over all matters arising under this agreement. By agreement between the representatives of the union and the company cases may be heard and decided by the chairman of the board of arbitration alone.

Piece-rate disputes usually arise in one of the following ways: (1) Employees working on a specific operation may complain that the work on the garment is slower and more difficult than it was expected to be, necessitating a higher piece rate in order to maintain their earnings; (2) the company may desire to substitute piecework for timework. It was stated that about two-thirds of the formally adjusted piece-rate cases originated at the request of the company. This is due to the fact that in the opinion of the management the piece-rate system of wage payment results in greater efficiency than timework.

Piece-rate complaints filed by employees proceed through the regular adjustment channels already described: Shop chairman and superintendent, deputies, rate committee, trade board, board of arbitration. Unless specified by the agreement, no piecework is permitted if not mutually agreed upon by the parties or ordered by either of the boards. Pending the introduction of piecework the manufacturing is to be done on a time basis. Requests on the part of the company for the substitution of piece for time work, or for the making of new rates, are not considered by the representatives of the parties on the factory floor—the shop chairman and the shop superintendent—being referred directly to the rate committee.

Responsibility for making piece rates is lodged primarily in the trade board which delegates this power to a rate committee composed of three members—a representative of the company, a representative of the workers, and the chairman of the board. As a matter of practice, the work of rate making is carried on almost exclusively by the two members representing the company and the employees. While some cases are brought before the full committee, such instances are exceptional. Of a total of 163 piece-rate adjustments made during the four-month period ending August 1, 1917, 115, or more than two-thirds, were made by the two members of the rate committee without the assistance of the chairman.

Every piece-rate controversy is taken up in the first instance by the two members of the rate committee, who attempt to reach an agreement. If an agreement is reached, a specification of the work to be performed and the rate to be paid is prepared and signed by both representatives. In case of disagreement the matter is referred to the full rate committee, which makes a decision fixing the specification and rate. After the specification and rate have been authorized by the rate committee, there can be no alteration of the terms by either of the parties without permission from the rate committee. If this decision is unsatisfactory to either of the parties, it may be appealed from to the board of arbitration.

New rates are provisional and temporary, subject to review after a sufficient period of trial to determine their merit.

As an illustration of the methods usually followed by the rate committee in determining piece rates the following adjustment may be cited. A rate was to be set on the finishing process of a new garment—coats for officers of the Army. On regular coats this process consists of the following operations, the rates on which are standardized: (1) Felling the lining around the sleeve head; (2) felling the lining at the bottom of the sleeves; (3) felling the lining at the shoulder seams; (4) felling the top collar to lining; (5) felling down the under collar; (6) sewing on hanger; and (7) sewing on the label. This process, which covers all the seven operations enumerated, is paid for at the rate of \$17.71 per 100 coats. The necessity of setting a new rate for the finishing work on military coats arose because of the fact that the finishing specifications on such coats called only for standard operations (1), (2), (3), and (7). The problem then was to deduct from the standard rate of \$17.71 the values of operations (4), (5), and (6). The values of (5) and (6) were easily agreed upon on the basis of former decisions made by the trade board specifying \$3.06 and \$0.90 per 100 coats for these operations. The value of operation (4) was arrived at by an actual time study and found to be \$1.25 per 100 coats. The final rate on the

finishing operations on military coats thus arrived at was \$17.71, less \$3.06 for operation (5), \$0.90 for operation (6), and \$1.25 for operation (4), an aggregate deduction of \$5.21 or a rate of \$12.50 per 100. This rate, however, was not satisfactory to the representative of the employees on the rate committee, who thought that a rate of \$13.50 would be fairer to the employees. The final rate agreed upon by the rate committee was \$13 per 100 coats.

In the determination of piece rates in this establishment time studies are resorted to frequently. If the results of such studies should be unsatisfactory to either of the parties, or to the chairman of the rate committee or of the trade board, the figures thus arrived at are sometimes modified in accordance with opinions of members of the committee or of expert tailors called in on such occasions for consultation. Such modifications, as a rule, consist of allowing some additional time in order to take into consideration possible variations due to the personality of the worker. It has been stated by the representatives of the company, and confirmed by the chairman of the trade board, that in a majority of the piece-rate adjustments the employees are given the benefit of the doubt.

The present annual output of this company in round numbers is 1,000,000 suits, 300,000 overcoats, and 150,000 extra trousers. Nine-tenths of the suits consist of three pieces—coat, vest, and trousers. Notwithstanding the high quality of the clothing manufactured by this firm the processes of manufacturing on the bulk of the goods are standardized to the point where a piece rate, once established, may be in force for years. Such a standardization eliminates the necessity of frequent controversies regarding piece rates. Approximately 40 per cent of the vests and 90 per cent of the trousers are termed "regular" and are made ordinarily without any possibility of piece-rate disagreements. Only now and then, on account of some change in manufacture, a new piece rate has to be set on garments termed regular. Only 6 out of the 163 piece-rate settlements mentioned above related to the regular product.

Models other than those termed regular are known as "feature stuff." The principal characterization of this "feature" output is shown by its name; instead of being more or less standard its minor details vary frequently, being subject to changes in style.

The basic operations involved in the making of regular coats, vests, and trousers are involved also in the manufacture of feature goods; therefore comparatively few piece-rate difficulties arise regarding basic operations even on feature garments. The features usually constitute small variations in the make-up of specified minor parts of the product—such as pockets, belts, collars, etc., and never cause a rerating of the entire garment. Instead of remaking the rate on the



entire operation the difference from the standard operation is measured and so-called "differentials" arrived at for deductions or increases.

The director of labor of this concern stated that the principal defect of this scheme for piece-rate making lies in its cumbersome-ness; too many preliminary efforts must be made before the matter may reach the trade board. Attention was called to the fact that it frequently takes from two to three weeks to get a formal piece-rate decision made by the trade board. In the meantime the work must be either continued on a time basis, which, in the opinion of the management, is highly expensive because of its inefficiency, or temporarily laid aside. The solution of this difficulty, it was said, may be found in an understanding between the workers and the company which would grant to the latter the initiative in introducing piecework and tentative rates, subject, of course, to protest by the employees and to appeal to the trade board or, if necessary, to the board of arbitration. If the action of the company under such a rule should be found to be contradictory to some of the principles of the agreement its decisions might be declared void and the former status resumed. If the rate set were considered too low an increase with back pay could be ordered. To protect the employees still further priority of hearing and trial before the trade board could be accorded to cases involving protests against tentative piece rates. Such a system, it was said, would enable the company to employ more efficient manufacturing methods and at the same time protect the employees from any possible unfairness that the substitution of piece for time work might incidentally bring.

The representatives of the unions concerned object to giving the company the privilege of setting tentative rates because it is their belief that such a system might easily result in a decentralization of the rate-making system. Numerous tentative piece-rate readjustments would take place as rapidly as any section head felt the necessity for a change. An increase in the number of rate cases would make it impossible for the union officials to control the rate situation. The number of shop stoppages would be bound to increase under such a system. This would naturally have a tendency to shatter the solidity of the entire agreement. The representatives of the employees are of the opinion that the number of serious piece-rate difficulties has been rather small and that the privilege accorded to the company to specify priority of hearing and trial for certain rate cases prevents the really important rate controversies from dragging on for an unreasonably long time.

The chairman of the trade board under the present and former agreement is of the opinion that, generally speaking, the existing



piece-rate making system is satisfactory, and that the setting of tentative piece rates by the company would contribute little to the improvement of the rate-making system or to efficiency.

That the method of adjusting piece-rate controversies specified in the agreement and described in detail above has been more satisfactory than any other method ever tried in the shops of this company is conceded by all the representatives of the company and of the working people. Within the organization of the company, however, there seems to exist some difference of opinion regarding the desirability, above discussed, of permitting the company to put in tentative piece rates subject to review by the trade board. The official representative of the company on the rate committee was formerly in favor of an amendment in the agreement to this effect, purely as a means of clearing up speedily a large accumulation of cases which the cumbersome machinery of rate making seemed unable to handle. During the past year, however, a sustained effort has been made by all concerned to clear up this accumulation and the need for a change in method is not so pressing. It now seems probable that the existing machinery will be able to dispose of new cases with a fair degree of promptness.

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## EMPLOYERS' HOUSING IN THE UNITED STATES.<sup>1</sup>

BY LEIFUR MAGNUSSON.

### INTRODUCTION.

Company housing in the United States dates from the beginning of the factory system. The colonial manufacturer who established his mill where water power was available usually found an undeveloped country, and by force of necessity had to provide accommodations for the labor which he brought to his establishment.

A good many early housing developments were found by the agents of the United States Bureau of Labor Statistics in the present study of industrial housing. One project connected with a cotton mill in Wilmington, Del., dates back to 1831.

Before undertaking its investigation the bureau secured from various sources a list of firms which did housing work for their employees. This list contained over 700 firms, but without question was incomplete. A thousand would probably be a conservative estimate of the number of industrial employers in the United States who do housing work.

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<sup>1</sup> Summary of a forthcoming report of the United States Bureau of Labor Statistics on Employers' Housing in the United States.

Altogether 213 companies were covered in the study, including subsidiary companies of large holding corporations which were classed as separate companies. The companies included controlled 423 establishments or plants and employed 466,991 men, of whom 160,645, or 34 per cent, were accommodated in company houses. Boarding houses were not included in this study. The data gathered were generally for the year 1916. It can be readily understood that the investigation was not comprehensive but merely representative, though it covered a considerable extent of territory, as is readily seen from Table 1 (p. 49).

#### THE COMPANY TOWN.

The survey revealed that town planning has not been given any great consideration in the large majority of cases; technical town planners had been consulted by 15 per cent of the employing companies studied. The idea of consulting town planning experts, furthermore, is of recent origin; and the employment of such experts seems relatively more frequent on the part of manufacturing employers than of mine operators. Model towns, with few exceptions, are of recent origin.

Employers are little hampered by existing buildings and city development, in the planning of their housing projects, for of the 236 developments for which separate information was secured, 157, or two-thirds, are reported as located on undeveloped land requiring the laying out of new towns. Streets in company towns are almost without exception ample in width, frequently if anything too wide, making the cost of original construction and upkeep unnecessarily high, frequently resulting in untidiness. The prevailing width for streets is 45 feet, and for alleys 15 feet.

The technical districting of land areas, restricting the land for special uses, is not generally practiced by employers in laying out company towns. There is always a natural tendency, however, to place stores at the center of the community and to group houses around that center.

Aside from restrictions against the keeping of saloons or the following of noxious trades contained in all leases and deeds of sales, such other limitations as are attempted relate to the keeping of domestic animals, type of fences and outbuildings, type and cost of house, etc.

In the matter of race restrictions, one employer alternated the negro and immigrant families in his houses, declaring his purpose to be to avoid too great clannishness and quarreling of neighbors.

Negroes are always segregated in the South, as are Mexicans in the southwestern company towns.

Public utilities are provided and certain governmental functions are exercised by the employing companies themselves in the large majority of cases in the 236 communities studied. And when the agency providing the utility is a private company, such company is frequently a subsidiary of the employing company, or controlled by the same individuals who control the employing company. No water system other than wells or hydrants outside are provided in 14, or 6 per cent of the 229 communities reporting; no sanitary sewers in 91, or 40 per cent; no storm sewers in 116, or 50 per cent; no electric lights in 39, or 17 per cent; no gas in 173, or 76 per cent; no street-paving in 103, or 45 per cent; and no sidewalks or gutters in 43, or 19 per cent of the communities studied.

In over one-half of the 232 communities reporting, street cleaning and lighting, fire protection, garbage collection, sanitary regulations, and restrictions upon the use of the land for stores, sale of liquors and type of residences, etc., are functions of the employing company and not of the community. In 85 cases the company also provides the police protection of the community. Generally speaking, employers merely assist in the provision of schools and churches.

The chief characteristic noticeable in every company town is its uniformity, due to the tendency to erect a certain uniform style of house and to lay the town out along rectangular lines of survey. The company town suffers from a wrong kind of deliberate planning—wherein it does not differ greatly from the noncompany town—largely because the housing work is incidental to the principal business of the employer and does not receive consideration in proportion to that given the purely business part of the employer's enterprise.

Another characteristic of the company town which it shares with most other communities has been its disregard of the advantages of vegetation, planting of trees, grass, and shrubbery. Bare court yards and surroundings are not only unsightly, but as one large coal operator in Pennsylvania pointed out they are a menace to health as the dust and dirt which generally collect are prolific carriers of disease.

As land is plentiful in practically all company housing developments, with the exception of a few in the Eastern States located within the limits of large cities, there is found no tendency toward crowding on lots. The narrowest lots (one-third being 20 and under 25 feet in width) found are for houses built by explosive manufacturers, unquestionably due to the prevalence of row houses. Lots for company houses built by copper mining companies in Michigan and Tennessee and coal operators in Ohio, Indiana, Pennsylvania, West Virginia, Colorado, and Wyoming are generally 50 and

under 60 feet in width. In the mining region of the North few lots less than 50 feet wide are found, and few less than 40 feet in Alabama. Narrower lots are found in a group of certain miscellaneous industries, where one-third are under 40 feet.

#### THE COMPANY HOUSE.

The company house tends to become standardized both as respects its plan and material of construction. The standardization goes even to the matter of the color of its exterior. Certain types of houses are characteristic of different sections of the country; and in the Eastern States there is a further difference between the type of house in the manufacturing town and in the mining town, a thing which is not true in the Southern and Northern States, where there is no essential difference in the company house in the manufacturing town and in the mining town. As no company towns in the far Western States enter into this study no statement can be made as respects those sections of the country.

A dwelling, for the purposes of this survey, is defined as the family unit, the selling or renting unit, as the case may be. Thus a double house is counted as two dwellings.

Before indicating the character of the types of dwellings which prevail in the different sections of the country covered by the survey, it may be well to point out some of the general features of company houses as disclosed by the bureau's investigation. Of the 53,176 individual dwellings, 25,582, or 48 per cent, are single dwellings; 18,765, or 35 per cent, double dwellings; and 6,014, or 11 per cent, row dwellings, while all other types combined number only 2,044, or about 4 per cent of the total. The type is not reported in 1 per cent of all cases.<sup>1</sup>

Since 1881 there has been a significant development in the type of buildings erected by employers for their workmen. The prevailing type of house erected before 1881 was the double dwelling; 870, or 48 per cent, of the 1,800 dwellings erected before that date were of that type; the row dwelling was the next most common, 423, or 24 per cent, being of that type. The prevalence of the row type of dwelling declined somewhat irregularly from that time to the present, so that now it forms about 11 per cent of all company dwellings. It is noted as significant that of 3,547 houses erected by employers in 1916, 1,529, or 43 per cent, are of the row type and of 1,177 erected in 1917, 375, or 32 per cent, are of the row type. The prevalence of the row type of house before 1881 is undoubtedly due to the fact that in the early days mine operators erected thousands of one-story frame rows. The increase in row houses in 1916 and 1917 is explained by

<sup>1</sup> See Table 2, p. 50, for details.

the fact that the new company developments which were reported as of those years happened to be laid out in large cities where land is high.

The frame structure is the most prevalent style of company house, with brick less than a tenth as prevalent, and all other types of material combined even less prevalent than brick.<sup>1</sup>

The largest proportion of the company houses, 17,643 dwellings or one-third of a total of 53,176, have four rooms. A little over one-sixth (9,407) of the houses have five rooms; and an equal proportion (9,097) six rooms. That is, a little over two-thirds of all company houses are four, five, and six room dwellings. There are 160 one-room dwellings, but this is less than 1 per cent of the total.

The four, five, and six room dwellings are therefore typical-sized company houses. Of 17,643 four-room dwellings 30 per cent rent for less than \$5 a month; 40 per cent for less than \$6; 58 per cent for less than \$7; and 76 per cent for less than \$8. Of the five-room company houses 63 per cent and of the six-room houses 43 per cent rent for less than \$8 per month. Considering all company dwellings, 69 per cent rent for less than \$8 a month.<sup>2</sup> It is then quite conservative to say that over two-thirds of all company houses are well within the means of the low-paid unskilled laborer. For while no study has been made of the actual relation between wages and rent, two employers report that they limit rent to a definite percentage of wages—namely, 25 per cent in one case and 10 per cent in the other. Assuming either of these ratios to be the correct one, the estimate that two-thirds of all company houses are within the means of the low-paid worker is not exaggerated. It presupposes, on the basis of the higher ratio of 25 per cent, earnings of about \$32 a month.

It is not to be expected that a large proportion of all company houses should have such modern conveniences as a bath, water-closet, sewer connections, and water or lighting system. However, considering all company houses (53,176), 8,238, or 15.5 per cent, are equipped with bath, water-closet, sewer or cesspool, water system, and gas or electric light, and many of them with laundry tubs and hot water connections; 859, or 1.6 per cent have bath, water-closet, sewer or cesspool, or a water system; 1,917, or 3.6 per cent, have water-closet, sewer or cesspool, running water inside, and gas or electric light; and 2,534, or 4.8 per cent, have water-closet, sewer or cesspool, and running water inside. There are no modern conveniences, except running water inside, in 10,600, or 19.9 per cent, of all company dwellings, and no modern conveniences, except gas or electric light, in 2,593, or 4.9 per cent, of all dwellings. On the other hand, the

<sup>1</sup> See Table 3, p. 51, for details.

<sup>2</sup> See Tables 4 and 5, pp. 51, 52, for details.



largest proportion of all company dwellings, 18,649, or 35 per cent, have no modern inside sanitary conveniences. The facts as to sanitary equipment are not reported for 5,596, or 10.5 per cent, of all buildings included in the survey.<sup>1</sup>

While nine-tenths of all company houses are of frame construction, several employers are experimenting with construction materials of concrete and hollow tile in various combinations. A large anthracite coal operator in Pennsylvania built a group of 20 double houses (40 dwellings) of poured concrete without air spaces in the walls, but he has not found them as successful as he had anticipated. They cost more than the same style and size of brick house, while some of the tenants report them as damp, and to an observer they appear rather cold and forbidding on the inside. The plaster has peeled off in spots, and where pieces have broken off the stair coping, which is also of poured concrete, it would seem difficult or impossible to make repairs. Hollow tile with stucco exterior is being used successfully in a mining town in Arizona, and variety is being obtained by tinting the stucco various colors. A company in Pennsylvania in its housing development has experimented with the hollow-wall form of concrete construction, but the development is too recent to say as to its success. Two large manufacturers have erected some 3,000-odd houses of the ready-built frame type. While making for rapid construction, difficulty was experienced in matching parts, which may have been due to confusion growing out of a hurry arising from the urgent necessity to get something done and up at once.

*Cost of the typical company house.<sup>2</sup>*

The cost of a few typical company houses in different sections of the country may be of some interest. Costs as here given include only cost of the house—not outbuildings or land or street improvements.

The cost of the double mine-type of house in the Pennsylvania and West Virginia mining regions ranges from \$600 to \$800 per dwelling, or the renting unit of 4 to 5 rooms. A similar type of house of 5 rooms per family erected in Michigan in 1907 cost \$825. The double frame cottage in the New England States cost in 1914 from \$800 to \$1,000 per dwelling.

The 4-room miner's frame house in Ohio costs \$600 to \$800; similar houses in Colorado cost in 1914 \$750. A group of 40 was built in 1914 in Colorado for \$700 each. A cement-block house of 4 rooms in

<sup>1</sup> See Table 6, pp. 53, 54, for details.

<sup>2</sup> The costs to-day would be much greater than those given in this report, owing to increased wages and cost of materials. The increases would vary with the materials used and the locality.



Colorado cost \$650 in 1900. The simple 4-room house on open piers built in the South cost \$670 in 1917; a group of thirty-five 4-room two-story frame houses built in northern Minnesota cost in 1910 \$750. A 4-room, one-story, one-family house of the ready-built type cost \$1,500 in 1913 in Virginia; a 5-room ready-built house of a similar type erected in New Jersey cost in 1915 approximately \$1,200. A 4-room ready-built house erected in 1914 in Pennsylvania by a certain railway-equipment company cost \$1,500. A 4-room, one-family frame bungalow, neither ceiled nor plastered inside but having inside sanitary conveniences, erected by companies in Arizona, costs \$1,000. These costs of typical 4-room company houses are cited merely by way of example, but even these few examples show how widely costs vary and how dependent they are upon local conditions and changes in the materials market from time to time.

#### MAINTENANCE.

Good company developments are found to be greatly marred by a failure to maintain the houses and their surroundings properly. Relatively poor housing accommodations are redeemed to an extent by a good system of upkeep. Employers are practically one in their belief that problems of maintenance are the most important ones for the success of any housing undertaking. The old style type of miner's house in anthracite and bituminous regions of Pennsylvania is being rejuvenated, as it were, by repainting and repair, construction of whitewashed fences, the planting of trees and shrubbery, and the encouragement of gardening. Streets and alleys and backyards are kept clean by a system of garbage and sanitary collection.

It is the policy of about a third of the companies included in the survey to encourage gardening by means of prizes, and it is found that once gardening has been started in this manner it tends to maintain itself. Another method of encouraging gardening is by the distribution of handbooks on the subject. A few employers report the giving of prizes a failure, and suggest instead the giving of a flat bonus to each tenant who keeps a garden of a specified standard.

As a preliminary to the inauguration of successful gardening it is usually necessary to erect fences; for almost inevitably it is found that a tenant who starts a garden will build a fence about his premises. Where the tenant is left to make his own fence a nondescript makeshift is the usual result, a fence made of the odds and ends of loose boards, pieces of corrugated iron and waste wire as a rule. Uniform company fences, on the other hand, add much to the appearance of a town.

Some companies, however, are able to enforce a rule of no fences; and when that is the case all yards are kept well turfed and mowed,

and provision made for supplying trash and garbage receptacles, which are regularly removed and emptied.

The repair and upkeep of company houses are generally committed to the repair department of the establishment, with the result that house repairs are given secondary consideration to general plant repair. Several companies, on the other hand, have found it better to keep a separate repair department in connection with their real estate or housing department; the houses are then given the proper attention, regular men being charged with the duty of repair and maintenance.

#### THE HOUSING INVESTMENT.

With few exceptions the housing work is conducted as a general part of the employer's principal business; the accounting and administrative work connected with it is done in the general office of the employer and by a staff which has other duties to perform. In some instances a special department has been created for the conduct of the work, usually termed the land department or land agent. Where the housing is conducted by a subsidiary company the housing enterprise usually becomes more elaborate and is found more generally in connection with a model village development.

Although the largest proportion of company housing is done directly by the employer as a general part of his business, there is discernible a slight tendency toward the indirect method of the subsidiary company or the real estate company controlled by stock ownership of the employer.

Out of 213 different employers canvassed in the inquiry, only 33 reported the practice of constructing and selling houses to their workmen. The practice of selling is finding its limited vogue among the more highly specialized and permanent industries. Mine operators do not encourage their employees to buy houses because the industry is not permanent, as mines gradually become worked out after a period of years.

Of the employing firms scheduled, only one encouraged the employees to take out a life insurance policy to guarantee the payment of his loan in the event of death prior to final payment. The plan is optional, yet about 51 per cent of the purchasers have taken advantage of it. Three companies have been found which are trying to prevent speculation in the houses which they sell to their employees. One large manufacturer in Ohio aims to have the speculative increase accrue to the employee. This is done by basing the monthly installments of the purchase price for the first five years on the initial real estate value of the property. This value is placed at 25 per cent above the actual cost price to the company; and if at the end of the five years the employee is still with the company there

is returned to him the difference between the real estate value and the cost value of the house. All payments after that date are made on the basis of the actual cost price of the property.

Another method of preventing speculation is to require the erection within a limited time, usually less than a year, of a house upon the lot sold to an employee. This method is in fact, however, only a temporary limitation against speculation.

*Cost of company housing.<sup>1</sup>*

To an employer who expects to undertake housing work the first consideration is usually the cost. On this point the survey is able to throw some light, 60 different companies having reported the total original cost of all company houses, not including land, as \$15,948,502. This amount is 28 per cent of the average annual pay roll of these companies for a five-year period (1911-1915). The houses accommodated 42 per cent of their employees, a factor which must be taken into consideration in comparing the cost of the houses with the pay roll. The proportion which the cost of the houses forms of the pay roll (28 per cent) is to the proportion of employees housed (42 per cent) as 2 is to 3. For example, if an employer proposes to house one-half of his employees he may expect to invest in houses, not including land, an amount equal to one-third of his annual pay roll; if he proposes to house all he will need to invest an amount equal to two-thirds of his annual pay roll. Separate industries show considerable variation because in some localities climatic conditions require a more substantial construction or because better houses than the average are sometimes built. Thus for one company in a group of miscellaneous industries, where a better class of house has been built, having modern conveniences and considerable architectural variety, the total original cost of the company houses is 52.3 per cent of the annual pay roll for a five-year period, while only 27.8 per cent of its 1,800 employees were housed.<sup>2</sup> This proportion is the reverse of that shown above for the 60 companies investigated taken together.

On his housing investment the employer gets a gross return of 8.3 per cent, a percentage based on the original cost of all houses as reported by 60 different companies. The total original cost of the houses was about \$15,126,125. Reports from eight different coal companies in Pennsylvania show a gross return of 11 per cent on a total inventory value of \$2,855,912. In calculating these percentages average annual rent receipts for a five-year period (1911-1915) have

<sup>1</sup> The relation of cost of housing to amount of pay roll has probably changed since the period covered by this report. The figures given can be taken only as a rough approximation of relative costs to-day.

<sup>2</sup> See Table 7, p. 55, for details.

been used. The gross returns received by companies in different sections of the country and for different industries vary considerably—e. g., from a maximum of 20 per cent on company houses of certain mining companies in Alabama to 6.2 per cent on the houses belonging to five steel companies in Pennsylvania and Ohio.<sup>1</sup>

*General aspects of company housing.*

Employers undertake to house their workmen primarily because there is a dearth of houses. Only in two industrial villages were there found vacant houses at the time of this survey, and that was because the houses were obviously bad. Aside from the immediate necessity for more houses, other reasons moved employers to maintain at least a nucleus of company houses. There was first the need of certain emergency men near the plant for the sake of added safety (as in mine operations in case of fire or accident); the desire for a stable supply of labor, married men particularly; and the belief that a more efficient labor force would thereby be secured.

Some of the reasons given are as follows: It pays as a business proposition; stockholders interested in real estate company which built the houses; property bought for plant extension (which shows the housing enterprise was merely an incidental feature); feeling that employer owes employee something; as an experiment; to prove out factory village plan as a new theory; to promote general welfare of mankind; and to obtain a supply of foreign labor.

It is extremely difficult to say whether employers secure all the ends in question. Certainly they do not supply nearly enough houses for all their labor force, as only one-third of their employees are accommodated in company houses. The cotton mills of the South house relatively the largest proportion of their labor supply, namely 71 per cent, followed by soft-coal mine operators in all sections of the country, who house 62 per cent. The lowest percentage housed, or 15.9 per cent, is in the copper and gold mining regions of the Southwest. This is due to the fact that the unskilled Mexican laborer is not generally housed by the companies in this region.<sup>2</sup>

While 165 out of 213 companies stated that their practice is to supply houses to all classes of their employees, preference is naturally given to men most difficult to retain; that is, the higher paid skilled workmen. No definite data are available to show what proportion of each particular class of labor is housed in company houses.

Practically all companies state that they are satisfied with the results of their housing work; only a few report an unfavorable experience, the commonest complaint being that the housing business is unprofitable. There were received altogether some 350 replies to

<sup>1</sup> See Tables 9 and 10, p. 56, for details.

<sup>2</sup> See Table 1, p. 49, for details.

the inquiry asking for the results to employers of their housing work. Arranged according to the frequency with which they have been noted, the results of company housing are declared to be as follows: (1) Secures a better class of workmen, (2) greater stability in the supply of labor, (3) reduction in the number of floaters, (4) better living conditions, (5) greater loyalty from employees, (6) more contented and (7) more efficient workmen, (8) better control of the labor situation (that is, hire and discharge with greater freedom), (9) attracts married men, (10) greater regularity of employment, (11) a better house for less money for the workman, (12) brings profit to the company, (13) facilitates part time, and (14) serves to advertise the company and to keep it favorably before the public. From this statement of results it is quite plain that housing is probably one of the most important factors in maintaining a steady supply of labor; that is, it is a factor in reducing labor turnover, a problem which is now receiving a great deal of attention from employers.

As this survey was not conducted as a house to house investigation, it has not been possible to secure any information concerning crowding in company houses. Incidentally, some light, however, has been thrown upon this question. A certain cotton mill in the Southern States required that each house should provide one employee per room. Furthermore, in general there is disclosed no policy on the part of the employer to restrict the keeping of roomers and boarders. Only a few of the leases out of a considerable number examined contain such restriction.

A housed labor supply is a controlled labor supply. Employers are in a position carefully to select their tenants from among their most desirable employees as there is always a dearth of houses and a long waiting list of applications. This control of the labor situation by the employer through the company house is most conspicuously brought out in the brevity of the notice to vacate contained in the rental lease which the employee signs, as also by the general practice of using no written lease. Many leases contain the stipulation that the tenancy of the house is for the period of employment only. Under such circumstances it has been held by a Federal court that no notice to vacate the premises is necessary.<sup>1</sup> On the whole, therefore, both the formal leases and the informal lettings show that the landlord and tenant relation of the employer and the employee can be severed upon short notice or upon no notice at all; it is quite informal.

In addition to the brevity of the notice required, the provisions of leases as to the rights of third parties to have access to the premises

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<sup>1</sup> *Hackett v. Marmet Co.*, 8 U. S. App. 149.



become of great importance in times of strikes. Such provisions as the following are contained in five leases submitted:

Necessary ingress and egress over the adjoining premises of the lessor to reach the nearest public highway is hereby given to the lessee and members of his family living with him. A way of ingress and egress may, however, be designated by the lessor to the enjoyment of which lessee and his family shall thereafter be restricted; and the lessor may at any time forbid ingress and egress over adjoining premises of the lessor to reach the leased premises to any or all persons other than the lessee and the members of his family living with him.

#### CONCLUSION.

Company housing is, therefore, not merely a problem concerned with the provision of more houses for industrial employees; it affects not only the fundamental relations of employer and employee, but it also has wide social significance.

Many employers frankly recognize that a social responsibility rests upon them. Through their control of community streets, lights, public utilities, houses, recreational centers, and the industry which supports the economic life of their community employers are in a position to control the character of the community. The rules promulgated by the employer are readily enforceable as they carry with them the threat of discharge from employment.

It is difficult to see how this responsibility can be avoided in a mining town. The isolation of mining towns, the impermanence of many of them, the shifting character of the labor force, the absence of local self-government, all cumulate to throw the responsibility upon the employer. In a manufacturing community, usually placed near populous centers where community life already exists, and where other agencies are already established to provide community needs, the responsibility of the employer is not so complete. It is therefore not necessary for him so thoroughly to control or dominate the life of the community.

But whether in the isolated mining community or in the populous city center the employer is placed in an advantageous position in relation to the housing problem. He knows the purposes which he wants his community to serve and can therefore lay it out with forethought, take advantage of the advice of experts, and consult town planners, architects, and large-scale builders. He knows how many families he will need to supply with houses; that is, he can gauge the supply of and demand for his houses. He can build on a large scale so as to cut down costs. He knows the type of labor he will want to house and can erect his houses to supply the needs of that particular class of employees.

This survey has shown quite clearly that the employer has had both successes and failures in this work. Too little attention has



been given to the layout and arrangement of the company town; there has been a tendency toward uniformity in the type of house and its arrangement on rectangular streets; there has been a failure to study the desires of the workman in the matter of the type of house to be provided. Maintenance has been neglected even where good houses have been originally provided, and restriction in the matter of keeping roomers and boarders has been almost utterly disregarded.

The survey reveals that as regards size, the 4, 5, and 6 room houses are the more prevalent, but at the same time the conditions which determine the best type of house to construct are varied—the character of the labor to be housed, native or immigrant, skilled or unskilled, high paid or low paid; climatic conditions; accessibility of material; building costs; and availability of building labor. It is, nevertheless, possible to standardize the interior plans of houses of different sizes which appear to have established themselves as most acceptable, thereby reducing costs and securing rapid construction. But a standardized interior need not mean a uniformity of exterior. It is possible to avoid uniformity in several ways, among which may be suggested careful town planning; judicious use of a few curving streets, which tend to minimize the monotony of similar houses, as no long vistas are exposed; and introducing variations in the exterior of the houses. One employer, in fact, has a standardized plan for a brick house, for which he has 14 different elevations.

This exterior variation may be produced (1) by alternating the position of houses in relation to the street, as, for instance, in the case of a gable house, turning the gables to the street in one instance and the side in the next; (2) by variation in outlines of porches and dormer windows; (3) by alternating houses with different forms of roof—hip, gable, gambrel, or flat; (4) by alternating single and double houses; (5) by variety in color; and (6) by the use of varying types of material—frame, brick, concrete (poured concrete or block construction), and stucco work upon frame in differing combinations.

And finally, the dreariness of many company towns is remarkably reduced if they are properly maintained and regard had to the uses of vegetation. There should be no excuse for the tolerance of filth and disorder—and this is something upon which all employers are agreed.

Touching the evils which arise from the dual relation of landlord and employer, it should be stated that many employers are desirous of avoiding the evils of this relationship as much as possible, and decry all forms of paternalism. This landlord-tenant relationship is being partially obviated by many employers by separating the housing business from the general business—i. e., by organizing the hous-

ing under subsidiary companies more or less detached from the principal business. Many model towns are now conducted by subsidiaries of the principal company. The consequent tendency is for the employer to concern himself as little as possible with the landlord business.

Some companies are abandoning the method of collecting rent or installments of purchase price by deducting from wages due, or at least are permitting the employees to exercise their choice in the matter. The employee is also now more frequently being given the choice of renting or buying his house from the employer.

One company suggested the unique possibility of having a joint trusteeship of the buildings funds, where houses are sold, in the hands of a board on which there is a representative of the company and also a representative of the employees who are purchasing the houses.

Finally, there is the possibility, indeed, the desire on the part of some large corporations to surrender the distinctly community functions to the independent control of the community itself. A model mine town in the soft-coal region of Pennsylvania was erected from the ground up by the employing company and about a year or two later was turned over to the community after the inhabitants had voted for incorporation. Another employer—a steel company—left it to the employees to place restrictions upon the property, but in this particular community only a building-line restriction was established, and conditions reverted to a state of disorder and untidiness. Thus there are absolutely controlled company towns where conditions are ideal and others where conditions are disreputable. On the other hand, there are small industrial towns without any company control, the companies confining their housing activities to a minimum, where conditions of disorder and community slothfulness prevail and where high ideals and efficient community control exist.

The accompanying tables give in statistical form the principal results of the investigation. Following the tables are a number of illustrations showing certain features of company housing in a few sections of the country.

TABLE 1.—SCOPE OF THE HOUSING INVESTIGATION.

Industry group.	Number of companies.	Number of establishments.	Number of employees.	Number of employees housed.	Per cent of employees housed.
Bituminous coal mining:					
Pennsylvania and West Virginia.....	32	<sup>1</sup> 114	78,218	43,877	56.1
Ohio and Indiana.....	3	4	1,287	688	53.5
Alabama, Tennessee, and Kentucky.....	24	29	<sup>2</sup> 18,694	<sup>2</sup> 15,035	80.4
Colorado and Wyoming.....	5	16	4,644	3,148	67.8
Total.....	64	163	102,843	62,748	61.0
Anthracite coal mining.....	24	<sup>3</sup> 104	<sup>4</sup> 90,608	<sup>4</sup> 20,660	22.8
Iron mining:					
Michigan, Wisconsin, and Minnesota.....	10	33	<sup>5</sup> 5,433	<sup>5</sup> 1,447	26.6
Alabama.....	3	3	1,497	805	53.8
Total.....	13	36	6,930	2,252	32.5
Copper mining: Michigan and Tennessee.....	5	5	10,064	3,290	32.7
Other copper and gold mining: Arizona, New Mexico, and Colorado.....	6	6	5,398	857	15.9
Iron and steel and allied industries:					
Northern district.....	25	30	<sup>6</sup> 116,904	<sup>6</sup> 20,625	17.6
Southern district.....	3	3	3,180	930	29.2
Total.....	28	33	120,084	21,555	17.9
Manufacture of explosives.....	2	5	28,777	10,840	37.7
Textile manufacture:					
Northern district.....	6	6	<sup>7</sup> 10,624	<sup>7</sup> 2,047	19.3
Southern district.....	48	48	35,643	25,289	71.0
Total.....	54	54	46,267	27,336	59.1
Miscellaneous industries.....	17	17	<sup>8</sup> 56,020	<sup>8</sup> 11,107	19.8
Grand total.....	213	423	466,991	160,645	34.4

<sup>1</sup> One company did not report number of establishments.

<sup>2</sup> Not including 1 company with 500 employees; number housed was not reported.

<sup>3</sup> Two companies did not report number of establishments.

<sup>4</sup> Not including 1 company with 25,600 employees; number housed was not reported.

<sup>5</sup> Not including 1 company with 1,450 employees; number housed was not reported.

<sup>6</sup> Not including 7 companies with 21,050 employees; number housed was not reported.

<sup>7</sup> Not including 1 company with 700 employees; number housed was not reported.

<sup>8</sup> Not including 2 companies with 2,460 employees; number housed was not reported.

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TABLE 2.—NUMBER AND PER CENT OF DWELLINGS OF EACH SPECIFIED TYPE, BY INDUSTRY GROUPS.

Industry group.	Single.		Double.		Row.		Miscellaneous.		Type not reported.		Total.
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	
Bituminous coal mining:											
Pennsylvania and West Virginia ..	3,886	33.2	7,388	63.1	429	3.7	8	0.1			11,711
Ohio and Indiana.....	129	54.9					106	45.1			235
Alabama, Tennessee, and Kentucky	5,177	90.9	521	9.1							5,698
Colorado and Wyoming.....	1,158	93.8	54	4.4	22	1.8					1,234
Total.....	10,350	54.8	7,963	42.2	451	2.4	114	.6			18,878
Anthracite coal mining .....	728	10.6	4,923	71.8	438	6.4			764	11.1	6,853
Iron mining:											
Michigan, Wisconsin, and Minne- sota.....	915	84.9	100	9.3			56	5.2	7	.6	1,078
Alabama.....	482	92.0	42	8.0							524
Total.....	1,397	87.2	142	8.9			56	3.5	7	.4	1,602
Copper mining: Michigan and Tennes- see.....	743	81.8	162	17.8			3	.3			908
Other copper and gold mining: Ari- zona, New Mexico, and Colorado.	349	54.4	90	14.0	192	29.9	11	1.7			642
Iron and steel and allied industries:											
Northern district.....	1,655	28.9	1,302	22.8	1,865	32.6	990	15.7			5,722
Southern district.....	457	65.0	246	35.0							703
Total.....	2,112	32.9	1,548	24.1	1,865	29.0	900	14.0			6,425
Manufacture of explosives.....	1,254	39.6	170	5.4	1,740	55.0					3,164
Textile manufacture:											
Northern district.....	101	15.6	194	29.9	208	32.0	146	22.5			649
Southern district.....	7,425	70.0	2,772	26.1	149	1.4	263	2.5			10,609
Total.....	7,526	66.9	2,966	26.3	357	3.2	409	3.6			11,258
Miscellaneous industries.....	1,123	32.6	801	23.2	971	28.2	551	16.0			3,446
Grand total.....	25,582	48.1	18,765	35.3	6,014	11.5	2,044	3.8	771	1.4	53,176

TABLE 3.—NUMBER AND PER CENT OF DWELLINGS OF EACH SPECIFIED KIND OF CONSTRUCTION MATERIAL, BY INDUSTRY GROUPS.

Industry group.	Frame.		Brick.		Other.		Total.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
Bituminous coal mining:							
Pennsylvania and West Virginia.....	11,101	94.8	331	2.8	279	2.4	11,711
Ohio, Indiana, and Illinois.....	235	100.0					235
Alabama, Tennessee, and Kentucky.....	5,698	100.0					5,698
Colorado and Wyoming.....	968	78.4			266	21.6	1,234
Total.....	18,002	95.4	331	1.8	545	2.9	18,878
Anthracite coal mining.....	6,708	97.9	43	.6	102	1.5	6,853
Iron mining:							
Michigan, Wisconsin, and Minnesota.....	1,071	99.4					1,078
Alabama.....	524	100.0					524
Total.....	1,595	99.6					1,602
Copper mining: Michigan and Tennessee.....	902	99.3	3	.3	3	.3	908
Other copper and gold mining: Arizona, New Mexico, and Colorado.....	393	61.2	20	3.1	229	35.7	642
Iron and steel and allied industries:							
Northern district.....	3,290	57.5	1,310	22.9	1,122	19.6	5,722
Southern district.....	668	95.0	35	5.0			703
Total.....	3,958	61.6	1,345	20.9	1,122	17.5	6,425
Manufacture of explosives.....	3,163	100.0	1	( <sup>2</sup> )			3,164
Textile manufacture:							
Northern district.....	402	61.9	213	32.8	34	5.2	649
Southern district.....	10,287	97.0	293	2.8	29	.3	10,609
Total.....	10,689	94.9	506	4.5	63	.6	11,258
Miscellaneous industries.....	2,363	68.6	970	28.1	113	3.3	3,446
Grand total.....	47,773	89.8	3,219	6.1	2,177	4.1	53,176

<sup>1</sup> Including 7, kind of material not reported.

<sup>2</sup> Less than one-tenth of 1 per cent.

TABLE 4.—NUMBER OF HOUSES OF EACH SPECIFIED NUMBER OF ROOMS AT CLASSIFIED AMOUNT OF RENT PER MONTH, FOR ALL INDUSTRIES COMBINED.

Classified amount of rent per month.	Number of houses having—									Total houses.	
	1 room.	2 rooms.	3 rooms.	4 rooms.	5 rooms.	6 rooms.	7 rooms.	8 rooms.	9 rooms and over.		Rooms not reported.
Under \$3.....	3	1,186	1,143	847	234	25	57	1	1	31	3,528
\$3 and under \$4.....	48	923	2,066	1,105	576	204	65	2	1	138	5,128
\$4 and under \$5.....		887	706	3,305	810	488	77	13	7	355	6,648
\$5 and under \$6.....	13	534	1,416	1,714	1,428	783	114	19	7	294	6,322
\$6 and under \$7.....		494	1,321	3,274	1,137	1,440	115	81	29	270	8,161
\$7 and under \$8.....		7	141	3,220	1,735	1,007	194	130	49	228	6,711
\$8 and under \$9.....		57	530	1,985	939	1,458	220	217	40	256	5,702
\$9 and under \$10.....		16	34	774	460	403	29	108	13	46	1,883
\$10 and under \$11.....	96	1	23	611	930	1,217	128	184	58	39	3,287
\$11 and under \$12.....			13	28	65	280	49	4	3		442
\$12 and under \$14.....			66	188	238	722	226	203	24	13	1,680
\$14 and under \$16.....		5	9	31	301	226	117	126	42	15	872
\$16 and under \$18.....			9	254	104	272	73	58	84	4	858
\$18 and over.....			16	276	447	538	221	182	177	5	1,862
Rent not reported.....		3	4	31	3	34	1	2	5	9	92
Total.....	160	4,113	7,497	17,643	9,407	9,097	1,686	1,330	540	1,703	53,176



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TABLE 5.—NUMBER AND PER CENT OF HOUSES OF SPECIFIED NUMBER OF ROOMS RENTING UNDER CERTAIN SPECIFIED AMOUNTS PER MONTH.

Rent per month.	NUMBER.										
	1 room.	2 rooms.	3 rooms.	4 rooms.	5 rooms.	6 rooms.	7 rooms.	8 rooms.	9 rooms and over.	Rooms not reported.	Total houses.
Under \$3.....	3	1,186	1,143	847	234	25	57	1	1	31	3,528
Under \$4.....	51	2,109	3,209	1,952	810	229	122	3	2	169	8,656
Under \$5.....	51	2,996	3,915	5,257	1,620	717	199	16	9	524	15,304
Under \$6.....	64	3,530	5,331	6,971	3,048	1,500	313	35	16	818	21,626
Under \$7.....	64	4,024	6,652	10,245	4,185	2,940	428	116	45	1,088	29,787
Under \$8.....	64	4,081	6,793	13,465	6,859	3,947	622	246	94	1,316	36,498
Under \$9.....	64	4,088	7,323	15,450	6,859	5,405	842	463	134	1,572	42,200
Under \$10.....	64	4,104	7,357	16,224	7,319	5,808	871	571	147	1,618	44,083
Under \$11.....	160	4,105	7,380	16,835	8,249	7,025	999	755	205	1,657	47,370
Under \$12.....	160	4,105	7,393	16,863	8,314	7,305	1,048	759	208	1,657	47,812
Under \$14.....	160	4,105	7,459	17,051	8,552	8,027	1,274	962	232	1,670	49,492
Under \$16.....	160	4,110	7,468	17,082	8,853	8,253	1,391	1,088	274	1,685	50,364
Under \$18.....	160	4,110	7,477	17,236	8,957	8,525	1,464	1,146	358	1,689	51,222
\$18 and over.....	160	4,110	7,477	17,236	8,957	8,525	1,464	1,146	358	1,689	51,222
Not reported.....	160	4,110	7,477	17,236	8,957	8,525	1,464	1,146	358	1,689	51,222
Total.....	160	4,113	7,497	17,643	9,407	9,097	1,686	1,330	540	1,703	53,176

PER CENT.

Under \$3.....	1.9	28.8	15.2	4.8	2.5	0.3	3.4	0.1	0.2	1.8	6.6
Under \$4.....	31.9	51.3	42.8	11.1	8.6	2.5	7.2	.2	.4	9.9	16.3
Under \$5.....	31.9	72.8	52.2	29.8	17.2	7.9	11.8	1.2	1.7	30.8	28.8
Under \$6.....	40.0	85.8	71.1	39.5	32.4	16.5	18.6	2.6	3.0	48.0	40.7
Under \$7.....	40.0	97.8	88.7	58.1	44.5	32.3	25.4	8.7	8.3	63.9	56.0
Under \$8.....	40.0	98.0	90.6	76.3	62.9	43.4	36.9	18.5	17.4	77.3	68.6
Under \$9.....	40.0	99.4	97.7	87.6	72.9	59.4	49.9	34.8	24.8	92.3	79.4
Under \$10.....	40.0	99.8	98.1	92.0	77.8	63.8	51.7	42.9	27.2	95.0	82.9
Under \$12.....	100.0	99.8	98.4	95.4	87.7	77.2	59.3	56.8	38.0	97.3	89.1
Under \$14.....	100.0	99.8	98.6	95.6	88.4	80.3	62.2	57.1	38.5	97.3	89.9
Under \$16.....	100.0	99.8	99.5	96.6	90.9	88.2	75.6	72.3	43.0	98.1	93.1
Under \$18.....	100.0	99.9	99.6	96.8	94.1	90.7	82.5	81.8	50.7	98.9	94.7
\$18 and over.....	100.0	99.9	99.7	98.3	95.2	93.7	86.8	86.2	66.3	99.2	96.3
Not reported.....	100.0	.2	.1	1.6	4.8	5.9	13.1	13.7	32.8	.3	3.5
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 6.—NUMBER AND PER CENT OF COMPANY HOUSES HAVING SPECIFIED SANITARY EQUIPMENT, BY INDUSTRY GROUPS.

NUMBER.

Industry group.	Bath, water-closet, sewer or cess-pool, water system, and gas or electric light.	Bath, water-closet, sewer or cess-pool, and water system.	Running water inside, bath and gas or electric light.	Water-closet, sewer or cess-pool; running water inside, and gas or electric light.	Water-closet and sewer or cess-pool; running water inside.	Gas or electric light and running water inside.	No modern conveniences except running water inside.	No modern conveniences except gas or electric light.	No modern conveniences (outside privies).	Not reported.	Total.
Bituminous coal mining:											
Pennsylvania and West Virginia.....	1 242	12	2 5			289	4,314	215	5,042	1,592	11,711
Ohio and Indiana.....	3						76		156		235
Alabama, Tennessee, and Kentucky.....	53	1	3 7		1	58	1,189	148	3,871	370	5,698
Colorado and Wyoming.....			58			6	1,121		29	20	1,234
Total.....	298	13	70		1	353	6,700	363	9,098	1,982	18,878
Anthracite coal mining.....	4 234	21	4 62	170	360	418	16	940	1,813	2,819	6,853
Iron mining:											
Michigan, Wisconsin, and Minnesota.....	73				96	142	538	95	113	21	1,078
Alabama.....	19		8	1		10	6	33	447		524
Total.....	92		8	1	96	152	544	128	560	21	1,602
Copper mining: Michigan and Tennessee.....	76	32		54	134		5 57	250	6 305		908
Other copper and gold mining: Arizona, Colorado, and New Mexico.....	284		8	5		127	97		121		642
Iron and steel and allied industries:											
Northern district.....	2,259	274	7 31	507	652	55	62	472	1,410		5,722
Southern district.....	31	2		8		5	428	1	222	6	703
Total.....	2,290	276	31	515	652	60	490	473	1,632	6	6,425
Manufacture of explosives.....	2,762			66		8	144		184		3,164
Textile manufacture:											
Northern district.....	242	9		188	56			129	19	6	649
Southern district.....	391	5		797	648	344	2,546	249	4,912	717	10,609
Total.....	633	14		985	704	344	2,546	378	4,931	723	11,258
Miscellaneous industries.....	1,569	503	1	121	587	548	6	61	5	45	3,446
Grand total.....	8,238	859	180	1,917	2,534	2,010	10,600	2,593	18,649	5,596	53,176

1 15 have "Kaustine" privies.  
 2 4 have shower baths; 1 has no gas or electric lights.  
 3 1 has shower bath and no gas or electric lights.  
 4 40 have combination bath and laundry tub in kitchen.  
 5 3 have pumps inside house.  
 6 173 have pumps inside house.  
 7 29 of these have no gas or electric lights.

TABLE 6.—NUMBER AND PER CENT OF COMPANY HOUSES HAVING SPECIFIED SANITARY EQUIPMENT, BY INDUSTRY GROUPS—Concluded.

## PER CENT.

Industry group.	Bath, water-closet, sewer or cess-pool, water system, and gas or electric light.	Bath, water-closet, sewer or cess-pool, and water system.	Running water inside, bath and gas or electric light.	Water-closet, sewer or cess-pool; running water inside, and gas or electric light.	Water-closet and sewer or cess-pool; running water inside.	Gas or electric light and running water inside.	No modern conveniences except running water inside.	No modern conveniences except gas or electric light.	No modern conveniences (outside privies).	Not reported.	Total.
Bituminous coal mining:											
Pennsylvania and West Virginia.....	2.1	0.1	( <sup>1</sup> )			2.5	36.8	1.8	43.1	13.6	100.0
Ohio and Indiana.....	1.3						32.3		66.4		100.0
Alabama, Tennessee, and Kentucky.....	.9	( <sup>1</sup> )	0.1		( <sup>1</sup> )	1.0	20.9	2.6	67.9	.6	100.0
Colorado and Wyoming.....			4.7			.5	90.8		2.4	1.6	100.0
Total.....	1.6	.1	.4		( <sup>1</sup> )	1.9	35.5	1.9	48.2	10.5	100.0
Anthracite coal mining.....	3.4	.3	.9	2.5	5.3	6.1	.2	13.7	26.5	41.1	100.0
Iron mining:											
Michigan, Wisconsin, and Minnesota.....	6.8				8.9	13.2	49.9	8.8	10.5	1.9	100.0
Alabama.....	3.6		1.5	.2		1.9	1.1	6.3	85.3		100.0
Total.....	5.7		.5	.1	6.0	9.5	34.0	8.0	35.0	1.3	100.0
Copper mining: Michigan and Tennessee.....	8.4	3.5		5.9	14.8		6.3	27.5	33.6		100.0
Other copper and gold mining: Arizona, Colorado, and New Mexico.....	44.2		1.2	.8		19.8	15.1		18.8		100.0
Iron and steel manufacture:											
Northern district.....	39.5	4.8	.5	8.9	11.4	1.0	1.1	8.2	24.6		100.0
Southern district.....	4.4	.3		1.1		.7	60.9	.1	31.6	.9	100.0
Total.....	35.6	4.3	.5	8.0	10.1	.9	7.6	7.4	25.4	.1	100.0
Manufacture of explosives.....	87.3			2.1		.3	4.6		5.8		100.0
Textile manufacture:											
Northern district.....	37.3	1.4		29.0	8.6			19.9	2.9	.9	100.0
Southern district.....	3.7	( <sup>1</sup> )		7.5	6.1	3.2	24.0	2.3	46.3	6.8	100.0
Total.....	5.6	( <sup>1</sup> )		8.7	6.3	3.1	22.6	3.4	43.8	6.4	100.0
Miscellaneous industries.....	45.5	14.6	( <sup>1</sup> )	3.5	17.0	15.9	.2	1.8	.1	1.3	100.0
Grand total.....	15.5	1.6	.3	3.6	4.8	3.8	19.9	4.9	35.1	10.5	100.0

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 7.—RELATION OF TOTAL ORIGINAL COST OF COMPANY HOUSES TO AVERAGE ANNUAL PAY ROLL.

Industry group.	Number of companies.	Number of employees.	Employees housed.		Average annual pay roll (1911-1915).	Original cost of houses.	Per cent original cost forms of pay roll.
			Number.	Per cent.			
Bituminous coal mining:							
Pennsylvania and West Virginia.....	7	8,488	6,253	73.7	\$86,018,788	\$2,831,575	47.0
Ohio and Indiana.....	2	1,037	648	62.5	459,339	155,818	33.9
Alabama, Tennessee, and Kentucky.....	13	8,987	6,750	75.1	<sup>2</sup> 3,887,939	1,552,948	39.9
Colorado and Wyoming.....	2	3,712	2,253	60.7	<sup>3</sup> 2,588,116	797,706	27.3
Anthracite coal mining.....	6	25,052	5,499	22.0	17,191,875	3,182,079	18.5
Iron mining:							
Michigan, Wisconsin, and Minnesota.....	5	4,476	1,146	33.0	<sup>5</sup> 3,526,767	663,203	18.8
Alabama.....	1	522	390	74.7	146,536	75,105	51.3
Copper mining: Michigan and Tennessee.....	5	10,064	3,290	32.7	<sup>6</sup> 6,762,088	1,695,154	25.1
Other copper and gold mining: Colorado, New Mexico, and Arizona.....	2	1,459	494	33.9	<sup>7</sup> 1,583,813	269,401	17.0
Iron and steel manufacture: Northern district.....	6	24,304	7,431	30.6	<sup>8</sup> 11,764,611	3,124,651	26.6
Textile manufacture: Southern district.....	10	10,811	7,020	64.9	<sup>8</sup> 2,883,057	1,339,715	46.5
Miscellaneous industries.....	1	1,800	500	27.8	671,289	351,147	52.3
Total.....	60	99,712	41,674	41.8	<sup>9</sup> 57,484,220	15,948,502	27.7

<sup>1</sup> 1 company reported for 3 years and 3 for 4 years.  
<sup>2</sup> 1 company reported for 3 years, 2 for 4 years, and 4 for 6 years.  
<sup>3</sup> 1 company reported for 3 years.  
<sup>4</sup> Not including 1 company having 1,450 employees; number housed not reported.  
<sup>5</sup> 1 company reported for 4 years.  
<sup>6</sup> 2 companies reported for 6 years.  
<sup>7</sup> 1 company reported for 6 years.  
<sup>8</sup> 3 companies reported for 4 years and 3 for 6 years.  
<sup>9</sup> 3 companies reported for 3 years, 9 for 4 years, and 19 for 6 years.

TABLE 10.—RELATION OF HOUSING INVESTMENT (INVENTORY VALUE) TO AVERAGE ANNUAL PAY ROLL.

Industry group.	Number of companies.	Number of employees.	Employees housed.		Inventory value of houses.	Average annual pay roll (1911-1915.)	Per cent inventory value forms of pay roll.
			Number.	Per cent.			
Bituminous coal mining:							
Pennsylvania and West Virginia.....	1	652	652	100.0	<sup>1</sup> \$174,712	\$612,843	28.5
Alabama, Tennessee, and Kentucky.....	2	678	440	84.9	89,605	699,811	12.8
Anthracite coal mining.....	4	40,511	6,473	16.0	2,469,530	<sup>2</sup> 28,051,246	8.8
Total.....	7	41,841	7,565	18.1	2,733,847	29,363,900	9.3

<sup>1</sup> Including improvements.  
<sup>2</sup> 2 companies reported for 3 years and 6 years, respectively.

TABLE 9.—RELATION OF HOUSING INVESTMENT (ORIGINAL COST) TO AVERAGE ANNUAL RENT RECEIPTS.

Industry group.	Number of companies.	Original cost of houses.	Average annual rent receipts (1911-1915).	Per cent rent receipts form of original cost.
Bituminous coal mining:				
Pennsylvania and West Virginia.....	7	\$2,831,575	<sup>1</sup> \$248,621	8.8
Ohio, Indiana, and Illinois.....	2	155,818	12,124	7.8
Alabama, Tennessee, and Kentucky.....	12	1,471,873	<sup>2</sup> 170,193	11.6
Colorado and Wyoming.....	3	803,862	<sup>3</sup> 92,976	11.6
Anthracite coal mining.....	6	3,182,079	211,536	6.6
Iron mining:				
Michigan, Wisconsin, and Minnesota.....	5	663,203	<sup>4</sup> 57,502	8.7
Alabama.....	2	112,305	14,686	13.1
Copper mining: Michigan and Tennessee.....	4	1,587,154	<sup>4</sup> 120,214	7.6
Other copper and gold mining: Colorado, New Mexico, and Arizona.....	2	269,401	<sup>5</sup> 40,893	15.2
Iron and steel manufacture: Northern district.....	5	2,249,651	138,721	6.2
Textile manufacture: Southern district.....	10	1,339,715	<sup>6</sup> 117,736	8.8
Miscellaneous industries.....	2	459,489	<sup>7</sup> 28,386	6.2
Total.....	60	15,126,125	1,253,588	8.3

<sup>1</sup> 1 company reported for 3 years and 1 for 4 years.<sup>2</sup> 1 company reported for 3 years, 2 for 4 years, and 3 for 6 years.<sup>3</sup> 1 company reported for 3 years and 1 for 4 years.<sup>4</sup> 2 companies reported for 6 years.<sup>5</sup> 1 company reported for 6 years.<sup>6</sup> 3 companies reported for 4 years and 3 for 6 years.<sup>7</sup> 2 companies reported for 4 years.

TABLE 10.—RELATION OF HOUSING INVESTMENT (INVENTORY VALUE) TO AVERAGE ANNUAL RENT RECEIPTS.

Industry group.	Number of companies.	Inventory value of houses.	Average annual rent receipts (1911-1915).	Per cent rent receipts form of inventory value.
Bituminous coal mining:				
Pennsylvania and West Virginia.....	1	<sup>1</sup> \$174,712	\$29,060	16.6
Alabama, Tennessee, and Kentucky.....	3	211,670	43,259	20.4
Anthracite coal mining.....	4	2,469,530	<sup>2</sup> 242,158	9.8
Total.....	8	2,855,912	314,477	11.0

<sup>1</sup> Including improvements.<sup>2</sup> Including receipts of 2 companies for 3 years and 6 years, respectively.





FIG. 1.—TYPICAL 4-ROOM FRAME HOUSE IN MINING TOWN IN ALABAMA.

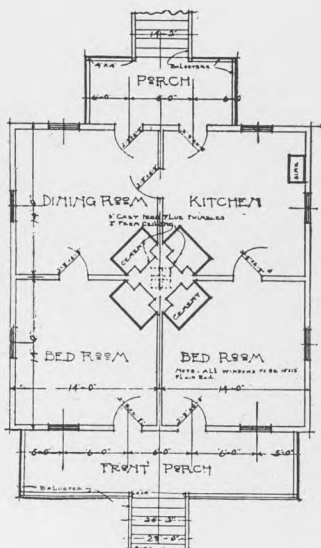


FIG. 2.—FLOOR PLAN OF TYPICAL 4-ROOM HOUSE.

This house (Figs. 1 and 2) cost, in 1912, less than \$500; rents for \$6.50 per month. Note the doors at front and rear, so that the house may be converted into a 2-dwelling house in emergency. The recent tendency is away from that practice, however.

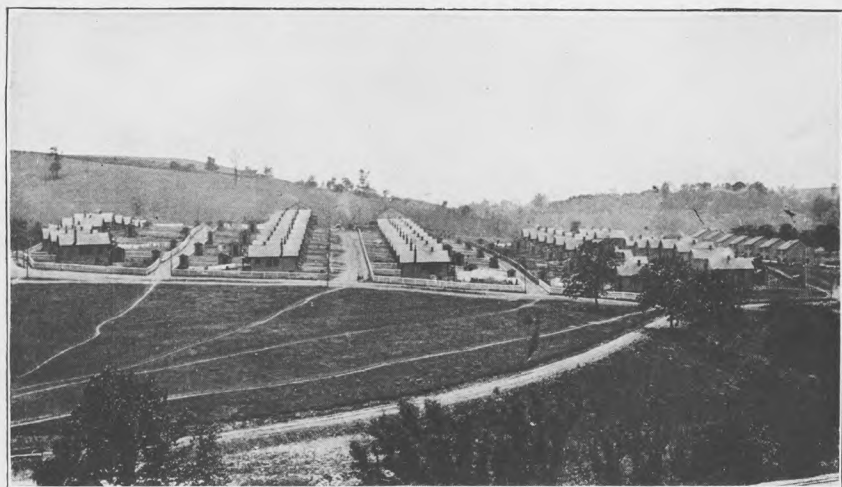


FIG. 3.—MINING TOWN IN OHIO.

Note the uniform type and arrangement of houses and rectangular street layout.



FIG. 4.—GROUP OF HOUSES IN BITUMINOUS COAL REGION OF PENNSYLVANIA.

Note the placing of houses in rows on hillside and the uniformity of architecture; also, all houses are painted red with white trim. Single houses are placed in one row, double houses in another. The larger outbuilding in the foreground is an outside bathhouse and laundry, but has no modern equipment in it. Each family has 4 rooms in both double and single houses, 2 rooms upstairs and 2 downstairs. Double houses rent for \$8 per month for each family; single houses about \$8.50.

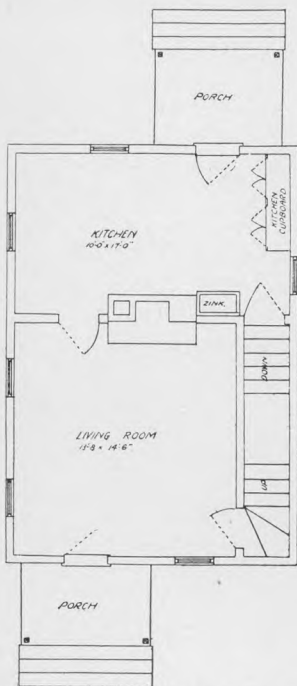


FIG. 5.—FIRST-FLOOR PLANS OF ONE-FAMILY HOUSE.

Four-room house, 2 rooms downstairs and 2 rooms upstairs; cost, in 1914, about \$900; rent, \$8 to \$8.50 per month.

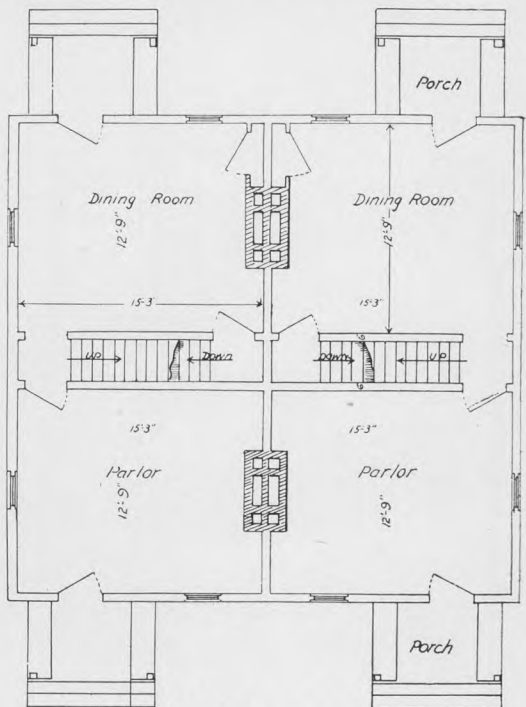


FIG. 6.—FIRST-FLOOR PLAN OF DOUBLE HOUSE.

Four rooms to each family; 2 rooms downstairs and 2 rooms upstairs. Cost per dwelling or renting unit, in 1914, \$800; rent per family, \$8 per month.



FIG. 7.—BETTER CLASS COMPANY HOUSE IN NEW ENGLAND.  
Electric light; stove heat. Rent, \$16.50 per month. Lot, 50 by 105 feet.

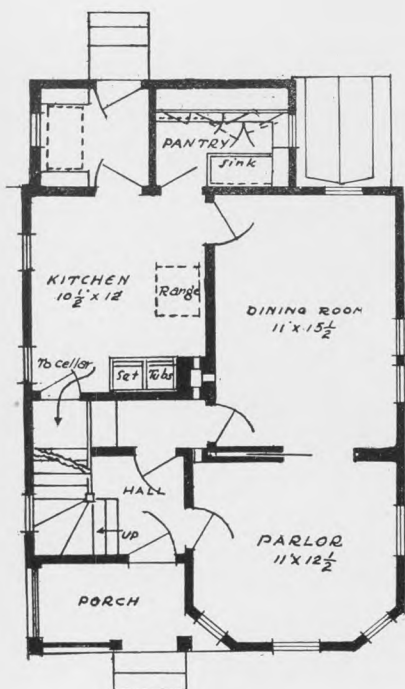


FIG. 8.—FIRST-FLOOR PLAN.

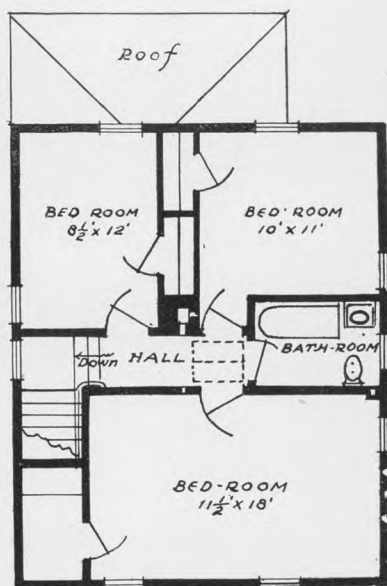


FIG. 9.—SECOND-FLOOR PLAN.



FIG. 10.—FRONT VIEW OF FOREIGN LABORERS' ROW.

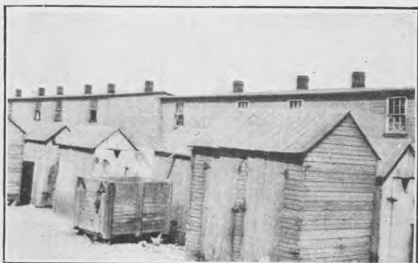


FIG. 11.—REAR OF ROW SHOWN IN FIG. 10.



FIG. 12.—FRONT VIEW BETTER CLASS ONE-FAMILY HOUSES.

Figs. 10, 11, 12, are houses belonging to a steel-car company in Pennsylvania. There are 234 dwellings of rows shown in Fig. 10, and 200 single houses in Fig. 12: 206 row dwellings built in 1904, 58 in 1902; single houses built in 1902. Rows have 4 rooms per family, 2 up and 2 down; no inside conveniences; cost \$330 per dwelling or family unit; rent \$4 per month per family for those built in 1904, and \$6 for those built in 1902. Single houses have 5 rooms and cellar; 125 have kitchen sink, sewer connections, water-closets in cellar, and hot-water connections, 72 renting for \$10 a month and 53 for \$12 per month, and each costing \$1,150; 75 have bathtubs, water-closets, and sewer connections, kitchen sinks and hot-water connections, each renting for \$14 per month and costing \$1,500. Row houses heated with stoves; single houses with gas grates.

## LABOR AND THE WAR.

### HOURS OF LABOR IN RELATION TO OUTPUT IN BRITISH MUNITION FACTORIES.<sup>1</sup>

Memorandum No. 18 of the Health of Munion Workers' Committee of Great Britain, recently received by the bureau, is a continuation of the study of output in relation to hours of work with which several of the earlier memoranda have been concerned.<sup>2</sup> This report will be published in a future bulletin of the bureau. Its more important findings and conclusions are shown in the following summary taken from the report itself:

While the investigations described in this report are, perhaps, too limited in the types of labor investigated to permit of final deductions being drawn from them, I am not aware of the existence of any exceptional conditions which would render such deductions inapplicable to other processes and industries. For convenience I attach the following provisional summary of the results of my investigations:

(a) Observations extending over a period of  $13\frac{1}{2}$  months upon the output of workers employed in making fuses showed that a reduction of working hours was associated with an increase of production both relative and absolute. The rate of production changed gradually, and did not reach an equilibrium value before the expiration of four months. Thereafter it remained steady during the period of  $3\frac{1}{2}$  to 5 months during which it was observed. The gradual change negatives the suggestion that the effect was a mere consequence of the desire to earn the same weekly wage as before the hours were shortened.

(b) Owing to the reduction of the working time, first by a change from a 12-hour day to a 10-hour day and subsequently by the abolition of Sunday labor, it was possible to compare output under three conditions. The group of women (numbering from 80 to 100) engaged in the moderately heavy labor of turning aluminum fuse bodies provided the following comparative results:

(i) When actually working 66.2 hours a week and nominally 74.8 hours their relative hourly production was 100 and their relative gross production 100.

(ii) When actually working 54.8 and nominally working from 58.5 to 66 hours their hourly production was 134 and their gross production 111.

(iii) When actually working 45.6 hours and nominally working from 49.5 to 58.5 hours their hourly production was 158 and their gross production 109.

It is therefore to be inferred that had these women been working uniformly a nominal 50-hour week their gross output would have been as large as when

<sup>1</sup> Health of Munion Workers Committee, Ministry of Munitions. Memorandum No. 18, Appendix to Memorandum No. 5 (Hours of Work). Further statistical information concerning output in relation to hours of work, with special reference to the influence of Sunday labor. April, 1917. By H. M. Vernon, M. D.

<sup>2</sup> Memorandum No. 5, Hours of work, and Memorandum No. 12, Statistical information concerning output in relation to hours of work, are reprinted in Bulletin No. 221 of the Bureau of Labor Statistics; and Interim Report, Industrial efficiency and fatigue, is reprinted in Bulletin No. 230.



they were working a nominal 66-hour week, and considerably greater than when they were working a 77-hour week. In other words, a considerable addition to the leisure time of the operatives would have substantially improved the total output of the factory.

(c) A group of 40 women engaged in the light labor of milling a screw thread on the fuse bodies improved their gross output by 2 per cent when actually working 54.8 hours a week, the standard being their gross output when working 64.9 hours per week. A further reduction of actual working hours to 48.1 resulted in such an improvement of hourly output that the gross output was only 1 per cent less than when the actual working time was 16.8 hours more.

(d) A group of 56 men, engaged in the heavy labor of sizing the fuse bodies, improved their hourly output by 37 per cent and their gross output by 21 per cent when actually working 51.2 hours, the standards being the hourly and gross outputs observed when the actual weekly hours were 58.2.

(e) Fifteen youths, engaged in the light labor of boring top caps by means of automatic machines, produced only 3 per cent less output when their actual weekly hours of work were 54.5 hours than when they were 72.5.

(f) In none of the operations studied was there any change either in the nature of the operation or of the type of machinery during the period under notice. The data were also so chosen as to eliminate any possible disturbances due to increasing skill.

(g) A part of the improvement in output was due to the workers starting work more promptly when on shorter hours. At one period the women engaged in turning fuse bodies lost on the average 37 minutes daily by starting work after, and stopping before, the nominal time. Nine months later, when their hourly output was 25 per cent better, they lost only 26.5 minutes daily in these ways.

(h) A rest from work on Sunday is followed by a relatively low output on Monday, and this output steadily rises in the course of the week, owing to the increased efficiency produced by practice. Generally the cumulative effects of fatigue neutralize and overpower this increased efficiency, and the output may fall after the second day (or night) of the working week if the hours are long and the work laborious, or not till after the third, fourth, or even fifth day, if the hours are shorter. In the absence of a Sunday rest the fatigued worker has no opportunity for complete recuperation, and his output, though more uniform, remains permanently at a lower level than that shown on Monday by a worker who has rested on Sunday.

(i) When the hourly outputs of individuals are plotted on a diagram, the distribution in the majority of operations is roughly symmetrical, persons who exceed the value reached by the largest group being about as numerous as those who fall short of it. In certain operations ("drawing" and "rectifying" cartridge cases) where the machine itself places an upper limit upon the possible speed of production, the shape of the diagram was different, the number that exceeded the output most frequently attained—what may be termed the fashionable or "modal" value—being much smaller than that which fell short of it. A corresponding result was obtained for women sorting cartridge cases, when paid at time rates; but for similar operatives when paid at piece rates the symmetrical distribution was once more observed. It is accordingly contended that the form of distribution, whether approximately symmetrical or asymmetrical, may be a useful test as to the existence of limitation of output, and that in the majority of the operations here studied no such limitation occurred.

BRITISH MUNITIONS OF WAR ACT, 1917.<sup>1</sup>

The Munitions of War Acts, 1915 and 1916, have been amended and extended by a new act, dated August 21, 1917. The act empowers the Minister of Munitions to give such directions as he may consider necessary for the purpose of the maintenance or increase of output, with respect to the remuneration of workpeople on time rates, employed on munitions work or work in connection therewith, or work in any controlled establishment. The minister is also given power to repeal the provisions of section 7<sup>2</sup> of the Munitions of War Act, 1915, on being satisfied that they can be repealed consistently with the national interests. In the event of their repeal alternative provisions are to have effect, prohibiting the employment of the workmen concerned on work other than certain munitions work, except with the consent of the minister; and, subject to certain exceptions, a contract of service between an employer and a workman employed on or in connection with munitions work is not to be determinable by either party except by a week's notice or on payment of a sum equal to an average week's wages under the contract.

Under another section of the new act, where an award has been made either under Part I of the Munitions of War Act, 1915, or in pursuance of an agreement between representatives of employers and workpeople, as to wages, hours, or other conditions of employment of persons engaged on munitions work, and the Minister of Munitions is satisfied that the award is binding upon employers employing the majority of the workpeople so engaged in any trade or branch of a trade, either generally or in a particular district, he may, by order, direct that the award shall be binding on all or any employers and persons so engaged, either without modification or subject to such modifications as he may consider necessary.

The Minister of Labor is empowered to make regulations as to the reporting of differences under section 1 of the Munitions of War Act, 1915, and with a view to preventing undue delay in negotiations for settling such differences, may prescribe the time within which any such difference is to be reported. Differences may also be reported henceforth by or on behalf of any Government department. The tribunals to which differences are referred under Schedule I of the act of 1915 are to make their awards without delay and, where practicable, within 14 days of the date of reference. Piece prices, time allowances, bonuses on output, or the rates or prices payable under any other system of payment by results, once fixed in a controlled

<sup>1</sup> Reprinted from The Labour Gazette, London, Sept., 1917, p. 314.

<sup>2</sup> The section referred to prohibits the employment of a workman who, during the previous six weeks, has been employed on or in connection with munitions work in any establishment of a class to which the section has been applied unless he holds a leaving certificate.

establishment, may not be altered except in accordance with procedure adopted by agreement between the owner of the establishment and the workmen or their representatives and in force at the passing of the act or, under certain conditions, by direction of the minister.

No workman employed on or in connection with munitions work may be discharged on the ground that he has joined or is a member of a trade-union or that he has taken part in any trade dispute.

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#### EXEMPTION OF FARM LABORERS FROM MILITARY SERVICE IN GREAT BRITAIN.<sup>1</sup>

The president of the Local Government Board has issued a circular to local and appeal tribunals regarding agricultural cases, in which he intimates that, in view of the urgency of increased food production, the Government has made new arrangements with regard to the retention of men on the land. Agricultural executive committees have been given the right of claiming, under certain conditions, the retention of men in agriculture.

Accompanying the circular is a memorandum for the guidance of tribunals, in which it is stated that if a voucher is issued by the executive committee stating that a man is employed wholly on farm work, that he was engaged in such work on June 1, 1917, and is employed on work of national importance, he is not to be posted for service with the colors or to be called up for medical examination or reexamination without the consent of the committee. This provision holds good, even though a substitute may have been provided or offered. If a man engaged whole time on a particular farm on farm work changes his place of employment the previous voucher by the executive committee will cease to be of effect; but they may issue a voucher for his new employment if this is warranted. Employment "whole time on a farm on farm work" is intended to cover the production of essential food supplies, and therefore includes the work of men whose whole time is employed on a market garden exclusively in production of food of a kind and quantity of national importance.

Farm work covers the employment of men in agriculture as thatchers, or as drivers of engines or motor tractors (including tractor plowmen); but these men must comply with the conditions laid down if vouchers are to be issued in respect of them.

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#### EMIGRATION FROM ITALY AFTER THE WAR.

Some interesting facts and opinions are set forth in a brief article in the *Journal of Commerce and Commercial Bulletin* for October 9, 1917, with regard to the labor supply of Italy and the potential emi-

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<sup>1</sup> Christian Science Monitor, Boston, Aug. 27, 1917.

gration from that country after the war. Dr. Francesco Saverio Nitti, professor of economics at the University of Naples and a member of the Italian Parliament, is quoted as saying that Italy will have more men to spare to other parts of the world than she had at the beginning of the war. Prior to the outbreak of hostilities Italy had been sending 350,000 men annually to other countries, chiefly to America. This was the number of permanent emigrants, not including those who returned after brief sojourns abroad. Dr. Nitti points out that with the cessation of this drain nearly a million men have been kept at home who would otherwise by this time have become residents of other countries. In addition to this number, 700,000 citizens have been called home from other countries. While Italy does not publish her casualty figures, the losses, though heavy, are said to be "insignificant compared to this gain in men due to the temporary stopping of emigration."

Dr. Nitti further points out that there has been no devastation within the Italian boundaries, so that there will be no great restoration undertakings necessary. However, the conditions in the allied countries of France and Belgium are very different, and will offer fields of employment "where the need will be tremendous, and wages, no doubt, the most attractive that the world will have to offer. You must remember that France and Belgium saved nothing in manpower by the stopping of emigration, because there was practically no emigration from those countries to stop. On the other hand, their losses by warfare are very heavy, and they have been invaded." From these facts the conclusion is reached that there will be little emigration to America, which, in past years, has been the chief destination of Italians seeking other places of residence.

Speaking of the economic situation, the opinion is expressed that this will be improved rather than adversely affected by the war. Essential industries are being maintained, the mistake of drawing men therefrom for the army having been corrected soon after the beginning of the war. Of the labor situation as it now stands, Dr. Nitti says:

In a way every man in Italy is a soldier, whether he is under arms or not. Our munitions works and transportation systems, for example, are all under full military discipline, and every man employed in such industry is rated as a soldier. But he gets the pay of a mechanic that prevails in that industry, which is very high just now, almost fantastically so for Italy.

We have had no strikes, no labor troubles of any sort since the war began, and we do not fear any. I would like particularly, in that connection, to say a word of praise for our railroad men, even those of them who in the past caused much of our labor troubles. They are all soldiers and practically all of their work is military, for two-thirds of Italian rolling stock is devoted to transportation of troops and munitions, but these railroad men have done their full share.





# PRICES AND THE COST OF LIVING.

## RETAIL PRICES OF FOOD IN THE UNITED STATES.

Food as a whole shows an increase of 2 per cent from August to September, according to reports received by the Bureau of Labor Statistics. Of the 27 articles for which prices are received, 17 increased in price, 7 decreased, and 3 articles remained the same.

Plate beef shows a decline of 5 per cent; and round steak, 4 per cent. Pork chops increased 13 per cent, eggs 14 per cent, while corn meal shows the greatest increase, or 24 per cent. Potatoes decreased 16 per cent, bread 4 per cent, and beans 2 per cent. Other articles show comparatively little change.

The following table shows the course of prices in the United States in August and September, 1917:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON AUG. 15 AND SEPT. 15, 1917.

[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 1916.]

Article.	Unit.	Average money price.		Relative price.	
		Aug. 15, 1917.	Sept. 15, 1917.	Aug. 15, 1917.	Sept. 15, 1917.
Sirloin steak.....	Pound.....	\$0.329	\$0.333	121	122
Round steak.....	do.....	.308	.296	126	121
Rib roast.....	do.....	.255	.259	120	122
Chuck roast.....	do.....	.217	.218	126	127
Plate beef.....	do.....	.172	.163	134	127
Pork chops.....	do.....	.344	.388	152	171
Bacon.....	do.....	.430	.442	150	154
Ham.....	do.....	.395	.409	134	139
Lard.....	do.....	.277	.296	158	169
Hens.....	do.....	.279	.302	118	128
Salmon, canned.....	do.....	.271	.277	134	137
Eggs.....	Dozen.....	.460	.525	123	140
Butter.....	Pound.....	.476	.496	121	126
Cheese.....	do.....	.328	.335	127	130
Milk.....	Quart.....	.114	.118	125	130
Bread.....	16-oz. loaf <sup>1</sup>	.091	.088	140	135
Flour.....	Pound.....	.075	.073	170	166
Corn meal.....	do.....	.066	.082	194	241
Rice.....	do.....	.106	.108	116	119
Potatoes.....	do.....	.054	.045	133	111
Onions.....	do.....	.046	.046	94	94
Beans, navy.....	do.....	.192	.188	175	171
Prunes.....	do.....	.162	.163	121	122
Raisins, seeded.....	do.....	.148	.148	115	115
Sugar.....	do.....	.099	.098	124	123
Coffee.....	do.....	.305	.305	102	102
Tea.....	do.....	.602	.612	110	112
All articles combined.....				131	134

<sup>1</sup> 16 ounces, weight of dough.

In the year from September 15, 1916, to September 15, 1917, prices of food as a whole advanced 29 per cent. No article declined in price. Corn meal advanced 141 per cent, beans 55 per cent, and flour 51 per cent. Onions showed no change in price.

A comparison of prices as between September, 1914, and September, 1917, shows that the increase for all articles combined was 43 per cent. During this period corn meal advanced 148 per cent, flour 98 per cent, potatoes 63 per cent, and bread 55 per cent.

A table showing the average and relative retail prices in September of each year from 1913 to 1917 follows:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON SEPT. 15 OF EACH YEAR, 1913 TO 1917, 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 1916.]

Article.	Unit.	Average money price, Sept. 15.					Relative price, Sept. 15.				
		1913	1914	1915	1916	1917	1913	1914	1915	1916	1917
Sirloin steak.....	Pound.....	\$0.262	\$0.270	\$0.265	\$0.284	\$0.333	96	99	97	104	122
Round steak.....	do.....	.233	.247	.238	.257	.296	95	101	97	105	121
Rib roast.....	do.....	.199	.208	.204	.218	.259	94	98	96	103	122
Chuck roast.....	do.....	.....	.179	.165	.177	.218	.....	104	96	103	127
Plate beef.....	do.....	.....	.131	.123	.131	.163	.....	102	96	102	127
Pork chops.....	do.....	.227	.236	.225	.261	.388	100	104	99	115	171
Bacon.....	do.....	.281	.290	.270	.296	.442	98	101	94	103	154
Ham.....	do.....	.282	.291	.262	.332	.409	96	99	89	113	139
Lard.....	do.....	.161	.156	.138	.222	.296	92	89	79	127	169
Hens.....	do.....	.215	.219	.208	.243	.302	91	93	88	103	128
Salmon, canned.....	do.....	.....	.....	.198	.202	.277	.....	.....	98	100	137
Eggs.....	Dozen.....	.375	.368	.349	.413	.525	100	98	93	110	140
Butter.....	Pound.....	.378	.378	.335	.390	.496	96	96	85	99	126
Cheese.....	do.....	.....	.....	.227	.230	.335	.....	.....	88	89	130
Milk.....	Quart.....	.089	.089	.088	.091	.118	98	98	97	100	130
Bread.....	16 oz. loaf <sup>1</sup> .....	.....	.057	.062	.068	.088	.....	87	96	105	135
Flour.....	Pound.....	.033	.037	.038	.048	.073	74	84	87	110	166
Corn meal.....	do.....	.031	.033	.033	.034	.082	91	97	96	100	241
Rice.....	do.....	.....	.....	.091	.091	.108	.....	.....	100	100	119
Potatoes.....	do.....	.019	.018	.014	.028	.045	71	68	51	104	111
Onions.....	do.....	.....	.....	.030	.046	.046	.....	.....	61	94	94
Beans, navy.....	do.....	.....	.....	.076	.121	.188	.....	.....	69	110	171
Prunes.....	do.....	.....	.....	.135	.134	.163	.....	.....	101	100	122
Raisins, seeded.....	do.....	.....	.....	.125	.129	.148	.....	.....	97	100	115
Sugar.....	do.....	.....	.....	.065	.077	.098	71	99	81	96	123
Coffee.....	do.....	.057	.079	.065	.077	.098	.....	.....	100	100	102
Tea.....	do.....	.....	.....	.299	.299	.305	.....	.....	100	100	112
All articles combined.....	do.....	.....	.....	.546	.546	.612	90	94	89	104	134

<sup>1</sup> 16 ounces, weight of dough.

The two tables which follow give average retail prices for 28 articles of food in 43 cities.

For 13 cities, average prices are shown for September 15, 1913, September 15, 1916, and for August 15 and September 15, 1917.

Average prices for 30 cities are shown for September 15, 1917. Prices for two cities—Atlanta, Ga., and Columbus, Ohio—are not given, as less than 80 per cent of the meat and grocery firms for these two cities sent in their reports to the bureau.

The price per pound is given for potatoes and flour in order that a comparison may be made with the other articles, as, for instance, corn meal. The units of measure reported from the different cities vary in some cases. Potatoes are quoted by the peck or fraction thereof in most cities. Some cities, however, quote on a single pound basis and some of the western cities quote on 100 pounds. Flour prices, as a rule, are given on an eighth-barrel-bag basis. A few firms quote on the fourth, sixteenth, or thirty-second barrel basis, with an occasional one-half barrel bag basis for some Pacific coast cities. In Indianapolis a few firms give prices for 20-pound bags.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN SELECTED SEPTEMBER

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers.]

Article.	Unit.	Atlanta, Ga.				Baltimore, Md.				Boston, Mass.			
		Sept. 15, 1913.	Sept. 15, 1916.	1917		Sept. 15, 1913.	Sept. 15, 1916.	1917		Sept. 15, 1913.	Sept. 15, 1916.	1917	
				Aug. 15.	Sept. 15.			Aug. 15.	Sept. 15.			Aug. 15.	Sept. 15.
Sirloin steak.....	Lb...	(1)	(1)	(1)	(1)	\$0.250	\$0.264	\$0.332	\$0.334	\$0.358	\$0.413	\$0.429	\$0.464
Round steak.....	Lb...	(1)	(1)	(1)	(1)	.230	.250	.322	.319	.356	.375	.452	.467
Rib roast.....	Lb...	(1)	(1)	(1)	(1)	.190	.216	.258	.259	.256	.275	.310	.327
Chuck roast.....	Lb...	(1)	(1)	(1)	(1)	.160	.180	.230	.225	.187	.225	.269	.273
Plate beef.....	Lb...	(1)	(1)	(1)	(1)	.....	.148	.163	.171	.....	.....	.....	.....
Pork chops.....	Lb...	(1)	(1)	(1)	(1)	.220	.256	.352	.395	.250	.267	.351	.405
Bacon, sliced.....	Lb...	(1)	(1)	(1)	(1)	.265	.237	.422	.454	.258	.275	.416	.439
Ham, sliced.....	Lb...	(1)	(1)	(1)	(1)	.320	.365	.428	.445	.320	.360	.424	.447
Lard.....	Lb...	(1)	(1)	(1)	(1)	.153	.185	.268	.299	.158	.182	.279	.295
Lamb.....	Lb...	(1)	(1)	(1)	(1)	.193	.268	.295	.326	.205	.264	.340	.346
Hens.....	Lb...	(1)	(1)	(1)	(1)	.218	.250	.295	.315	.262	.278	.308	.329
Salmon, canned.....	Lb...	(1)	(1)	(1)	(1)	.....	.163	.257	.254	.....	.191	.290	.294
Eggs.....	Doz...	(1)	(1)	(1)	(1)	.347	.373	.424	.491	.471	.540	.580	.652
Butter.....	Lb...	(1)	(1)	(1)	(1)	.386	.399	.496	.528	.374	.385	.471	.512
Cheese.....	Lb...	(1)	(1)	(1)	(1)	.....	.260	.352	.350	.....	.248	.318	.324
Milk.....	Qt...	(1)	(1)	(1)	(1)	.087	.088	.108	.117	.089	.089	.130	.130
Bread.....	16-oz. <sup>2</sup> loaf.	(1)	(1)	(1)	(1)	.....	.060	.079	.079	.....	.062	.083	.085
Flour.....	Lb...	(1)	(1)	(1)	(1)	.032	.050	.076	.075	.037	.054	.083	.078
Corn meal.....	Lb...	(1)	(1)	(1)	(1)	.025	.028	.062	.063	.035	.041	.074	.075
Rice.....	Lb...	(1)	(1)	(1)	(1)	.....	.093	.108	.110	.....	.097	.110	.112
Potatoes.....	Lb...	(1)	(1)	(1)	(1)	.018	.027	.029	.028	.017	.025	.033	.027
Onions.....	Lb...	(1)	(1)	(1)	(1)	.....	.046	.046	.052	.....	.055	.052	.057
Beans, navy.....	Lb...	(1)	(1)	(1)	(1)	.....	.128	.186	.180	.....	.118	.188	.184
Prunes.....	Lb...	(1)	(1)	(1)	(1)	.....	.120	.159	.164	.....	.142	.168	.167
Raisins.....	Lb...	(1)	(1)	(1)	(1)	.....	.120	.142	.145	.....	.124	.146	.150
Sugar.....	Lb...	(1)	(1)	(1)	(1)	.052	.073	.095	.092	.056	.074	.097	.097
Coffee.....	Lb...	(1)	(1)	(1)	(1)	.....	.235	.274	.279	.....	.340	.341	.340
Tea.....	Lb...	(1)	(1)	(1)	(1)	.....	.550	.624	.638	.....	.600	.632	.652

Article.	Unit.	Milwaukee, Wis.				New York, N. Y.				Philadelphia, Pa.			
		Sept. 15, 1913.	Sept. 15, 1916.	Aug. 15, 1917.	Sept. 15, 1917.	Sept. 15, 1913.	Sept. 15, 1916.	Aug. 15, 1917.	Sept. 15, 1917.	Sept. 15, 1913.	Sept. 15, 1916.	Aug. 15, 1917.	Sept. 15, 1917.
Sirloin steak.....	Lb...	\$0.236	\$0.256	\$0.305	\$0.300	\$0.264	\$0.292	\$0.351	\$0.368	\$0.317	\$0.339	\$0.387	\$0.402
Round steak.....	Lb...	.216	.233	.285	.281	.237	.237	.351	.368	.271	.305	.364	.374
Rib roast.....	Lb...	.192	.198	.242	.240	.215	.240	.286	.298	.223	.248	.286	.295
Chuck roast.....	Lb...	.164	.175	.221	.219	.161	.178	.226	.235	.182	.202	.248	.258
Plate beef.....	Lb...	.....	.125	.156	.161	.....	.163	.206	.211	.....	.129	.168	.171
Pork chops.....	Lb...	.216	.255	.342	.383	.230	.267	.348	.394	.232	.275	.361	.403
Bacon, sliced.....	Lb...	.286	.303	.420	.452	.262	.275	.423	.440	.282	.302	.417	.447
Ham, sliced.....	Lb...	.290	.303	.398	.418	.212	.229	.283	.300	.326	.362	.453	.470
Lard.....	Lb...	.158	.189	.277	.294	.163	.182	.275	.294	.159	.191	.283	.303
Lamb.....	Lb...	.205	.240	.305	.321	.153	.213	.264	.295	.197	.244	.311	.335
Hens.....	Lb...	.198	.230	.259	.297	.218	.259	.288	.316	.229	.271	.306	.327
Salmon, canned.....	Lb...	.....	.207	.271	.266	.....	.233	.322	.332	.....	.177	.260	.251
Eggs.....	Doz...	.300	.338	.425	.454	.442	.490	.544	.592	.397	.431	.476	.531
Butter.....	Lb...	.348	.380	.454	.485	.374	.390	.470	.507	.425	.443	.531	.559
Cheese.....	Lb...	.....	.255	.321	.331	.....	.244	.331	.338	.....	.251	.348	.355
Milk.....	Qt...	.070	.070	.090	.090	.090	.090	.125	.124	.080	.080	.110	.110
Bread.....	16-oz. <sup>2</sup> loaf.	.....	.067	.101	.093	.....	.063	.088	.088	.....	.050	.079	.079
Flour.....	Lb...	.031	.048	.078	.073	.032	.050	.079	.079	.032	.049	.076	.076
Corn meal.....	Lb...	.033	.039	.074	.080	.034	.040	.067	.076	.027	.032	.057	.066
Rice.....	Lb...	.....	.096	.115	.113	.....	.091	.104	.107	.....	.096	.110	.112
Potatoes.....	Lb...	.016	.032	.038	.029	.025	.030	.032	.033	.022	.031	.035	.035
Onions.....	Lb...	.....	.048	.045	.046	.....	.055	.047	.050	.....	.049	.049	.054
Beans, navy.....	Lb...	.....	.128	.203	.188	.....	.115	.189	.185	.....	.104	.183	.182
Prunes.....	Lb...	.....	.140	.158	.159	.....	.133	.165	.164	.....	.133	.153	.157
Raisins.....	Lb...	.....	.128	.148	.150	.....	.124	.146	.145	.....	.120	.138	.138
Sugar.....	Lb...	.055	.073	.099	.094	.051	.072	.090	.092	.050	.072	.090	.091
Coffee.....	Lb...	.....	.280	.281	.273	.....	.262	.263	.256	.....	.286	.270	.277
Tea.....	Lb...	.....	.528	.594	.599	.....	.445	.501	.536	.....	.536	.576	.583

<sup>1</sup> Prices not shown; less than 80 per cent of reports for September, 1917, received by bureau.<sup>2</sup> 16 ounces, weight of dough.<sup>3</sup> Whole.

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

CITIES FOR SEPTEMBER 15, 1913, SEPTEMBER 15, 1916, AND FOR AUGUST 15 AND BER 15, 1917.

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

Chicago, Ill.				Cleveland, Ohio.				Denver, Colo.				Detroit, Mich.				
Sept. 15, 1913.	Sept. 15, 1916.	1917		Sept. 15, 1913.	Sept. 15, 1916.	1917		Sept. 15, 1913.	Sept. 15, 1916.	1917		Sept. 15, 1913.	Sept. 15, 1916.	1917		
		Aug. 15.	Sept. 15.			Aug. 15.	Sept. 15.			Aug. 15.	Sept. 15.			Aug. 15.	Sept. 15.	
\$0.243	\$0.277	\$0.308	\$0.315	\$0.254	\$0.280	\$0.308	\$0.312	\$0.243	\$0.253	\$0.315	\$0.317	\$0.263	\$0.262	\$0.316	\$0.313	
.214	.240	.273	.281	.229	.243	.291	.291	.214	.219	.296	.283	.210	.228	.286	.283	
.203	.227	.251	.258	.189	.205	.235	.238	.178	.195	.239	.239	.200	.212	.258	.252	
.159	.177	.213	.220	.169	.185	.215	.214	.158	.176	.211	.206	.150	.162	.202	.205	
.....	.129	.167	.165	.....	.123	.151	.158	.....	.105	.147	.140	.....	.126	.152	.161	
.218	.264	.322	.374	.244	.280	.392	.415	.204	.240	.347	.399	.223	.253	.355	.403	
.326	.325	.429	.476	.296	.303	.441	.452	.290	.317	.455	.480	.247	.253	.427	.448	
.322	.359	.407	.439	.373	.350	.441	.421	.333	.333	.438	.464	.270	1.227	.417	.425	
.150	.180	.265	.283	.164	.192	.281	.302	.165	.193	.289	.310	.169	.177	.275	.303	
.199	.235	.288	.320	.187	.244	.285	.308	.160	.223	.308	.302	.160	.214	.300	.316	
.....	.192	.231	.265	.294	.219	.249	.302	.327	.197	.208	.267	.285	.205	.242	.288	.331
.....	.229	.270	.283	.....	.175	.249	.262	.....	.181	.264	.275	.....	.195	.258	.289	.....
.304	.358	.428	.465	.368	.436	.495	.542	.321	.388	.500	.493	.320	.390	.463	.511	
.353	.372	.448	.484	.383	.413	.478	.516	.386	.383	.448	.494	.359	.375	.455	.497	
.....	.266	.342	.344	.....	.255	.313	.332	.....	.250	.347	.352	.....	.246	.308	.329	
.080	.090	.100	.100	.080	.080	.120	.120	.084	.083	.103	.115	.080	.090	.120	.120	
.....	.059	.093	.093	.....	.060	.090	.090	.....	.058	.090	.091	.....	.062	.080	.080	
.029	.045	.072	.069	.032	.049	.076	.073	.026	.040	.065	.058	.031	.047	.076	.071	
.028	.033	.059	.065	.029	.033	.063	.069	.026	.026	.062	.059	.028	.030	.067	.072	
.....	.094	.105	.103	.....	.093	.103	.106	.....	.092	.112	.113	.....	.089	.107	.113	
.018	.031	.034	.027	.020	.031	.033	.029	.018	.026	.041	.025	.019	.032	.035	.028	
.....	.042	.037	.039	.....	.048	.047	.049	.....	.033	.044	.039	.....	.041	.048	.....	
.....	.124	.192	.183	.....	.131	.199	.186	.....	.113	.202	.191	.....	.124	.190	.190	
.....	.128	.165	.159	.....	.129	.153	.165	.....	.131	.178	.183	.....	.122	.164	.170	
.....	.131	.146	.147	.....	.124	.140	.143	.....	.131	.147	.145	.....	.108	.138	.140	
.052	.072	.094	.091	.056	.076	.100	.098	.059	.074	.097	.095	.057	.072	.100	.099	
.....	.300	.292	.284	.....	.288	.280	.294	.....	.288	.307	.304	.....	.280	.294	.310	
.....	.518	.571	.564	.....	.492	.512	.565	.....	.488	.569	.572	.....	.438	.508	.559	

Pittsburgh, Pa.				St. Louis, Mo.				San Francisco, Cal.				Seattle, Wash.			
\$0.277	\$0.300	\$0.364	\$0.365	\$0.260	\$0.267	\$0.311	\$0.308	\$0.213	\$0.203	\$0.231	\$0.230	\$0.240	\$0.224	\$0.261	\$0.264
.247	.270	.331	.337	.243	.257	.305	.307	.197	.190	.226	.225	.207	.204	.248	.250
.222	.231	.277	.279	.195	.206	.255	.253	.211	.207	.227	.226	.193	.192	.219	.218
.175	.189	.235	.242	.156	.166	.210	.214	.150	.133	.157	.159	.160	.128	.178	.178
.....	.124	.168	.170	.....	.124	.160	.163	.....	.128	.153	.154	.....	.109	.150	.150
.252	.280	.360	.403	.210	.253	.355	.382	.237	.237	.328	.335	.243	.234	.339	.401
.304	.317	.443	.462	.275	.273	.420	.463	.344	.342	.446	.470	.325	.320	.460	.494
.316	.350	.437	.453	.273	.293	.416	.439	.330	.333	.430	.456	.300	.300	.406	.410
.157	.188	.281	.308	.143	.177	.263	.291	.187	.188	.284	.290	.176	.178	.269	.285
.200	.253	.329	.353	.183	.223	.280	.296	.165	.201	.266	.274	.193	.210	.270	.280
.....	.294	.346	.371	.171	.203	.246	.271	.242	.270	.262	.291	.233	.210	.258	.262
.....	.210	.287	.297	.....	.173	.271	.277	.....	.179	.245	.245	.....	.189	.270	.269
.348	.380	.435	.509	.273	.342	.377	.459	.464	.450	.475	.538	.433	.393	.511	.528
.393	.400	.475	.517	.368	.389	.475	.509	.429	.371	.504	.530	.400	.385	.491	.530
.....	.249	.326	.338	.....	.241	.324	.340	.....	.229	.306	.316	.....	.231	.303	.308
.086	.093	.125	.125	.090	.080	.110	.110	.100	.100	.100	.121	.086	.088	.120	.120
.....	.064	.092	.092	.....	.064	.096	.094	.....	.058	.083	.083	.....	.....	.092	.092
.032	.050	.078	.075	.029	.046	.071	.066	.034	.043	.069	.068	.029	.038	.067	.065
.028	.032	.070	.079	.025	.028	.062	.065	.035	.036	.069	.071	.032	.037	.073	.075
.....	.095	.106	.106	.....	.086	.099	.100	.....	.085	.099	.102	.....	.084	.103	.104
.021	.036	.032	.030	.020	.030	.033	.028	.017	.025	.035	.032	.014	.016	.027	.024
.....	.053	.051	.050	.....	.042	.043	.043	.....	.028	.024	.026	.....	.034	.029	.031
.....	.122	.189	.184	.....	.120	.194	.191	.....	.124	.185	.180	.....	.126	.197	.191
.....	.136	.159	.162	.....	.121	.168	.169	.....	.128	.144	.146	.....	.122	.142	.147
.....	.121	.146	.147	.....	.133	.170	.170	.....	.108	.142	.143	.....	.128	.147	.145
.058	.080	.102	.099	.055	.076	.100	.093	.056	.071	.091	.089	.066	.079	.098	.095
.....	.265	.302	.303	.....	.242	.280	.280	.....	.317	.304	.304	.....	.326	.309	.313
.....	.575	.685	.693	.....	.543	.610	.617	.....	.517	.521	.540	.....	.500	.520	.533

1 Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 30 CITIES  
FOR SEPT. 15, 1917.

[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.	Birmingham,	Bridgeport,	Buffalo, N. Y.	Butte, Mont.	Charleston,	Cincinnati,	Columbus,	Dallas, Tex.	Fall River,	Indianapolis,	Jacksonville,
		Ala.	Conn.			S. C.	Ohio.	Ohio.		Mass.	Ind.	Fla.
Sirloin steak	Lb.	\$0.350	\$0.430	\$0.318	\$0.305	\$0.273	\$0.274	(1)	\$0.302	\$0.432	\$0.325	\$0.325
Round steak	do.	.316	.398	.298	.273	.262	.262	(1)	.290	.370	.325	.288
Rib roast	do.	.262	.333	.251	.246	.240	.232	(1)	.252	.294	.234	.252
Chuck roast	do.	.212	.275	.218	.196	.180	.188	(1)	.218	.247	.218	.197
Plate beef	do.	.165	.180	.173	.131	.145	.153	(1)	.180	.....	.162	.150
Pork chops	do.	.377	.400	.415	.378	.395	.373	(1)	.....	.....	.....	.....
Bacon, sliced	do.	.491	.489	.433	.535	.450	.439	(1)	.475	.420	.457	.446
Ham, sliced	do.	.427	.490	.425	.471	.404	.401	(1)	.445	.415	.441	.400
Lard	do.	.293	.295	.286	.296	.291	.290	(1)	.284	.289	.297	.298
Lamb	do.	.333	.351	.283	.303	.307	.283	(1)	.319	.336	.250	.303
Hens	do.	.266	.340	.314	.315	.303	.321	(1)	.256	.323	.290	.281
Salmon, canned	do.	.267	.319	.263	.330	.249	.263	(1)	.278	.278	.236	.285
Eggs	Doz.	.489	.670	.536	.636	.480	.468	(1)	.439	.681	.454	.511
Butter	Lb.	.540	.497	.493	.555	.500	.505	(1)	.489	.494	.504	.507
Cheese	do.	.344	.337	.325	.344	.321	.350	(1)	.357	.321	.363	.338
Milk	Qt.	.152	.125	.110	.145	.140	.120	(1)	.138	.130	.100	.130
Bread	16-oz. loaf <sup>2</sup>	.093	.094	.086	.107	.090	.080	(1)	.089	.085	.085	.094
Flour	Lb.	.074	.076	.069	.082	.079	.076	(1)	.069	.078	.072	.075
Corn meal	do.	.057	.072	.062	.070	.060	.068	(1)	.073	.073	.058	.060
Rice	do.	.120	.115	.106	.127	.084	.117	(1)	.096	.116	.120	.099
Potatoes	do.	.037	.029	.029	.025	.030	.029	(1)	.045	.027	.031	.037
Onions	do.	.056	.059	.056	.043	.049	.037	(1)	.044	.048	.052	.056
Beans, navy	do.	.197	.186	.185	.188	.163	.189	(1)	.180	.174	.197	.191
Prunes	do.	.163	.165	.150	.164	.166	.162	(1)	.174	.160	.173	.174
Raisins	do.	.164	.149	.130	.145	.138	.158	(1)	.147	.148	.165	.158
Sugar	do.	.102	.098	.095	.107	.095	.095	(1)	.102	.099	.103	.101
Coffee	do.	.333	.316	.286	.418	.282	.265	(1)	.352	.333	.295	.327
Tea	do.	.762	.608	.496	.725	.620	.724	(1)	.820	.473	.735	.717

Article.	Unit.	Kansas City,	Little Rock,	Los Angeles,	Louisville,	Manchester,	Memphis,	Minneapolis,	Newark, N. J.	New Haven,	New Orleans,	Omaha, Nebr.
		Mo.	Ark.	Cal.	Ky.	N. H.	Tenn.	Minn.		Conn.	La.	
Sirloin steak	Lb.	\$0.314	\$0.305	\$0.272	\$0.288	\$0.448	\$0.300	\$0.268	\$0.386	\$0.435	\$0.277	\$0.322
Round steak	do.	.292	.276	.246	.273	.410	.280	.253	.391	.405	.242	.300
Rib roast	do.	.233	.250	.229	.228	.280	.245	.213	.307	.326	.232	.228
Chuck roast	do.	.201	.194	.181	.200	.246	.205	.181	.268	.283	.181	.204
Plate beef	do.	.167	.169	.149	.168	.....	.160	.134	.195	.....	.153	.158
Pork chops	do.	.375	.377	.363	.360	.401	.366	.364	.412	.412	.368	.379
Bacon, sliced	do.	.463	.495	.490	.470	.424	.475	.445	.437	.480	.488	.458
Ham, sliced	do.	.419	.455	.471	.404	.406	.401	.420	.310	.494	.397	.387
Lard	do.	.302	.298	.289	.293	.299	.288	.288	.298	.296	.281	.304
Lamb	do.	.262	.307	.285	.280	.343	.339	.269	.361	.377	.316	.295
Hens	do.	.257	.259	.277	.289	.332	.270	.271	.333	.333	.300	.270
Salmon, canned	do.	.292	.289	.257	.252	.296	.257	.295	.318	.305	.285	.285
Eggs	Doz.	.446	.508	.533	.462	.629	.444	.439	.597	.683	.443	.446
Butter	Lb.	.491	.517	.499	.515	.535	.486	.465	.525	.506	.505	.483
Cheese	do.	.348	.343	.332	.367	.324	.321	.321	.348	.329	.330	.327
Milk	Qt.	.100	.150	.120	.110	.120	.122	.100	.125	.116	.116	.118
Bread	16-oz. loaf <sup>2</sup>	.098	.089	.081	.090	.084	.096	.093	.083	.089	.076	.096
Flour	Lb.	.068	.074	.068	.071	.079	.070	.063	.077	.078	.079	.064
Corn meal	do.	.065	.065	.069	.059	.071	.059	.059	.069	.069	.072	.063
Rice	do.	.105	.101	.103	.105	.103	.100	.101	.108	.110	.101	.102
Potatoes	do.	.029	.038	.031	.029	.026	.030	.024	.031	.031	.039	.029
Onions	do.	.045	.049	.028	.040	.052	.042	.036	.058	.050	.035	.044
Beans, navy	do.	.194	.197	.172	.210	.184	.195	.185	.182	.188	.171	.202
Prunes	do.	.158	.163	.161	.151	.154	.164	.158	.163	.168	.174	.161
Raisins	do.	.145	.149	.144	.160	.148	.157	.143	.146	.147	.154	.158
Sugar	do.	.101	.099	.090	.100	.103	.100	.098	.095	.099	.097	.098
Coffee	do.	.292	.341	.323	.279	.342	.305	.312	.298	.328	.266	.319
Tea	do.	.613	.777	.589	.702	.562	.709	.488	.567	.535	.615	.588

<sup>1</sup> Prices not shown; less than 80 per cent of reports for September, 1917, received by bureau.

<sup>2</sup> 16 ounces, weight of dough.



AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 30 CITIES  
FOR SEPT. 15, 1917—Concluded.

Article.	Unit.	Portland, Oreg.	Providence, R. I.	Richmond, Va.	Rochester, N. Y.	St. Paul, Minn.	Salt Lake City, Utah.	Scranton, Pa.	Springfield, Ill.	Washington, D. C.		
Sirloin steak.....	Lb.....	\$0.250	\$0.529	\$0.325	\$0.313	\$0.304	\$0.280	\$0.356	\$0.335	\$0.364		
Round steak.....	do.....	.244	.445	.305	.302	.267	.262	.317	.325	.348		
Rib roast.....	do.....	.227	.333	.254	.255	.237	.236	.275	.249	.281		
Chuck roast.....	do.....	.176	.307	.229	.244	.202	.206	.231	.231	.238		
Plate beef.....	do.....	.142	.....	.186	.177	.141	.159	.165	.179	.182		
Pork chops.....	do.....	.376	.431	.365	.380	.366	.390	.381	.383	.431		
Bacon, sliced.....	do.....	.461	.449	.437	.413	.444	.459	.456	.462	.462		
Ham, sliced.....	do.....	.422	.484	.368	.402	.415	.418	.428	.440	.433		
Lard.....	do.....	.300	.309	.291	.298	.295	.323	.287	.307	.303		
Lamb.....	do.....	.260	.362	.300	.315	.257	.283	.341	.352	.347		
Hens.....	do.....	.244	.344	.292	.320	.265	.310	.336	.240	.310		
Salmon, canned.....	do.....	.340	.284	.210	.278	.259	.295	.274	.274	.248		
Eggs.....	Doz.....	.494	.638	.494	.553	.436	.549	.528	.473	.545		
Butter.....	Lb.....	.550	.526	.540	.505	.472	.544	.488	.516	.523		
Cheese.....	do.....	.308	.337	.341	.325	.313	.345	.319	.366	.346		
Milk.....	Qt.....	.113	.120	.123	.116	.100	.100	.120	.110	.110		
Bread.....	16-oz. loaf <sup>1</sup>	.086	.088	.085	.086	.091	.090	.093	.099	.091		
Flour.....	Lb.....	.062	.076	.075	.079	.064	.059	.077	.073	.077		
Corn meal.....	do.....	.071	.072	.064	.074	.068	.073	.....	.071	.064		
Rice.....	do.....	.108	.109	.113	.113	.105	.107	.108	.118	.112		
Potatoes.....	do.....	.032	.031	.034	.028	.024	.035	.027	.031	.028		
Onions.....	do.....	.029	.052	.061	.049	.036	.039	.047	.046	.066		
Beans, navy.....	do.....	.192	.184	.189	.195	.203	.220	.192	.211	.193		
Prunes.....	do.....	.143	.170	.135	.195	.158	.166	.160	.169	.167		
Raisins.....	do.....	.142	.143	.146	.152	.143	.148	.139	.139	.145		
Sugar.....	do.....	.094	.101	.099	.098	.102	.104	.097	.108	.092		
Coffee.....	do.....	.320	.341	.291	.299	.319	.360	.319	.295	.284		
Tea.....	do.....	.540	.565	.670	.515	.515	.625	.525	.630	.607		

<sup>1</sup> 16 ounces, weight of dough.

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

Information collected by the Bureau of Labor Statistics shows that fluctuations in the retail prices of important food articles in the United States have conformed quite closely to changes in wholesale prices during recent months. It is apparent, however, that the margin between the wholesale and retail prices of some articles has widened materially since September, 1913.

In collecting data for the comparison, it was found that in some instances slight differences of grade or quality existed between the articles for which wholesale prices were obtainable and those for which retail prices could be secured. It was found impracticable also, in most instances, to obtain both kinds of quotations 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 comparisons of retail with wholesale prices can not be made. The figures are believed to be of interest, however, in showing price variations in the retail as compared with the wholesale markets.

In the table which follows the wholesale price represents, in each case, the mean of the high and low quotations on the date selected,

while the retail price is the simple average of all prices reported for the article and city in question. For convenience of comparison with retail prices, beans and corn meal are here quoted by the pound, wholesale, instead of the customary 100 pounds. Similarly, to facilitate comparison with the wholesale price, flour at retail is priced by the barrel instead of the one-eighth barrel. The initials W. and R. are used to designate wholesale and retail prices, respectively.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES, SEPTEMBER, 1913 TO 1916, AND JANUARY, APRIL, JULY, AUGUST, AND SEPTEMBER, 1917.

[The initials W=wholesale and R=retail prices.]

Article and city.	Unit.	September.				1917				
		1913	1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.
Bacon, short clear sides, Chicago... W.	Lb...	\$0.134	\$0.146	\$0.098	\$0.161	\$0.158	\$0.218	\$0.247	\$0.261	\$0.274
Bacon, sliced, Chicago..... R.	Lb...	.326	.338	.307	.325	.316	.395	.439	.429	.476
Beans, medium, choice, New York. W.	Lb...	.039	.052	.057	.090	.108	.130	.154	.150	.135
Beans, navy, small, white, New York..... R.	Lb.....			.083	.115	.149	.162	.188	.189	.185
Beef, fresh, carcass, Chicago..... W.	Lb...	.129	.144	.133	.138	.138	.160	.163	.168	.190
Round steak, Chicago..... R.	Lb...	.214	.236	.227	.240	.227	.256	.266	.273	.281
Beef, fresh, sides, New York..... W.	Lb...	.130	.145	.133	.143	.133	.173	.163	.170	.185
Rib roast, bone in, New York..... R.	Lb...	.215	.231	.227	.240	.238	.270	.279	.286	.298
Butter, creamery, extra, Chicago... W.	Lb...	.310	.300	.243	.320	.370	.440	.375	.394	.425
Butter, creamery, extra, Chicago... R.	Lb...	.353	.340	.302	.372	.438	.484	.432	.448	.484
Butter, creamery, extra, New York..... W.	Lb...	.313	.323	.255	.330	.395	.450	.395	.408	.444
Butter, creamery, extra, New York... R.	Lb...	.374	.373	.321	.390	.460	.513	.453	.470	.507
Butter, creamery, extra, San Francisco..... W.	Lb...	.385	.315	.280	.300	.355	.390	.385	.435	.435
Butter, creamery, extra, San Francisco..... R.	Lb...	.429	.379	.350	.371	.425	.452	.455	.504	.530
Cheese, whole milk, American twins, Chicago..... W.	Lb...	.143	.130	.130	.179	.218	.223	.216	.215	.240
Cheese, full cream, American, Chicago..... R.	Lb.....			.226	.266	.321	.327	.339	.342	.344
Cheese, whole milk, State, New York..... W.	Lb...	.155	.156	.145	.188	.220	.245	.238	.229	.244
Cheese, full cream, American, New York..... R.	Lb.....			.228	.244	.301	.335	.328	.331	.338
Cheese, fancy California flats, San Francisco..... W.	Lb...	.170	.145	.110	.145	.180	.215	.200	.235	.235
Cheese, full cream, American, San Francisco..... R.	Lb.....			.208	.229	.242	.297	.297	.306	.316
Eggs, fresh, firsts, Chicago..... W.	Doz...	.233	.233	.229	.273	.485	.305	.310	.323	.385
Eggs, strictly fresh, Chicago..... R.	Doz...	.304	.298	.290	.358	.525	.376	.406	.428	.465
Eggs, fresh, firsts, New York..... W.	Doz...	.255	.265	.253	.325	.505	.330	.350	.380	.413
Eggs, strictly fresh, New York..... R.	Doz...	.442	.409	.386	.490	.667	.424	.477	.544	.592
Eggs, fresh, extra pullets, San Francisco..... W.	Doz...	.300	.360	.310	.330	.380	.280	.320	.370	.430
Eggs, strictly fresh, San Francisco... R.	Doz...	.464	.458	.450	.450	.480	.374	.392	.475	.538
Flour, winter patent, Kansas City... W.	Bbl...	4.200	5.375	4.775	7.650	8.950	11.450	11.150	12.900	10.700
Flour, Aristo, Kansas City..... R.	Bbl...	5.900	6.800	7.400	9.200	10.600	13.689	13.680	14.320	13.289
Flour, standard patent, Minneapolis..... W.	Bbl...	4.700	5.725	5.425	8.475	9.450	11.025	12.000	13.200	11.350
Flour, Pillsbury's Best, Minneapolis..... R.	Bbl...	5.600	7.000	7.000	9.200	10.800	13.200	13.424	14.336	12.208
Flour, first patent, St. Louis..... W.	Bbl...	4.000	5.175	5.250	7.375	8.800	11.425	10.500	11.375	10.350
Flour, Gold Medal, St. Louis..... R.	Bbl...	6.200	7.400	7.147	9.200	10.587	12.853	13.200	14.800	13.700
Ham, smoked, Chicago..... W.	Lb...	.174	.193	.143	.190	.188	.243	.243	.233	.263
Ham, smoked, sliced, Chicago... R.	Lb...	.322	.350	.328	.359	.333	.382	.414	.407	.439
Lamb, dressed, round, Chicago... W.	Lb...	.140	.145	.160	.190	.200	.220	.260	.230	.280
Lamb, leg of, yearling, Chicago... R.	Lb...	.199	.207	.209	.235	.232	.263	.287	.288	.320
Lard, prime, contract, New York... W.	Lb...	.116	.097	.083	.146	.159	.215	.201	.226	.240
Lard, pure, tub, New York..... R.	Lb...	.163	.161	.148	.182	.213	.263	.274	.275	.294
Meal, fine, yellow, New York..... W.	Lb...	.015	.019	.017	.021	.027	.031	.040	.052	.050
Meal, New York..... R.	Lb...	.034	.036	.035	.040	.051	.057	.070	.067	.076
Milk, fresh, Chicago..... W.	Qt...	.037	.037	.039	.039	.045	.054	.047	.051	.051
Milk, fresh, bottled, delivered, Chicago..... R.	Qt...	.080	.080	.080	.090	.100	.100	.100	.100	.100
Milk, fresh, New York..... W.	Qt...	.038	.035	.035	.037	.051	.049	.050	.060	.060
Milk, fresh, bottled, delivered, New York..... R.	Qt...	.090	.090	.090	.090	.100	.109	.114	.125	.124

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES, SEPTEMBER, 1913 TO 1916, AND JANUARY, APRIL, JULY, AUGUST, AND SEPTEMBER, 1917—Concluded.

[The initials W=wholesale and R=retail prices.]

Article and city.	Unit.	September.				1917				
		1913	1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept
Milk, fresh, San Francisco.....W..	Qt...	\$0.039	\$0.039	\$0.038	\$0.038	\$0.038	\$0.038	\$0.043	\$0.043	\$0.058
Milk, fresh, bottled, delivered, San Francisco.....R..	Qt...	.100	.100	.100	.100	.100	.100	.100	.100	.121
Potatoes, white, good to choice, Chicago.....W..	Bu...	.750	.775	.450	1.350	1.750	2.700	2.625	1.600	1.250
Potatoes, Chicago.....R..	Bu...	1.089	1.035	.655	1.844	2.370	3.455	2.975	2.012	1.623
Poultry, dressed fowls, New York...W..	Lb...	.188	.195	.175	.220	.220	.265	.248	.240	.258
Poultry, hens, dressed, New York...R..	Lb...	.218	.227	.216	.259	.261	.293	.287	.288	.316
Rice, head, Honduras, New Orleans.....W..	Lb...	.051	.055	.043	.044	.048	.049	.071	.072	.070
Rice, head, Louisiana, New Orleans.R..	Lb...	.....	.....	.063	.071	.074	.088	.101	.103	.101
Sugar, granulated, New York.....W..	Lb...	.045	.071	.052	.063	.066	.081	.074	.082	.082
Sugar, granulated, New York.....R..	Lb...	.051	.072	.059	.072	.074	.087	.084	.090	.092

### PRICES AND WAGES IN INDIA.<sup>1</sup>

This report contains statistics of wholesale prices, retail prices, and wages up to the year 1915 and in some cases to January, 1916. The wholesale prices for 24 articles in 87 markets are based in general on fortnightly returns and market reports published by chambers of commerce. The retail prices are reported fortnightly by district officers, the averages being calculated for meteorological districts and for Provinces, based on prices in the headquarters of each district. The wages reported are in general the average paid in certain occupations during the last half of the year, while those for State railways, post offices, workshops, and business establishments, collieries, mills, etc., are compiled from reports made by these interests.

The average of the annual wholesale prices of 24 articles for all Provinces shows no fluctuation in 1915 as compared with 1914. Certain articles, however, fluctuated in price, varying in degree according to the locality. For example, taking India as a whole, refined sugar increased 34 per cent, raw sugar 31 per cent, wheat 13 per cent, wheat flour 16 per cent, and tobacco leaf 3 per cent; while the price of cotton decreased 22 per cent, poppy seed 17 per cent, cotton seed 8 per cent, linseed 11 per cent, and mustard and sesamum seed 14 per cent each. When a comparison is made between the years 1913 and 1915 the variation in the wholesale prices of many articles is considerably greater. The price of wheat increased 27 per cent, barley 21 per cent, maize 28 per cent, flour 28 per cent, grain 29 per cent, raw sugar 43 per cent, and refined sugar 31 per cent as compared with 1913; while the price of mustard seed decreased 13 per

<sup>1</sup> India. Department of statistics. Prices and wages in India. Thirty-second issue, Calcutta, 1917. viii, 266 pp. Price, 3s.

cent, sesamum 18 per cent, poppy seed 25 per cent, raw cotton 34 per cent, and raw jute 30 per cent. Prices of certain goods varied considerably when comparing one port or market with another. Rice was 12 per cent lower in Mysore and 19 per cent higher in Calcutta in 1915 than in 1913, and wheat prices were 40 per cent higher in Bihar and Orissa and only 11 per cent higher in Bombay Presidency in 1915 than in 1913. The prices of wheat, wheat flour, and sugar were higher in 1914 and 1915 than in 1913 in every port from which prices were reported. Prices of fibers and oil seeds, with the exception of one quotation for cotton (1 per cent) and one for cotton seed (2 per cent), were lower in every market reported in 1915 than in 1914, and lower in every market than in 1913. In general, however, these commodities showed a tendency toward recovery in 1915.

The following table shows for all India the per cent of increase or decrease in the average wholesale prices of 24 articles in 1915 as compared with prices in 1913 and 1914, based on reports received from 17 ports and Provinces.

PER CENT OF INCREASE OR DECREASE IN AVERAGE WHOLESALE PRICES OF 24 ARTICLES IN THE MARKETS OF INDIA IN 1915 AS COMPARED WITH PRICES IN 1913 AND 1914.

Commodity.	Per cent of increase (+) or decrease (-) in 1915 as compared with price in—		Commodity.	Per cent of increase (+) or decrease (-) in 1915 as compared with price in—	
	1913	1914		1913	1914
Cereals:			Other foodstuffs and tobacco—		
Rice.....	+ 3	+ 1	Concluded.		
Wheat.....	+27	+13	Tumeric.....	- 13	+ 5
Barley.....	+21	+ 6	Tobacco, leaf.....	+11	+ 3
Jawar (Indian millet).....	+12	( <sup>1</sup> )	Oil seeds:		
Bajra (pearl millet).....	+17	+ 4	Cotton.....	-12	- 8
Maize.....	+28	+ 7	Linseed.....	-13	-11
Ragi (cereal grass).....	+10	- 7	Mustard and rape.....	-13	-14
Flour, wheat.....	+28	+16	Sesamum.....	-18	-14
Pulse:			Poppy.....	-25	-17
Gram (chick peas).....	+29	- 1	Fibers:		
Arhar Dal (pulse).....	+41	+ 7	Cotton.....	-34	-14
Other foodstuffs and tobacco:			Jute.....	-30	-22
Ghi (butter oil).....	-13	- 3	Live stock:		
Sugar, raw.....	+43	+31	Sheep.....	+ 3	- 1
Sugar, refined.....	+31	+34	Plow bullocks.....	+ 6	( <sup>1</sup> )

<sup>1</sup> No change.

The same general trend of prices as shown by the wholesale market reports is shown in the reports for retail markets. In certain localities and with certain articles the changes were more pronounced. The greatest advance reported in the retail price of wheat in 1915 over 1913 was in the United Provinces and in Central India, being 36 per cent in each of these districts, while in Mysore there was no change. In India as a whole the average price was 22 per cent higher

in 1915 than in 1913 and 12 per cent higher than in 1914. Retail prices are shown for food grains and salt. The following table shows the per cent of increase or decrease in average wholesale prices of food grains and salt in 1915 as compared with prices in 1913 and 1914, as reported by ports and Provinces:

PER CENT OF INCREASE OR DECREASE IN AVERAGE RETAIL PRICES OF FOOD GRAINS AND SALT IN 1915, AS COMPARED WITH PRICES IN 1913 AND 1914.

Commodity.	Per cent of increase (+) or decrease (-) in 1915 as compared with price in—		Commodity.	Per cent of increase (+) or decrease (-) in 1915 as compared with price in—	
	1913	1914		1913	1914
Rice.....	(1)	- 1	Kangni.....	+12	+7
Wheat.....	+22	+12	Maize.....	+24	+6
Barley.....	+14	+ 3	Gram (chick peas).....	+26	(1)
Jawar (Indian millet).....	+ 9	- 2	Arhar Dal (pulse).....	+34	+7
Bajra (pearl millet).....	+15	+ 2	Salt.....	+ 6	+5
Mauri or Ragi (cereal grass).....	+ 6	- 1			

<sup>1</sup> No change.

Summary tables are given showing the average annual wholesale prices and, by index numbers, the trend of prices of 24 principal articles of consumption by port and Provinces for 1913, 1914, 1915, and the average annual wholesale prices of food grains and other articles for each year, 1897 to 1915, together with wholesale prices of staple articles in Calcutta in 1873, and from 1891 to 1916, with index numbers for the same period based on prices in 1873. Similar tables are given for retail prices, covering 11 articles.

The average rise in wholesale prices in Calcutta for 74 articles was 8 per cent at the end of the first year of the war and 21 per cent at the end of the second year. The greatest increase as compared with the price at the end of July, 1914, when considered by groups, is found in metals (80 per cent). Jute (raw) and oil and oil seeds fell 24 and 23 per cent, respectively. Raw cotton advanced 10 per cent and cotton manufactures 44 per cent.

Statistics of wages of skilled and unskilled labor in districts of British India are collected every 5 years, the last census being in 1911-12. Statistics for the Central Provinces are, however, collected annually. The following table shows the rate of wages for 1914, 1915, and 1916 for certain classes of wage earners in the chief industries of India, namely, the cotton industry of Bombay, the woolen industry of Cawnpore, the jute, paper, and mining (coal) industries of Bengal, the tea industry of Assam, the rice industry of Rangoon, and the brewing industry of Punjab. The wages given are those paid in the month of January, except for tea laborers, which are



the average of the wages earned in September and March of each official year.

AVERAGE WAGES PAID TO CERTAIN CLASSES OF WAGE EARNERS IN SELECTED INDUSTRIES IN INDIA, 1914, 1915, AND 1916.

Industry.	Wages paid by—	Rate of wages paid in—		
		1914	1915	1916
Cotton:				
Weavers.....	Month.....	\$10.53	\$11.34	\$11.34
Sizers.....	do.....	13.77	13.77	13.77
Wool:				
Weavers.....	do.....	4.32	4.54	4.60
Dyers.....	do.....	3.15	3.03	3.19
Jute:				
Weavers.....	Week.....	1.83	1.82	1.83
Spinners.....	do.....	1.12	1.13	1.13
Coolies.....	Day.....	.13	.14	.14
Paper:				
Machine men.....	Month.....	9.72	8.75	8.42
Coolies.....	do.....	3.89	3.89	3.89
Rice:				
Mill tindals.....	do.....	24.30	24.30	24.30
Mill coolies.....	do.....	4.54	4.54	4.54
Coal:				
Miners.....	Day.....	.12	.12	.12
Blacksmiths.....	do.....	.10	.10	.10
Brewing:				
Coopers.....	Month.....	6.62	7.07	7.64
Maltmen.....	do.....	2.69	2.66	2.96
Tea:				
Act laborers, male.....	do.....	1.85	1.96	1.86
Nonact laborers, male.....	do.....	1.97	1.95	1.95

Later reports on prices in India made possible the preparation of the following tables, showing index numbers of wholesale and retail prices of certain commodities:

INDEX NUMBERS SHOWING VARIATIONS IN AVERAGE WEEKLY WHOLESALE PRICES OF CERTAIN GRADES OF WHEAT IN INDIAN PORTS AND IN LONDON FOR SELECTED WEEKS.<sup>1</sup>

[Average price week ending July 30, 1914=100.]

Week ending—	Index numbers of prices in Indian ports for—		Week ending—	Index numbers of prices in London for—	
	Karachi (white). <sup>2</sup>	Bombay (Delhi No. 1, white Pessy).		Karachi (white, choice).	Delhi. <sup>3</sup>
July 30, 1914.....	100	100	July 30, 1914.....	100	( <sup>3</sup> )
Jan. 7, 1915.....	135	125	Jan. 8, 1915.....	132	105
July 23, 1915.....	110	118	July 23, 1915.....	142	111
Jan. 7, 1916.....	119	122	Apr. 19, 1916.....	154	( <sup>4</sup> )
July 28, 1916.....	106	108	July 28, 1916.....	155	( <sup>4</sup> )
Jan. 26, 1917.....	129	111	Jan. 26, 1917.....	208	157
Apr. 6, 1917.....	121	116	Apr. 4, 1917.....	210	157
Apr. 27, 1917.....	122	112	Apr. 13 to 27, 1917.....	215	157
July 20, 1917.....	117	121	July 13 to 20, 1917.....	220	171

<sup>1</sup> Wheat prices in India from second half of July, 1914, to second half of June, 1917, Calcutta, July 26, 1917.

<sup>2</sup> 5 per cent barley, 3 per cent dirt, 30 per cent red.

<sup>3</sup> Price on Dec. 16, 1914, taken as 100, since no earlier quotation is available.

<sup>4</sup> No quotation.



INDEX NUMBERS SHOWING VARIATIONS IN AVERAGE WEEKLY RETAIL PRICES OF WHEAT IN INDIAN MARKETS ON SELECTED DATES.<sup>1</sup>

[Week ending July 30, 1914=100.]

Week ending—	Index number.	Week ending—	Index number.
July 30, 1914.....	100	July 28, 1916.....	106
Jan. 7, 1915.....	135	Jan. 26, 1917.....	129
July 23, 1915.....	110	Mar. 30, 1917.....	121
Jan. 7, 1916.....	119	July 20, 1917.....	117

<sup>1</sup> Wheat prices in India from second half of July, 1914, to second half of June, 1917. Calcutta, July 26, 1917.

The following table compares the average wholesale prices of 10 commodities in Indian markets for fortnight ending June 30, 1915, (equals 100) with prices of June 30, 1916, and June 30, 1917:

INDEX NUMBERS OF WHOLESALE PRICES OF 10 COMMODITIES ON JUNE 30, 1916, AND JUNE 30, 1917, AS COMPARED WITH JUNE 30, 1915.<sup>1</sup>

Commodity.	Index numbers.			Commodity.	Index numbers.		
	1916		1917		1916		1917
	June 30, 1915=100 <sup>1</sup>	June 30, 1916=100 <sup>2</sup>	June 30, 1915=100 <sup>3</sup>		June 30, 1915=100 <sup>1</sup>	June 30, 1916=100 <sup>2</sup>	June 30, 1915=100 <sup>3</sup>
Rice.....	98	93	91	Gram (chick peas)...	98	97	95
Wheat.....	91	109	99	Arhar Dal (pulse)...	91	90	82
Barley.....	110	99	109	Ghi (butter oil)....	114	111	127
Jawar.....	97	100	97	Sugar.....	96	94	90
Maize.....	95	104	99	Salt.....	119	110	131

<sup>1</sup> Wholesale and retail (fortnightly) prices, July 25, 1916. Calcutta.

<sup>2</sup> Wholesale and retail (fortnightly) prices, July 24, 1917.

<sup>3</sup> Computed by this office.

## FOOD AND FUEL CONTROL.

### PROGRESS OF FOOD AND FUEL CONTROL IN THE UNITED STATES.

BY CYRUS F. STODDARD.

#### FOOD.

##### *Wheat.*

On August 30 the fair price committee, under the chairmanship of Dr. Harry A. Garfield, appointed to establish a price for the 1917 wheat crop,<sup>1</sup> submitted its report to the President. It recommended a price of \$2.20 for No. 1 northern spring wheat at Chicago, and the President issued an order, based upon this determination, establishing this price as the basic price from which prices of other grades are determined, applicable at each primary market in the country. Taking \$2.20 as the basic price, the prices of other grades at Chicago range from \$2.10 for No. 1 humpback to \$2.24 for No. 1 dark hard winter, No. 1 dark northern spring, and No. 1 amber durum, and the differentials between the different primary markets of the United States are as follows:

Kansas City and Omaha, 5 cents less than basic; Duluth and Minneapolis, 3 cents less; St. Louis, 2 cents less; New Orleans and Galveston, basic; Buffalo, 5 cents more; Baltimore and Philadelphia, 9 cents more; and New York, 10 cents more than basic. Nos. 2, 3, and 4 of each grade are, respectively, 3, 6, and 10 cents less than basic.

The committee reported that in its deliberations it had kept constantly in mind three factors: First, the fact that the United States is at war; second, the need of encouraging the producer; and third, the necessity of reducing the cost of living to the consumer. It recognized the fact that the normal laws of supply and demand may have been violently interfered with and that prices should be stabilized by artificial means. The committee gave attention to the fact that "the wheat yield in a great and important section of the country has this year been below the normal; that over against this situation is the need among the whole body of the population, especially the wage earners, that the rising tide of costs shall be stayed and reduced as rapidly as possible consistent with the welfare of the producer; that the Government is

<sup>1</sup>The personnel of this committee was given in the MONTHLY REVIEW for September, 1917, p. 70.

at the present time engaged in the great task of reducing and stabilizing costs of other staple commodities; that the wheat of the world is abundant for its needs even disregarding the stores in Russia, but because of lack of shipping and war conditions the burden of supplying wheat to the Allies and to neutral nations rests for the time being upon the United States and Canada." Cost estimates for the crop of 1917 were furnished by the Department of Agriculture, by independent investigations by the committee, and by the evidence submitted to the committee by producers and their representatives. The committee also considered "the regulations recently established by the United States Food Administration grain corporation<sup>1</sup> for the different grades of the wheat through which all transactions in wheat are to be standardized and speculation to be entirely eliminated; also that profits to the grain dealer, miller, and flour dealer have been regulated and reduced by the grain corporation, affecting a material reduction in the cost of flour." In arriving at the price determined upon, the committee was guided by the principle announced by the President that a fair price should be based upon the cost of production for the entire country plus a reasonable profit.

*Sugar.*

During the latter half of September the international sugar committee was formed to arrange for the distribution of the sugar imported from the West Indies and the United States insular possessions. Two of the members of this committee, Sir Joseph White-Todd and John V. Drake, sr., both of whom are familiar with the sugar situation, were appointed by the Allied Governments, while the American members are Earl D. Babst, president of the American Sugar Refining Co., and William A. Jamison, of Arbuckle Bros., neither of whom is interested in any way in the production of Cuban sugar; Mr. George M. Rolph, head of the sugar division of the Food Administration, is the fifth member of the committee. It is the duty of this committee to arrange for the purchase and distribution of all sugar, whether for the United States or the Allied Governments. The three American members are to serve as a subcommittee to handle and decide purely domestic questions with which the Allied members are not concerned. A committee of American refiners, consisting of C. A. Spreckels, James H. Post, and C. M. Warner, of New York; George H. Earle, jr., of Philadelphia; and Dwight P. Thomas, of Boston, also has been appointed to cooperate with the international committee, with the idea of assisting in the distribution of a part of the imported sugar that comes to the United States refiners.

<sup>1</sup> The organization of this corporation and its personnel were given in the MONTHLY REVIEW for September, 1917, p. 71.

As the result of a conference between representatives of the entire sugar-refining industry and the Food Administration, the refiners voluntarily agreed for the duration of the war, not only to obtain their supplies of raw sugar under the direction of the international sugar committee, but also to work on a stipulated margin between the cost of raw sugar and the selling price of refined sugar, thus limiting profits and going a long way toward stabilizing prices and eliminating speculation.

They further agreed to refine sugar on a net margin between the cost of their raw material and the selling price of their refined product of approximately 1.30 cents per pound after trade discounts have been deducted. The figure was arrived at by taking the average margin for five years previous to and including 1914 and adding the increased cost of operation which refiners must now face. For example, in refining sugar there is a loss in weight of about 7 pounds on every 100, and as raw sugar is expected to cost, in round figures, about 2 cents per pound more than in the 5-year prewar period, this alone amounts to an increased cost of 14 cents per 100 pounds. Bags, jute and cotton, have increased in price equivalent to about 15 cents per 100, coal 5 cents, labor 8 cents, and bone black 2 cents. These increases, added to the old prewar basis, bring the figure up to 1.281 cents, so that in selling on a margin of 1.30 cents net, only 0.019 cent per pound has been left to cover the increased cost of lighterage and cartage, added interest on the larger amount of money invested in the business, increased insurance due to explosion risks and the higher valuation of sugar, as well as the higher cost of all materials used in the refineries.

“The refiner sells his product to the wholesale grocery jobber through a broker and, in turn, the jobber sells to the retail trade. The margin of profit for the jobber and the broker, like that of the refiner, will be limited by the Food Administration to an amount that will represent a reasonable charge for the services performed. By these regulations and agreements the Food Administration hopes to eliminate speculation and to deliver sugar into the hands of the retail trade at a fair cost, based upon the present cost of production, manufacturing, and distribution. There the Food Administration’s control stops, and it will be necessary for the consuming public to see that they obtain their sugar at a proper price from the retail trade. The administration will assist in every way through publicity in keeping the country posted as to what the retailer should charge in the various sections of the United States.”

On September 21 the Food Administration announced that the beet-sugar producers of the country unanimously agreed to place the entire beet-sugar production of the country in the hands of the Food

Administration to be sold at a wholesale price not exceeding \$7.25 per hundred pounds, cane basis, f. o. b. seaboard refining points. Arrangements of the details of distribution of beet sugar have been placed in the hands of the Food Administration sugar distributing committee, composed of H. A. Douglass, Detroit, Mich.; E. C. Howe, Denver, Colo.; W. H. Hannam, San Francisco, Cal.; S. H. Love, Salt Lake City, Utah; W. S. Petriken, Denver, Colo.; S. W. Sinsheimer, Huntington Beach, Cal.; and W. P. Turner, Detroit, Mich.

The Western Sugar Refining Co. and the California-Hawaiian Sugar Refining Co., both located at San Francisco, have notified the Food Administration that while it will result in tremendous losses to their interests, they will make the wholesale price for cane sugar in the western half of the United States not to exceed \$7.25 per hundred pounds f. o. b. seaboard refining points.

There is, according to the Food Administration, no occasion for alarm over the prospect of a short crop of sugar this year. Nevertheless the American people are urged to make every effort to reduce the per capita consumption in order to conserve the supply and permit greater shipments than heretofore to the Allied Armies at the front. The world's present supply is estimated at 18,659,792 tons, as compared with an average production of 18,712,997 tons for a prewar period of five years. The beet-sugar crop in this country has been estimated at 1,000,000 tons, as against a prewar five-year average production of 724,346 tons, and the domestic cane-sugar crop, it is estimated, will be about 300,000 tons, as against a prewar five-year average of 241,837 tons. The per capita consumption in the United States is approximately 78<sup>1</sup> pounds, while in France it is about 45 pounds. In England the consumption per person is to be reduced from 97.4 pounds to less than 30 pounds per annum, but no such sacrifice is asked of the American people.

#### *Meat.*

In conference with the meat packers in Chicago during the latter part of August Mr. Hoover assured them that he had no intention of fixing the price of beef and pork products, as had been unofficially announced, but that he hoped "to develop by discussion with representative committees of the hog producers, the cattle producers, the commission men, and the packers greater stabilization of the industry during the war, and in such a way as to encourage production, to eliminate speculative profits, and risk, so far as may be, and by so doing to protect the consumer."

The Food Administration and the Department of Agriculture have impressed upon the farmers and stockmen the great necessity of

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<sup>1</sup> United States Statistical Abstract for 1916, pp. 529, 719.



increasing the meat supply of the country. Especially should the energies of the farmers be directed to increasing the sheep stock, since sheep supply a demand not only for food and fertility, but also for wool for clothing. Also it is urged that every heifer calf or ewe lamb should be brought to maturity, and that hog production should be increased. These are important considerations, since now the farmers of this country must supply our own soldiers and citizens as well as help feed the soldiers and citizens of our allies. It is estimated that the world's herds have been diminished by 28,080,000 cattle, 32,425,000 hogs, and 54,500,000 sheep.<sup>1</sup> After the war Europe, with diminished number of animals and, therefore, diminished annual production of animal food, will require large imports of meat during the years of recuperation, and will probably require the actual importation of breeding animals. Therefore, in a broad way, the outlook to the American producer from now on will be a large demand for animal products, and a continued need for meat and dairy animals to convert forage and grain not needed for human consumption into meat and dairy products. Since the herds and flocks of the country can be increased only over a period of years the foundation for such increase should be laid at once.

The packers' committee, representing all classes of packers, met with the Food Administration on September 12 and expressed approval of the Government's proposed plan to place the entire industry under license and a desire to cooperate with the Food Administration in working out war problems. Live-stock producers have recommended to the Food Administration that the main hope of reducing the price of meats lies in the establishment of municipal markets "because the greatest expense in meat handling occurs with the retailer."

#### *Other foods.*

Contrary to belief in some quarters, the Food Administration has no power to control or fix the price of milk. However, manufacturers of canned milk have demonstrated a desire to assist in preventing exorbitant prices by voluntarily agreeing to submit their business to the supervision of the Food Administration during the period of the war, and to limit the price to the public so as not to return to the industry a greater profit than was received before the war, at which time, they declare, a profit of 30 cents a case on evaporated milk and 40 cents a case on condensed milk was considered fair.

The Food Administration, in conjunction with the Department of Agriculture, has established a method of grading potatoes and will take steps to obtain an equitable distribution of the 1917 crop. This

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<sup>1</sup> Official Bulletin for Oct. 9, 1917, p. 16.



plan and that of licensing potato shippers met with the unanimous approval of 80 large potato shippers, representing practically every important potato section in the United States. The practice of buying and selling potatoes by the hundred pounds, instead of by the sack or bushel, will be followed in the future.

The President, on October 8, issued a proclamation, the provisions of which are effective November 1, 1917, requiring all persons engaged in the import, manufacture, storage, and distribution of certain fundamental foodstuffs to secure a license from the Food Administration. Those affected by this order include meat packers, cold-storage warehousemen, millers, canners, elevator operators, grain dealers, wholesale distributors, and retailers doing a business of more than \$100,000 per year and handling the commodities set forth in the proclamation. After November 1 no unlicensed person will be permitted to trade in the commodities enumerated. Licensees will be required to report from time to time to the Food Administration on their activities. This licensing system was authorized by the food control law and provides effective machinery for its enforcement. After quoting those provisions of the Food Control Act under which the action is taken, the proclamation proceeds:

It is essential in order to carry into effect the purposes of said act to license the importation, manufacture, storage and distribution of necessaries to the extent hereinafter specified.

All persons, firms, corporations and associations engaged in the business either of (1) operating cold-storage warehouses (a cold-storage warehouse, for the purposes of this proclamation, being defined as any place artificially or mechanically cooled to or below a temperature of 45 degrees above zero Fahrenheit, in which food products are placed and held for thirty days or more), (2) operating elevators, warehouses or other places for storage of corn, oats, barley, beans, rice, cottonseed, cottonseed cake, cottonseed meal or peanut meal; or, (3) importing, manufacturing (including milling, mixing or packing), or distributing (including buying and selling) any of the following commodities:

Wheat, wheat flour, rye, or rye flour.

Barley or barley flour.

Oats, oatmeal, or rolled oats.

Corn, corn grits, cornmeal, hominy, corn flour, starch from corn, corn oil, corn sirup, or glucose.

Rice, rice flour.

Dried beans.

Pea seed or dried peas.

Cottonseed, cottonseed oil, cottonseed cake, or cottonseed meal.

Peanut oil or peanut meal.

Soya bean oil, soya bean meal, palm oil, or copra oil.

Oleomargarine, lard, lard substitutes, oleo oils, or cooking fats.

Milk, butter, or cheese.

Condensed, evaporated, or powdered milk.

Fresh, canned, or cured beef, pork, or mutton.

Poultry or eggs.

Fresh or frozen fish.

Fresh fruits or vegetables.

Canned: Peas, dried beans, tomatoes, corn, salmon, or sardines.

Dried: Prunes, apples, peaches, or raisins.

Sugar, sirups, or molasses.

Excepting, however:

1. Operators of all elevators or warehouses handling wheat or rye, and manufactures of the derivative products of wheat or rye, who have already been licensed.

2. Importers, manufacturers, and refiners of sugar and manufacturers of sugar sirups and molasses, who have already been licensed.

3. Retailers whose gross sales of food commodities do not exceed \$100,000 per annum.

4. Common carriers.

5. Farmers, gardeners, co-operative associations of farmers or gardeners, including live-stock farmers and other persons with respect to the products of any farm, garden, or other land owned, leased, or cultivated by them.

6. Fishermen whose business does not extend beyond primary consignment.

7. Those dealing in any of the above commodities on any exchange, board of trade or similar institution as defined by section 13 of the act of August 10, 1917, to the extent of their dealings on such exchange or board of trade.

8. Millers of corn, oats, barley, wheat, rye, or rice operating only plants of a daily capacity of less than 75 barrels.

9. Canners of peas, dried beans, corn, tomatoes, salmon, or sardines whose gross production does not exceed 5,000 cases per annum.

10. Persons slaughtering, packing, and distributing fresh, canned, or cured beef, pork, or mutton, whose gross sales of such commodities do not exceed \$100,000 per annum.

11. Operators of poultry or egg-packing plants, whose gross sales do not exceed \$50,000 per annum.

12. Manufacturers of maple sirup, maple sugar, and maple compounds.

13. Ginners, buyers, agents, dealers, or other handlers of cotton seed who handle yearly between September 1 and August 31 less than 150 tons of cotton seed are hereby required to secure on or before November 1, 1917, a license, which license will be issued under such rules and regulations governing the conduct of the business as may be prescribed.

Applications for licenses must be made to the United States Food Administration, Washington, D. C., law department, license division, on forms prepared by it for that purpose, which may be secured on request.

Any person, firm, or corporation or association other than those hereinbefore excepted who shall engage in or carry on any business hereinbefore specified after November 1, 1917, without first securing such license will be liable to the penalty prescribed by said act of Congress.

The Food Administration has issued a number of bulletins bringing together some of the more important statements it has prepared for the daily press, tracing its activities and plans for food conservation. Among these is one containing 10 lessons on food conservation, the aim in preparing them being to acquaint students in the country with the world situation as respects food supplies and production and to outline definite and immediate things to do and, wherever possible, to show how to do them. The subjects included are: Food the deciding factor; Plan of food administration; Food

conservation measures; Wheat conservation, with demonstrations of emergency breads; Conservation of meat, fats, and sugars; Food preservation, with demonstrations of canning and drying; Fundamentals of an adequate diet; and Methods of organizing local groups into a working unit.

*Administration.*

To assist in carrying out the provisions of the food control law the President, on August 16, approved the appointment, for each State, of a Federal food administrator, whose duty is to assist in the enforcement of the policies of the Food Administration in its efforts to stabilize conditions, to defend honest enterprises against illegitimate competition, to correct the abnormalities and abuses that have crept into trade by reason of the world disturbance, and to restore business, so far as may be possible, to a reasonable basis. The Food Administration announces that it feels justified in counting on the patriotic cooperation of the great majority of business men, but in case any person should be found trying to exploit the country in this time of war these State food administrators are empowered "to take steps to see that the drastic powers that Congress has conferred upon the Food Administration for handling such cases are employed." The men who have been selected as Federal food administrators in the various States represent a wide variety of interests and include leading business men, college presidents and educators, and farmers. These administrators have been appointed in all States except Delaware, New York, South Dakota, and the District of Columbia, and are as follows:

Alabama.....	Richard M. Hobbie.....	Montgomery.
Arizona.....	Timothy A. Riordan.....	Phoenix.
Arkansas.....	Hon. Hamp Williams.....	Little Rock.
California.....	Ralph P. Merritt.....	San Francisco.
Colorado.....	Thos. B. Stearns.....	Denver.
Connecticut.....	Robert Scoville.....	Hartford.
Delaware <sup>1</sup> .....		
District of Columbia.....	Clarence R. Wilson.....	Washington.
Florida.....	Braxton Beacham.....	Orlando.
Georgia.....	Dr. Andrew M. Soule.....	Athens.
Hawaii.....	J. F. Childs.....	Honolulu.
Idaho.....	R. F. Bicknell.....	Boise.
Illinois.....	Harry A. Wheeler.....	Chicago.
Indiana.....	Dr. Harry E. Barnard.....	Indianapolis.
Iowa.....	J. F. Deems.....	Burlington.
Kansas.....	Dr. Henry J. Waters.....	Manhattan.
Kentucky.....	Fred M. Sackett.....	Louisville.
Louisiana.....	John M. Parker.....	New Orleans.
Maine.....	Dr. Leon S. Merrill.....	Orono.
Maryland.....	Edwin G. Baetjer.....	Baltimore.
Massachusetts.....	Henry B. Endicott.....	Boston.

<sup>1</sup> Administrator not yet appointed.

Michigan.....	George A. Prescott.....	Lansing.
Minnesota.....	A. D. Wilson.....	St. Paul.
Mississippi.....	P. M. Harding.....	Vicksburg.
Missouri.....	Frederick B. Mumford.....	Columbia.
Montana.....	Prof. Alfred Atkinson.....	Bozeman.
Nebraska.....	Gurdon W. Wattles.....	Omaha.
Nevada.....	Henry M. Hoyt.....	Reno.
New Hampshire.....	Huntley N. Spaulding.....	Concord.
New Jersey.....	Hon. James F. Fielder.....	Jersey City.
New Mexico.....	Ralph C. Ely.....	Santa Fe.
New York (city only).....	Arthur Williams.....	New York City.
North Carolina.....	Henry A. Page.....	Raleigh.
North Dakota.....	Dr. Edwin F. Ladd.....	Fargo.
Ohio.....	Fred C. Croxton.....	Columbus.
Oklahoma.....	Dr. Stratton D. Brooks.....	Norman.
Oregon.....	W. B. Ayer.....	Portland.
Pennsylvania.....	Howard Heinz.....	Philadelphia.
Porto Rico.....	Albert E. Lee.....	San Juan.
Rhode Island.....	Alfred M. Coats.....	Providence.
South Carolina.....	David R. Coker.....	Columbia.
South Dakota.....	Charles M. Herreid.....	Aberdeen.
Tennessee.....	Prof. H. A. Morgan.....	Nashville.
Texas.....	E. A. Peden.....	Houston.
Utah.....	W. W. Armstrong.....	Salt Lake City.
Vermont.....	James Hartness.....	Springfield.
Virginia.....	Col. E. B. White.....	Leesburg.
Washington.....	Charles Hebbard.....	Spokane.
West Virginia.....	Earl W. Oglebay.....	Wheeling.
Wisconsin.....	Magnus Swenson.....	Madison.
Wyoming.....	Theodore C. Diers.....	Sheridan.

To assist the Food Administration, appointments of State merchant representatives have been made, the duty of these representatives being primarily to effect a mobilization of the retail merchants in order to secure their assistance in publicity work in food conservation by means of window displays, advertising, demonstrations, posters, etc.

Briefly stated, the problem which confronts the Food Administration and which it is endeavoring to solve is to feed our allies this winter by sending them as much food as can be spared, of the most concentrated nutritive value in the least shipping space. These foods are wheat, beef, pork, dairy products, and sugar. The solution of this problem lies in the hands of the American people and may be attained by eating less of the foods enumerated and more of other foods of which we have an abundance, and by wasting less of all foods. As President Wilson said:

This is the time for America to correct her unpardonable fault of wastefulness and extravagance. Let every man and every woman assume the duty of careful, provident use and expenditure as a public duty, as a dictate of patriotism which no one can now expect ever to be excused or forgiven for ignoring.

## FUEL.

The prices for bituminous and anthracite coal at the mine were established by the President, effective August 21 and September 1, respectively. These prices, which are provisional, will stand unless changed by the President for good cause shown, and all applications for revision will be carefully examined by the Fuel Administration. The President has directed that a jobber dealing in bituminous coal shall not add to the purchase price a gross margin in excess of 15 cents per ton of 2,000 pounds. The jobber dealing in anthracite coal is not permitted to add to his purchase price a gross margin in excess of 20 cents per ton of 2,240 pounds, when delivery of such coal is to be effected at or east of Buffalo. Ten cents additional may be charged if delivery is to be made west of Buffalo.

The bituminous coal prices are based on a division of the country into 29 districts, in each of which producers will market their output at the same price. The maximum rates fixed by the President on the run-of-mine basis range from \$1.90 for Alabama big seam coal to \$3.25 in the State of Washington, the average price being approximately \$2.36 per ton. To meet exceptional conditions in certain outlying fields prices ranging from \$2.15 to \$3.30 for run-of-mine coal have been fixed. The maximum prices for anthracite coal established by the President in his order of August 23, effective September 1, 1917, are as follows:

MAXIMUM PRICES FOR ANTHRACITE COAL PER TON OF 2,240 POUNDS FREE ON BOARD CARS AT THE MINE.

Size.	White ash grade.	Red ash grade.	Lykens Valley grade.
Broken.....	\$4.55	\$4.75	\$5.00
Egg.....	4.45	4.65	4.90
Stove.....	4.70	4.90	5.30
Chestnut.....	4.80	4.90	5.30
Pea.....	<sup>1</sup> 4.00	<sup>1</sup> 4.10	<sup>1</sup> 4.35

<sup>1</sup> An order issued by the Fuel Administration, effective Oct. 1, 1917, reduced this price by 60 cents.

On September 30 the fuel administrator announced the method by which the retail coal and coke dealers should fix their maximum gross margins—that is, the difference between the average cost of coal or coke at the retailer's yard, wharf, or siding and the prices at which they sell to the consumer. Under the plan announced, the retailer is to ascertain his retail margin in the year 1915, when more normal conditions prevailed than at present. To this he may add not to exceed 30 per cent of that margin, including his profits at that time. It is provided, however, that in no case shall the retail margin added by any retail dealer exceed the average added by him for the same



size, grade, and class of business during July, 1917. Since it is the retail price of coal in which the average householder is interested it may be well to go a little more fully into this matter. The Fuel Administration has defined the retail gross margin as being the difference between the price charged by retail coal or coke dealers to consumers and the average cost of coal or coke to such retailer, free on board cars at his railroad siding, yard, pocket, or trestle, or free alongside his wharf, pocket, or water yard, or the average cost to such retailer at wholesalers' pockets, trestles, railroad sidings, mines, tipples, docks, yards, or wharves as the case may be. This average cost of coal or coke, to which the gross retail margin may be added, shall be ascertained by the dealer for each size and grade on the first and sixteenth of each calendar month; according to a method announced by the Fuel Administration, as follows:

The tonnage and average cost of coal or coke on hand at the beginning of a period is to be combined with the tonnage and average cost of coal or coke received during the period.

## EXAMPLE—EGG COAL.

	Tons.	Total cost.	Average cost per ton.
On hand, Oct. 1.....	100	\$600.00	\$6.00
Received Oct. 1 to 15, inclusive.....	300	1,500.00	5.00
Total.....	400	2,100.00	5.25
Sold Oct. 1 to 15, inclusive.....	350		
On hand Oct. 16.....	50	262.50	5.25
Received Oct. 15 to 31, inclusive.....	300	1,425.00	4.75
Total.....	350	1,687.50	4.82

In the above example the average cost per ton of egg coal to which the gross margin should be added for sales during the period October 1 to October 15, inclusive, is \$6; during the period October 16 to 31, inclusive, it is \$5.25; and for sales during the period November 1 to 15, inclusive, the average cost is \$4.82. The same method of computation must be applied by each dealer in ascertaining his average cost of each size and grade of coal or coke.

Arrangements for the apportionment of the coal supply and the regulation of the retail sale of coal are in the hands of State fuel administrators and local committees of citizens in each county and in each city having a population of more than 2,500 or such other population as the State fuel administrator may determine. These local committees are charged with the duty of ascertaining and reporting to the fuel administrator the reasonable retail margin (that is, "the cost of local distribution at a reasonable dealer's profit") to be allowed, which, when duly fixed by order, together with the cost at the mine named by the President, the transportation



charges, and the jobber's commission (when sold through a jobber), will constitute the price to the consumer. These figures will be compiled with relation to local needs in order that the fuel administration may, if necessary, apportion the supply of coal with careful regard to the greatest existing needs. So far as appointed the State fuel administrators are as follows:

Alabama.....	S. P. Kennedy.....	Anniston.
Arizona.....	Will L. Clark.....	Flagstaff.
California.....	Albert E. Schwabacher.....	San Francisco.
Colorado.....	William J. Galligan.....	Denver.
Connecticut.....	Thomas W. Russell.....	Hartford.
Delaware.....	Charles H. Ten Weeges.....	Wilmington.
District of Columbia.....	John L. Weaver.....	Washington.
Georgia.....	Dr. L. G. Hardman.....	Commerce.
Idaho.....	F. R. Gooding.....	Gooding.
Illinois.....	John E. Williams.....	Streator.
Indiana.....	Evans Woolen.....	Indianapolis.
Iowa.....	Charles W. Webster.....	Waucoma.
Kansas.....	Emerson T. Carey.....	Hutchinson.
Louisiana.....	John G. O'Kelley.....	New Orleans.
Maine.....	J. H. Hamlen.....	Portland.
Michigan.....	William K. Prudden.....	Lansing.
Mississippi.....	C. L. Townes.....	Minter City.
Massachusetts.....	James J. Storrow.....	Boston.
Montana.....	M. J. Swindlehurst.....	Helena.
Nebraska.....	John L. Kennedy.....	Omaha.
Nevada.....	E. H. Walker.....	Carson City.
New Hampshire.....	Charles M. Floyd.....	Manchester.
New Mexico.....	William C. McDonald.....	Carrizozo.
New York.....	Albert H. Wiggin.....	New York City.
North Carolina.....	A. W. McAllister.....	Greensboro.
North Dakota.....	I. P. Barker.....	Bismarck.
Ohio.....	Homer H. Johnson.....	Cleveland.
Oklahoma.....	P. A. Norris.....	Ada.
Oregon.....	Fred J. Holmes.....	La Grande.
Pennsylvania.....	William Potter.....	Philadelphia.
Rhode Island.....	George H. Holmes.....	Providence.
South Carolina.....	B. B. Gossett.....	Anderson.
Utah.....	W. W. Armstrong.....	Salt Lake City.
Vermont.....	H. J. M. Jones.....	Montpelier.
Washington.....	David Whitcomb.....	Seattle.
Wisconsin.....	W. N. Fitzgerald.....	Wilwaukee.

## FOOD CONTROL IN GREAT BRITAIN.<sup>1</sup>

### STATEMENT OF FOOD CONTROLLER TO THE PUBLIC.

In the recently published first number of the *National Food Journal*,<sup>2</sup> the official organ of the British Ministry of Food, Lord

<sup>1</sup> For previous articles on food control in Great Britain see MONTHLY REVIEW, March, 1917, pp. 392-407, June, 1917, pp. 928-945, and July, 1917, pp. 69-78.

<sup>2</sup> The *National Food Journal*. Issued by the Ministry of Food. No. 1, London, Sept. 12, 1917.

Rhondda, the Food Controller, makes a statement of his policy and welcomes the appearance of this Journal as a means of giving to the public detailed and official information in respect to the action taken by the Ministry of Food.

He states that his policy, broadly speaking, is to fix prices of those articles of prime necessity over the supply of which he can obtain control at all stages, from producer down to the retailer. The purpose is to fix such prices on the principle of allowing a reasonable prewar profit to those engaged in the production and distribution of the particular commodity. The policy contemplates the prevention of speculation, the elimination of unnecessary middlemen, and the utilization of existing agencies for the purpose of distribution, under license and control and under supervision of local food controllers to be appointed by the local authorities. Lord Rhondda states that while he is primarily concerned with the protection of the consumers, he must see that the legitimate interests of food producers and other traders are safeguarded, and above all avoid action that will curtail the necessary supplies. In short, his object is to see that supplies are forthcoming so far as they are available and that the prices are not excessive.

The matter of profiteering has engaged the attention of the controller, who takes occasion to make clear three points in this connection: "1, That the worst form of profiteering, which consists in the intervention of the unnecessary middleman, has already been almost entirely eliminated in the case of essential foodstuffs; 2, that the more prevalent, if more excusable, habit of selling a commodity for what it will fetch can only be checked by a complete system of control; 3, that this control has already become operative in respect of bread, flour, sugar, and a variety of imported foodstuffs and is gradually being extended to meat and all descriptions of food."

The aim of the food controller has been to economize and maintain supplies of essential foodstuffs and insure their equitable distribution at the lowest prices which the circumstances permit. This problem is being met by inducing people to eat less and to eliminate waste, and by encouraging the use of all foodstuffs to the greatest nutritive advantage.

The percentage of increase in retail food prices in the United Kingdom on August 1, 1917, was 101.7 as compared with normal prices at the outbreak of the war. Among the causes of this rise are the following: "1, The high prices charged in countries from which imports of foods are obtained, owing in large measure to either exceptional demand or general shortage in supply. These high prices are outside the control of the home Government; 2, the rise in price due to inflation, which may occur either directly through an increase in

currency, or more indirectly through the additional extent to which credit is increased, when loans are raised, and the Government which borrows is a large spender; 3, the high freight rates on the Atlantic routes, the great increase in war-risk insurances, and the difference in rates of exchange."

Since the last publication in the MONTHLY REVIEW of an article on food control in Great Britain,<sup>1</sup> the Food Controller has issued such a large number of new orders that the space available for the present article does not permit the reproduction of their text in full. It therefore seems expedient to give a general summary of the orders now in force. The following statement taken from the first issue of the National Food Journal for September 12, 1917, gives first a summary of the orders enacted up to August 22, 1917, following which is given a summary of the orders beginning with that date.

#### SUMMARY OF FOOD ORDERS ISSUED UP TO AUGUST 22, 1917.

##### BEANS, PEAS, AND PULSE.

All imported beans, peas, and pulse have been taken over by the ministry of food.

The following maximum retail prices have been fixed: Large butter beans 8d. (16 cents) per pound; white haricot beans, 6d. (12 cents); colored haricot beans, 5½d. (11 cents); blue and green peas (whole and split), 9d. (18 cents); large manufactured lentils, 8d. (16 cents); small manufactured lentils, 7d. (14 cents); yellow split peas, 6d. (12 cents).

All must be sold by weight only and may be used only for human consumption.

The sale of peas in packages is authorized under certain conditions. The packages may contain only peas and a bag of cooking requisites and must be of the approximate gross weights of 1 pound, three-fourths pound, or one-half pound, which may be sold at 9d. (18 cents), 6½d. (13 cents), and 4½d. (9 cents), provided the respective net weights of the peas is not less than 14½ ounces, 10¾ ounces, and 6¾ ounces.

The use before December 1 of winter-sown winter beans grown in the United Kingdom in the year 1917 is forbidden for any purpose other than seed. No such beans may be bought or sold to any person other than such persons as ordinarily deal in them and with a view to their being used or resold for the purposes of seed. In cases of purchase the buyer must give a certificate to the seller, giving the name and address of the buyer and stating the purpose for which such beans are required. This certificate must be retained by the seller and be open to the inspection of any authorized person. The order does not refer to Ireland.

##### BREAD AND CEREALS.

Bread must not be sold until it has been made at least 12 hours.

The only loaves allowed are the tin loaf, the one-piece oven-bottom loaf, pan Coburg shape, and twin sister brick loaves, and rolls weighing not less than 1 ounce and not more than 2 ounces.

No currant, sultana, or milk bread may be made.

No sugar may be used in bread.

<sup>1</sup> See MONTHLY REVIEW for July, 1917, pp. 69-78.

All bread must be sold by weight. All loaves must be 1 pound or an even number of pounds.

No wheat, rye, rice, tapioca, sago, manioc, or arrowroot or products thereof may be used except for human food.

No wheat, rye, rice, no flour thereof, nor any article containing such flour, shall be damaged or wasted.

No maize, barley, or oats, or products thereof may be used except for seed or human or animal food.

The extraction of flour from wheat is raised to a nominal basis of 81 per cent.; the percentage of flour from other cereals to be mixed with wheaten flour shall be as fixed by the Flour Mills Control Committee from time to time.

Barley, maize, oats, rye, rice, and beans are the permitted cereals from which flour may be manufactured as admixtures to wheaten flour. Soya-bean flour is also permitted, but is limited to 5 per cent.

The maximum retail price of maize flour, maize flakes, maize semolina, hominy, cerealine, or maize meal is 3½d. (7 cents) per pound; and of oatmeal, rolled oats, flaked oats, or other like products of oats, 4½d. (9 cents) per pound in Scotland and 5d. (10 cents) per pound elsewhere in the United Kingdom.

No person shall, without a permit issued under the authority of the Food Controller, sell any wheat, barley, oats, or rye of the 1917 crop grown in the United Kingdom. All existing contracts are canceled, except in such cases as the Food Controller shall otherwise determine, or in the case of contracts made by any Government department.

Maximum prices have been fixed for the 1917 harvest of the United Kingdom of wheat, rye, oats, and barley.

Grain suitable for seed and sold specifically for that purpose is exempt from the order.

All grain specified in the order must be sold by weight—wheat and rye 504 pounds a quarter, oats 336 pounds, and barley 448 pounds.

No person may torrefy or bleach any wheat, rye, oats, or barley, whether imported or home grown.

No barley may be used except for the purpose of seed or manufacturing of flour. Tailings, screenings, or barley so damaged as to be unfit for milling are excluded.

Barley flour may not be used except in the manufacture of articles suitable for human food, and no article containing barley flour may be used otherwise than as human food. This does not apply to barley flour which, before September 1, had been so treated as to be unsuitable for human food, or which may become unfit for such purpose.

To damage barley or barley flour or any article containing the latter is an offense.

No winter-sown winter oats grown in the United Kingdom in 1917 may be used in England or Wales before November 1, or rye before January 1, 1918, for any purpose other than seed.

The Food Controller has taken over all flour mills of the United Kingdom which use wheat in the making of flour.

#### BREWING.

The Food Controller has taken over all barley, foreign and home grown, other than home-grown barley which has not been kiln dried.

By an order made in March the output of beer in each quarter was limited to one-third of the output during the corresponding quarter of the year 1 April, 1915, to 31 March, 1916.

By a further order made in July the barrelage during the quarter commencing 1 July, 1917, was increased by 20 per cent, provided that any brewer accepting this increase brews one-half of his total output at a gravity not exceeding an original gravity of 1,036°. The remaining half shall be brewed at an average original gravity not exceeding that of the total brewed by him during the quarter commencing 1 July, 1916.

A further increase of barrelage not exceeding 13½ per cent may be authorized by license of the Food Controller and will be allocated to such munition and agricultural areas as are found still to be deficient in supplies.

Brewers who do not elect to come under the order are not affected.

The manufacture and sale of malt is prohibited, except under license.

#### CAKES AND PASTRIES.

The making of any light fancy pastries, muffins, crumpets, and other light articles of food is prohibited.

Cakes, buns, scones, and biscuits must conform to certain requirements as to the amount of sugar and wheaten flour that may be used.

Fifteen per cent of sugar is allowed in cakes and biscuits; 10 per cent in buns. No sugar may be used in scones.

Not more than 30 per cent of wheaten flour may be used in cakes and 50 per cent in buns and scones.

No ornamented cake or bun may be made.

#### CHEESE.

The Food Controller has taken over all cheese imported from the United States, Canada, Australia, and New Zealand.

The Board of Trade has placed a quantity of cheese on the market at a price which enables retailers to sell at 1s. 4d. (32 cents) per pound.

#### CONDITIONS OF SALE.

No trader, in selling an article, may impose a condition relating to the purchase of any other article.

#### FISH.

The board of agriculture is empowered to authorize the taking of sea fish in tidal or territorial waters by any method or appliance now unlawful, and at times and places otherwise forbidden, and to permit the sale of fish so caught. The use of fixed nets, stake nets, or other erections on tidal lands may not be sanctioned without the consent of the Board of Trade or on the foreshore under the control of the commissioners of woods and forests without the consent of those commissioners.

Every person owning or having power to sell pickled herrings of the kinds known as largefulls, fulls, matfulls, mediumfulls, matties (guttled or ungtuttled), large spents, spents, tornbellies (guttled only), cured on or after May 1, 1917, must on or before the 14th of each month furnish to the Food Controller a return giving particulars of (a) all such herrings in his possession or under his control on the last day of the preceding month; (b) all sold or disposed of during that month; and (c) such other particulars as may be required to complete the prescribed form on which the return must be made and which may be had from the Ministry of Food, Grosvenor House, London, W. 1.

A person who does not own more than 25 barrels at the end of any month shall not be required to make a return in respect of that month.



## FRUIT.

No jam manufacturer shall buy, for preserving or bottling, any of the following fruits grown in the United Kingdom at prices exceeding those specified: Egg plums, £10 10s. (\$51.12) per ton; other plums, £12 10s. (\$60.85) per ton; Farleigh or Kent damsons, £12 (\$58.40) per ton; pin, or prune, or other damsons £14 (\$68.13) per ton; greengages, £22 (\$107.06) per ton.

These prices include picking and packing, and are f. o. r. or f. o. b., but where the fruit is delivered by the seller to the purchaser's premises, or for sale in a market, the customary charges may be added. Other permitted charges are the market tolls actually paid, and not more than 25s. (\$6.08) a ton for the use of baskets or usual packages other than sacks. The commission of an agent buying on behalf of a manufacturer is limited to 12s. 6d. (\$3.04) per ton.

It is an offense to offer such fruit to a jam manufacturer at prices in excess of the above, or to enter into any fictitious transaction.

## HOARDING.

No person shall acquire supplies of food beyond the needs of his ordinary consumption.

A tradesman shall not sell any article of food where he has reasonable grounds for believing that the quantity ordered is in excess of requirements.

The Food Controller may order the inspection of premises in which he has reason to believe that hoarding is taking place.

## HORSE RATIONING.

Restrictions are imposed on the feeding of horses with cereal foodstuffs. Hay, straw, bran, or dried brewers' grains are still allowable.

These restrictions do not apply to horses used exclusively for purposes of the Army Council or Admiralty, or in agriculture, stallions used for stud purposes, thoroughbred brood mares, and brood mares in foal or with foal at foot.

In the case of horses used for trade or business purposes, and of certain classes of thoroughbreds, a ration is fixed, the amount of which may be ascertained from the order.

All other horses are precluded from receiving any cereal foodstuffs, except those mentioned in the first paragraph.

## JAM.

The Food Controller has fixed wholesale and retail prices of jams and jellies. In regard to wholesale sales the buyer may require the goods to be delivered free of charge to his station. The seller may add to the maximum price applicable the cost of the outside package inclosing the jars or other containers, provided this is refunded on return of the package. In retail sales the maximum prices are to include all charges for jars or other containers and for all packages. When the jam or jelly is contained in a 7-pound jar the buyer is entitled to recover from the seller 6 d. (12 cents) on each jar returned in good condition.

Restrictions are imposed as to the composition of jams and jellies.

Except under authority of the food controller, no person may buy, sell, or deal in any apricot pulp or bitter or sour oranges, or pulp made from such oranges, outside the United Kingdom, whether or not the transaction is effected in the United Kingdom.



## MEAT SALES.

A person, called the dealer, who buys any fat cattle may only resell them to a person, called the permitted buyer, who undertakes to slaughter them within 14 days. This undertaking must be entered in a book kept at the market where the sale takes place, or, in other cases, on an authorized form which must be sent by the dealer to the nearest market authority. Market authorities may grant licenses under certain conditions for a second dealer, called the distributing dealer, to purchase fat cattle for removal to another specified market for sale to a permitted buyer.

In respect to dead meat it is provided that a salesman—that is, a person who has bought any dead meat—may sell it only to a retailer or a consumer, and his profit is limited by the order.

All persons engaged in the production, purchase, sale, distribution, transport, storage, or shipment of any cattle or meat shall furnish such particulars as to their businesses as may from time to time be specified by or on behalf of the Food Controller, and shall verify the same in such manner as he may direct.

Rams, ewes, wethers, lambs, deer, goats, and swine are included in the expression "cattle," in addition to cattle usually so called.

## MILK.

The maximum wholesale price of milk is 6½d. (13 cents) per imperial gallon and the retail price 2d. (4 cents) a quart over the price on the fifteenth of the same month in 1914.

## PUBLIC MEALS.

Hotels, restaurants, clubs, boarding houses where the number of bedrooms for letting exceeds 10, and refreshment places generally are rationed in bulk according to the ascertained weekly average of meals served in them. The allowance of meat is based on an average of 5 ounces for each luncheon and dinner, and 2 ounces for each breakfast served; bread, 2 ounces for each breakfast, luncheon, tea, and dinner, with 1 ounce of flour for each luncheon and dinner; and sugar,  $\frac{2}{3}$  of an ounce for each breakfast, luncheon, tea, and dinner.

Establishments at which no meal is served costing more than 1s. 3d. (30 cents) exclusive of beverages, are not rationed. But where a public eating place is excluded from the public meals order by reason of the fact that it never charges more than 1s. 3d. (30 cents) for any meal, it shall not serve any individual between the hours of 3 p. m. and 6 p. m. with more than 2 ounces in all of bread and cakes. This does not apply to places which limit to 6d. (12 cents) the maximum price charged for any meal served between the hours of 3 p. m. and 6 p. m. and not containing meat, fish, or eggs.

## SUGAR.

No chocolate must be sold or bought retail at a price exceeding 3d. (6 cents) per ounce, or any other sweetmeats at a price exceeding 2d. (4 cents) per ounce.

The quantity of sugar used by manufacturers other than of jam, marmalade, or condensed milk is reduced to 25 per cent of the 1915 supply.

## TEA AND COFFEE.

No tea may be packed other than the net weight.

All tea sold retail, whether contained in a package or not, shall be sold by net weight.

By arrangement with the trade 30 per cent of the total imports of tea from India and Ceylon is allocated to be sold to the public retail at 2s. 4d. (57 cents) per pound, 35 per cent at 2s. 8d. (65 cents), and 25 per cent at 3s. (73 cents). The balance of 10 per cent consists of fine teas at above 3s. (73 cents) a pound.

An arrangement has also been made with the Coffee Trade Association to supply a good, sound, pure coffee at a rate which would enable grocers to sell retail at 1s. 6d. (37 cents) per pound.

#### ENFORCEMENT OF ORDERS.

Any infringement of an order made by the Food Controller is a summary offense under the Defense of the Realm Regulations, and the offender is liable to imprisonment for six months, with or without hard labor, or a fine of £100 (\$486.65), or both.

Contraventions of the orders can in all cases be investigated and prosecuted by the police, and, in the case of those provisions with which the public are most directly concerned, by the local authorities.

In England and Wales the local authorities concerned are the councils of the several metropolitan and municipal boroughs and the urban and rural districts, but not the county councils. In Scotland they are the town councils in all burghs, and outside the burghs the district committee or, where the county is not divided, the county council.

Inspectors and deputy inspectors of weights and measures and other persons performing such duties are authorized to take samples of any flour in possession of millers, bakers, or others who have bread or flour for sale; to require any retailer of package tea to weigh such in their presence, and in England and Ireland to prosecute in cases of infringements.

Information regarding contravention of orders should be given to the police or to an officer of the local authority and not to the Ministry of Food.

#### FOOD ORDERS ENACTED BEGINNING WITH AUGUST 22, 1917.

Several important food orders have recently been issued by the food controller. A digest of these orders is given below. This digest, together with the summary of orders issued before August 22, 1917, and given on the preceding pages, makes a complete record for reference of all food orders enacted in Great Britain up to September 6, 1917.

FOOD-CONTROL COMMITTEES (CONSTITUTION) ORDER, 1917, DATED AUGUST 22, 1917  
(NO. 869).

The above order was issued after the Food Controller had approached local authorities throughout Great Britain with a request for cooperation in food control, and had forwarded to them certain detailed information as to the method of control to be adapted. The authorities approached for England and Wales were—in London, the common council of the city and the metropolitan borough councils; outside London, the municipal borough council and the urban and rural district councils. The authorities for Scotland were—(a) in each county a joint committee of the county council and the town councils of those burghs whose population in 1911 did not exceed 5,000,

provided that the town council of any large burgh may also join; and (b) in all other burghs, the town council. The present order requests these authorities to appoint food-control committees which will administer a new scheme of sugar distribution, to continue the campaign for food economy, and, when their organization is complete, to deal with other food supplies, including bread and meat. They will be asked, also, at an early date, to assume special responsibilities in regard to food prices. For all important foodstuffs the Food Controller will fix a general scale of prices based at each stage on the reasonable profits of traders. The committees will be entrusted with the enforcement of this scale and will be asked to advise on any modification of it that may be shown to be necessary in their districts.

Food-control committees thus constituted consist of not more than 12 members each, who need not necessarily be members of the council. Each committee must include at least one woman and one representative of labor. Their necessary expenses will be a charge on the exchequer. The term of office of members of such committees is to be one year, with permissible reappointment at the expiration of this period. The quorum necessary for the prosecution of the business of a food-control committee may be determined by the committee, provided that in no case shall the quorum be less than three. Each committee appoints its own chairman from among its members. A food-control committee may appoint such and so many subcommittees consisting wholly or partly of the members of the committee as it thinks fit, and may delegate to the subcommittee, so far as the Food Controller may direct, any of its powers and duties. So far as is practicable, at least one member of each subcommittee shall be a woman and at least one other a representative of labor.

The powers and duties of a food-control committee are to be such as are from time to time assigned to it by the Food Controller, and the committee in the exercise of those powers and the performance of those duties shall comply with such instructions as may be given by the Food Controller from time to time.

The order does not apply to Ireland.

On the recommendation of the chief secretary to the Lord Lieutenant of Ireland, the Food Controller has appointed a food-control committee for Ireland for the purposes set out below:

(a) To advise the Food Controller (1) as to maintenance of the food supply and its distribution in Ireland; (2) as to any modifications that may be necessary in orders made or proposed to be made by him under the Defense of the Realm Regulations in view of any special requirements of Ireland; (3) as to the steps to be taken for the administration and enforcement of the Food

Controller's orders in Ireland; (4) and generally as to any question referred to them by the Food Controller.

(b) To take steps, subject to the direction of the Food Controller, for giving effect in Ireland to orders issued by the Food Controller.

It is in contemplation to set up local committees in the county boroughs of Dublin, Belfast, Cork, Derry, Limerick, and Waterford.

THE SUGAR (REGISTRATION OF RETAILERS) ORDER, 1917, DATED AUGUST 23, 1917  
(NO. 885).

This order provides that no person shall on or after October 1, 1917, sell or deal in sugar by retail on any premises unless he is the holder, in respect of such premises, of a certificate of registration, for the time being in force, granted by the food-control committee within whose area such premises are situated. The committee shall grant a certificate of registration to any applicant who makes an application to them before September 15, 1917, and who, or whose predecessor in business, was in the year 1915 dealing in sugar by retail, and who at the date of his application is so dealing in sugar. Such certificates may be granted to every applicant if it is the opinion of the committee that the grant is necessary in the interests of the public within its area. Certificates of registration may be revoked by the committee with the consent of the Food Controller if the regulations issued by the Food Controller are not observed by the holder of the certificate.

Holders of such certificates of registration and their employees shall give to the committee such information, reports, and returns relating to the stock of sugar and dealings in sugar as the Food Controller or committee may from time to time require, and shall permit any person authorized by the Food Controller or committee to inspect all relevant books, documents, and accounts.

In outlining the new scheme of sugar distribution in the House of Lords on July 26, Lord Rhondda explained that while the present system required alteration, he had decided against the introduction of any rigid system of rationing by sugar tickets. "The success of the scheme," he said, "would largely depend on the willing and intelligent cooperation of the public."

To facilitate enforcement of the above order, consumers will by the end of September receive at their homes or be able to obtain at the post office a form of application for a sugar registration card, and after having completed and returned this to their local food office they will, in due time, receive through the mail a sugar registration card. Each consumer will be free to deposit his card with any sugar retailer he may choose, and the retailer will in due course receive an allowance of sugar in respect of each card deposited with

him. There is no advantage in depositing with one grocer rather than with another. The smallest retailer will have the same opportunity of getting supplies for each card deposited with him as the largest retailer. The order making it an offense to impose any conditions as to buying other goods in order to obtain sugar still remains in force. As a matter of fact, everything else being equal, it will facilitate the new sugar distributing scheme if consumers, as far as practicable, deposit their sugar registration cards, when received, with the retailers with whom they at present deal.

MEAT (MAXIMUM PRICES) ORDER, 1917, DATED AUGUST 29, 1917 (NO. 903).

The above order schedules maximum wholesale prices for dead meat as from September 3, the profit of the wholesale dealer being already limited under the meat (sales) order of May 31, 1917, and contains provisions for the limitation of retail prices. The effect of these provisions is that the retail butcher must not sell meat over the counter at prices which in the aggregate exceed the price paid by him for such meat by more than  $2\frac{1}{2}$ d. (5 cents) per pound, or 20 per cent, whichever is the less, his accounts being balanced over fortnightly periods. Out of this difference the retailer will have to pay the expenses of carriage, wages, rents, rates and all the other expenses of his business, including his personal remuneration.

Further, the local food-control committee are empowered to fix schedules of maximum retail prices for the various joints, with which the butcher will, in addition, be required to comply. These schedules may vary from district to district, according to varying local conditions. A butcher is required to keep posted in his shop in a conspicuous position the prices which he actually charges for the various cuts and joints. The responsibility of enforcing the retail prices and of securing that the charges made by the butcher do not exceed those allowed by the order will rest on the local food-control committee.

THE BACON, HAM, AND LARD (MAXIMUM PRICES) ORDER, 1917, DATED AUGUST 30, 1917 (NO. 910).

This order fixes maximum producers' and importers' prices for bacon, ham, and lard. In connection therewith, it is pointed out that importers' prices are mainly determined by the market prices ruling in foreign countries, over which the Food Controller has no control, and that they must be maintained at such figures as will insure a regular shipment to Great Britain of adequate supplies.

The present order was issued in conjunction with a royal proclamation dated August 29, 1917, which prohibits the importation, except



under license, of bacon, hams, and lard (other than neutral lard). The object of this proclamation is to enable the Government to take over the whole import of these articles and to concentrate the purchase of them in various countries in a single organization.

THE CHEESE (MAXIMUM PRICES) ORDER, 1917, DATED AUGUST 31, 1917 (NO. 911).

This order fixes maximum wholesale prices for various kinds of British-made cheese, to go into effect beginning with September 3, 1917.

THE BUTTER (MAXIMUM PRICES) ORDER, 1917, DATED AUGUST 31, 1917 (NO. 913).

By this order the Food Controller prescribes, beginning with September 3, 1917, maximum wholesale prices for butters of various kinds, and also beginning from September 10, 1917, that no person shall retail butter at more than  $2\frac{1}{2}$ d. (5 cents) per pound in excess of the actual cost to him, an additional  $\frac{1}{2}$ d. (1 cent) per pound being permitted, however, for credit or delivery. It is further provided that the food-control committees may from time to time prescribe a scale of maximum prices for butter in accordance with general directions from the Food Controller.

THE SEED POTATOES (IMMUNE VARIETIES) ORDER, 1917, DATED SEPTEMBER 5, 1917  
(NO. 935).

In this order it is laid down that except under certain conditions no potatoes of the King George VII, Great Scot, Lochar, and Temp-lar varieties, grown in Scotland or in England or Wales in 1917, may be sold or otherwise disposed of or moved from the premises on which they are situate on September 6, 1917, except under a license issued by the Board of Agriculture and Fisheries or by the Board of Agriculture for Scotland. The order does not apply to persons holding less than 5 tons or cultivating less than one-half acre of such potatoes.

THE FLOUR AND BREAD (PRICES) ORDER, 1917, DATED SEPTEMBER 6, 1917 (NO. 937).

Beginning with September 17, 1917, this order fixes the following maximum retail prices for bread and flour:

*Bread.*

Per 4 lb. loaf.....	9d. (18 cents).
Per 2 lb. loaf.....	4½d. (9 cents).
Per 1 lb. loaf.....	2½d. (5 cents).



*Flour.*

Sack of 280 lbs. or half sack, per sack (sack extra) 50s. (\$12.17).	
7 lbs. or more, but under half sack, per 14 lbs.	2s. 8d. (65 cents).
Per quartern (3½ lbs.)	8½d. (17 cents).
Per half-quartern (1¾ lbs.)	4½d. (9 cents).
Per 1 lb.	2½d. (5 cents).
Self-raising flour, per lb.	3½d. (7 cents).

These prices refer to sales for cash over the counter. A reasonable additional charge may be made by the retailer if he gives credit to his customer or delivers the bread or flour at the customer's house. For special and proprietary brands higher prices may be permitted by license of the Food Controller. It will be laid down that no retailer may charge special prices for proprietary breads unless he has bread on offer at the same time at or below the maximum price. Similarly he may not sell 1 pound loaves (or rolls) at a higher price than 2½d. (4½ cents) a pound unless he has also on offer bread at or below 2½d. (4½ cents) a pound, nor may he sell flour at 2½d. (5 cents) a pound unless he is also selling quarterns and half quarterns of flour at or below the maximum prices.

Food-control committees will be authorized to grant temporary and provisional licenses for the charging of retail prices in excess of those specified, either by particular retailers or in their district generally, where they are satisfied that ordinary bread and flour can not be retailed at those prices. Every case in which a provisional license is granted will be reported to the Ministry of Food for examination by cost accountants of the ministry, and the license will be allowed to continue only if the Food Controller is satisfied that the claim for a higher price is justified.

To enable the retailer to sell to the public at the retail prices named, wholesale prices have been fixed for flour. On and after September 17, wheat meal and flour manufactured in the United Kingdom will be sold wholesale at 44s. 3d. (\$10.77) per sack of 280 pounds at the mill door, subject to a discount of 6d. (12 cents) a sack for cash within seven days. Imported flour will be sold at higher prices, according to quality. The price of 44s. 3d. (\$10.77) has been fixed with a view to allowing the retailer a reasonable and not more than a reasonable profit. If it is found that in practice the profit is unreasonably high or unreasonably low, the wholesale price of flour will be varied.

The flour mills of the country are already under the control of the Ministry of Food, and the flour importers are largely controlled by the Royal Commission on Wheat Supplies. A further step is now being taken by forming a register of flour factors, and it will be illegal for any person to trade in home-milled flour after October 1 as a flour factor unless he has been licensed by the Food Controller.

Arrangements have been made for providing compensation to bakers and other retailers holding stocks of flour or having stocks in transit invoiced at the old prices, and also for compensating factors and importers for the stocks they hold.

CONVICTIONS FOR VIOLATIONS OF THE FOOD REGULATIONS.

An interesting feature of the National Food Journal is a section devoted to an account of prosecutions for violations of the food regulations and orders. In one case a farmer was fined £5,750 (\$27,982.38) for selling "ware" and seed potatoes at prices exceeding the maximum rates fixed by the Potatoes 1916 Main Crop (Prices) Order (No. 2), 1917. There were 55 charges, and in each case the fine was the maximum of £100 (\$486.65) with an additional £250 (\$1,216.63) for costs. Another man was fined £100 (\$486.65) on six summonses, one being that he had sold potatoes to a retailer at £22 (\$107.06) per ton instead of £11 10s. (\$55.96) and 10s. (\$2.43) carriage. A farmer was fined £5 (\$24.33) for having in his possession 2 hundredweight (224 pounds) of sugar, and in another case a fine of £1 (\$4.87) was assessed against a man for having in his possession 45 pounds of sugar, 3 pounds of tea, and 6 half sacks of flour. A certain baker was fined £25 (\$121.66) for selling new bread, and another baker was fined £25 for exposing and £25 for selling such bread. It appears that more than 60 persons of all classes have been fined sums ranging from £15 (\$73) to £1 (\$4.87) for having obtained preserving sugar by false declarations.

## WAGES AND HOURS OF LABOR.

### NEW WAGE SCALE FOR ANACONDA COPPER MINING CO. EMPLOYEES.<sup>1</sup>

On September 17, following a strike by the employees of the Anaconda Copper Mining Co. at its mines at Butte and its reduction works at Anaconda and Great Falls, Mont., work was resumed, the new wage scale offered by the company in June having been accepted by the employees. The new wages are based on the price per pound of electrolytic copper, and the following table shows the old and the new wage rate of the principal occupations at the mines and reduction works. It should be explained that the schedule does not stop at 31 cents, as indicated in the table; the wages continue to advance at the rate of 25 cents for each 2 cents' increase in the price of copper. The column "25 and under 27 cents" represents the wage scale at the present time.

COMPARATIVE WAGE RATES OF THE PRINCIPAL OCCUPATIONS AT THE MINES AND  
REDUCTION WORKS OF THE ANACONDA COPPER MINING CO.

Occupation.	Un- der 15 cents.	15 and under 17 cents.	17 and under 19 cents.	19 and under 21 cents.	21 and under 23 cents.	23 and under 25 cents.	25 and under 27 cents.	27 and under 29 cents.	29 and under 31 cents.
Miners, all underground men engaged in mining:									
Old scale .....	\$3.50	\$3.75	\$4.00	\$4.25	\$4.25	\$4.25	\$4.50	\$4.50	\$4.75
New scale .....	3.50	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75
Miners in shaft, station cutting and winzes:									
Old scale .....	4.00	4.25	4.50	4.75	4.75	4.75	5.00	5.00	5.25
New scale .....	4.00	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
Blacksmiths, carpenters, machinists, elec- tricians, boiler makers, painters:									
Old scale .....	4.50	4.75	4.75	5.00	5.00	5.00	5.25	5.25	5.50
New scale .....	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50
Helpers for craftsmen:									
Old scale .....	3.50	3.75	3.75	4.00	4.00	4.00	4.25	4.25	4.50
New scale .....	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50
Stationary engineers:									
Old scale .....	4.00	4.25	4.50	4.50	4.75	4.75	5.00	5.00	5.25
New scale .....	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50
Hoisting engineers (first motion):									
Old scale .....	4.50	4.75	5.00	5.25	5.25	5.25	5.50	5.50	5.75
New scale .....	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00
Hoisting engineers (geared):									
Old scale .....	4.00	4.25	4.50	4.50	4.75	4.75	5.00	5.00	5.25
New scale .....	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50
Boiler cleaners:									
Old scale .....	3.75	4.00	4.00	4.25	4.25	4.50	4.75	4.75	5.00
New scale .....	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00
Boiler cleaners' helpers:									
Old scale .....	3.00	3.25	3.25	3.50	3.50	3.75	4.00	4.00	4.25
New scale .....	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50

<sup>1</sup> Data taken from Metallurgical and Chemical Engineering, 239 West 39th Street, New York. Oct. 1, 1917, p. 370.

## COMPARATIVE WAGE RATES OF THE PRINCIPAL OCCUPATIONS AT THE MINES AND REDUCTION WORKS OF THE ANACONDA COPPER MINING CO.—Concluded.

Occupation.	Under 15 cents.	15 and under 17 cents.	17 and under 19 cents.	19 and under 21 cents.	21 and under 23 cents.	23 and under 25 cents.	25 and under 27 cents.	27 and under 29 cents.	29 and under 31 cents.
Diamond drill runners:									
Old scale.....	\$4.00	\$4.25	\$4.50	\$4.50	\$4.75	\$4.75	\$5.00	\$5.00	\$5.25
New scale.....	4.00	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
Firemen:									
Old scale.....	3.50	3.75	4.00	4.00	4.25	4.25	4.50	4.50	4.75
New scale.....	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00
Laborers, special:									
Old scale.....	3.50	3.50	3.50	3.50	3.75	3.75	4.00	4.00	4.25
New scale.....	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50
Laborers:									
Old scale.....	3.00	3.25	3.25	3.50	3.50	3.75	4.00	4.00	4.25
New scale.....	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00
Drivers, locomotive, surface:									
Old scale.....	3.50	3.75	3.75	4.00	4.25	4.25	4.50	4.50	4.75
New scale.....	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50
Pump men:									
Old scale.....	4.00	4.25	4.50	4.50	4.75	4.75	5.00	5.00	5.25
New scale.....	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50
Shift bosses:									
Old scale.....	5.00	5.25	5.50	5.50	5.75	5.75	6.00	6.00	6.25
New scale.....	5.00	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
Station tenders:									
Old scale.....	4.00	4.25	4.50	4.50	4.75	4.75	5.00	5.00	5.25
New scale.....	4.00	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
Teamsters and stablemen:									
Old scale.....	3.25	3.50	3.50	3.50	3.75	3.75	4.00	4.00	4.25
New scale.....	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25
Tool sharpeners:									
Old scale.....	4.00	4.25	4.25	4.25	4.50	4.50	4.75	4.75	5.00
New scale.....	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50

An agreement, announced on September 20,<sup>1</sup> has been effected between the War Industries Board and the copper producers by which the latter will furnish copper to the Government at the rate of 23½ cents per pound, f. o. b. New York, subject to revision after four months, the establishment of this price being based upon the cost of production as determined by the Federal Trade Commission. In effecting this agreement the War Industries Board stipulated (1) that the producers shall not reduce the wages now paid; (2) that the operators shall sell to the allies and to the public at the same price paid by the Government, and take the necessary measures, under the direction of the War Industries Board, for the distribution of the copper to prevent it from falling into the hands of speculators who would increase the price to the public; and (3) that the operators shall pledge themselves to exert every effort necessary to keep the production of copper up to the maximum of the past so long as the war lasts. The official announcement of the fixing of the price mentioned contains the following statement:

“The War Industries Board felt that the maintenance of the largest production should be assured and that a reduction in wages should be avoided. The stipulation that present wages shall not be reduced

<sup>1</sup> Official Bulletin for Sept. 21, 1917.

compels the maintenance of the highest wages ever paid in the industry, which without such stipulation would, with the reduction made in the price of copper, be reduced under the sliding scale so long in effect in the copper mines. Within this year copper has sold as high as 36 cents per pound, and the market price would now be higher than it is had it not been well known for some weeks that the Government would fix the price."

### NEW FAIR WAGE SCHEDULE IN MANITOBA.

The Fair Wage Board of the Province of Manitoba, Canada, recently formulated a schedule of hourly wage rates and hours per week applicable in the city of Winnipeg and in the province itself (other than Winnipeg and a radius of 30 miles therefrom) from August 15, 1917, to August 14, 1918. This schedule has received the approval of the minister of public works, under the provisions of the Fair Wage Act, 1916, being section 10 of chapter 121 of the Statutes of Manitoba, 1916.

SCHEDULE OF WAGE RATES PER HOUR AND HOURS PER WEEK FIXED BY THE FAIR WAGE BOARD OF MANITOBA, APPLICABLE TO THE CITY OF WINNIPEG AND A RADIUS OF 30 MILES THEREFROM.

Occupation.	Rate of wages per hour.	Hours per week.
Common laborers.....	\$0.30	60
Builders' laborers (being those directly engaged in assisting tradesmen not otherwise classified).....	.35	60
Teamsters (employed directly from or on the building).....	.30	66
Bricklayers.....	.75	44
Stonemasons.....	.75	44
Marble setters.....	.70	44
Mosaic and tile setters.....	.62½	48
Terrazo workers.....	.45	54
Stonecutters:		
Journymen.....	.72½	44
Planer men and lathe men.....	.55	59
Plasterers.....	.70	44
Wood, wire, and metal lathers.....	.60	44
Plumbers.....	.62½	44
Steam fitters.....	.65	44
Hoist engineers:		
Engineers in charge of double-drum machines used for hoisting materials, operating boom and guy derricks, locomotive cranes, cableways, traveling derricks, steam shovels, clam shells, orange peels, pile drivers, irrespective of the motive power.....	.65	60
Engineers in charge of single-drum machines used for hoisting materials or operating tractors, concrete mixers, pumps, syphons, pulsometers, stone crushers, air compressors, dinky locomotives, irrespective of the motive power, or operating portable or stationary boilers used on the building during construction for any of the before-mentioned purposes.....	.55	60
Sheet-metal workers.....	.50	54
Painters, decorators, paper hangers, glaziers.....	.50	50
Blacksmiths.....	.50	54
Electrical workers (journeymen inside wiremen).....	.55	50
Structural steel and iron workers.....	.55½	54

SCHEDULE OF WAGE RATES PER HOUR AND HOURS PER WEEK FIXED BY THE FAIR WAGE BOARD OF MANITOBA, APPLICABLE TO THE CITY OF WINNIPEG AND A RADIUS OF 30 MILES THEREFROM—Concluded.

Occupation.	Rate of wages per hour.	Hours per week.
Asbestos workers:		
Journeyman.....	\$0.50	44
First-class improvers.....	.40	44
Second-class improvers.....	.35	44
Third-class improvers.....	.25	44
Asphalters (including mastic and patent flooring and roofs):		
Finishers.....	.40	54
Men engaged in preparing, mixing, and heating material.....	.35	60
Carpenters:		
Journeyman.....	.55	54
(Except during the months of June, July, and August, when the hours shall be).....		50
Form carpenter or carpenter's helper.....	.35	60
(Men considered by employers to be qualified for a higher rate per hour than 35 cents on account of the class of work being performed, to be paid not less than 55 <sup>1</sup> cents per hour.)		

<sup>1</sup> 50 cents outside of Winnipeg and a radius of 30 miles therefrom.

In the Province, outside of Winnipeg and a radius of 30 miles therefrom, the rate provided for each occupation is the same except that it is 5 cents less per hour in the case of common laborers, builders' laborers, teamsters, journeymen carpenters, and painters, decorators, paper hangers, and glaziers. Also, the hours per week are the same for each occupation, except in the case of painters, decorators, paper hangers, and glaziers, who work 50 hours in the Winnipeg district and 54 hours in other parts of the Province.

#### COURSE OF INDUSTRIAL WAGES IN GERMANY DURING THE WAR.<sup>1</sup>

In order to arrive at some general conclusion as to the rise in the level of wages of adult workers during the war period in various trade groups, the Imperial Statistical Office recently sent out forms of inquiry to all the firms from which it receives monthly reports on the state of employment. The particulars asked for included data concerning the total number of days worked by men and women employed and the aggregate wages paid in the last two full weeks of March and September of 1914, 1915, and 1916. The number of returns secured and capable of being utilized was 369, which have been classified under 13 groups of industries. A preliminary summary of the chief results appears in the *Deutscher Reichsanzeiger* of August 27, from which the following particulars have been extracted:

In September, 1914, nearly all trades experienced a fall in wages as compared with March of that year, but from September onward a constant increase was recorded. In the case of men the average earnings for a day's work in all the trades combined fell by about

<sup>1</sup> Reprinted from *The Labour Gazette*, London, September, 1917, p. 316.



1 per cent between March and September, 1914, but by September, 1916, it had risen 46 per cent above the level of March, 1914. The period of greatest increase (14.8 per cent) was during the first winter of the war. From March, 1915, to September, 1915, there was a rise of 11.4 per cent, in the next six months a rise of 6.7 per cent, and from March, 1916, to September, 1916, a rise of 7.8 per cent.

In the case of women workers there was a drop of 15.3 per cent in daily earnings between March and September, 1914, but by September, 1916, women's earnings had risen to a figure 54.1 per cent above that of March, 1914. The greatest increase in women's wages did not occur during the first winter of the war (as was the case with men's), but between September, 1915, and March, 1916, the rise in this period being 18.3 per cent.

Data in regard to various important groups of industries separately are summarized below :

Trade group.	Average earnings per day.					
	Men.			Women.		
	March, 1914.	September, 1916.	Increase per cent. <sup>1</sup>	March, 1914.	September, 1916.	Increase per cent. <sup>1</sup>
	<i>s. d.</i>	<i>s. d.</i>		<i>s. d.</i>	<i>s. d.</i>	
Metal.....	5 5 (\$1.32)	7 11 (\$1.93)	44.5	2 0 (\$0.49)	4 0 (\$0.97)	99.5
Engineering.....	5 3 (1.28)	7 11 (1.93)	48.0	2 3 (.55)	3 10 (.93)	70.2
Electrical.....	4 5 (1.07)	7 4 (1.78)	64.6	2 8 (.65)	4 9 (1.16)	74.5
Paper.....	3 10 (.93)	5 5 (1.32)	40.6	2 3 (.55)	2 11 (.71)	28.4
Woodworking.....	4 2 (1.01)	5 6 (1.34)	32.9	1 11 (.47)	2 7 (.63)	30.2
Chemical.....	5 1 (1.24)	6 9 (1.64)	34.2	2 4 (.57)	3 6 (.85)	50.4
Stoneworking and pottery.....	4 5 (1.07)	5 4 (1.30)	21.3	1 8 (.41)	2 2 (.53)	31.1
Food, drink, and tobacco.....	5 7 (1.36)	6 1 (1.48)	8.2	2 1 (.51)	2 10 (.69)	37.6
Leather and rubber.....	4 11 (1.20)	6 2 (1.50)	24.6	2 9 (.67)	3 2 (.77)	13.6

<sup>1</sup> The percentages are computed from the amounts given in the original (in marks and pfennigs) and do not in every case agree exactly with those derived from a comparison of the sums representing the conversions into English currency.

Owing to the limited number of industrial concerns covered by the inquiry, as well as to disturbing influences resulting from war conditions, the German Department of Labor Statistics are of opinion that any conclusions drawn from the foregoing figures as to the movement of the level of wages in German industry during the war must necessarily be subject to certain reservations.

It may be added that no reference is made in the source to the question as to how far increased earnings may be due to the working of overtime.

MINERS' WAGES IN GERMANY.<sup>1</sup>

"While in upper Silesia the demands of the miners for increased pay may be considered to have been satisfied," says Soziale Praxis of 16th August, "in lower Silesia, Saxony, and upper Bavaria fresh demands have recently been put forward. In lower Silesia hewers were granted a wage of 6s. 11d. [\$1.68], and the workmen did not press for more as the administration proved that the mines did not pay. In the Oelsnitz-Lugau district the rate per shift was increased by more than 6d. [12 cents], and a new war bonus of 7d. [14 cents] was also granted. At upper Bavarian mines (Penzberg, Hausham Marienstein, and Peissenberg) a hewer's rate of 6s. 4d. [\$1.54] was demanded, the rates of other workpeople to be increased in proportion. Besides war bonuses, a supplement of 30 per cent on overtime and an increase of 50 per cent on the Sunday-shift rate were also demanded. The employers refuse to grant the last named, as they consider this would encourage the practice of not working on Monday. The miners, however, still persist in all their demands. A large meeting of miners at Essen held recently showed that besides obtaining better conditions for their members, the trade-unions have to bring about the recognition of the principle of negotiation. Herr Hue, member of Parliament, and a local official of the Christian Trade-Unions, acting in concert, called upon the employers to abate their claim to be 'masters in their own houses.' They also directed attention to the increased number of shifts worked, and to the necessity of providing sufficient stores of food, especially of potatoes. At the same time the meeting declared their intention of increasing the existing output as much as possible."

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 WAGES AND EARNINGS IN VARIOUS OCCUPATIONS IN  
 NORWAY, 1915.

The Central Statistical Bureau of Norway has just issued a report relative to wages and earnings in Norway for the year 1915.<sup>2</sup> The report shows that there has been a general increase in earnings during the period 1910-1915, as compared with 1905-1910. In 1915 the increase over 1910 was 31.9 per cent in country districts and 29.5 in the cities. During the period 1905-1910 wages increased 18.4 per cent in country districts and 21.9 per cent in the cities.

Average daily wages paid by the city of Christiania on public works were reported as follows: Carpenters, smiths, and bricklayers, in 1910, \$1.072 and in 1915, \$1.367; and laborers, \$0.938 in 1910 and \$1.313 in 1915.

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<sup>1</sup> Reprinted from The Labor Gazette, London, September 1917, p. 316.

<sup>2</sup> Arbeidslønninger, 1915. Utgitt av det Statistiske Centralbyraa, 1917.

The following table shows the average daily wages paid adult laborers, 1905, 1910-1914, as reported by the State Insurance Institute:

AVERAGE DAILY WAGES OF LABORERS, AS REPORTED BY STATE INSURANCE INSTITUTE, 1905 TO 1914.

	1905	1910	1911	1912	1913	1914	Increase, per cent.	
							1905-1910	1910-1914
Males.....	\$0.836	\$0.962	\$0.997	\$1.051	\$1.120	\$1.185	15.1	21.3
Females.....	.402	.480	.498	.525	.563	.582	19.3	19.7

The following table shows the average wages for 1910, 1911, 1913, and 1915, as reported by trade-unions:

AVERAGE WAGES IN VARIOUS OCCUPATIONS, AS REPORTED BY TRADE-UNIONS, 1910 TO 1915.

District and occupation.	Average hourly wages paid in—			
	1910	1911	1913	1915
<b>Iron and metal workers:</b>				
<i>The Kingdom.</i>				
Shipyards and machine shops.....	(1)	\$0.108	\$0.117	\$0.125
Metal-goods makers.....	(1)	.112	.129	.139
Blacksmiths.....	(1)	.112	.131	.156
<i>Christiania.</i>				
Shipyards and machine shops.....	\$0.105	.113	.121	.129
Metal-goods makers.....	.111	.113	.130	.134
Blacksmiths.....	.116	.116	.135	.155
<b>Weekly earnings.</b>				
<b>Goldsmiths:</b>				
Males.....	(1)	\$6.72	\$7.41	\$7.80
Females.....	(1)	3.63	4.10	4.33
<b>Lithographers.....</b>				
<b>Bookbinding:</b>				
Book and job printing.....	6.90	5.12	8.40	(1)
Compositors, newspaper.....	6.69	7.60	7.84	(1)
Compositors, machine.....	9.79	6.90	10.58	(1)
Compositors, female.....	4.15	4.63	5.24	(1)
Press feeders, female.....	3.10	3.30	3.70	(1)
<b>Shoemakers:</b>				
Hand.....			\$5.77	\$8.06
Factory workers—				
Males.....			12.49	17.02
Females.....			7.48	10.16

<sup>1</sup> Not reported.

The Statistical Yearbook of Norway summarizes earnings for the year 1915 by industries, and gives comparable data, by quinquennial [945]

periods, 1895-1915. There has been a somewhat regular and continuous increase in daily, monthly, and yearly earnings in rural districts as well as in cities, in all industries reported. The per cent of increase in the last 20 years has in many cases exceeded 100.

The following table shows the average earnings in cities by industrial groups and quinquennial periods, 1895-1915:

WAGES IN THE CITIES OF NORWAY, BY INDUSTRIES AND OCCUPATIONS, 1895 TO 1915.

Industrial group.	1895	1900	1905	1910	1915
ANNUAL EARNINGS.					
Domestic labor:					
Males.....	\$71.02	\$81.20	\$80.40	\$93.26	\$140.70
Females.....	26.80	34.84	35.64	45.02	58.16
DAILY WAGES.					
Farm labor:					
Males <sup>1</sup> .....					
Females <sup>1</sup> .....					
General labor:					
Males <sup>1</sup> .....	.61	.69	.69	.88	1.22
Females <sup>1</sup> .....	.37	.41	.43	.54	.80
Blacksmiths.....	.73	.88	.87	1.05	1.36
Ironworkers.....	.70	.86	.85	1.12	1.56
Pipe layers.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	.98	1.47
Painters.....	.63	.77	.78	.92	1.17
Tanners.....	.69	.73	.70	.86	1.08
Butchers.....	.68	.79	.82	.91	1.19
Bakers.....	.76	.77	.79	.97	1.34
Shoemakers, hand work.....	.62	.88	.81	1.01	1.33
Shoemakers, factories.....	( <sup>2</sup> )	.77	.72	.90	1.14
Clothing.....	.71	( <sup>2</sup> )	.83	.97	1.22
Furriers.....	.75	.86	.89	.96	1.20
Saddlery.....	( <sup>2</sup> )	.86	.82	1.02	1.32
Masons.....	1.04	1.24	1.20	1.54	1.84
Masons' helpers.....	.71	.88	.87	1.22	1.52
Furniture making.....	.68	.85	.84	1.07	1.42
Cabinetmakers <sup>3</sup> .....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1.52
Coopers.....	.68	.89	.92	1.02	1.38
Carpenters.....	.77	.90	.92	1.18	1.56
Painters <sup>3</sup> .....	.79	.93	.99	1.20	1.55
Compositors:					
Males.....	.77	.93	.94	1.09	1.32
Females.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	.56	.92
Master machinists.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1.29	1.66
Press feeders (females).....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	.54	.65
Bookbinding.....	.72	.87	.84	1.01	1.22
Tile making.....	.68	.76	.86	1.10	1.22
Foundry working.....	.85	.94	.97	1.13	1.33
Machine operators.....	.75	.88	.86	1.03	( <sup>2</sup> )
Molders.....					1.34
Sheet-iron workers.....					1.33
Telephone.....	.70	.81	.83	.97	1.21
Ship carpenters.....	.71	.82	.87	1.02	1.34
Spinning:					
Males.....	.66	.70	.72	.91	1.11
Females.....	.34	.34	.36	.47	.59
Weaving:					
Males.....	.75	.77	.81	.85	1.15
Females.....	.35	.40	.43	.47	.56
Sawyers, wood.....	.70	.75	.77	.96	1.22
Planing mills.....	.77	.77	.77	.98	1.19
Wood pulp.....	.65	.70	.69	.98	1.10
Celluloid making.....	.84	.80	.76	1.06	1.25
Millers, grist.....	.64	.73	.73	.87	1.18
Brewing.....	.63	.72	.73	.87	1.18
Food preserving (canning):					
Males.....	.69	.77	.71	.87	1.16
Females.....	.34	.36	.37	.47	.63
Tobacco working:					
Males.....	.69	.83	.80	.90	1.31
Females.....	.39	.37	.53	.56	.58

<sup>1</sup> Tenants having their own lodging and board.

<sup>2</sup> Not reported.

<sup>3</sup> Building trades.

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WAGES IN THE CITIES OF NORWAY, BY INDUSTRIES AND OCCUPATIONS, 1895 TO 1915—Concluded.

Industrial group.	1895	1900	1905	1910	1915
Cigar making:					
Males.....	\$0.92	\$0.92	\$0.92	\$1.02	\$1.43
Females.....	(1)	.36	.47	.60	.88
Cloak makers.....	(1)	.38	.35	.52	(1)
Road construction, common labor:					
Summer.....	.65	.76	.78	.99	1.27
Winter.....	.57	.66	.67	.88	1.17
Pavers.....	.86	.95	1.06	1.11	1.40
Stevedores:					
Summer.....	.72	.83	.92	1.00	1.34
Winter.....	.59	.74	.86	.91	1.29
Wood-yard employees:					
Summer.....	.67	.76	.79	.99	1.19
Winter.....	.60	.66	.69	.90	1.13
SEAMEN—MONTHLY WAGES.					
Steamships:					
First officers.....	24.12	28.41	29.21	30.02	51.72
Second officers.....	17.69	20.37	21.98	23.32	40.47
First engineers.....	38.06	45.29	47.70	48.24	68.07
Second engineers.....	23.32	28.41	31.36	31.62	49.31
Firemen.....	13.13	14.47	14.74	16.35	24.66
Carpenters.....	16.62	18.49	19.03	21.17	30.55
Boatswains.....	14.20	16.35	16.35	18.49	28.94
Seamen, able.....	12.06	13.67	13.67	15.81	23.85
Stewards.....	9.11	10.45	10.99	11.52	17.69
Seamen, ordinary.....	17.96	21.71	22.24	26.00	41.81
Seamen, apprentices.....	6.70	8.58	8.04	8.31	13.40
Sailing vessels:					
First officers.....	18.49	21.44	22.78	26.26	57.89
Second officers.....	14.47	17.15	18.22	20.64	46.90
Carpenters.....	17.15	18.76	18.76	21.17	34.30
Boatswains.....	14.20	16.35	16.35	17.96	29.75
Seamen, able.....	11.52	13.40	13.40	14.74	26.00
Seamen, ordinary.....	14.74	16.62	19.56	23.85	38.59
Seamen, apprentices.....	6.97	8.04	7.77	8.31	13.13

1 Not reported.

## WAGES IN OCCUPATIONS IN RURAL DISTRICTS, 1895 TO 1915.

Occupational group.	1895	1900	1905	1910	1915
Woodmen.....	\$0.57	\$0.70	\$0.69	\$0.80	\$1.14
Raftsmen:					
Rivers.....	.66	.79	.81	.90	1.23
Lakes.....	.69	.80	.79	.94	1.22
Miners.....	.62	.76	.81	1.01	1.14
Glassworkers.....	.80	.85	.87	1.17	1.41
Agricultural laborers, males <sup>1</sup> .....	.35	.39	.40	.55	.69

1 Lodging and board not included.

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## MINIMUM WAGE.

### MINIMUM WAGE LAW OF ARKANSAS HELD CONSTITUTIONAL.

The Supreme Court of Arkansas on June 4 sustained the minimum wage law of the State (Act No. 191, Acts of 1915). The act in question establishes the hours of labor for females, and makes it unlawful for manufacturing, mechanical, or mercantile establishments, laundries, and express and transportation companies to pay female workers of six months' practical experience less than \$1.25 per day; inexperienced workers who have not had six months' experience are to receive not less than \$1 per day. Employment in excess of the prescribed working-day of nine hours is to be paid for at the rate of time and a half; the period in which overtime may be worked is limited to a maximum of 90 days per year. Provision is made for piece-workers, and for investigations as to work in canneries, hotels, restaurants, and telephone establishments, special findings within fixed limits being authorized.

In the case in question (*State v. Crowe*, 197 S. W. 4), the State proceeded against J. B. Crowé for violation of the law, the court below deciding against the validity of the act. The State appealed and secured a reversal of this finding, the supreme court upholding the law and remanding the case for proceedings in accordance with its view of constitutionality. Technical questions as to procedure and enactment were first disposed of, and the court then noted the general tendency of the States to regulate employment and conditions of women and children in behalf of the welfare of the race. For itself the court said: "It is a matter of common knowledge, of which we take judicial notice, that conditions have arisen with reference to the employment of women which have made it necessary for many of the States to appoint commissions to make a detailed investigation of the subject of women's work and their wages." Reference was made to the action of the Supreme Court of the United States which by its equal division left undisturbed the opinion of the Supreme Court of Oregon in the case *Stettler v. O'Hara* (69 Ore. 519, 139 Pac. 743). It was pointed out that the legislature was obligated not to fix an unreasonable or arbitrary minimum wage, but that there



is no more appropriate standard than the normal needs of the average employee, this being the basis on which the legislature proceeded in its enactment of the law in question.

Chief Justice McCullough dissented on the ground that no relation could be discerned between the wages earned by female employees and their health or morals, holding, also, that the action of the Supreme Court in the O'Hara case was without persuasive effect and not a precedent as a decision by the court itself. Another justice concurred in the conclusion that the act invades the Constitution of the United States and of the State of Arkansas, but took the view that the action of the Supreme Court was controlling, and must stand until otherwise decided.

## EMPLOYMENT AND UNEMPLOYMENT.

### PROCEEDINGS OF THE FIFTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF PUBLIC EMPLOYMENT OFFICES.

#### REPORT OF THE COMMITTEE ON STANDARDIZATION.

[Presented and adopted at the fifth annual meeting of the association held at Milwaukee, Wis., Sept. 20 and 21, 1917.]

In January, 1916, the Bureau of Labor Statistics began publishing in the MONTHLY REVIEW the reports of the operation of State and municipal public employment offices in the United States. From the outset it was apparent that the figures published for the different employment offices were not comparable because there was no uniformity of method or practice in compiling the information which was furnished by the different offices. There were no generally accepted definitions or interpretation of the several items in the reports presented. In some offices every person who comes in to apply for a job is registered, in others only those are registered for whom positions are available. Some bureaus renew the application of a person each day he comes to the employment office, others make no record whatever of renewals. Some offices report, as positions filled, all persons sent out to positions; others report only those whom they ascertain to have been actually hired. It is plain, therefore, that figures compiled on such indiscriminate bases are not comparable and are in a sense misleading. With full knowledge of these discrepancies, the United States Commissioner of Labor Statistics has continued to collect and publish these reports each month in the MONTHLY REVIEW. This has been done with the hope that the superintendents and directors of the various employment offices would note these discrepancies and would appreciate the importance of recording the statistical facts on a uniform basis. Unfortunately this hope has not been fully realized, although some progress has been made.

At the last meeting of this association, held in Buffalo a year ago last July, these deficiencies were clearly presented and the sentiment was expressed that the compilation of statistics relative to the activities of employment offices was worth while. It was concluded that agreement must be reached upon uniform definitions and practices so that the reports from all offices will be on the same basis. For the purpose of formulating such definitions and practices a committee

on standardization was named as follows: Royal Meeker, chairman, Charles F. Gettemy, H. J. Beckerle, C. H. Mayhugh, and Luke D. McCoy. This committee was charged with the task of drawing up a system of uniform records and formulating standard definitions of terms and methods of work to be followed by all the offices throughout the country.

During the year four meetings of the committee on standardization have been held. The first was held in New York City, January 23 and 24; the second in Cleveland, Ohio, March 12 and 13; the third in Chicago, Ill., June 6 and 7; and the fourth in Milwaukee, Wis., September 19.

To assist the committee in its deliberations, the chairman invited directors and superintendents of employment offices and others actively interested in employment office work in the various States to come to the meetings and give us the benefit of their advice. Many have responded to the invitation and have given valuable service and counsel.

All of the meetings were well attended, although it was not possible to have present at any one meeting representatives of all the States which conduct public employment offices. However, twelve States and the Federal Government have been represented at one or more of these meetings.

At the New York meeting consideration was given to the kinds of records that should be kept by the offices and the interpretation that should be made of the terms used in the various official reports. These subjects were fully discussed and the following resolutions adopted:

*Resolved*, That when any public employment office receives an order calling for more than two workers, the employer shall be asked to give definitely the actual number of places he has open. The employer's statement of the number of places he has open shall be set down as his demand for employees.

*Resolved*, That when all efforts fail to ascertain from an employer the number of positions he has open, the number of persons sent to him for positions on any one day shall be taken as the number of persons called for by him on that day and such number shall be entered each day as his demand for employees.

Whereas the records of applications from employers are not now being reported on a uniform basis, and

Whereas figures giving the number of such applications, even if secured on a uniform basis, would treat the small employer and the large employer as of equal importance, and

Whereas such figures are thought to be of little significance: Therefore be it

*Resolved*, That hereafter the records of the number of applications from employers shall not be reported to the United States Bureau of Labor Statistics, but the number of different employers who make application to the office in a year shall be reported to the said bureau.

*Resolved*, That every public employment office should register each applicant who applies at the desk or by mail for work, for the first time, and that suf-

ficient clerical force and office facilities to register all such applicants should be provided for each office.

If for any reason an office is unable to register all applicants for employment its reports, annual or other, shall state what classes have not been registered and the reasons necessitating the omission of such classes.

*Resolved*, That as soon as possible the several public employment offices in their annual reports make all statistical tabulations cover the calendar year.

*Resolved*, That there be adopted a system of eliminating the application cards from the files at the end of some period to be subsequently decided upon.

*Resolved*, That at the close of each calendar year the cards of all applicants for positions who have not renewed their applications or been referred to positions during the two full calendar years preceding shall be eliminated permanently from the files. If an eliminated card is consulted for any purpose it shall in no case be restored to the files or used in lieu of a new application card, and any applicant whose card has been eliminated shall, if again making application, be treated as a new applicant and registered accordingly on a new card.

#### ILLUSTRATION.

Suppose it is decided to begin the elimination of the cards from the files on January 1, 1918. Elimination should be made only of the cards of those applicants who have had no dealings with the Bureau either by original registration, renewal, or reference to a position for at least two full calendar years preceding January 1, 1918. Suppose Mr. A registered January 2, 1916, and has since had no dealings with the office. His card should not be eliminated because his registration has not run two full calendar years preceding January 1, 1918, the date of eliminating cards from the files. His card should not be eliminated until the next day of elimination comes, namely, January 1, 1919. The resolution as adopted provides for the elimination of the cards of applicants who have had no dealings with the employment office for a period of at least two full calendar years and less than three full calendar years. What is true of new registrations is equally true of renewals. Any applicant who either registers, renews his registration, or is sent out to employment subsequent to January 1, 1916, should have his card retained in the files until January 1, 1919. This means that on January 1, 1918, registration and renewal cards will be eliminated running back to and including January 2, 1915.

*Resolved*, That the report of this meeting shall be edited by the Federal Bureau of Labor Statistics and shall be published in the MONTHLY REVIEW.

The subject of renewals was discussed at length, but no definite agreement was reached.

The committee then adjourned to meet March 8 and 9, 1917, at the rooms of the Cleveland Public Employment Office. This city was chosen to enable the members of the committee to study the forms, methods, and practices of the Cleveland office.

To enable those attending to visit the State employment office on a Monday morning the date for holding the Cleveland meeting was changed to March 12 and 13, and it was held as planned, in the Cleveland Public Employment Office.

The meeting was convened at 7 o'clock a. m., the opening hour of the employment office, in order that the members of the committee

might observe the methods pursued and the manner in which the work of that office is handled. During the morning about 500 new applications and renewals were received and over 250 employees were sent out to positions. We had the opportunity to follow the office procedure from the original application filled out by the applicant through to the placement of the worker in the position to which he is sent. All of the blank forms used were examined and their uses and purposes fully explained. The committee then repaired to the mayor's reception room in the city hall, where the conferences were held. The order of business was (1) the uniform definition of terms to be used in employment records and the interpretation of same; (2) the question of renewals of applications; (3) references to positions; (4) placements; and (5) the classification of occupations and industries. An extended discussion of these subjects resulted in the adoption of the following resolutions:

*Resolved*, That applications should be renewed and renewals recorded every day that a registered applicant for employment appears at an employment bureau. Bureaus may permit renewals by mail or telephone.

*Resolved*, That on the first of each month all applications which were made prior to the fifteenth day of the preceding month shall be placed in the inactive file unless in the meantime they have been renewed.

*Resolved*, That at the close of each calendar year the cards of all employers who have not renewed their applications during the two full calendar years preceding shall be eliminated permanently from the files. If an eliminated card is consulted for any purpose it shall in no case be restored to the files or used in lieu of a new order card, and an employer whose card has been eliminated shall, if again making application, be treated as a new employer and registered accordingly on a new card.

*Resolved*, That statistics be tabulated showing the number of persons who have secured one position and the number of persons who have secured more than one position through the employment bureau during the calendar year.

*Resolved*, That a record be kept of the number of offers of positions made through each employment bureau, and that the term "offer of position" be understood to refer to an individual offer to one person.

There may therefore be no direct relation between the number of offers of positions and the number of positions offered. For example, if an applicant is sent to a position which he does not secure and another applicant is subsequently referred to the same position, then the number of offers of positions is two, while, as a matter of fact, there was but one position offered. It is the number of offers of positions that should be reported.

*Resolved*, That a position shall be considered secured only when the employment bureau has direct evidence that a person sent to it has been actually employed and that such evidence shall be in the form of a record that the information was received by telephone or inquiry from the office, or voluntarily from the employer, or by mail, or at the office personally by either the employer or employee.

*Resolved*, That the active files shall contain only employers' or employees' record cards and verification cards of places filled which have been used within one month.

*Resolved*, That the inactive files shall contain only employers' and employees' record cards and verification cards of places filled which have not been used within one month, but which have been used within the two preceding calendar years.

*Resolved*, That the dead files shall contain only employers' and employees' record cards and verification cards of positions filled which have been in disuse for two previous calendar years but which may have to be preserved as public records.

*Resolved*, That data for males and females be clearly distinguished on the records and in reports.

*Resolved*, That registrations and placements of minors under 19 be reported separately, and that the minimum age in this group be stated.

*Resolved*, That bureaus should distinguish in their records and reports between temporary and steady positions. All data should be reported by occupation, but, in addition, the total number of placements for each sex should be divided into three general groups, as follows: (1) Temporary, one day; (2) temporary, other (two days or less than one month); (3) steady (one month or more). The duration of the position in each case is to be determined from the facts secured in connection with making the placements.

A resolution was proposed by Mr. Kruesi, which offered the services of the public employment offices to the United States to assist in recruiting men for the Army and Navy, and to secure men in other capacities needed by the Federal Government. After long debate this resolution was withdrawn. The opposition to this resolution was mainly on the ground that it was not the function of the public employment offices to serve as recruiting stations for the Army and Navy, and that any extensive use of the offices as such would be detrimental to the regular placement work for which they were created.

The third meeting of the committee was held at the Congress Hotel, Chicago, Ill., June 6 and 7.

The order of business as outlined in the call was as follows:

1. Classification of occupations and industries, to be used by public employment offices.
2. Standard blank forms.
3. Employment problems growing out of the war.
  - a. What special problems in securing employees and employments have the different offices met with?
  - b. What reorganization and changes in practices have been found necessary to meet war emergencies?

Each delegate will be called upon to give his experience and opinion.

4. Plans for working out a national system of public employment offices.
  - a. Federal subsidies to State and municipal offices.
  - b. An independent system of Federal offices.
  - c. Should efforts be made at this time to secure Federal legislation and appropriations to bring about a national system of employment offices?
5. New business.



After a brief reference to topics 1 and 2, it was decided to defer discussion of them and the committee proceeded to the consideration of topic 3, "Employment problems growing out of the war." Each Federal, State, and city representative was called upon to outline the special problems met with in securing employees and employments as a result of the war situation, and to specify what reorganization and changes in practices have been necessary to meet war emergencies. The reports and discussion emphasized the urgent need for the establishment of a Federal system of employment service to unify the State systems.

The remainder of the conference, therefore, was devoted to the consideration of "Plans for working out a national system of public employment offices." This very important topic was discussed at length and the following resolutions were unanimously adopted:

Whereas the necessity for a National Bureau of Employment Offices has been long recognized, and

Whereas the present war emergency further emphasizes the need of such a bureau: Therefore be it

*Resolved*, That the American Association of Public Employment Offices recommends to Congress the immediate establishment of a National Bureau of Employment Offices under the United States Department of Labor, as follows:

1. The National Bureau of Employment Offices shall aid and assist the several State systems already in existence and encourage and aid the establishment of such systems in other States under the following conditions:

(a) That each State shall adopt such record system, methods of work, and form of reporting as shall be approved by the National Bureau.

(b) That each State shall report as an entire State to such place and at such times as shall be approved by the National Bureau.

(c) That the National Bureau shall furnish trained and experienced agents, whose duty it shall be to aid in organizing systems in States where no system has already been established; in the establishment of new offices in States now having such systems; and in increasing the efficiency of offices previously established. Said agents shall make such written reports concerning any office as may be required by the National Bureau upon its own initiative or at the request of the State director of employment offices. Copies of all such reports shall be furnished the State director. All questions involving individual offices shall be taken up with the State director.

(d) That the National Government shall contribute to every State working under the system approved by the National Bureau one dollar for every dollar appropriated and expended by said State for employment office work, including such amounts as may be contributed by any political subdivision cooperating with the State and a reasonable allowance for rental or other service. The amount contributed by the National Bureau shall be used for employment office work under the supervision of the State director of employment offices.

2. The National Bureau of Employment Offices shall establish clearing houses in such groups of States as shall be deemed necessary for the efficient exchange of information and the proper distribution of labor.

3. The National Bureau of Employment Offices shall have an advisory committee consisting of the director of the National Bureau and the State directors of employment offices. The director of the National Bureau shall be ex officio chairman of the advisory committee. Said committee shall meet at least twice a year, traveling and other necessary expenses incident thereto being borne by the National Government.

4. The National Bureau of Employment Offices shall be given authority to license, supervise, and regulate all private employment agencies doing an interstate business.

*Resolved*, That the next meeting of this committee shall be held at Milwaukee, Wis., on the 19th day of September, 1917, at which time the order of business will be the discussion of standard blank forms and proposed classification of occupations and industries.

On motion, it was voted that the President of the American Association of Employment Offices be requested to appoint a committee of three to present to the Council of National Defense the proposal to establish a National Association of Public Employment Offices, as embodied in the above resolutions. In accordance therewith, Messrs. Charles B. Barnes, director, State employment bureaus, New York; Fred C. Croxton, labor director, Ohio branch, Council of National Defense; and W. G. Ashton, commissioner of labor of Oklahoma, were appointed as such committee.

The fourth meeting of the committee on standardization was held at the Republican House, Milwaukee, Wis., on September 19, 1917, at 9 o'clock a. m.

The order of business as outlined in the call issued by the chairman for the meeting was—

1. Unfinished business:

(a) Classification of occupations and industries to be used by public employment offices.

(b) Standard blank forms.

(c) Review and reconsideration of resolutions adopted in previous conferences with the view of final ratification.

2. New business.

After the reading of the minutes of the Chicago meeting, by unanimous consent, the first topic was deferred for the present and the committee took up the consideration of topic 2, standard blank forms. Copies of sample forms were distributed and after extended discussion which resulted in some revision, the three following forms were unanimously adopted:

1. Employers' order card.
2. Employees' record card.
3. Introduction cards.

**FORM 1.**

[Front of card.]

EMPLOYERS' ORDER.					Number.....
Name			Date		
Address			Telephone		
Occupation			Number wanted		
Wages		Hours		Probable duration of work	
Nationality	Sex	Age limit	Color	Married or Single	
Apply to					
Remarks					

[Back of card.]

HELP SENT.			
Persons sent.	Nationality.	Date sent.	Result.

**FORM 2.**

[Front of card.]

APPLICATION FOR WORK.			
No. ....			
Name:		Date:	
Address:		Telephone:	
Occupation:		Wages wanted:	Willing to work out of town:
Also willing to work as		Wages wanted:	
Age:	Color:	Married. Single. Widowed.	Number of dependents:
Birthplace:	Citizen of U. S.:	Speak English. Read English.	Renewals:
<b>LAST EMPLOYMENT.</b>			
Where:			
Occupation:			
Time employed:			
Wages:			
Reasons for leaving:			
How long unemployed:			
Remarks:			



INTRODUCTION CARD.

[Front.]

FREE EMPLOYMENT OFFICE.

(City) ....., 1917.

To.....  
 .....  
 .....

This will introduce.....  
 as an applicant for the position of..... at.....  
(occupation) (wages)  
 .....Supt.

Employer please fill out space below and return card by mail.

I have.....hired.....for the  
 position of.....and he went to work.....1917.

Name of employer.....  
 Address.....

[Back.]

POST CARD.

]1-cent stamp.]

FREE EMPLOYMENT OFFICE

.....  
 .....  
 .....

In the opinion of the committee these three cards were all that were needed to record all necessary information.

The resolutions adopted at the three previous meetings of the committee were next taken up. Each resolution was considered separately and all were, by unanimous vote, reaffirmed, except the third resolution adopted at the New York meeting, reading as follows:

Whereas the records of applications from employers are not now being reported on a uniform basis; and

Whereas figures giving the number of such applications, even if secured on a uniform basis, would treat the small employer and the large employer as of equal importance; and

[960]



Whereas such figures are thought to be of little significance: Therefore be it *Resolved*, That hereafter the records of the number of applications from employers shall not be reported to the United States Bureau of Labor Statistics, but the number of different employers who make application to the office in a year shall be reported to the said bureau.

This resolution was reconsidered and, after discussion, was repealed, because the figures referred to are as accurate and as significant as the figures for persons asked for, new registrations, and renewals.

The question of a uniform classification of occupations was next taken up. Two sample lists were presented for consideration, one an extended list embodying practically all occupations met with in the several employment offices of the various States; the other an abbreviated list including only what was deemed the minimum that should be recorded. Considerable discussion was had as to the merits of each, after which a motion was made and seconded to adopt and amend the shorter classification. The motion was lost.

It was then moved that it was the sense of the committee that more consideration should be given this important question than was possible at this meeting and that the committee should not, at this time, present any classification of occupations for adoption. The motion was carried, with the understanding that the committee would ask for further time to consider this very important subject.<sup>1</sup>

The meeting of the committee then adjourned.

ROYAL MEEKER, *Chairman*.

CHARLES F. GETTEMY.

H. J. BECKERLE.

C. H. MAYHUGH.

LUKE D. MCCOY.

PROPOSED BILL FOR ESTABLISHMENT OF A UNITED STATES EMPLOYMENT SERVICE.

The committee on standardization of the American Association of Public Employment Offices, at a meeting held in Chicago, Ill., June 6 and 7, 1917, passed a resolution recommending to Congress the establishment of a national bureau of employment offices. A special committee was appointed which gave further consideration to the matter and prepared a draft of a bill to be introduced in Congress. The proposed bill was presented for consideration to the American Association of Public Employment Offices at its fifth annual meeting held in Milwaukee, Wis., September 20 and 21, 1917, and received unanimous indorsement. A copy of the bill follows:

<sup>1</sup> The committee on standardization was continued by vote of the association.

A Bill To promote the welfare of industries and wage earners of the United States; to extend the United States Employment Service in the Department of Labor; to regulate employment agencies doing an interstate business; and for other purposes.

*Be it enacted by the Senate and the House of Representatives in Congress assembled:*

SECTION 1. That there is hereby extended and established in the Department of Labor a United States Employment Service, in charge of a director, who shall be appointed by the President and shall receive a salary of \$5,000 per annum. There shall also be in the Service such assistants, experts, special agents, clerks, and other employees as may be necessary to carry out the purposes of this act and as may from time to time be authorized by appropriation or other law.

SEC. 2. That the Service shall (a) have general charge of any and all employment activities of the Department of Labor, and, subject to the approval of the Secretary of Labor, prescribe rules and regulations for the conduct of the Service: *Provided*, That no wage earner shall be directed without full notice to any establishment wherein a strike is known to exist or to impend; (b) collect and furnish to wage earners and employers accurate information in reference to employers seeking workers or workers seeking employment, using any appropriate means for securing and distributing such information and for preventing misrepresentation and the dissemination of misleading statements by other agencies purporting to convey such information; (c) cooperate with all public employment offices in devising, installing, and from time to time amending and improving the best adapted, most efficient and economical systems of records and methods of conducting business for such offices, and interchanging information with all such offices or other authorities and organizations having to do with similar work; (d) encourage and aid State and municipal authorities in establishing and operating public employment offices in conformity with standards approved by the Service; (e) license and regulate private agencies engaged in the interstate employment business for profit.

SEC. 3. That the Service may subdivide the country into districts and zones and therein at convenient locations establish clearing houses for employment information to which public employment offices located within such districts may make regular reports at such times and containing such employment information and relevant data as the director may require. It shall be the function of such clearing houses to connect offices registering employers seeking workers but unable to supply them from their own patrons, with offices registering workers of the type desired but unable to connect them with opportunities for employment within the districts which they respectively serve.

SEC. 4. That for the general purposes of this act is hereby appropriated out of any money in the Treasury not otherwise appropriated the sum of \$\_\_\_\_\_ for the fiscal year ending June 30, 1918. That for the purpose of aiding States in establishing and maintaining public employment offices there is hereby appropriated out of any money in the Treasury not otherwise appropriated the following additional sums:

For the fiscal year ending June 30, 1918, \_\_\_\_\_ dollars and for the fiscal year ending June 30, 1919, and annually thereafter the sum of \_\_\_\_\_ dollars.

SEC. 5. That the sums so appropriated in each fiscal year shall be allotted to the States in proportion to the sums which they have appropriated and expended for the maintenance of public employment offices during the current year, but such allotment shall be made upon the condition that for every one dollar allotted from the Federal fund the State receiving it shall expend

during the current year for the maintenance of public employment offices not less than one dollar.

In computing the allotment of any State sums expended by municipalities, counties, or other districts in the State shall be included: *Provided*, That the employment agencies of such municipalities, counties, or other districts are under the supervision of and are cooperating with the State public employment bureau. Any money allotted to a State on the basis of sums expended by municipalities, counties, or other districts in the State shall be turned over by the State to such municipalities, counties, or other districts in proportion to the sums which they have expended in the maintenance of public employment agencies. The United States Employment Service shall annually ascertain whether the States are operating their public employment offices in accordance with the purposes and provisions of this act and of the standards set from time to time by the director with the approval of the Secretary of Labor, and on or before the first day of January of each year shall certify to the Secretary of the Treasury the names of the States which have accepted the provisions of this act and have complied therewith and the amount which each such State is entitled to receive for the current fiscal year. Upon such certification the Secretary of the Treasury shall pay to the treasurer or other custodian of each State the money which it is entitled to receive and the money so received by the State treasurer or other custodian under the provisions of this act shall be paid by him to the public employment bureaus entitled thereto.

SEC. 6. That in order to secure the benefit of the appropriation provided for in section four of this act, any State shall, (1) through the executive authority thereof, accept the provisions of this act and designate three or more persons connected with the Department of Labor or the public employment bureau to serve as a State board, and have all necessary power to cooperate as herein provided with the Service in the administration of this act; (2) appoint the State treasurer or other State officer custodian to receive and disburse moneys paid to the State from the Treasury in pursuance of this act; (3) empower the State board to (a) organize a competent system of public employment offices, with administrative power to make and from time to time amend necessary regulations for securing the efficient and economical operation of such offices within the State, in cooperation with the Service; (b) to prepare and submit to the director of the Service for his approval and to put into operation, when approved, plans for organizing such offices, such plans to include provisions for operation of such offices by the State separately or jointly with municipalities or other districts and for the selection of all officers upon competency and merit and with tenure of office during good behavior and efficiency; and such offices shall be required to make such reports to the director of the Service, at such times and stating such facts as he may require. On or before the first day of September in every year the State treasurer or other State officer appointed as custodian by any State shall report in detail the expenditures of every public employment office cooperating with the Service and receiving funds under the provisions of this act, and the board appointed as herein provided shall report in full regarding the operations of such offices, giving such facts as may previously be outlined and required by the director; all such reports being for the period ending with the 30th day of June next preceding.

SEC. 7. That no person, corporation, or association shall, without a license issued by the director, engage in the business for profit of sending or persuading, inducing, enticing, procuring, or causing to be sent from or to any point within a State, Territory, or the District of Columbia to or from any point out-

side of such State, Territory, or the District of Columbia, or from any point in a Territory or the District of Columbia to another point within said Territory or the District of Columbia (a) any person seeking employment, or (b) any information regarding employers seeking workers or workers seeking employment.

Application for such license shall be made, under oath, upon blanks furnished by the director and shall be in such form and contain such information as he may require. The application shall be accompanied by a bond in the penal sum of one thousand dollars conditioned upon the faithful observance of the provisions of this act and of any rules or regulations issued thereunder. Licenses issued under this act shall run for a period of not more than one year, shall not be transferable, and the fee for the issuance of each license shall be twenty-five dollars.

The director shall, subject to the approval of the Secretary of Labor, prescribe uniform rules and regulations respecting applications for licenses, bonds to be given by licensees, and terms and conditions upon which the business required by this act to be licensed shall be conducted by licensees.

SEC. 8. That if any person, corporation, or association licensed under this act is guilty of fraud or misrepresentation or violates any of the provisions of this act or any rule or regulations thereunder or any of the conditions of his bond, the director may revoke his license and declare his bond forfeited in whole or in part after giving him such notice as the director may deem sufficient and an opportunity to answer the charges against him.

SEC. 9. Any person, corporation, or association who shall conduct the business required by this act to be licensed without first obtaining such a license, or after his license has been revoked and before procuring a new license in the manner provided by this act shall be guilty of a misdemeanor and shall be punished by a fine of not less than one hundred dollars nor more than one thousand dollars or by imprisonment for a term not exceeding one year, or by both such fine and imprisonment.

SEC. 10. The duties required by law to be performed by the Division of Information of the Bureau of Immigration in the Department of Labor authorized by section 40 of the act of February 20, 1907, entitled "An act to regulate the immigration of aliens into the United States," and the officers, clerks, and other employees occupying statutory positions in the said Division of Information are hereby transferred to and combined with the United States Employment Service hereby created at such time and in such manner, arrangement, and organization as the Secretary of Labor may determine. All appropriations or allotments of appropriations hereto or hereafter made for the division of information shall remain available for the said division until such time as it shall be transferred to and combined with the United States Employment Service as herein provided.

SEC. 11. That this act shall take effect immediately.

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#### WORK OF FEDERAL, STATE, AND MUNICIPAL 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 September, 1917, and in cases where figures are available, for the corresponding month in 1916. For the United States figures are given from Federal employment offices in 31 States and the District of Columbia, Federal-State

[1964]

employment offices in 3 States, a Federal-State-county-municipal employment office in 1 State, Federal-municipal employment offices in 1 State, State employment offices in 16 States, a State-county-municipal employment office in 1 State, State-municipal employment offices in 2 States, municipal employment offices in 8 States, and a municipal-private employment office in 1 State. Figures from 2 Canadian employment offices are also given.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917.

## UNITED STATES.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
<b>Alabama:</b>						
Mobile (Federal):						
September, 1916.....			1 31	( <sup>2</sup> )	127	127
September, 1917.....	2	410	1 10	( <sup>2</sup> )	1	1
<b>California:</b>						
Fresno (State):						
September, 1917.....	929	3, 181	1, 522	( <sup>2</sup> )	2, 650	2, 487
Los Angeles (Federal):						
September, 1916.....	4	17	1 93	( <sup>2</sup> )	18	17
September, 1917.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Oakland (State):						
September, 1916.....	846	1, 285	536	( <sup>2</sup> )	1, 121	801
September, 1917.....	1, 298	2, 505	807	( <sup>2</sup> )	1, 841	1, 453
Sacramento (State):						
September, 1916.....	655	1, 583	944	( <sup>2</sup> )	1, 450	1, 322
September, 1917.....	664	1, 850	930	( <sup>2</sup> )	1, 607	1, 463
Sacramento (municipal):						
September, 1916.....	( <sup>2</sup> )	332	67	( <sup>2</sup> )	332	332
September, 1917.....	216	( <sup>2</sup> )	52	( <sup>2</sup> )	( <sup>2</sup> )	278
San Diego (Federal):						
September, 1916.....	431	713	1 757	( <sup>2</sup> )	898	675
September, 1917.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
San Francisco (Federal):						
September, 1916.....	394	763	1 314	( <sup>2</sup> )	865	401
September, 1917.....	427	650	1 407	( <sup>2</sup> )	458	185
San Francisco (State):						
September, 1916.....	1, 513	3, 735	2, 764	( <sup>2</sup> )	3, 207	2, 572
September, 1917.....	2, 884	6, 327	2, 805	( <sup>2</sup> )	5, 131	4, 153
<b>Total:</b>						
September, 1916.....					7, 891	6, 120
September, 1917.....					( <sup>2</sup> )	<sup>3</sup> 10, 019
<b>Colorado:</b>						
Colorado Springs (State):						
September, 1916.....	( <sup>2</sup> )	656	610	( <sup>2</sup> )	582	( <sup>2</sup> )
September, 1917.....	700	700	488	( <sup>2</sup> )	( <sup>2</sup> )	443
Denver (Federal):						
September, 1916.....	4	6	1 26	( <sup>2</sup> )	7	3
September, 1917.....	10	25	1 22	( <sup>2</sup> )	22	4
Denver No. 1 (State):						
September, 1916.....	( <sup>2</sup> )	612	410	( <sup>2</sup> )	385	( <sup>2</sup> )
September, 1917.....	1, 309	1, 309	746	( <sup>2</sup> )	( <sup>2</sup> )	674
Denver No. 2 (State):						
September, 1916.....	( <sup>2</sup> )	462	370	( <sup>2</sup> )	263	( <sup>2</sup> )
September, 1917.....	894	894	440	( <sup>2</sup> )	( <sup>2</sup> )	402
Grand Junction (State): <sup>4</sup>						
September, 1917.....	575	575	1 398	( <sup>2</sup> )	( <sup>2</sup> )	316
Pueblo (State):						
September, 1916.....	( <sup>2</sup> )	983	944	( <sup>2</sup> )	862	( <sup>2</sup> )
September, 1917.....	550	550	467	( <sup>2</sup> )	( <sup>2</sup> )	462
<b>Total:</b>						
September, 1916.....					2, 099	( <sup>2</sup> )
September, 1917.....					( <sup>2</sup> )	2, 301

<sup>1</sup> Number applying for work. <sup>3</sup> Exclusive of Los Angeles and San Diego Federal offices, not reported.

<sup>2</sup> Not reported.

<sup>4</sup> Temporary office conducted during fruit season.



## OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

## UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from employ- ers.	Persons asked for by employ- ers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New regis- trations.	Renew- als.		
<b>Connecticut:</b>						
Bridgeport (State):						
September, 1916.....	(2)	973	1,118	(2)	(2)	852
September, 1917.....	(2)	601	730	(2)	(2)	564
Hartford (State):						
September, 1916.....	(2)	941	1,232	(2)	(2)	725
September, 1917.....	(2)	1,301	1,524	(2)	(2)	1,049
New Haven (State):						
September, 1916.....	(1)	918	1,079	(1)	(1)	765
September, 1917.....	(1)	908	985	(1)	(1)	774
Norwich (State):						
September, 1916.....	(1)	217	235	(1)	(1)	202
September, 1917.....	(1)	302	351	(1)	(1)	290
Waterbury (State):						
September, 1916.....	(1)	207	205	(1)	(1)	146
September, 1917.....	(1)	224	246	(1)	(1)	154
Total:						
September, 1916.....						2,690
September, 1917.....						2,831
<b>Delaware:</b>						
Wilmington (Federal):						
September, 1916.....	16	108	261	(1)	49	46
September, 1917.....	34	500	2312	(1)	346	318
<b>District of Columbia:</b>						
Washington (Federal):						
September, 1917.....	303	1,678	2802	(1)	721	654
<b>Florida:</b>						
Jacksonville (Federal):						
September, 1916.....	16	110	237	(1)		
September, 1917.....			2538	(1)	2	2
Miami (Federal):						
September, 1916.....	9	35	267	(1)	35	30
September, 1917.....	2	2	224	(1)	2	1
Total:						
September, 1916.....					35	30
September, 1917.....					4	3
<b>Georgia:</b>						
Savannah (Federal):						
September, 1916.....	3	40	2236	(1)	38	38
September, 1917.....	3	4,000	2304	(1)	160	125
<b>Idaho:</b>						
Boise (municipal):						
September, 1916.....	75	78	75	(1)	75	47
September, 1917.....	94	200	175	(1)	166	160
Moscow (Federal):						
September, 1916.....	5	5	25	(1)	5	5
September, 1917.....	520	520	231	(1)	31	31
Total:						
September, 1916.....					80	52
September, 1917.....					197	191
<b>Illinois:</b>						
Chicago (Federal):						
September, 1916.....	559	1,855	21,677	(1)	1,574	1,524
September, 1917.....	709	3,305	23,063	(1)	2,741	2,525
Chicago (State):						
September, 1916.....	(1)	9,523	11,693	(1)	(1)	8,550
September, 1917.....	4,356	14,662	11,156	2,274	13,128	10,812
East St. Louis (State):						
September, 1916.....	(1)	1,472	1,720	(1)	(1)	1,135
September, 1917.....	823	1,325	399	591	987	926
Peoria (State):						
September, 1916.....	(1)	1,225	946	(1)	(1)	882
September, 1917.....	922	1,535	382	743	1,112	1,099
Rock Island-Moline (State):						
September, 1916.....	(1)	717	742	(1)	(1)	630
September, 1917.....	768	2,143	1,071	437	1,452	1,336
Rockford (State):						
September, 1916.....	(1)	1,692	1,426	(1)	(1)	1,136
September, 1917.....	813	1,427	743	159	762	678

<sup>1</sup> Not reported.<sup>2</sup> Number applying for work.

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## OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

## UNITED STATES—Continued.

State, city and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
Illinois—Concluded.						
Springfield (State):						
September, 1916.....	(1)	958	608	(1)	(1)	559
September, 1917.....	553	841	336	483	770	582
Total:						
September, 1916.....					(1)	14,416
September, 1917.....					20,952	17,958
Indiana:						
Evansville (State):						
September, 1916.....	453	453	90	40	502	453
September, 1917.....	180	453	407	104	487	482
Ft. Wayne (State):						
September, 1916.....	359	520	380	43	420	381
September, 1917.....	394	807	117	616	801	733
Indianapolis (Federal):						
September, 1916.....	90	653	<sup>2</sup> 660	(1)	574	542
September, 1917.....	170	985	<sup>2</sup> 1,852	(1)	924	796
Indianapolis (State):						
September, 1916.....	719	799	(1)	(1)	799	587
September, 1917.....	1,476	1,497	1,358	118	1,476	1,392
South Bend (State):						
September, 1916.....	237	767	349	43	361	311
September, 1917.....	203	379	260	47	307	278
Terre Haute (State):						
September, 1917.....	150	350	209	52	261	258
Total:						
September, 1916.....					<sup>2</sup> 2,656	<sup>3</sup> 2,274
September, 1917.....					4,256	3,939
Iowa:						
Des Moines (State):						
September, 1916.....	36	220	114	37	123	93
September, 1917.....	62	321	124	15	126	96
Kansas:						
Topeka (State):						
September, 1916.....	32	35	35	3	36	27
September, 1917.....	110	1,230	355	11	347	333
Kentucky:						
Louisville (State):						
September, 1916.....	737	737	904	(1)	737	737
September, 1917.....	232	217	<sup>2</sup> 265	(1)	217	217
Louisville (municipal-private):						
September, 1916.....	(1)	290	373	595	243	109
September, 1917.....	180	538	157	268	302	127
Total:						
September, 1916.....					980	846
September, 1917.....					519	344
Louisiana:						
New Orleans (Federal-State):						
September, 1916.....	50	1,078	<sup>2</sup> 500	(1)	173	27
September, 1917.....	154	1,029	<sup>2</sup> 258	(1)	927	718
Maine:						
Portland (Federal):						
September, 1917.....	13	109	<sup>2</sup> 59	(1)	33	33
Maryland:						
Baltimore (Federal):						
September, 1916.....	59	90	<sup>2</sup> 163	(1)	106	106
September, 1917.....	45	442	<sup>2</sup> 257	(1)	731	613
Massachusetts:						
Boston (Federal):						
September, 1916.....			<sup>2</sup> 51	(1)		
September, 1917.....	65	2,620	<sup>2</sup> 1,817	(1)	1,360	1,202

<sup>1</sup> Not reported.<sup>2</sup> Number applying for work.<sup>3</sup> Exclusive of Terre Haute office, not reported.

134 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
<b>Massachusetts—Concluded.</b>						
Boston (State):						
September, 1916.....	2,543	2,783	<sup>1</sup> 1,259	( <sup>2</sup> )	<sup>3</sup> 3,519	1,450
September, 1917.....	2,454	2,761	<sup>1</sup> 1,527	( <sup>2</sup> )	<sup>3</sup> 3,781	1,473
Springfield (State):						
September, 1916.....	1,182	1,601	<sup>1</sup> 691	( <sup>2</sup> )	<sup>3</sup> 1,824	1,135
September, 1917.....	1,026	1,468	<sup>1</sup> 616	( <sup>2</sup> )	<sup>3</sup> 1,683	1,054
Worcester (State):						
September, 1916.....	1,064	1,419	<sup>1</sup> 594	( <sup>2</sup> )	<sup>3</sup> 1,443	744
September, 1917.....	1,107	1,438	<sup>1</sup> 603	( <sup>2</sup> )	<sup>3</sup> 1,521	806
<b>Total:</b>						
September, 1916.....					6,786	3,329
September, 1917.....					8,345	4,535
<b>Michigan:</b>						
Battle Creek (State):						
September, 1916.....	78	228	<sup>4</sup> 146	( <sup>2</sup> )	135	135
September, 1917.....	299	403	403	( <sup>2</sup> )	403	403
Bay City (State):						
September, 1916.....	43	163	<sup>4</sup> 81	( <sup>2</sup> )	81	81
September, 1917.....	42	88	101	( <sup>2</sup> )	112	110
Detroit (Federal):						
September, 1916.....	331	971	<sup>4</sup> 688	( <sup>2</sup> )	688	673
September, 1917.....	56	250	<sup>4</sup> 281	( <sup>2</sup> )	217	195
Detroit (State):						
September, 1916.....	602	5,216	<sup>4</sup> 5,549	( <sup>2</sup> )	4,680	4,680
September, 1917.....	1,144	6,097	6,100	( <sup>2</sup> )	6,075	6,075
Flint (State):						
September, 1916.....	404	806	<sup>4</sup> 778	( <sup>2</sup> )	778	778
September, 1917.....	447	1,335	779	( <sup>2</sup> )	742	702
Grand Rapids (State):						
September, 1916.....	457	993	<sup>4</sup> 874	( <sup>2</sup> )	852	852
September, 1917.....	478	1,189	945	( <sup>2</sup> )	808	746
Jackson (State):						
September, 1916.....	396	898	<sup>4</sup> 768	( <sup>2</sup> )	755	749
September, 1917.....	511	552	429	( <sup>2</sup> )	439	409
Kalamazoo (State):						
September, 1916.....	350	514	<sup>4</sup> 490	( <sup>2</sup> )	490	490
September, 1917.....	463	603	710	( <sup>2</sup> )	556	437
Lansing (State):						
September, 1916.....	69	270	<sup>4</sup> 233	( <sup>2</sup> )	217	217
September, 1917.....	134	639	651	( <sup>2</sup> )	639	620
Muskegon (State):						
September, 1916.....	64	285	<sup>4</sup> 214	( <sup>2</sup> )	212	201
September, 1917.....	65	437	232	( <sup>2</sup> )	157	150
Saginaw (State):						
September, 1916.....	171	1,012	<sup>4</sup> 741	( <sup>2</sup> )	741	741
September, 1917.....	131	688	448	( <sup>2</sup> )	448	448
Sault Ste. Marie (Federal):						
September, 1916.....	7	1,033	<sup>4</sup> 50	( <sup>2</sup> )	36	36
September, 1917.....	3	97	<sup>4</sup> 64	( <sup>2</sup> )	45	45
<b>Total:</b>						
September, 1916.....					9,665	9,633
September, 1917.....					10,641	10,340
<b>Minnesota:</b>						
Duluth (State):						
September, 1916.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1,241
September, 1917.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	1,221
Minneapolis (Federal):						
September, 1916.....	26	43	<sup>4</sup> 36	( <sup>2</sup> )	12	12
September, 1917.....	11	24	<sup>4</sup> 74	( <sup>2</sup> )	0	0
Minneapolis (State):						
September, 1916.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	2,060
September, 1917.....	( <sup>2</sup> )	2,643	2,194	( <sup>2</sup> )	2,129	1,939

<sup>1</sup> Number who were registered.  
<sup>2</sup> Not reported.

<sup>3</sup> Number of offers of positions.  
<sup>4</sup> Number applying for work.

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS. 135

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
<b>Minnesota—Concluded.</b>						
St. Paul (State):						
September, 1916.....	(1)	(1)	(1)	(1)	(1)	1,246
September, 1917.....	(1)	(1)	(1)	(1)	(1)	1,177
Total:						
September, 1916.....					(1)	4,559
September, 1917.....					(1)	4,337
<b>Mississippi:</b>						
Gulfport (Federal):						
September, 1916.....	1	300	2 59	(1)	0	0
September, 1917.....	5	2,546	2 31	(1)	4	4
<b>Missouri:</b>						
Kansas City (Federal-State):						
September, 1916.....	677	1,524	2 1,339	(1)	1,403	1,077
September, 1917.....	1,034	2,190	2 1,673	(1)	1,625	1,522
St. Joseph (State):						
September, 1916.....	659	1,680	2 1,285	(1)	1,264	1,254
September, 1917.....	429	1,198	2 780	(1)	780	778
St. Louis (Federal-State):						
September, 1916.....	160	819	358	27	385	370
September, 1917.....	348	3,259	1,363	(1)	1,300	1,275
Total:						
September, 1916.....					3,052	2,701
September, 1917.....					3,705	3,575
<b>Montana:</b>						
Butte (municipal):						
September, 1916.....	300	374	560	(1)		298
September, 1917.....	(1)	408	2 413	(1)	340	352
Helena (Federal):						
September, 1916.....	4	4	2 11	(1)	3	3
September, 1917.....	1	1	2 3	(1)	3	3
Total:						
September, 1916.....					343	301
September, 1917.....					(1)	355
<b>Nebraska:</b>						
Lincoln (Federal):						
September, 1917.....	291	488	2 393	(1)	393	393
Omaha (Federal-State-county-municipal):						
September, 1917.....	918	1,751	810	468	1,266	989
Total:						
September, 1917.....					1,659	1,382
<b>Nevada:</b>						
Reno (Federal):						
September, 1916.....	75	263	2 303	(1)	252	237
September, 1917.....	126	426	2 211	(1)	209	196
<b>New Jersey:</b>						
Jersey City (Federal-State):						
September, 1916.....	12	407	2 173	(1)	125	107
September, 1917.....	87	941	2 173	(1)	687	622
Newark (Federal-State):						
September, 1916.....	1,237	1,643	2 2,978	(1)	1,712	1,317
September, 1917.....	2,485	8,858	2 1,531	(1)	6,694	5,867
Orange (Federal-State):						
September, 1917.....	268	546	181	(1)	282	264
Total:						
September, 1916.....					2 1,837	2 1,424
September, 1917.....					7,663	6,753

<sup>1</sup> Not reported.

<sup>2</sup> Number applying for work.

<sup>3</sup> Exclusive of Orange office, not reported.

136 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
<b>New York:</b>						
Albany (State):						
September, 1916.....	597	864	536	277	790	435
September, 1917.....	641	958	464	275	817	609
Buffalo (Federal):						
September, 1916.....	147	1,032	<sup>1</sup> 1,002	( <sup>2</sup> )	971	859
September, 1917.....	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Buffalo (State):						
September, 1916.....	982	1,966	1,264	72	1,831	1,421
September, 1917.....	1,208	2,138	1,711	179	2,539	1,937
New York City (Federal):						
September, 1916.....	162	635	<sup>1</sup> 219.5	( <sup>2</sup> )	347	328
September, 1917.....	3,913	6,597	10,433	( <sup>2</sup> )	10,754	5,049
New York City (State):						
September, 1916.....	1,335	1,911	1,081	504	2,025	1,185
September, 1917.....	2,107	2,862	1,206	875	2,810	1,864
New York City (municipal):						
September, 1916.....	2,167	2,530	2,163	( <sup>2</sup> )	3,486	2,053
September, 1917.....	2,529	2,647	1,876	2,219	3,409	1,987
Rochester (State):						
September, 1916.....	1,058	1,681	890	343	1,550	980
September, 1917.....	1,574	2,837	1,605	582	2,237	1,186
Syracuse (State):						
September, 1916.....	1,038	1,420	713	145	1,146	734
September, 1917.....	1,196	1,802	905	212	1,494	1,065
<b>Total:</b>						
September, 1916.....					12,146	7,995
September, 1917.....					<sup>3</sup> 24,060	<sup>3</sup> 13,697
<b>North Dakota:</b>						
Bismarck (Federal):						
September, 1917.....	95	300	1,290	( <sup>2</sup> )	290	290
<b>Ohio:</b>						
Akron (State-municipal):						
September, 1916.....	( <sup>2</sup> )	1,853	772	1,269	1,574	1,359
September, 1917.....	( <sup>2</sup> )	2,699	998	1,836	1,946	1,644
Athens (State-municipal):						
September, 1917.....	( <sup>2</sup> )	122	107	59	110	80
Canton (State-municipal):						
September, 1917.....	( <sup>2</sup> )	496	429	128	465	294
Chillicothe (State-municipal):						
September, 1917.....	( <sup>2</sup> )	5,795	5,724	99	5,795	5,751
Cincinnati (State-municipal):						
September, 1916.....	( <sup>2</sup> )	1,840	1,317	2,434	1,743	952
September, 1917.....	( <sup>2</sup> )	2,935	3,690	3,358	2,485	1,697
Cleveland (Federal):						
September, 1916.....	4	36	<sup>1</sup> 111	( <sup>2</sup> )	96	26
September, 1917.....	44	1,270	<sup>1</sup> 141	( <sup>2</sup> )	113	41
Cleveland (State-municipal):						
September, 1916.....	( <sup>2</sup> )	7,928	2,344	6,744	6,694	5,374
September, 1917.....	( <sup>2</sup> )	8,030	3,433	7,243	6,788	5,651
Columbus (State-municipal):						
September, 1916.....	( <sup>2</sup> )	2,612	924	2,050	2,155	1,839
September, 1917.....	( <sup>2</sup> )	3,567	1,079	2,501	2,941	2,407
Dayton (State-municipal):						
September, 1916.....	( <sup>2</sup> )	1,182	670	1,006	908	822
September, 1917.....	( <sup>2</sup> )	1,616	1,083	1,240	1,376	1,142
Hamilton (State-municipal):						
September, 1917.....	( <sup>2</sup> )	209	148	43	136	105
Lima (State-municipal):						
September, 1917.....	( <sup>2</sup> )	382	358	110	382	314
Mansfield (State-municipal):						
September, 1917.....	( <sup>2</sup> )	224	180	74	206	169
Marietta (State-municipal):						
September, 1917.....	( <sup>2</sup> )	317	200	101	226	184
Marion (State-municipal):						
September, 1917.....	( <sup>2</sup> )	643	247	91	282	229
Portsmouth (State-municipal):						
September, 1917.....	( <sup>2</sup> )	403	393	107	364	309

<sup>1</sup> Number applying for work.

<sup>2</sup> Not reported.

<sup>3</sup> Exclusive of Buffalo Federal office, not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—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.		
Ohio—Concluded.						
Sandusky (State-municipal):						
September, 1917.....	(1)	248	184	56	194	110
Springfield (State-municipal):						
September, 1917.....	(1)	313	263	167	218	130
Steuensville (State-municipal):						
September, 1917.....	(1)	676	340	354	650	502
Tiffin (State-municipal):						
September, 1917.....	(1)	305	260	196	283	198
Toledo (State-municipal):						
September, 1916.....	(1)	4,338	1,362	1,754	2,431	2,016
September, 1917.....	(1)	4,924	2,341	2,911	4,610	3,815
Washington C. H. (State-municipal):						
September, 1917.....	(1)	291	114	69	165	119
Youngstown (State-municipal):						
September, 1916.....	(1)	1,185	584	1,052	1,141	957
September, 1917.....	(1)	2,025	965	1,354	1,714	1,504
Zanesville (State-municipal):						
September, 1917.....	(1)	231	243	102	236	136
Central office (State-municipal):						
September, 1917.....	(1)	90	818	.....	90	86
Total:						
September, 1916.....					2 16,742	2 13,345
September, 1917.....					31,775	26,617
Oklahoma:						
Enid (State):						
September, 1916.....	(1)	119	135	(1)	(1)	109
September, 1917.....	178	316	3 137	(1)	121	115
Muskogee (State):						
September, 1916.....	(1)	336	187	(1)	(1)	153
September, 1917.....	391	600	3 339	(1)	328	325
Oklahoma City (State):						
September, 1916.....	(1)	839	515	(1)	(1)	451
September, 1917.....	259	930	3 607	(1)	583	515
Tulsa (State):						
September, 1916.....	(1)	850	658	(1)	(1)	658
September, 1917.....	969	1,928	3 1,369	(1)	1,260	1,247
Total:						
September, 1916.....					(1)	1,371
September, 1917.....					2,292	2,202
Oregon:						
Astoria (Federal):						
September, 1916.....	31	276	3 283	(1)	124	119
September, 1917.....	13	361	3 37	(1)	17	16
Portland (Federal):						
September, 1916.....	1,556	5,177	3 4,017	(1)	3,963	3,755
September, 1917.....	1,984	4,318	3 3,720	(1)	3,824	3,635
Portland (municipal):						
September, 1916.....	(1)	5,177	84	(1)	(1)	3,214
September, 1917.....	1,594	3,818	78	(1)	(1)	3,184
Total:						
September, 1916.....					4 4,087	7,088
September, 1917.....					4 3,841	6 835
Pennsylvania:						
Altoona (State):						
September, 1916.....	(1)	52	62	1	35	28
September, 1917.....	30	76	29	39	56	55
Harrisburg (State):						
September, 1916.....	(1)	356	216	94	226	176
September, 1917.....	140	720	367	117	415	387

<sup>1</sup> Not reported.

<sup>2</sup> Exclusive of 16 offices not in operation in 1916.

<sup>3</sup> Number applying for work.

<sup>4</sup> Exclusive of Portland municipal office, not reported.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
Pennsylvania—Concluded.						
Johnstown (State):						
September, 1916.....	(1)	178	57	14	63	47
September, 1917.....	83	142	70	13	91	70
Philadelphia (Federal):						
September, 1916.....	81	131	<sup>2</sup> 144	(1)	174	115
September, 1917 <sup>3</sup> .....	153	2,392	<sup>2</sup> 763	(1)	650	591
Philadelphia (State):						
September, 1916.....	(1)	1,158	635	815	1,123	996
September, 1917.....	477	1,891	2,201	502	1,693	1,614
Pittsburgh (Federal):						
September, 1916.....	28	590	<sup>2</sup> 757	(1)	495	461
September, 1917.....	6	114	<sup>2</sup> 106	(1)	102	100
Pittsburgh (State):						
September, 1916.....	(1)	765	692	137	528	483
September, 1917.....	260	813	311	88	321	290
Total:						
September, 1916.....					2,644	2,306
September, 1917.....					3,328	3,107
Rhode Island:						
Providence (Federal):						
September, 1917.....	21	463	<sup>2</sup> 465	(1)	319	264
Providence (State):						
September, 1916.....	274	313	153	203	(1)	313
September, 1917.....	266	404	322	146	(1)	404
Total:						
September, 1916.....					(1)	(1)
September, 1917.....					(1)	668
South Carolina:						
Charleston (Federal):						
September, 1916.....	0	0	<sup>2</sup> 31	(1)	127	127
September, 1917.....	2	145	<sup>2</sup> 799	(1)	145	145
South Dakota:						
Huron (Federal):						
September, 1917.....	43	55	<sup>2</sup> 82	(1)	67	46
Tennessee:						
Memphis (Federal):						
September, 1916.....	5	523	<sup>2</sup> 104	(1)	37	37
September, 1917.....	10	1,222	<sup>2</sup> 1,942	(1)	1,930	1,884
Texas:						
Dallas (municipal):						
September, 1916.....	236	630	53	6	642	606
September, 1917.....	615	643	<sup>4</sup> 512	9	608	491
El Paso (Federal):						
September, 1917.....	4	4	<sup>2</sup> 20	(1)	7	1
Fort Worth (Federal):						
September, 1917.....	7	3,032	<sup>2</sup> 848	4	848	311
Fort Worth (municipal):						
September, 1916.....	227	834	442	27	427	400
September, 1917.....	122	901	<sup>5</sup> 1,064	13	660	644
Galveston (Federal):						
September, 1916.....	1	1	<sup>2</sup> 28	(1)	7	6
September, 1917.....	5	247	<sup>2</sup> 15	(1)	65	41
Houston (Federal):						
September, 1916.....	4	11	<sup>2</sup> 17	(1)	2	2
September, 1917.....	1	20	<sup>2</sup> 10	(1)	8	7
Total:						
September, 1916.....					<sup>6</sup> 1,078	<sup>6</sup> 1,014
September, 1917.....					2,196	1,495

<sup>1</sup> Not reported.

<sup>2</sup> Number applying for work.

<sup>3</sup> Includes Bourse Branch.

<sup>4</sup> Includes 448 transients.

<sup>5</sup> Includes 400 transients.

<sup>6</sup> Exclusive of El Paso and Fort Worth offices, not reported.



OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Continued.

UNITED STATES—Continued.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
Virginia:						
Norfolk (Federal):						
September, 1916.....	9	18	1 71	(2)	32	23
September, 1917.....	15	5,011	1 122	(2)	84	14
Richmond (municipal):						
September, 1916.....	293	485	463	(2)	555	231
September, 1917.....	234	300	339	(2)	400	185
Total:						
September, 1916.....					587	254
September, 1917.....					484	199
Washington:						
Aberdeen (Federal):						
September, 1916.....	14	300	1 329	(2)	101	101
September, 1917.....	7	39	1 77	(2)	39	39
Bellingham (Federal-municipal):						
September, 1916.....	142	315	1 263	(2)	268	250
September, 1917.....	139	319	1 270	(2)	166	151
Colfax (Federal):						
September, 1916.....	9	23	1 18	(2)	81	81
September, 1917.....	30	75	1 125	(2)	66	61
Everett (municipal):						
September, 1916.....	672	(2)	(2)	(2)	(2)	459
September, 1917.....	(2)	465	(2)	(2)	(2)	284
North Yakima (Federal):						
September, 1916.....	821	2,505	1 1,864	(2)	1,712	1,549
September, 1917.....	885	2,001	1 2,511	(2)	1,796	1,697
Seattle (Federal):						
September, 1916.....	169	825	1 1,092	(2)	357	319
September, 1917.....	178	1,177	1 1,983	(2)	465	436
Seattle (municipal):						
September, 1916.....	4,106	7,433	(2)	(2)	6,996	6,519
September, 1917.....	4,428	7,880	(2)	(2)	7,805	7,092
Spokane (Federal):						
September, 1916.....	99	258	1 792	(2)	258	246
September, 1917.....	165	657	1 683	(2)	542	537
Spokane (municipal):						
September, 1916.....	2,690	3,572	(2)	(2)	3,882	3,822
September, 1917.....	1,915	2,560	(2)	(2)	2,410	2,350
Tacoma (Federal-municipal):						
September, 1916.....	686	1,333	1 1,084	(2)	1,267	1,252
September, 1917.....	635	1,303	1 1,884	(2)	1,141	1,125
Walla Walla (Federal):						
September, 1916.....	164	278	1 235	(2)	164	152
September, 1917.....	430	495	1 415	(2)	261	240
Wenatchee (Federal):						
September, 1916.....	113	405	1 364	(2)	328	328
September, 1917.....	87	300	1 892	(2)	203	195
Total:						
September, 1916.....					3 15,414	15,078
September, 1917.....					3 14,894	14,207
Wisconsin:						
La Crosse (State-municipal):						
September, 1916.....	149	219	1 179	(2)	152	74
September, 1917.....	216	111	149	(2)	101	79
Milwaukee (Federal):						
September, 1917.....	1,021	3,776	1 3,379	(2)	3,095	2,487
Milwaukee (State-county-municipal):						
September, 1916.....	1,880	3,770	1 2,892	(2)	3,169	2,289
September, 1917.....	4,326	1,886	3,648	(2)	3,791	2,679
Oshkosh (State-municipal):						
September, 1916.....	165	249	1 157	(2)	151	90
September, 1917.....	179	234	131	(2)	99	75

<sup>1</sup> Number applying for work.

<sup>2</sup> Not reported.

<sup>3</sup> Exclusive of Everett municipal office, not reported.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES IN SEPTEMBER, 1916, AND SEPTEMBER, 1917—Concluded.

UNITED STATES—Concluded.

State, city, and kind of office.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Posi- tions filled.
			New registra- tions.	Renew- als.		
Wisconsin—Concluded.						
Superior (State-municipal):						
September, 1916.....	391	1,116	1 943	( <sup>2</sup> )	926	604
September, 1917.....	1,133	343	999	( <sup>2</sup> )	965	838
Total:						
September, 1916.....					<sup>3</sup> 4,398	<sup>3</sup> 3,057
September, 1917.....					8,051	6,518

CANADA.

Quebec:						
Montreal (provincial):						
September, 1916.....	954	( <sup>2</sup> ) 570	1 340	( <sup>2</sup> )	454	374
September, 1917.....	198		1 274	( <sup>2</sup> )	366	316
Quebec (provincial):						
September, 1916.....	( <sup>2</sup> )	201	117	( <sup>2</sup> )	( <sup>2</sup> )	84
September, 1917.....	46	387	1 233	( <sup>2</sup> )	173	155
Total:						
September, 1916.....					( <sup>2</sup> )	458
September, 1917.....					539	471

<sup>1</sup> Number applying for work. <sup>2</sup> Not reported. <sup>3</sup> Exclusive of Milwaukee Federal office, not reported.

REPORT OF EMPLOYMENT EXCHANGES IN THE UNITED KING-  
DOM (GREAT BRITAIN AND IRELAND) FOR FOUR WEEKS  
ENDING AUGUST 10, 1917.

According to the British Labor Gazette of August, 1917, the number of workpeople on the register of the 382 British employment offices at some time or other during the four weeks ending August 10, 1917, was 327,178, exclusive of workmen in occupations of a more or less casual nature, as dock laborers, etc. The figures comprise workers in professional, commercial, and clerical, as well as industrial occupations. The operations for the four weeks are summarized as follows:

	Men.	Women.	Boys.	Girls.	Total.
On registers at July 13, 1917.....	32,376	64,123	6,814	9,309	112,622
Number of individuals registered during period.....	63,794	112,899	19,056	18,807	214,556
Total.....	96,170	177,022	25,870	28,116	327,178
Reregistrations during period.....	2,501	2,730	323	290	5,844
On registers at Aug. 10, 1917.....	28,189	56,494	6,632	8,280	99,595
Vacancies notified during period.....	55,318	51,130	10,006	8,612	125,066
Vacancies filled during period.....	37,341	42,669	8,433	7,063	95,506
Applicants placed in other districts.....	9,229	9,956	1,457	987	21,629

The average daily number of registrations and of vacancies filled for the four weeks ending August 10, 1917, is shown in the following table, together with comparative figures for a month ago and a year ago:

Department.	Average registrations per day in period ending—			Average vacancies filled per day in period ending—		
	Aug. 10, 1917.	July 13, 1917.	Aug. 11, 1916.	Aug. 10, 1917.	July 13, 1917.	Aug. 11, 1916.
Men.....	2,882	3,310	3,664	1,623	1,875	2,012
Women.....	5,028	5,575	5,750	1,855	2,193	2,389
Boys.....	843	824	854	367	385	386
Girls.....	830	880	870	307	351	354
Total.....	9,583	10,589	11,138	4,152	4,804	5,141

### EMPLOYMENT IN SELECTED INDUSTRIES IN SEPTEMBER, 1917.

The Bureau of Labor Statistics received reports concerning the volume of employment in September, 1917, from representative manufacturing establishments in 13 different industries. Comparing the figures for September of this year with those from identical establishments for September, 1916, it appears that in 7 industries there was an increase in the number of people employed and in 6 a decrease. The men's ready-made clothing industry showed an increase in this respect of 10.6 per cent. A decrease of 14.8 per cent appeared in car building and repairing. This decline would not be so great but for the fact that the falling off in two large plants was very marked.

### COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN SEPTEMBER, 1916, AND SEPTEMBER, 1917.

Industry.	Estab-lishments to which in-quiries were sent.	Estab-lishments re-ported for Sep-tember both years.	Period of pay roll.	Number on pay roll in Sep-tember—		Per cent of in-crease (+) or de-crease (-).	Amount of pay roll in September—		Per cent of in-crease (+) or de-crease (-).
				1916	1917		1916	1917	
Boots and shoes.....	85	77	1 week..	52,835	48,611	- 8.0	\$676,803	\$707,556	+ 4.5
Cotton manufacturing.....	88	57	..do.....	45,859	45,097	- 1.7	442,812	517,741	+16.9
Cotton finishing.....	19	15	..do.....	11,382	11,342	- .4	134,144	158,411	+18.1
Hosiery and underwear....	82	58	..do.....	28,765	28,944	+ .6	271,779	320,941	+18.1
Woolen.....	56	44	..do.....	39,369	40,807	+ 3.7	482,240	614,340	+27.4
Silk.....	65	41	2 weeks..	19,060	17,673	- 7.3	426,023	428,664	+ .6
Men's ready-made cloth- ing.....	86	32	1 week..	16,751	18,521	+10.6	230,071	279,724	+21.6
Iron and steel.....	141	112	½ month.	177,146	189,581	+ 7.0	6,658,489	8,562,105	+28.6
Car building and repairing.	78	22	..do.....	29,513	25,156	-14.8	909,994	920,019	+ 1.1
Cigar manufacturing.....	103	63	1 week..	17,677	17,320	- 2.0	204,749	222,537	+ 8.7
Automobile manufactur- ing.....	66	38	..do.....	89,926	91,742	+ 2.0	1,861,768	2,158,537	+15.9
Leather manufacturing....	46	35	..do.....	13,244	13,700	+ 3.0	187,656	229,553	+22.3
Paper making.....	80	48	..do.....	25,766	27,344	+ 6.1	357,396	432,744	+21.1

Each of the 13 industries canvassed showed an increase in the total amount of the pay roll for September, 1917, as compared with September, 1916. The greatest increase indicated—28.6 per cent—was in the iron and steel industry. There was an increase of 27.4 per cent in woolen manufacturing.

One shoe factory was closed during September, 1917, and another was practically closed. The report rendered by one cotton manufacturing plant stated that the number of workmen available was far short of the number needed to run the mill with present orders.

The next table shows the number of persons actually working on the last full day of the reported pay period in September, 1916, and September, 1917. Many establishments do not keep a record of this fact and consequently the number reporting such data is small. This should be taken into consideration when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN SEPTEMBER, 1916, AND SEPTEMBER, 1917.

Industry.	Establishments reporting for September both years.	Period of pay roll.	Number actually working on last full day of reported pay period in September—		Per cent of increase (+) or decrease (-).
			1916	1917	
Boots and shoes.....	19	1 week....	9,891	9,272	- 6.3
Cotton manufacturing.....	32	do.....	23,686	23,312	- 1.6
Cotton finishing.....	11	do.....	7,451	7,149	- 4.1
Hosiery and underwear.....	12	do.....	8,610	8,903	+ 3.4
Woolen.....	38	do.....	31,718	34,070	+ 7.4
Silk.....	25	2 weeks....	10,173	8,917	-12.3
Men's ready-made clothing.....	6	1 week....	1,429	1,121	-21.6
Iron and steel.....	90	½ month...	140,075	149,425	+ 6.7
Car building and repairing.....	19	do.....	23,421	19,499	-16.7
Cigar manufacturing.....	27	1 week....	5,219	4,855	- 7.0
Automobile manufacturing.....	18	do.....	53,161	53,141	( <sup>1</sup> )
Leather manufacturing.....	19	do.....	6,962	6,930	- .5
Paper making.....	15	do.....	9,271	9,703	+ 4.7

<sup>1</sup> Decrease of less than one-tenth of 1 per cent.

The figures in the next table show that in 7 industries there were more persons on the pay roll in September, 1917, than in August, 1917. A 5.4 per cent increase in paper making was the greatest. Car building and repairing here again shows a marked decrease, due in part to the great falling off in one or two large plants.

Employees in 9 of the industries received more money in September than in August, 1917. There was an increase of 12.7 per cent in automobile manufacturing, which was the largest.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN AUGUST, 1917,  
 AND SEPTEMBER, 1917.

Industry.	Estab- lish- ments to which in- quiries were sent.	Estab- lish- ments report- ing for Au- gust and Sep- tem- ber.	Period of pay roll.	Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
				August, 1917.	Sep- tem- ber, 1917.		August, 1917.	Sep- tem- ber, 1917.	
Boots and shoes.....	85	65	1 week..	49,905	47,238	- 5.3	708,201	697,703	- 1.5
Cotton manufacturing.....	88	56	..do.....	46,477	46,070	- .9	520,492	537,895	+ 3.3
Cotton finishing.....	19	16	..do.....	13,733	14,014	+ 2.0	202,650	206,448	+ 1.9
Hosiery and underwear.....	82	55	..do.....	27,963	28,240	+ 1.0	306,150	314,861	+ 2.8
Woolen.....	56	47	..do.....	40,534	41,484	+ 2.3	598,054	625,235	+ 4.5
Silk.....	65	41	2 weeks..	18,037	17,673	- 2.0	428,022	428,664	+ .1
Men's ready-made cloth- ing.....	86	34	1 week..	17,654	16,762	- 5.1	264,707	256,326	- 3.2
Iron and steel.....	141	110	½ month..	187,730	186,213	- .8	8,603,361	8,422,703	- 2.1
Car building and repairing.....	78	22	..do.....	28,005	25,156	-10.2	1,039,809	920,019	-11.5
Cigar manufacturing.....	103	64	1 week..	18,421	19,404	+ 5.3	228,455	244,060	+ 6.8
Automobile manufactur- ing.....	66	40	..do.....	92,070	95,672	+ 3.9	1,994,419	2,246,978	+12.7
Leather manufacturing....	46	33	..do.....	12,969	12,995	+ .2	212,031	220,966	+ 4.2
Paper making.....	80	46	..do.....	24,519	25,846	+ 5.4	391,924	406,104	+ 3.6

A very much smaller number of establishments reported as to the number of persons actually working on the last full day of the reported pay period. The following table gives in comparable form the figures for August and September of this year. The small number of establishments represented should be noted when using the figures.

 COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL  
 DAY'S OPERATION IN AUGUST, 1917, AND SEPTEMBER, 1917.

Industry.	Estab- lish- ments report- ing for August and Sep- tem- ber.	Period of pay roll.	Number actually work- ing on last full day of reported pay period in—		Per cent of increase (+) or de- crease (-).
			August, 1917.	September, 1917.	
Boots and shoes.....	23	1 week....	11,588	10,771	-7.1
Cotton manufacturing.....	35	..do.....	28,094	27,908	- .7
Cotton finishing.....	11	..do.....	6,838	7,149	+4.5
Hosiery and underwear.....	17	..do.....	11,842	11,877	+ .3
Woolen.....	40	..do.....	33,750	34,664	+2.7
Silk.....	27	2 weeks....	13,623	13,377	-1.2
Men's ready-made clothing.....	7	1 week....	4,218	3,843	-8.9
Iron and steel.....	87	½ month....	141,786	143,939	+1.5
Car building and repairing.....	22	..do.....	24,122	22,206	-7.9
Cigar manufacturing.....	30	1 week....	5,791	6,043	+4.4
Automobile manufacturing.....	22	..do.....	58,633	60,211	+2.7
Leather manufacturing.....	17	..do.....	7,361	7,386	+ .3
Paper making.....	13	..do.....	7,600	8,250	+8.6

## CHANGES IN WAGE RATES.

The reports received by the bureau from establishments in the 13 industries show that changes in wage rates were made in 10 industries in the period August 15 to September 15, 1917. No changes were reported in boot and shoe manufacturing, men's ready-made clothing, and

woolen. 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 no changes were made.

Increases in wage rates were reported by 13 plants in the iron and steel industry. Four plants reported a 10.98 per cent increase, affecting 37 per cent, 38.8 per cent, 27.9 per cent, and 38.5 per cent of their forces, respectively. Another plant gave a 17 per cent increase to about one-third of the force. In one instance there was an increase of 6 per cent granted to tonnage men, about 60 per cent of the entire force. Two establishments reported a 5 per cent increase, affecting one-half of the force in each instance, the employees receiving such increase in one of them being tonnage men. In 4 plants there was an increase of 9.83 per cent to 48.9 per cent, 50.9 per cent, 47.8 per cent, and 47.6 per cent of the forces, respectively.

In leather manufacturing 2 establishments gave a 10 per cent increase, this affecting the entire force in one, and one-third of the force in the second. Another plant in this industry granted an 8 per cent increase but did not state the proportion of the force affected; while a fourth reported a 5.7 per cent increase to setters, or 1.5 per cent of the employees, and an increase of approximately 14 per cent to lumpers, or 2 per cent of the force.

Two establishments in paper making reported increases. One plant gave an increase of 2 cents per hour to the entire force, while the second granted an additional 25 cents per day to some boiler makers but did not make any general increase.

In the silk industry one establishment reported a 5 per cent general increase. In a second instance 17.5 per cent of the force received a 10 per cent increase. One plant gave a 10 per cent increase to 7 per cent of the force and a 5 per cent increase to 5 per cent of the force. A fourth granted a 10 per cent special bonus for the quarter ending August 25, 1917.

There were two increases reported in car building and repairing. One plant in this industry stated that 92 per cent of the force was granted a 15 per cent increase, while the second gave an increase of 6.5 per cent, affecting 20 per cent of the employees.

The entire force in one hosiery and underwear plant received an 8 per cent increase. In another establishment there was an increase of 5 per cent, affecting 50 per cent of the people employed.

Only one increase—5 per cent to all except overseers—was reported in cotton manufacturing. One plant in cotton finishing reported a 5 per cent increase but failed to state whether or not it was general. In automobile manufacturing one establishment stated that the productive average hourly rate had increased \$0.0114. One plant in cigar manufacturing stated that pieceworkers were given increased rates.



## VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN AUGUST, 1917.

The following figures as to the condition of employment in Great Britain and Ireland in August, 1917, as compared with July, 1917, and August, 1916, have been compiled from figures appearing in the British Labor Gazette of September, 1917. The most important changes appear in the tin-plate, steel, and galvanized sheet trades, which show an increase of 2.7 per cent of the mills in operation as compared with the preceding month and a decrease of 27.2 per cent of mills in operation as compared with August, 1916. The textile trades show a decrease in the number of employees on account of the scarcity of labor, while the change of earnings is due to advances in rates of wages and war bonuses. Shortage of labor was reported in the following trades: Pig iron industry; quarrying; iron and steel; cotton trade; woolen and worsted trades; jute trades; silk trade; carpet trade; lace trade; bleaching, printing, dyeing, and finishing trades; tailoring trades; shirt and collar trade; other clothing trades; brick and cement trades; bookbinding trades; paper trades; glass trades; and food preparation trades. In agriculture there was a shortage of labor, but with the assistance of soldiers, women, and school boys, the farmers managed to keep pace with the work. Short time was reported in certain cases, but the following trades reported overtime: Engineering trades, shipbuilding trades, leather trades, sawmilling and machining trades, cement trade, printing and bookbinding trades, paper trades, pottery trades, and food preparation trades.

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VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN AUGUST, 1917, AS COMPARED WITH JULY, 1917, AND AUGUST, 1916.

[Compiled from figures in the Labor Gazette (London), September, 1917.]

Industries, and basis of comparison.	Per cent of increase (+) or decrease (-) in August, 1917, as compared with—		Industries, and basis of comparison.	Per cent of increase (+) or decrease (-) in August, 1917, as compared with—	
	July, 1917.	August, 1916.		July, 1917.	August, 1916.
Coal mining: Average number of days worked.....	+6.2	- 2.8	Shirt and collar trade:		
Iron mining: Average number of days worked.....	+1.2	+ .3	Number of employees.....	-1.5	- 8.6
Quarrying: Number of employees.....	- .3	-11.8	Earnings of employees.....	+ .3	+ 6.9
Pig iron: Number of furnaces in blast.....	-1.7	+ 3.6	Other clothing trades:		
Iron and steel works:			Dressmaking and millinery—		
Number of employees.....	+2.5	+ 8.7	Number of employees.....	-26.0	- 9.8
Number of shifts worked.....	+2.5	+ 8.3	Wholesale mantle, costume, blouse, etc.—		
Engineering trades: Number of employees <sup>1</sup> .....	+ .03	+20	Number of employees—		
Shipbuilding trades: Number of employees <sup>1</sup> .....	- .06	+ .12	London.....	-2.3	- 8.3
Tinplate, steel, and galvanized sheet trades: Number of mills in operation.....	+2.7	-27.2	Manchester.....	-3.6	- 2.7
Cotton trade:			Glasgow.....	+3.8	- 3.5
Number of employees.....	- .7	- 8.0	Corset trade—Number of employees.....	-1.8	-14.5
Earnings of employees.....	+ .0	+ 3.2	Building and construction of works: Number of employees <sup>1</sup> .....	- .10	- .06
Woolen trade:			Sawmilling and machining:		
Number of employees.....	-1.4	- 4.8	Number of employees <sup>1</sup> .....	+ .1	- .1
Earnings of employees.....	- .2	+ 8.8	Brick trade:		
Worsted trade:			Number of employees.....	-1.7	- 2.7
Number of employees.....	- .7	- 3.0	Earnings of employees.....	+1.0	+12.2
Earnings of employees.....	- .9	+13.2	Cement trade:		
Hosiery trade:			Number of employees.....	+ .3	-10.1
Number of employees.....	- .5	- 4.9	Earnings of employees.....	+1.5	+ 3.5
Earnings of employees.....	-1.1	+ 6.8	Printing, bookbinding, and paper trades:		
Jute trade:			Printing trades—		
Number of employees.....	+ .2	+ 1.1	Number of employees reported by trade-unions <sup>1</sup> .....	+ .1	- .8
Earnings of employees.....	-1.1	+19.0	Number of employees reported by employers.....	- .7	- 9.3
Linen trade:			Earnings of employees reported by employers.....	-2.1	+ 4.6
Number of employees.....	+1.3	+ 2.2	Bookbinding trades—		
Earnings of employees.....	+2.6	+27.1	Number of employees reported by trade-unions <sup>1</sup> .....	+ .1	+ .1
Silk trade:			Number of employees reported by employers.....	+ .3	- 8.6
Number of employees.....	-1.0	- 3.5	Earnings of employees reported by employers.....	+3.3	+ 9.3
Earnings of employees.....	+ .4	+13.8	Paper trades: Number of employees.....	- .5	- 5.5
Carpet trade:			Pottery trades:		
Number of employees.....	+1.8	- 3.5	Number of employees.....	- .2	- .9
Earnings of employees.....	-1.0	+15.0	Earnings of employees.....	-2.8	+17.5
Lace trade:			Glass trades:		
Number of employees.....	-1.2	- 8.8	Number of employees.....	-1.7	- 1.3
Earnings of employees.....	- .8	+ 1.4	Earnings of employees.....	+1.9	+11.8
Bleaching, printing, dyeing, and finishing:			Food preparation trades:		
Number of employees.....	- .1	- 4.0	Number of employees.....	- .8	- 8.1
Earnings of employees.....	-2.1	+12.5	Earnings of employees.....	+2.5	+16.0
Boot and shoe trade:			Dock and riverside labor: Number of employees.....	- 3.5	- 8.8
Number of employees.....	- .7	- 5.2	Seamen: Number of employees.....	-11.1	-24.7
Earnings of employees.....	-1.4	+ 7.5			
Leather trades: Number of employees.....	+ .1	+ 1.3			
Tailoring trades:					
Number of employees.....	- .3	+ .9			
Earnings of employees.....	- .2	+25.3			

<sup>1</sup> Based on unemployment returns.

# INDUSTRIAL CONDITIONS IN FOREIGN COUNTRIES.

## INDUSTRIAL DEVELOPMENT OF JAPAN.<sup>1</sup>

Notwithstanding the industrial development of Japan within the last few years, it may still be considered an agricultural country. While there has been a remarkable increase in the value of manufactures in Japan, agriculture still remains the predominant industry.

The following table shows the annual production of certain food articles in 1895 and in 1911 to 1915:

ANNUAL PRODUCTION OF CERTAIN ARTICLES OF FOOD IN JAPAN, 1895, AND 1911 TO 1915.

Year.	Rice (bushels).	Barley, rye, and wheat (bushels).	Potatoes (tons).	Sweet potatoes (tons).	Sugar cane (tons).	Tea (tons).
1895 <sup>a</sup> .....	194,609,466	94,211,640	194,335	(b)	(b)	34,061
1911.....	256,496,253	108,645,461	755,055	4,158,067	947,351	35,882
1912.....	249,106,156	113,437,936	770,070	4,053,068	879,625	37,133
1913.....	249,268,637	124,251,504	784,158	4,287,476	954,762	36,295
1914.....	282,755,294	105,375,890	969,356	4,055,572	1,103,500	35,836
1915.....	277,388,763	117,957,141	(b)	(b)	(b)	37,832

<sup>a</sup> Sixteenth Financial and Economic Annual of Japan, 1916.

<sup>b</sup> Not reported.

As an indication of the industrial development in Japan since 1895, the following summary of manufacturing establishments is made:

NUMBER OF FACTORIES, HORSEPOWER USED, AND PERSONS EMPLOYED IN FACTORIES IN JAPAN IN SELECTED YEARS, 1895 TO 1914.

Year.	Number of factories.			Horsepower of motors used.	Number of persons employed.			Per cent of—		Per cent of increase in number of employees over 1896.
	Using power.	Not using power.	Total.		Males.	Females.	Total.	Males.	Females.	
1895.	2,758	4,396	7,154	61,000	<sup>a</sup> 168,000	<sup>a</sup> 246,000	<sup>a</sup> 414,000	<sup>a</sup> 40.6	<sup>a</sup> 59.4	.....
1903.	3,741	4,533	8,274	107,000	182,000	301,000	483,000	37.7	62.3	16.7
1910.	6,731	6,792	13,523	781,000	274,587	442,574	717,161	38.3	61.7	73.2
1914.	10,334	6,728	17,062	1,323,000	318,667	535,297	853,964	37.3	62.7	106.3

<sup>a</sup> Figures not available for 1895. The number employed are for 1896 as given in a work on "Japan at the beginning of the twentieth century," published by the Imperial Japanese Commission to the Louisiana Purchase Exposition, 1904, p. 403.

<sup>1</sup> Data are from Bulletin de la Statistique Général de la France et du Service d'Observation des Prix, April, 1917.

From the foregoing table it is seen that in the period covered the number of factories using mechanical power has increased rapidly; that the number not using power increased up to 1910, but was less in 1914 than in 1910; and that for the entire period considered, 20 years, there has been an increase of over 138 per cent in total number of factories, nearly 2,069 per cent in amount of power used, and over 100 per cent in number of employees.

Of the total number of employees in factories in 1914, 39,575 were under 14 years of age, of whom 7,644 were males and 31,931 were females.

The following table compares the number of mills, machines, etc., employees, value of products, and capital invested in the more important branches of manufacturing, 1905 and 1914:

NUMBER OF MILLS, MACHINES, ETC., IN OPERATION, PERSONS EMPLOYED, VALUE OF PRODUCTS, AND CAPITAL INVESTED, IN CERTAIN CLASSES OF FACTORIES, 1905 AND 1914.

Industry.	Number of mills, etc.		Number of employees.		Value of products.		Capital invested.	
	1905	1914	1905	1914	1905	1914	1905	1914
Cotton yarn and waste.....	1 78	1 103	65,911	116,005	2 205,291	2 386,230	\$18,421,557	\$40,455,963
Woven goods.....	<sup>3</sup> 734,809	<sup>3</sup> 622,099	769,491	610,777	\$76,984,493	\$142,067,437	( <sup>4</sup> )	( <sup>4</sup> )
Japanese paper.....	<sup>5</sup> 61,641	<sup>5</sup> 48,960	24,529	15,664	6,833,670	9,244,407	( <sup>4</sup> )	( <sup>4</sup> )
European paper.....	{ <sup>6</sup> 21	{ <sup>6</sup> 38	4,894	7,906	5,507,426	12,498,295	4,722,925	13,341,939
Matches.....	{ 7 109	{ 7 360						
Porcelain and earthenware.....	<sup>6</sup> 4,834	<sup>6</sup> 5,540	22,026	29,964	4,393,129	7,797,114	( <sup>4</sup> )	( <sup>4</sup> )
Mats and matting.....	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )	3,900,283	4,005,827	( <sup>4</sup> )	( <sup>4</sup> )
Camphor.....	<sup>5</sup> 1,564	<sup>5</sup> 3,211	( <sup>4</sup> )	( <sup>4</sup> )	258,628	594,397	( <sup>4</sup> )	( <sup>4</sup> )
Laquered ware.....	<sup>6</sup> 5,442	<sup>6</sup> 6,820	16,188	19,317	2,768,814	4,351,763	( <sup>4</sup> )	( <sup>4</sup> )
Straw plaits and wood chip-braids.....	<sup>5</sup> 77,877	<sup>5</sup> 101,000	282,271	232,317	2,702,434	865,578	( <sup>4</sup> )	( <sup>4</sup> )

<sup>1</sup> Mills.   <sup>2</sup> Tons.   <sup>3</sup> Looms.   <sup>4</sup> Not reported.   <sup>5</sup> Families.   <sup>6</sup> Factories.   <sup>7</sup> Machines.

Considerable wage data are shown by industries, but in most cases these are for all operators and apprentices, both males and females, 14 years of age and over, as an industrial group and not by occupations. However, the presentation shows that there has been a gradual and comparatively continuous increase in wages in nearly if not all branches of industry.

The table following shows the average daily and the relative wages of persons over 14 years of age in various industries and occupations for the years 1905, 1909, and 1914, the wages of 1900 being used as the base for computing the relative wages:

AVERAGE DAILY AND RELATIVE WAGES OF EMPLOYEES IN SPECIFIED OCCUPATIONS, 1905, 1909, AND 1914.

Occupation.	Average daily wages.			Relative wages (wages of 1900=100).		
	1905 <sup>1</sup>	1909	1914	1905	1909	1914
<b>Agriculture, etc.:</b>						
Farm laborer, male.....	\$0.16	\$0.19	\$0.23	106.7	126.7	156.7
Farm laborer, female.....	.10	.11	.15	105.3	121.1	157.9
Sericultural laborer, male.....	.14	.21	.25	93.5	138.7	161.3
Sericultural laborer, female.....	.11	.13	.14	121.1	142.1	147.4
Silk spinner, female.....	.11	.13	.17	110.0	135.0	175.0
Gardener.....	.27	.36	.41	107.8	143.1	162.7
Fisherman.....	.21	.24	.30	107.7	123.1	153.8
<b>Clothing, etc.:</b>						
Weaver, male.....	.17	.22	.23	103.0	133.3	139.4
Weaver, female.....	.09	.13	.14	90.0	130.0	145.0
Dyer.....	.16	.23	.25	110.3	158.6	175.9
Cotton whipper.....	.20	.26	.27	110.8	140.5	145.9
Tailor (for Japanese dress).....	.23	.26	.31	123.7	135.9	161.5
Tailor (for European dress).....	.32	.39	.42	108.5	133.9	142.4
Pouch maker.....	.28	.30	.32	129.5	138.6	145.5
Clog (wooden shoes) maker.....	.21	.28	.30	105.0	142.5	150.0
Shoemaker.....	.28	.33	.36	121.3	140.4	153.2
<b>Food, drink, etc.:</b>						
Soy maker, monthly contract.....	1 3.57	1 4.82	1 5.40	115.1	155.6	174.5
Brewery hand, monthly contract.....	1 5.16	1 7.93	1 8.63	95.1	145.9	158.8
Confectioner.....	.17	.20	.23	113.3	133.3	153.3
Tobacco cutter.....	.27	.28	.35	125.6	132.6	162.7
Rice pounder.....	.16	.17	.20	106.7	116.7	136.6
<b>House building, etc.:</b>						
Carpenter.....	.30	.40	.43	111.1	148.1	159.3
Plasterer.....	.30	.41	.44	111.1	151.9	164.8
Stonecutter.....	.33	.46	.50	108.2	152.5	165.6
Sawyer.....	.29	.39	.42	111.3	149.1	158.5
Shingle roofer.....	.28	.39	.43	111.8	154.9	170.6
Tile roofer.....	.32	.47	.52	110.2	159.3	176.3
Bricklayer.....	.35	.50	.52	112.7	160.3	166.7
Brickmaker.....	.27	.38	.37	122.2	108.9	166.7
Shipwright.....	.32	.40	.46	114.3	144.6	164.3
Floor-mat maker.....	.25	.37	.39	108.5	157.4	166.0
Screen and door maker.....	.27	.38	.41	107.8	149.0	160.8
Paper hanger.....	.28	.36	.38	112.0	146.0	152.0
<b>Instruments, etc.:</b>						
Cabinetmaker.....	.27	.37	.40	110.0	150.0	160.0
Cooper.....	.23	.30	.34	107.0	139.5	160.5
Cartwright.....	.25	.32	.36	108.5	138.3	155.3
Harness maker.....	.31	.35	.37	131.9	148.9	159.6
Lacquering.....	.24	.29	.35	104.3	125.5	151.1
Jeweler.....	.26	.31	.32	123.8	147.6	154.7
Founder.....	.26	.33	.37	112.8	142.6	157.4
Blacksmith.....	.27	.33	.37	114.6	139.6	154.2
Potter.....	.23	.32	.32	121.1	168.4	168.4
<b>Miscellaneous:</b>						
Lacquer-juice extractor.....	.19	.27	.....	105.6	152.8	.....
Oil presser.....	.21	.27	.30	116.7	152.8	169.4
Paper maker.....	.16	.21	.22	100.0	131.3	140.6
Compositor.....	.21	.25	.30	120.0	145.7	171.4
Printer.....	.19	.24	.27	111.8	144.1	161.8
Day laborer.....	.20	.26	.28	110.8	140.5	151.4
Male servant, monthly contract.....	1 1.60	1 2.17	1 2.29	119.3	161.5	170.4
Female servant, monthly contract.....	1 .89	1 1.47	1 1.47	114.7	189.1	189.1

<sup>1</sup> Per month.

In 1914 wages of male and female farm laborers under yearly contract averaged 53.89 yen (\$26.84) per year and 32.18 yen (\$16.03) per year, respectively.

There were 137,543 operatives and apprentices employed in Government shops—arsenals, machine shops, steel works, sail lofts, shipyards, etc. The daily wages of male workers varied from that paid in the forest office as a minimum, 46 sen (23 cents), to the maximum of 91 sen (45 cents), paid in a factory of the imperial railway.

Generally speaking, daily wages in these Government shops varied from 60 sen (30 cents) to 80 sen (40 cents) per day for males.

*Cooperative societies.*—During the period 1906 to 1915 there has been a continuous increase in the number of cooperative associations. The number of each kind of such societies is shown for each of the years 1906, 1910, and 1915 in the table which follows:

NUMBER OF COOPERATIVE SOCIETIES IN OPERATION ON DEC. 31, IN SELECTED YEARS, BY KIND OF SOCIETY.

Kind of society.	Number of societies in operation on Dec. 31—		
	1906	1910	1915
Credit .....	1,292	2,226	3,015
Sale .....	126	217	234
Purchase .....	446	772	535
Productive .....	48	78	133
Sale and purchase .....	271	503	461
Sale and productive .....	81	136	141
Purchase and productive .....	46	49	37
Sale, purchase, and productive .....	82	222	230
Credit and sale .....	5	351	400
Credit and purchase .....	41	1,239	2,582
Credit and productive .....	1	14	39
Credit, sale, and purchase .....	24	1,062	2,609
Credit, sale, and productive .....	1	14	90
Credit, purchase, and productive .....	1	26	57
Credit, sale, purchase, and productive .....	5	369	946
Total .....	2,470	7,308	11,509

In one class of society only—purchase and productive—is a decrease in the number reported.

*Sickness insurance.*—Only one company is reported as issuing sickness insurance policies, and this appears to have done but little business since its organization, and no business is reported since 1912.

*Accident insurance.*—Accident insurance is reported from 1912–13 to 1914–15. One company with a paid-up capital of 250,000 yen (\$124,500) issues this class of policy only, and two other companies having a combined paid-up capital of 2,000,000 yen (\$996,000) issue accident insurance in connection with other lines of business. The number of policies in force in 1912–13 was 6,079 and amount of risk carried was 9,226,040 yen (\$4,594,568). In 1914–15 there were 13,291 contracts, with risk amounting to 15,946,333 yen (\$7,941,274).

*Postal savings bank.*—The transactions of the post-office savings bank show an increase from 5,848,498 deposits, amounting to 54,248,775 yen (\$27,015,890), on March 31, 1906, to 11,971,580 deposits, amounting to 191,375,715 yen (\$95,305,106), on March 31, 1915. Of the deposits reported in 1915, 4,087,967, amounting to 54,730,822 yen (\$27,255,949), were credited to agriculturists, and 879,970 deposits, amounting to 13,317,357 yen (\$6,632,044), were credited to operatives. The rate of interest on deposits was increased from 4.2 per cent to 4.8 per cent in April, 1915.



## WORKMEN'S COMPENSATION.

### WORKMEN'S COMPENSATION LEGISLATION OF 1917—AMENDING ACTS.

BY LINDLEY D. CLARK.

Attention has already been called to the fact that five States have this year joined the ranks of those jurisdictions which substitute compensation remedies for suits at law in cases of injury to employees. Brief accounts of the laws of those States were given, for New Mexico in the MONTHLY REVIEW for May (pp. 744-746), for Delaware and Utah in the MONTHLY REVIEW for June (pp. 973-976), and for Idaho and South Dakota in the MONTHLY REVIEW for July (pp. 96-100).

By reason of these enactments the number of States having compensation laws is now 37, besides the Territories of Alaska and Hawaii and the island possession of Porto Rico. There is also a Federal statute covering civil employees of the United States. Of the 35 local laws in force at the beginning of this year 24 were amended, and supplemental laws were enacted in two other States. The changes made by the amendments, as well as the new laws enacted, will be presented in a bulletin on Workmen's Compensation Laws now in preparation, but the great interest in legislation on this subject warrants an earlier summary presentation of the effects of the principal changes made. In practically every case the tendency has been to enlarge the scope of the laws and to liberalize their provisions. Numerous details as to administration, insurance, and the like, are of less general interest than the substantive provisions, though their importance in securing the adequate and prompt enforcement of the laws can not be overlooked.

Among the important changes is one in the law of California, which is broadened to cover occupational diseases, as is that of Hawaii. The law of Illinois is made compulsory in its application, instead of election being presumed. In Nevada, on the other hand, the method of a presumed election is abolished and active election required.

A number of changes were made as to coverage. In Indiana railroad train service is excluded from the provisions of the law; the same is done in Washington, railroad labor, with the exception of construction work, being made subject to liability or other provisions

of law such as exist or may be enacted by reason of acts of Congress. This action of the Washington Legislature is its answer to the problem of conflict of laws as regards interstate and intrastate commerce, and makes the rights and liabilities the same in either case, thus gaining an end which it has been proposed to reach by amending the Federal Constitution so as to permit the National Government to take control of common carriers by railroad in whatever field. This end is clearly much more easily attainable, so far as the situation in any individual State is concerned, by such action as was taken by the Washington Legislature.<sup>1</sup> In this connection attention may be called to the act of Congress noted on another page (Workmen's Compensation and Admiralty, p. 153), in which a very different solution of a similar problem was attempted, Congress proposing to bestow alternative rights upon claimants injured in maritime undertakings, offering them their choice between State and Federal laws.

A limitation that is found in some laws requires the industries covered by the act to be carried on "for pecuniary gain," a provision of the Iowa statute which was stricken out by an amendment of this year. So-called numerical exemptions are changed in a number of laws. Thus, in Texas the law was formerly applicable only where 6 or more persons were employed; 5 or more was the number fixed by the laws of Nebraska and Wyoming, and 4 or more in Wisconsin. The law of Nebraska now applies without regard to the number of employees, while in the other States named it applies where there are 3 or more employees. The employments included are enumerated in New York and Wyoming, and the list was extended by specific inclusions, while in Texas the exclusion of cotton ginning was stricken out. The Texas statute, however, excluded vessels engaged in interstate or foreign commerce from its scope.

Employees of the State and of municipalities, irrigation districts, etc., may elect to come under the law in Oregon, the same as those of private employers, while in Rhode Island State employees are included, and also such employees of cities and towns as are designated in any local act adopted by the municipality at an election held to decide on the acceptance of the compensation law. In Vermont employees were formerly excluded from the act if they earned wages or salary in an amount exceeding \$1,500. This barrier was this year advanced so as to include persons earning not more than \$2,000.

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<sup>1</sup> The novelty of method in this case consists rather in the adoption of the Federal law in its present or any future form, without stating in terms what that law is, than in the acceptance of the liability principles of the Federal law, since this has been done in a number of States in which the law as to common carriers is largely copied from the Federal statute.

A very general movement is in evidence to reduce the period of waiting time which must intervene between the receipt of an injury and the beginning of compensation payments. Thus the common period of two weeks, or 14 days, is reduced one-half in Hawaii, Indiana, Kansas, Minnesota, and Nebraska, and in Vermont after July 1, 1918. In California the time is reduced from two weeks to 10 days, and in Connecticut from 10 days to 7 days. The three weeks' period originally fixed by the Colorado statute is reduced to two; while the Washington law, which originally provided for benefits in case the "loss of earning power shall exceed 5 per cent," now gives compensation after eight days of disability. The effect of the establishment of this standard, however, is to extend the waiting time, since the earlier law had been construed to be applicable in cases in which 5 per cent of a working month was lost.

The purposes of a waiting time are usually said to be to do away with numerous cases of trivial injury and to reduce malingering. Where a more serious injury is received neither of these reasons is operative, so that a number of States grant benefits from the date of the injury in cases in which disability continues beyond a fixed period. The Nebraska law was amended to reduce this period from eight weeks to six. In New York, if a disability continues for more than 49 days, payments will be made from the beginning; 30 days is the period fixed by amendments in Washington and Wyoming and 28 days in Rhode Island and Wisconsin.

A number of changes were made with regard to beneficiaries, not so much as to the classes to be included, but for the purpose of determining their relative rights and the conditions under which payments should be continued or terminated. The Alaska statute was amended so as definitely to include posthumous children; benefits may also be paid to children beyond the age of 16 (the limitation in the law of this Territory), where there is dependence on account of mental or physical incompetency. The age when payments cease was advanced from 16 years to 18 years in Nevada.

The changes in benefits were too numerous to be noted here in detail, but were generally in the direction of enlargement. An exception is found in the Colorado law, which reduces the \$100 allowance for burial expenses to \$75. A rather peculiar provision of the laws of California and Massachusetts requires the payment of burial expenses in an amount not exceeding \$100 in all cases of death, but directs that where there are dependents receiving benefits the sum so advanced shall be deducted from the award. The Massachusetts act originally made an allowance of \$200 for the expenses of the last sickness and burial of persons dying without dependents, and that of California of \$100 for burial and made no burial allowance in other cases. The law of Wisconsin also formerly provided

burial allowances only in case there were no dependents, but by amendment these allowances are now payable in all fatal cases. In Kansas the allowance where there are no dependents is increased to \$150 from \$100, while under the Vermont law \$100 may be paid in all cases instead of \$75 as formerly.

Medical, surgical, etc., aid may be required in any amount necessary under the law of California, while in Wisconsin it is to be continued as long as in the judgment of the commission the treatment will lessen the compensation period. The Wisconsin law also directs artificial limbs to be furnished. In Washington a medical and hospital fund is to be maintained by equal contributions of employers and employees, and necessary aid is to be furnished from this fund during temporary disability, and in cases of permanent disability until the compensation award is made. In Hawaii the amount of the benefits is advanced from \$50 to \$150 and the term of medical treatment is unlimited. In Iowa and Rhode Island the period of treatment is extended from two weeks to four; while in the former State compensation benefits for the fifth, sixth, and seventh weeks are to be advanced to 83½ per cent, but if disability continues beyond the seventh week the normal 50 per cent basis is resumed—a form of temporary increase that may be regarded as a method of extending the period of medical treatment.

As in Washington, the Kansas law originally made no provision for medical treatment, but the amendment provides that such treatment may be had on demand for a period of 50 days and in an amount not exceeding \$150. The value of the treatment is increased from \$75 to \$100 in Vermont, and its term from one week to two weeks in Texas, though in the latter State hospital services for an additional two weeks must be furnished if found necessary. In Nevada the term of customary treatment is reduced from 4 months to 90 days, but a maximum of one year is fixed in cases in which the industrial commission orders it to be furnished.

Benefits for disability or death are measured either by lump sums or by percentages of the employee's wages, and in the latter case minimum and maximum benefits may be fixed. The weekly benefit under the Connecticut statute is fixed at a maximum of \$14 instead of \$10 as formerly, a similar change being made in Massachusetts for cases of total disability. Maximum death benefits are advanced in Illinois from \$3,500 to \$4,000, and the maximum percentage allowance in cases of disability where the injured man has children is fixed at 65 per cent instead of 50. The Iowa statute fixes the minimum and maximum payments for disability at \$6 and \$15 per week, respectively, instead of \$5 and \$10 as formerly. The benefit allowed in cases of disability is advanced in Kansas from 50 per cent to 60

per cent, the minimum death benefit from \$1,200 to \$1,400, and the maximum from \$3,600 to \$3,800. The Minnesota statute also advances the disability benefit from 50 per cent to 60 per cent of the injured person's earnings, and makes the maximum \$12 instead of \$11 per week as formerly. The Nebraska law adopts a  $66\frac{2}{3}$  per cent basis in lieu of its former 50 per cent basis, and makes the weekly minimum and maximum \$6 and \$12, respectively, instead of \$5 and \$10. This rate is paid for 300 weeks in cases of permanent disability, after which 45 per cent of the injured man's wages is to be paid instead of 40 per cent as formerly, and the weekly minimum and maximum in such prolonged cases are set at \$4.50 and \$9 instead of \$4 and \$8 as before. Benefits payable to widows or widowers under the law of Nevada are reduced from 40 per cent to 30 per cent, with a uniform addition of 10 per cent for each child entitled to benefits, the maximum allowance being  $66\frac{2}{3}$  per cent of the decedent's earnings instead of 60 per cent as before.

The period for which death benefits may run is increased from six to eight years in Ohio, and the minimum and maximum amounts are fixed at \$2,000 and \$5,000, respectively, instead of \$1,500 and \$3,750. The law of Wyoming increases the lump-sum benefits provided for in cases of death and permanent disability, and advances the awards payable to nonresident alien beneficiaries from 25 per cent of the citizens' allowances to 33 per cent of the same. Payments in case of temporary disability are fixed at \$18 per month for single persons instead of \$15 and \$24 per month for married persons instead of \$20 as previously provided; additions for children may bring the total up to \$40 per month, instead of \$35 as formerly. The maximum period for disability payments in Vermont was formerly 260 weeks, with a possible extension of 52 weeks. An amendment of the current year strikes out the provision for an extension, but on the other hand it also removes the maximum limit of the basic wages to be considered in computing benefits, which was \$25 per week.

The law of Texas formerly stood alone in making a provision for the payment of the debts of deceased persons where no dependents survived. This was a departure from the intent of compensation legislation, which is to relieve the economic distress due to the removal of the family support in case of death and not to provide means of securing creditors' claims. An amendment of this year strikes out the provision that authorizes the payment to creditors of such sums as would have been due to beneficiaries had any survived.

It is interesting to observe that of the new laws enacted this year each contains a schedule providing compensation for specified periods or in specified amounts for specific injuries causing permanent partial disability. In addition to these, Kansas and Washington, two of the States whose laws formerly had no schedules of this kind, this year



enacted laws providing for the payment of lump sums for a list of specified injuries, the law of Kansas providing that for permanent partial disability not thus provided for there shall be a payment of 60 per cent of the wage loss for eight years, while in Washington injuries not named in the schedule are to be compensated according to their degree in proportion to the schedule rates named. Iowa adds loss of hearing to the disabilities for which compensation is to be provided, while the Wisconsin statute is amended by extending the compensation period for the disabilities named in its schedule in a great majority of the cases enumerated.

The purpose of securing the payment of compensation when awarded is evident in amendments to the laws of California, Nebraska, and New Jersey, insurance being required in all cases unless there is a proved ability to carry one's own risk. In Pennsylvania contractors with the State or its municipalities are required to insure their employees in accordance with the provisions of the State compensation law.

Another phase of the insurance question was dealt with by the Nevada Legislature, which struck out from the law its schedule of premiums for certain classes of industries, relegating the subject of premium rates to the industrial commission.

As indicated in the beginning, numerous administrative changes have been made, details of which will not be here presented. It may be noted, however, that in Michigan a board was created to exercise certain advisory functions with regard to the insurance features of the law. An investigative board was also created to consider the subject of needed amendments to the act. The administration of the law of Nebraska is placed in charge of a compensation division in the bureau of labor of the State. The commissioner of labor is made compensation commissioner, but is authorized to appoint a chief deputy compensation commissioner, to be charged with the powers and to discharge the duties of the compensation commissioner. The industrial accident board of Vermont is abolished and the administration of the act conferred upon one man, to be known as commissioner of industries, who is also charged with the enforcement of the labor laws generally.

The most far-reaching and most suggestive change made by the legislature of any State during the year, and indeed one of the most far-reaching amendments to any compensation law since the idea was given its present general form, is the provision of an amendment to the Washington statute, which provides for the creation of local aid boards, to assist in the administration of the law, including the care and treatment of injured workmen. These boards are to consist of two members each, one to be selected and removed at pleasure by a



majority of the workmen coming under the jurisdiction of the board, and one by a majority of the employers. In case of disagreement, the chairman of the State board or his assistant is to make decisions. These local boards are to be distributed throughout the State with reference to the localities and industries in accordance with determinations of the State board, the numbers to be such as experience determines to be necessary or advisable for the proper and economical administration of the service. It is the duty of these local boards to provide for the care and treatment of injured persons coming under the act, reporting to the State board the commencement of every disability, its termination and cause, together with recommendations for the improvement of the service and the administration. A State medical aid board is also created, to establish rules and practices for the care and treatment of injured workmen, these to be administered only by the local aid boards.

Taking into consideration the mode of appointment and the duties of these boards, together with the maintenance of a medical aid fund through the joint contribution of employers and employees, it is clear that there is here an attempt to enlist the interest and the service of local agencies in a manner not hitherto attempted. It is the first approximation to the local administrative methods of the German accident insurance system, with its supervision by fellow workmen financially interested by reason of their contributions, that has been attempted in this country. The outcome of the experiment will be awaited with interest.

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#### WORKMEN'S COMPENSATION AND ADMIRALTY.

Decisions of the Supreme Court of the United States holding that State compensation laws could have no application to cases of injury where maritime or admiralty law would apply, were noted in the MONTHLY REVIEW for July, 1917 (pp. 100-109). The cases then before the court involved the employment of longshoremen loading and unloading steamships in New York Harbor, the titles of the cases being *Southern Pacific Co. v. Jensen*, 37 Sup. Ct. 524, and *Clyde Steamship Co. v. Walker*, 37 Sup. Ct. 544. The opinions were delivered on May 21, 1917. There were vigorous dissents to this ruling on the part of four justices, while the industrial commissions of California and New York were strongly outspoken in favor of such readjustment of the laws as would enable the States to assume jurisdiction.

In pursuance of the purpose to relieve the situation produced by these decisions, which, according to Mr. A. J. Pillsbury, chairman of the Industrial Accident Commission of California, "placed thousands of workers beyond protection, for, under the admiralty

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laws, no compensation at all is payable where death results, and very little is obtainable in cases of injury," a bill was introduced in Congress, with the purpose of transferring to the States the control of such cases, or at least of giving concurrent jurisdiction. This bill (S. 2916) was first presented in the Senate of the United States on September 25, by Senator Johnson of California, and was, in form, an amendment of the Judicial Code, section 24, clause 3. The section named declared the extent of the original jurisdiction of the United States, which included "all civil cases of admiralty and maritime jurisdiction, saving to suitors in all cases the right of a common-law remedy where the common law is competent to give it." The amendment proposed to add "and to claimants the rights and remedies under the workman's compensation law of any State." A similar amendment was proposed also for clause 3 of section 256, which declared that the jurisdiction vested in the courts of the United States in certain classes of cases should be exclusive of the courts of the several States. This saving effect is intended to result in allowing the State compensation laws to operate where territorially applicable, without regard to the maritime nature of the case. The same bill was presented in the House (H. R. 6329) by Representative Gard of Ohio on September 29.

A memorandum accompanying the bill, prepared by its supporters, sets forth the fact that the effect of the Supreme Court decisions was to terminate the exercise of a power that had operated beneficially in the case of numerous accidents in the harbors of New York and San Francisco, affecting citizen workers whose injuries entail burdens upon the local community, without power for such alleviation or distribution as is possible in the case of other industrial employees. On October 2 the bill was considered by the Senate by unanimous consent, and was passed after a brief statement as to its intent. It was similarly acted upon in the House on October 5, and received presidential approval on October 6, thus becoming a law within eleven days from its introduction into Congress.

In connection with the fact that the commissions had, prior to the Supreme Court decisions, proceeded on the assumption that the compensation laws were applicable, it is of interest to note that steamship and navigation companies which had paid premiums into the New York State fund, subsequent to the decision, applied for a refund of these premiums on the ground of the inapplicability of the law to them. This request was denied by the industrial commission on the ground that the courts have held as a recognized principle that no relief can be given litigants from a mistake of law, the theory being that everyone is supposed to be acquainted with its provisions. The same commission had before it the cases of a number of bene-

ficiaries to whom awards had been made prior to the rendering of the Supreme Court decisions, but whose benefits were being withheld by the insurance carriers on the ground of the invalidity of the awards. It developed, however, that in each case payments had been made by the insurance company to the beneficiary subsequent to the rendering of these decisions, and the commission ruled that this payment amounted to an acquiescence in the mode of settlement in force, and that by this acquiescence claimants have been lulled into security until some of their rights may have expired by limitation, and their opportunity to secure evidence for a suit at law or in admiralty been lost; both employer and insurer were therefore held to be obligated to abide by the awards as made.

A very similar case was before the industrial accident board of Texas, payment to a widow from the insurance company having been suspended on account of the decisions of the Supreme Court. The beneficiary's husband had been drowned by the sinking of a tug while attempting to tow a steamship from the harbor to sea. The company owning the boat had accepted the provisions of the Texas compensation law, and had insured its liability thereunder; on the occurrence of the accident an award was made, and payments for 16 weeks were made by the company. Further payments were refused on the ground, as already indicated, that the State had no jurisdiction, the insurance company contending that decisions, both on interstate commerce and on admiralty, relieved it from paying awards made under a State compensation law.

As to admiralty, it was stated by the industrial accident board that the towboat company, the employer, had the right to have its liability determined in a Federal court, with admiralty jurisdiction, but that it could invoke or waive this right as it saw fit. The same option was held to belong to the claimant, but not to the insurance company, which simply entered the case voluntarily "upon a three-cornered contract for a valuable consideration, assuming certain contingent liabilities which it assumed to pay as they matured." It was held that the insurance company had no admiralty rights whatever, that its liability was merely one of contract, the fruits of which it had already reaped, so that it was not now in a position to avoid its obligations. It was pointed out that under the Texas act this was a suit between the insurance company and the employee or his beneficiaries, and on a different footing from that which would obtain if the claimant had brought action against the towboat company itself. Certain provisions of the laws of New York, New Jersey, and Texas were dwelt upon, and the conclusion was reached that the differences disclosed warranted the inference that the Texas act was not to be construed in accordance with the Supreme Court decisions on the New York and New Jersey laws, either as regards admiralty or interstate

commerce, the chief emphasis as to the latter point being laid on the optional nature of the Texas statute, as contrasted with the compulsory law of New York and the New Jersey statute, which was said to embody "compulsory presumptions which in effect challenge the propriety" of classifying it as an elective statute. It was concluded therefore that the company's liability on its contract continued, and "that the Employers' Liability Act of Texas in no way trenches upon the admiralty jurisdiction of the Federal court and does not encroach upon the jurisdiction of the Federal courts upon matters affecting interstate commerce in any way."

Appeals to the courts from both the rulings of the New York commission noted above were announced as probable. However, premium payments will again apparently become due by reason of the amendment permitting application of the remedies under the workmen's compensation law of the State, so that any procedure for recovery of premiums may now be abandoned.

Some doubt has been expressed as to the constitutionality of this amendment in view of the provision of the Constitution which extends the judicial power of the United States courts "to all cases of admiralty and maritime jurisdiction," the contention being that a mere act of Congress can not confer the right to recover under compensation laws which establish a remedy said by the Supreme Court to be "of a character wholly unknown to the common law, incapable of enforcement by the ordinary processes of any court, and not saved to suitors from the grant of exclusive jurisdiction"; but in considering the outcome of any action at law to avoid the effect of the amending legislation it must be kept in mind that four of the nine justices of the Supreme Court bench believed that the State had the right to enforce its law under existing conditions, and that this amendment is a direct attempt by Congress to protect the States in such action.

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#### DRAFT OF WORKMEN'S COMPENSATION BILL FOR THE STATE OF VIRGINIA.

A joint resolution of the General Assembly of Virginia, agreed to February 5, 1916, provided for the appointment of a commission to draft a bill for a workmen's compensation law such as "having regard to the peculiar conditions of Virginia, will do justice to both employers and employees." A tentative draft has been prepared by this commission and submitted for consideration in anticipation of the meeting of the legislature in January of next year. The bill is elective in form, but election is presumed by both employer and employee in the absence of contrary notice. Employers electing to

reject the act forfeit the common-law defenses, while employees electing to reject the act are subject to those defenses in cases in which the employer accepts the compensation provisions. The law proposed is exclusive where applicable, and employers are compelled to insure the payment of compensation thereunder.

The bill is limited to accidental injuries and does not include diseases in any form except as they result from the injury.

Excluded from the operation of the act are casual laborers, employees of steam railways and carriers in interstate commerce generally, farm laborers and domestic servants, and employers of less than three operatives regularly in the same business; voluntary election may, however, be made by persons not otherwise covered by the bill, except of course those in interstate commerce. The proposed law applies compulsorily to State and municipal corporations and their employees.

A waiting period of 14 days is fixed, and the compensation basis is one-half the average weekly wages of the injured employee. Total-disability payments may not be more than \$10 per week nor less than \$5, nor continue more than 500 weeks nor exceed a total of \$4,000. Partial disability is to be compensated by the payment of one-half the wage loss, the amount to be not more than \$10 per week and to continue for not more than 300 weeks. A schedule of awards is provided for specific injuries.

Death benefits have the same maximum and minimum limitations as total disability, but are restricted to a term of 300 weeks. Payments to alien beneficiaries other than those resident in the Dominion of Canada may not exceed \$1,000, while in other cases the total amount shall not exceed \$4,000. Conversion to lump sums is provided for if deemed by the industrial commission to be for the best interests of the parties. Payments to children cease on their reaching the age of 18, unless physically or mentally incapacitated from earning a livelihood, and to a widow or widower and dependent children living with them on the remarriage of the widow or widower. Necessary medical attention must be provided for not more than 30 days after the injury, and in fatal cases burial expenses not exceeding \$100 must be paid.

A commission to administer the proposed act is provided for, to be known as the industrial commission of Virginia, consisting of three members to be appointed by the governor for terms of six years. A salary of \$4,000 per year is to be paid each member; and a secretary, who is to receive not more than \$2,500 per year, is provided for. Disputes passed upon by this commission may be appealed within 15 days from the award to the courts, in a form and manner to be prescribed by the supreme court of appeals of the State.



**REPORT OF INDUSTRIAL ACCIDENT BOARD OF MONTANA, YEAR  
ENDING JUNE 30, 1917.**

The Industrial Accident Board of Montana has recently issued its second annual report for the 12 months ending June 30, 1917, which includes a review of the operations of the law since it became effective, July 1, 1915.<sup>1</sup>

The Montana law is elective and applies only to hazardous employments having five or more employees. Insurance may be taken under one of three plans: (1) Self-insurance upon satisfactory showing of solvency, (2) private insurance companies, or (3) State accident-insurance fund. On July 1, 1917, there were 1,918 employers operating under the compensation act, and these constitute 99 per cent of all employers engaged on hazardous occupations subject to the act. These employers reported having 48,502 employees during 1916, but the board estimates the present number of employees at approximately 73,000, which represents 97 per cent of the workmen engaged in hazardous occupations.

The report states that during the two years ending June 30, 1917, 65 employers<sup>2</sup> operated under plan 1, paying in compensation, including 123 lump-sum death settlements and 358 burial expenses, the sum of \$631,906.67. The total of the claims awaiting settlement under this plan is estimated at about \$190,000, making a compensation liability amounting to \$821,906.67. Computed on an estimated pay roll of \$75,142,611 for the two-year period, this would indicate a total cost to employers of a little more than 1 per cent.

Under the second plan there were operating at the end of the fiscal year 1,141 insured employers employing approximately 23,000 men, and representing a pay roll of \$27,039,852. It appears that during the first two years of the act the 13 insurance companies carrying risks under this plan have paid out \$131,371.12 in compensation, burial, medical, and hospital expenses. The outstanding losses for the same period are estimated at \$32,000, making \$163,371.12 as total losses incurred. Computed on a reported pay roll of \$27,039,852, as given above, the actual accident cost approximated 0.6 per cent. The amount of premium collected by these insurance companies is estimated at something over \$600,000, or about 2½ per cent of the entire pay roll. "The actual accident cost under this plan, of a little over one-half of 1 per cent, compared with the premium cost of over 2½ per cent of the pay roll, would indicate the necessity for a substantial reduction in the prevailing insurance rates, which undoubtedly will be the case."

<sup>1</sup> Montana Industrial Accident Board, second annual report for the 12 months ending June 30, 1917. Workmen's Compensation Act. [Helena, 1917.] 344 pp.

<sup>2</sup> Six of these companies withdrew from active business three months before the close of the fiscal year ending June 30, 1917, leaving 59 registered at that date.



The 718 employers with 9,691 employees who insured in the State fund paid in premiums a total of \$73,050.08, levied in four assessments, during the two-year period, upon a total reported pay roll of \$9,589,932, representing a premium cost to the employers of less than 1 per cent. The report shows that the State fund has paid out in compensation of all kinds \$41,542.87, with pending claims aggregating about \$11,500, making a total liability for the two-year period of \$53,042.87, which, computed on the pay-roll total indicated above, makes an accident cost under this plan of a little more than one-half of 1 per cent.

Referring to the accident records, the report states that of the 73,000 employees covered by the three plans, 8,325, or 11.4 per cent, were injured, 307 injuries resulting in death, 10 in permanent total disability, 184 in permanent partial disability, and 7,824 in temporary disability. Of this latter number 1,461 received compensation and the rest returned to work before the expiration of the two-weeks waiting period and received only the medical and hospital attention prescribed by the law.

During the two-year period 15,127<sup>1</sup> accidents were reported, 443 being fatal, 13 permanent total disabilities, 273 permanent partial disabilities, and 14,398 temporary disabilities, of which number 2,862 received compensation and 11,536 returned to work before the expiration of the waiting period. Of the 15,127 accidents, 9,803 came under plan 1, 4,622 under plan 2, and 702 under plan 3.

The following table shows for the two years the benefits paid under each specified plan:

BENEFITS PAID UNDER EACH SPECIFIED PLAN OF INSURANCE FOR THE 2 YEARS ENDING JUNE 30, 1917.

Plan.	Fatal (443 cases).	Permanent total disability (13 cases).	Permanent partial disability (273 cases).	Temporary total disability (14,398 <sup>a</sup> cases).	Medical and hospital benefits.	Burial expenses.	Total.
First .....	\$379,989.28	\$30,947.00	\$54,184.91	\$136,243.61	\$9,500.97	\$21,040.90	\$631,906.67
Second .....	26,744.77	7,612.38	17,648.99	57,369.66	18,245.32	3,750.00	131,371.12
Third .....	13,178.46	.....	4,219.89	16,700.62	5,301.55	1,490.00	40,890.52
Total .....	419,912.51	38,559.38	76,053.79	210,313.89	<sup>b</sup> 33,047.84	26,280.90	804,168.31

<sup>a</sup> Of this number 2,862 received compensation.

<sup>b</sup> This, as explained, is exclusive of the cost of hospital contracts or agreements, which are held by fully four-fifths of the employees under the act. The report states that the workmen have paid out for this service during the 24 months something like one million and a half dollars.

The report shows that 3,591 workmen were injured sufficiently to draw compensation, including death benefits, and that the amount so paid was \$1,035,668,<sup>2</sup> or an average of about \$300 each.

<sup>1</sup> Of these, 6,802 occurred during the first year.

<sup>2</sup> This includes an estimate of \$231,500 necessary to settle pending claims, which, subtracted from the \$1,035,668, leaves approximately the total in the preceding table.

The following is the financial statement covering the period March 1, 1915, to June 30, 1917:

ASSETS.	
Industrial fund.....	\$32, 754. 31
Administrative fund.....	12, 095. 92
Investment fund (registered warrants).....	4, 502. 85
Compensation.....	40, 890. 52
Administrative expense.....	56, 854. 02
Refunds.....	1, 063. 84
Bonds and securities (deposited for plan No. 1).....	35, 000. 00
Furniture and fixtures.....	2, 431. 97
Expenditures authorized.....	107, 600. 00
Accrued disabilities.....	15, 026. 95
	308, 220. 38

LIABILITIES.	
Premium income.....	\$77, 179. 25
Less uncollected.....	3, 713. 42
	73, 465. 83
Collections.....	12, 343. 17
Administrative income.....	247. 25
Less uncollected.....	150, 883. 52
	150, 883. 52
Collections (inspection fees).....	5, 336. 91
Industrial fund warrant account.....	15, 998. 21
Administrative fund warrant account.....	35, 000. 00
Appropriations (including boiler, quartz, and coal mine inspection).....	1, 02
Bonds and securities in trust.....	412. 02
Special deposits.....	15, 026. 95
Interest received.....	308, 220. 38
Reserve for known liabilities.....	308, 220. 38

#### INCREASED BENEFITS IN BRITISH WORKMEN'S COMPENSATION (WAR ADDITION) ACT, 1917.<sup>1</sup>

The British Workmen's Compensation Act of 1906 has recently been amended by the enactment of the Workmen's Compensation (War Addition) Act, 1917, which came into force on September 1 of the current year.

The act places upon employers a 25 per cent increased liability for such weekly compensation as may become payable at any time during the period of validity of the act—namely, the period of the war, and six months thereafter—to every employee who on or after September 1, 1917, may be suffering total disability as the result of an accident which arose out of and in the course of his employment,

<sup>1</sup> Journal of Commerce, New York, Sept. 19, 1917.

even if such accident occurred prior to the coming into force of the act.

The full text of the new act is reprinted below :

1. (1) Where any workman is at any time during the period for which this act continues in force entitled during total incapacity to a weekly payment by way of compensation under the Workmen's Compensation Act, 1906, he shall, whether the incapacity arose before or after the commencement of this act, be entitled to receive from the person liable to pay the compensation, by way of addition to each such weekly payment payable in respect of any week within the said period, a sum equal to one-fourth of the amount of that payment.

(2) The additional weekly sum payable under this act shall be deemed to be part of the weekly payment under the Workmen's Compensation Act, 1906, for the purposes of—

(a) The provisions relating to the recovery of weekly payments;

(b) Any order made with respect to payment into court of a weekly payment;

(c) The provisions of paragraph (19) of the first schedule to the Workmen's Compensation Act, 1906, (which prohibits the assignment, etc., of weekly payments); and shall, notwithstanding that the liability to make the said weekly payment is redeemed subsequent to the commencement of this act, continue to be payable in the same manner as if that liability had not been redeemed.

2. Where an employer is liable to pay benefits under a scheme certified by the registrar of friendly societies under section three of the Workmen's Compensation Act, 1906, the registrar may direct that workmen who are at any time during the period for which this act continues in force entitled to benefits under the scheme as on account of total incapacity shall receive such additional benefit as is specified by the registrar in the direction as being in his opinion of equivalent value to the additional sum payable under the foregoing provisions of this act.

3. (1) This act shall come into operation on the first day of September, 1917, and shall continue in force during the continuance of the present war and for a period of six months thereafter.

(2) This act may be cited as the Workmen's Compensation (War Addition) Act, 1917.

# INDUSTRIAL ACCIDENTS AND DISEASES.

## ACCIDENT SEVERITY RATES.

[A comparison of the scale used by the Bureau of Labor Statistics and the scale proposed by the I. A. I. A. B. C.]

One of the most interesting results of the August meeting of the International Association of Industrial Accident Boards and Commissions at Boston was the association's acceptance of a report of its committee on statistics, recommending the adoption by the several State commissions of a system of accident severity rating. Inasmuch as the Bureau of Labor Statistics had earlier worked out and applied a somewhat similar scheme of severity rating in two comprehensive reports, now in press,<sup>1</sup> a comparison of the two systems becomes of interest.<sup>2</sup>

Both systems are based on the same fundamental idea—that, because accidents differ so greatly in the seriousness of the resulting injuries, the mere frequency of accidents does not offer a true measure of accident hazard; and that such a measure can be obtained only by comparing accidents on the basis of their severity. Also, both systems adopt the same scheme for the measurement of severity, namely, the time loss resulting from the injury. In the case of temporary disability, this time loss is accurately measured by the number of days during which the worker is incapacitated for labor. In the case of death and permanent disabilities, it is necessary to use a more or less arbitrary scale.

It is in the fixing of this scale that the two systems differ. The bureau's scale values death as equivalent to the loss of 9,000 work-days, on the basis that the average age of men killed by accident is about 30 years, and their expectancy of active labor, at that time, about 30 years (300 workdays per year  $\times$  30 years expectancy = 9,000 workdays). Permanent total disability was given a rating of 10,500 days, on the ground that total invalidism is economically more severe than death, inasmuch as it not only deprives the victim of all his productive power but makes him, to some extent, a burden on the time of others. In valuing permanent partial disability, the bureau's scale took the loss of the arm as the most severe of such disabilities, and rated this injury at 2,808 days (or 31 per cent of death). In so doing it was recognized that existing industrial and educational conditions probably make the loss of an arm to most workers a more

<sup>1</sup> Accidents and accident prevention in machine building. Bulletin 216, U. S. Bureau of Labor Statistics (in press); Accidents and accident prevention in the iron and steel industry. Bulletin 234, U. S. Bureau of Labor Statistics (in press).

<sup>2</sup> The report of the committee on statistics of the I. A. I. A. B. C. was published in the October, 1917, number of the MONTHLY REVIEW, pp. 123 to 143. The scale devised by the Bureau of Labor Statistics was published in the MONTHLY REVIEW for July, 1916, pp. 6 to 17.

serious injury, from the standpoint of earning capacity, than is represented by a 31 per cent of death rating. But, on the other hand, it appears probable that better methods of functional rehabilitation and education in the future will tend greatly to diminish the economic importance of almost all partial disabilities.

The proposed association scale rates death much lower, and permanent disabilities much higher than does the bureau's scale. Death, by the association's scale, is rated at 6,000 days (i. e., 20 years), total permanent disability being classed the same as death, and the arm is assigned a value of 4,500 days, or 75 per cent of death. The time losses assigned the lesser partial disabilities are correspondingly higher than those for similar disabilities in the bureau's scale.

The two scales, in detail, are as follows:

SCALES OF TIME LOSSES FOR WEIGHTING INDUSTRIAL ACCIDENTS SO AS TO SHOW SEVERITY OF ACCIDENTS.

*Scale used by the United States Bureau of Labor Statistics in Bulletins 216 and 234.*

Result of injury.	Per cent of death loss.	Time losses in days.
Death.....	100.0	9,000
Permanent total disability.....	117.0	10,500
Loss of members:		
Arm.....	31.0	2,808
Leg.....	29.0	2,592
Hand.....	24.0	2,196
Foot.....	21.0	1,845
Eye.....	13.0	1,152
Thumb.....	6.0	540
First finger.....	5.0	414
Second finger.....	3.0	270
Third finger.....	2.5	225
Fourth finger.....	1.5	135
Great toe.....	3.8	342

*Scale proposed by the committee on statistics of the I. A. I. A. B. C.*

Result of injury.	Degree of disability in per cent of permanent total disability.	Days lost.
Death.....	100	6,000
Permanent total disability.....	100	6,000
Arm above elbow, dismemberment.....	75	4,500
Arm at or below elbow, dismemberment.....	60	3,600
Hand, dismemberment.....	50	3,000
Thumb, any permanent disability of.....	10	600
Any one finger, any permanent disability of.....	5	300
Two fingers, any permanent disability of.....	12½	750
Three fingers, any permanent disability of.....	20	1,200
Four fingers, any permanent disability of.....	30	1,800
Thumb and one finger, any permanent disability of.....	20	1,200
Thumb and two fingers, any permanent disability of.....	25	1,500
Thumb and three fingers, any permanent disability of.....	33½	2,000
Thumb and four fingers, any permanent disability of.....	40	2,400
Leg above knee, dismemberment.....	75	4,500
Leg at or below knee, dismemberment.....	50	3,000
Foot, dismemberment.....	40	2,400
Great toe, or any two or more toes, any permanent disability of.....	5	300
One toe, other than great toe, any permanent disability of.....	0	300
One eye, loss of sight.....	30	1,800
Both eyes, loss of sight.....	100	6,000
One ear, loss of hearing.....	10	600
Both ears, loss of hearing.....	50	3,000

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The following table shows the results obtained by applying the two scales to the same groups of accidents. The data used are from the forthcoming reports of the bureau on accidents in the iron and steel and machine-building industries.

ACCIDENT FREQUENCY AND SEVERITY RATES IN THE IRON AND STEEL INDUSTRY FOR THE FIVE-YEAR PERIOD, 1910 TO 1914, AND FOR MACHINE BUILDING IN 1912.

[The severity rates are computed both on the scale of time allowances used by the United States Bureau of Labor Statistics in Bulletins 216 and 234 and upon the scale proposed by the committee on statistics of the International Association of Industrial Accident Boards and Commissions.]

Department.	Number of 300-day workers.	Accident frequency rates per 1,000 100-day workers.				Days lost per 1,000 300-day workers.													
		Death.	Perma- nent dis- abil- ity.	Tempo- rary dis- abil- ity.	Tot- al.	Bureau of Labor Sta- tistics scale.				I. A. I. A. B. C. scale.									
						Death.	Perma- nent dis- abil- ity.	Tempo- rary dis- abil- ity.	Tot- al.	Death.	Perma- nent dis- abil- ity.	Tempo- rary dis- abil- ity.	Tot- al.						
Steel industry:																			
Blast furnaces..	124,636	2.6	2.9	181.1	186.7	23.4	2.8	2.5	28.7	15.6	3.3	2.5	21.4						
Steel works:																			
Bessemer.....	28,101	2.0	5.2	262.1	269.3	17.9	3.1	3.8	24.8	11.9	4.0	3.8	19.3						
Open hearth.....	71,293	2.0	4.6	218.4	224.9	17.9	3.0	2.9	23.7	11.9	4.7	2.9	19.5						
Crucible.....	5,144	4.4	4.1	99.0	103.5	3.5	2.1	1.6	7.2	2.3	3.4	1.6	7.7						
Foundries.....	95,917	.9	4.7	185.2	190.8	7.9	2.6	2.2	12.7	5.3	3.4	2.2	10.9						
Rolling mills:																			
Heavy.....	67,663	1.1	3.9	133.1	138.0	9.4	2.2	1.9	13.5	6.3	2.8	1.9	11.0						
Plate.....	21,711	.9	4.8	144.1	149.8	7.9	3.0	2.0	12.9	5.3	4.1	2.0	11.4						
Puddle.....	12,788	.7	4.5	131.5	136.7	6.3	2.0	1.7	10.0	4.2	2.8	1.7	8.7						
Rod.....	13,244	.6	5.9	153.9	159.9	5.4	4.1	2.0	11.5	3.6	5.1	2.0	10.7						
Sheet.....	128,423	.7	2.6	150.0	153.3	6.1	1.4	1.7	9.2	4.1	1.9	1.7	7.7						
Tube.....	73,338	.5	3.4	117.6	121.5	4.5	1.7	1.5	7.7	3.0	2.1	1.5	6.6						
Miscellaneous..	98,809	.8	3.6	215.4	219.9	7.6	2.4	2.8	12.8	5.1	3.3	2.8	11.2						
Fabricating shops..	108,538	.9	3.9	235.0	239.7	7.8	2.2	2.4	12.4	5.2	2.8	2.4	10.4						
Forge shops.....	6,249	1.3	3.1	172.8	177.2	11.5	1.4	2.0	14.9	7.7	1.9	2.0	11.6						
Wire drawing.....	59,481	.3	6.3	190.4	197.1	3.0	4.3	1.9	9.3	2.0	5.6	1.9	9.5						
Electrical.....	14,421	2.3	3.3	135.7	141.3	20.7	2.6	1.6	24.9	13.8	3.6	1.6	19.0						
Mechanical.....	97,162	1.1	4.0	183.1	188.2	9.5	2.5	2.3	14.2	6.3	3.2	2.3	11.8						
Power houses.....	8,083	.7	2.6	67.3	70.6	6.7	2.5	.9	10.1	4.5	2.5	.9	7.9						
Yards.....	55,932	2.0	4.4	145.8	152.1	18.0	3.1	1.9	23.0	12.0	4.1	1.9	18.0						
Coke ovens.....	13,282	2.0	2.9	124.3	129.2	18.3	3.3	1.7	23.3	12.2	4.4	1.7	18.3						
Armor plate.....	3,000	1.3	4.0	120.7	126.0	12.0	1.1	2.0	15.1	8.0	1.8	2.0	11.8						
Axle works.....	1,326	1.5	3.0	330.3	334.8	13.6	5.0	4.9	23.5	9.1	7.6	4.9	21.6						
Car wheels.....	2,367	1.3	6.3	257.3	264.9	11.4	2.0	4.0	17.4	7.6	2.2	4.0	13.8						
Docks.....	1,293	2.3	8.5	107.5	118.3	20.9	6.6	2.5	30.0	13.9	9.3	2.5	25.7						
Erecting.....	2,157	12.1	11.1	342.1	365.3	108.5	14.7	5.4	128.6	85.7	16.5	5.4	107.6						
Total.....	1,310,911	1.2	3.6	171.6	176.7	10.5	2.5	2.1	15.1	7.0	3.2	2.1	12.3						
Machine building...	115,703	.3	3.6	114.6	118.0	2.9	1.6	1.1	5.6	1.9	2.1	1.1	5.1						

Examination of the table shows that the severity rates obtained under the association's scale are, for the most part, considerably lower than those derived by the bureau's scale. Thus, the severity rate for the steel industry as a whole is decreased from 15.1 days to 12.3 days lost per worker and for machine building from 5.6 days to 5.1 days. In one instance, however, the reverse is true. Thus, in crucible melting the bureau's scale gives a severity rate of 7.2 days while the association's scale gives 7.3 days.

A most interesting point to be noted is that while the use of the different scales alters the rates, there is no important change in the



relations between the rates for the several departments and industries. This emphasizes the fact that the precise scale used is not of primary importance. Severity rates, as absolute amounts, are not significant. Their importance lies in the fact that they offer the most satisfactory measure of accident hazards as between different industrial groups. As long as the scale used is reasonably accurate it will fulfil its function.

#### FIRST INDUSTRIAL SAFETY CONGRESS OF NEW YORK STATE.<sup>1</sup>

The first industrial safety congress of New York State was held under the auspices of the State industrial commission at Syracuse, December 11-14, 1916. At the first session a paper was read by George M. Pope, president of the National Association of Manufacturers, on the duty of employers in the matter of prevention of accidents and the conservation of health of employees. "It is the manifest duty first for employers," he declared, "to study the most approved schemes of hygienic prevention, adopt such devices, and then see to it that the employees understand fully their part in systematic preventive cooperation. Health is a factor in production, and healthy industry will produce wholesome products." To establish adequate accident prevention and health conservation in industry, two distinct duties were suggested: First, the employer's individual responsibility in his particular plant, factory, or industry; and, second, his cooperation with local, State, and national organizations whose activities are directed toward this beneficent result. The safety campaign of the National Association of Manufacturers was then outlined, embracing efforts to obtain (1) an ultimate uniform workmen's compensation system, (2) organization by manufacturers of their own relief associations, preferably in cooperation with their workers, and (3) recognition of the three essential principles in compensation legislation, namely, the encouragement of accident prevention, assurance of compensation, preferably by compensatory insurance, and coverage for all wage workers, provision being made that doctors' and lawyers' fees shall not rob the injured. Edward J. Barcalo, president of the Associated Manufacturers and Merchants of New York State, spoke on the attitude of New York organized industry toward the safety movement, saying the reasons which prompted industry to indorse safety efforts were humanitarian and economic. Employers desire to save lives and prevent injuries and illness to workers, and they recognize that a feeling of safety and security on the part of employees brings economic returns which amply repay them for the expenditure necessary to improve working conditions.

<sup>1</sup> Proceedings of the First Industrial Safety Congress of New York State, held under the auspices of the State Industrial Commission, Syracuse, Dec. 11-14, 1916, J. B. Lyon Co., printers, Albany, 1917. 236 pp.

The attitude of New York organized labor toward the safety movement was discussed by James P. Holland, president of the New York State Federation of Labor, who urged that employers should consult with their workers in the preparation of shop rules to search out and correct preventable hazards, and that these rules should be "vigorously enforced without fear or favor in the higher interest of all."

An entire session was devoted to the general subject of women in industry, the discussion revolving about the question, Do women wage earners present any special problem in accident prevention and the conservation of health as distinguished from that involved in safeguarding workmen? In a paper by Dr. Lucy A. Bannister, Westinghouse Lamp Co., emphasis was laid upon the importance of instructing and developing new untrained young women workers so that in the shortest possible time, with the expenditure of a minimum amount of energy on the part of the operative, the maximum of efficiency may be obtained. This embraces care in the selection of workers as to their physical fitness, their ability and aptitude, intelligence in the assignment of labor, thorough and interesting instruction, and an adequate follow-up system. The speaker advocated for all women equal pay for doing the same work as that done by men. "The relation of the home woman to safety," "The working woman's point of view," and "The necessity for educating employers and employees in factories and mercantile establishments" were the titles of other papers.

At the morning session on the second day of the congress, John Price Jackson, Pennsylvania State commissioner of labor, spoke on the guarding of elevators, cranes, and moving machines, and Frederick S. Crum, assistant statistician, Prudential Insurance Company, introduced some statistics of boiler explosions which showed that in the United States, covering the period 1868 to 1915, the annual average number of explosions was 281, killing an average each year of 256 persons and injuring 380. These figures were compared with an annual average in the United Kingdom (1883 to 1915) of 72 explosions, killing 26 and injuring 58 persons, and with an annual average in Germany (1877 to 1914) of 15 explosions, killing 10 and injuring 6 persons. The fatality rate, based on population, in the period 1910 to 1914 was 2.3 in the United States, 0.1 in Germany, and 0.5 in the United Kingdom.

"Safety and efficiency" was the title of a paper by C. W. Price, field secretary, National Safety Council, the purpose of the speaker being to show that an expenditure to improve sanitary conditions or factory equipment is more than compensated by the increased efficiency of the workers. An appreciation of the value of the human equipment, he declared, is increasing among manufacturers, who are

waking up to a realization of the fact that if they deliberately pursue a course that disregards the rights of employees to live their lives, to preserve their limbs and health, to be contented and happy, they are pursuing a course that at last leads to loss and inefficiency.

L. W. Hatch, chief statistician, New York Industrial Commission, urged upon employers the importance of reporting to their State industrial commissions such statistics as are required by law, and that these should include all that will afford information of practical value in the work of prevention or compensation. It is through this cooperation that the industrial commission is able to assist in the prevention of accidents, which, after all, is the first interest of the employer.

That good lighting constitutes a safeguard against accident and undue visual fatigue of the workers, and is a vital factor in the economics of industrial plants, was brought out by L. B. Marks, consulting illuminating engineer, whose paper on factory lighting and its bearing on the health and productivity of workers was illustrated by lantern slides. An exhaustive paper on heat and ventilation, their bearing on the health and productivity of workers from the viewpoint of the physician in industrial practice, was presented by Dr. Charles A. Lauffer, Westinghouse Electrical & Manufacturing Co. The following excerpt summarizes the main points brought out in this paper:

Body temperature is maintained by solar heat. The evaporation of perspiration from the skin is the chief method of heat dissipation; clothing and heated houses are measures for maintaining body heat. The manufactured indoor climate is incomplete if coal is merely fed into the furnace and humidity conditions are ignored. When ferns and house plants wither and die the humidity is too low; humidity is maintained to preserve paintings, antique furniture, and cabinet work from shrinking and cracking; excessively dry air draws particles of moisture from everything indoors, including the surface of our bodies and the air passages of nose and throat. More water in the atmosphere of homes and factories is often required and less heat. When indoors it is cold, outdoors at the same temperature it is warm and balmy, the relative humidity is greater outdoors than indoors.

Expired air is unfit to use over and over again. Exhaust fans for local ventilation, to remove dust, fumes, odors, and impurities at their source, to prevent their dissemination by general ventilation render the atmosphere of the factory more salubrious.

The diffusion of gases is such that crowded buildings may require the exit for vitiated air from both floor and ceiling, though conditions encountered, rather than pet theories, should control the selection of a ventilating system.

Archaic views of the toxicity of carbon dioxide and the withdrawal of oxygen from the atmosphere of buildings are subsiding; the stagnation of air, high humidity, and other factors intensify the discomfort from an atmosphere apparently vitiated. Yet adequate ventilation should be maintained to promote the health and productivity of workers.

Excessively dry temperatures are readily endured by man, but high wet-bulb temperatures impair the productivity of workers, may induce fatigue, even heat collapse, or thermic fever.

By attention to such measures of personal hygiene as relieve fatigue—sleep, bathing, clothing, diet, etc.—the individual's ability to withstand fluctuations of diurnal and seasonal temperature is enhanced.

This same subject was presented from the viewpoint of the heating and ventilating engineer by C. A. Booth, Buffalo Forge Co.

Other papers presented at the congress included: "Psychology of the emergency hospital," by Hubert Hornsby, National Civic Federation; "Classification of buildings and materials of manufacture as the basis of safety requirements," by James C. Heckman, general superintendent, Larkin Co., Buffalo, N. Y.; "Industrial safety in California," by Paul Scharrenberg, editor, Coast Seamen's Journal, San Francisco, Cal.; "Occupancy and its relation to exit facilities from the viewpoint of life hazard," by H. W. Forster, general manager, Independence Inspection Bureau, Philadelphia, Pa.; "Horizontal vs. vertical exits," by H. F. J. Porter, consulting industrial engineer, New York City; "Standardization of safety appliances," by H. H. Cannon, National Workmen's Compensation Service Bureau, New York City; "Machine shop hazards," by L. D. Burlingame, Brown and Sharpe Manufacturing Co., Providence, R. I.; "Woodworking hazards," by Albert S. Regula, American Museum of Safety, New York City; "Hazards in a lineman's work," by J. F. Naylor, district superintendent, New York Telephone Co., Syracuse, N. Y.; and "Practical benefits derived from safety organization," by John A. Robertson, general manager, Eastman Kodak Co., Rochester, N. Y.

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#### MINING FATALITIES IN THE UNITED STATES DUE TO EXPLOSIVES.

In Technical Paper 175, entitled "Production of explosives in the United States during the calendar year 1916," recently issued by the United States Bureau of Mines, four tables are presented showing the number of fatalities due to the use of explosives in the mining industry. In two of these tables all of the explosives fatalities in coal mines are shown, while one table gives those at bituminous mines alone. A fourth table gives the number and percentage of fatalities due to explosives at metal mines and at quarries. In all coal mines there were 148 fatalities, 146 underground and 2 on the surface. Of the 146, 58, or 39.7 per cent, were due to premature blasts and short fuses, while the next largest number, 21, or 14.4 per cent, were due to handling and transportation. Approximately 66 per cent of these fatalities occurred in Pennsylvania mines. In bituminous mines alone the fatalities due to explosives amounted to 60, or 2.8 per cent of the total killed, the fatality rate being 0.096 per 1,000 employed. This is a decrease from 1916 of 16 in the number killed, of 0.56 in the percentage of total killed, and of 0.004 in the fatality rate. In 1903

9.8 per cent of the fatalities at bituminous mines was due to the use of explosives. Attention is called to the fact that 80 per cent of the permissible explosives<sup>1</sup> used in coal mines is used in bituminous mines and that the amount so used has increased steadily each year from 1901, with the exception of 1914. This, taken in connection with the reduction in the number of fatalities in bituminous mines, which has also occurred each year since 1903, with the exception of 1907, 1909, and 1915, offers an interesting comparison.

In metal mines in 1915 there were 78 fatalities due to explosives, or 14.1 per cent of all killed, and in quarries there were 28 fatalities, or 18.9 per cent of all killed.

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#### TREATMENT OF WOUNDS WITH CARREL-DAKIN SOLUTION AND FORMULAS FOR ITS PREPARATION.

It became apparent at the outbreak of the war that with the possible exception of those wounds caused by high velocity bullets all wounds were infected, so that one of the first considerations in their successful treatment was the development of a means to prevent or control this infection. In an effort to work out this problem, Dr. Alexis Carrel and Dr. H. D. Dakin began their research work at the Beaujon Hospital, Paris, in 1914, and after experimenting with 200 or more antiseptics the so-called Dakin hypochlorite solution was perfected. This solution is not a cure-all, but it has strong bactericidal properties and is said to be ideal as an antiseptic because it is nontoxic and nonirritating. A new method of wound sterilization with this solution has been developed by Dr. Carrel, whose technique has in large measure assured the success which has attended its use in preventing infection and controlling suppuration. In fact it has been stated that Dakin's solution represents 20 per cent of the cure and the technique of Carrel represents 80 per cent. It seems to be proved beyond any question of doubt that the Carrel method of wound sterilization with Dakin's solution is a specific, that it not only aborts infection but is efficacious after infection has become established. Used in a number of military hospitals in Europe it has been the means of saving the lives of soldiers who otherwise would have succumbed to wounds not necessarily fatal in themselves but in which infection had made its deadly way. As already suggested, the success of Dakin's solution depends largely upon a thorough

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<sup>1</sup> "In this class," states the report, "are included ammonium nitrate explosives, hydrated explosives, organic nitrate explosives, and certain nitroglycerin explosives containing an excess of free water or carbon. All permissible explosives have passed certain tests of the Bureau of Mines and are not to be regarded as permissible unless used in the manner specified by the bureau."



understanding and careful use of the technique of Carrel, the details of which if applied in army hospitals would unquestionably result in checking tremendous loss of life and in preventing the untold number of amputations, frightful deformities, and permanent disabilities which soldiers suffer as a result of infected wounds. Dr. Carrel has expressed the opinion that the application of his method is not so practical in ambulatory cases as in hospital cases.

Dakin's solution has been tried by the medical departments of a number of industrial plants in this country, and the report of its successful application in the dispensary of the General Electric Co. at West Lynn, Mass., has just come to the attention of this bureau. Dr. Frank E. Schubmehl, the works physician, states that early in December, 1916, Dakin's solution was prepared according to the original formula, which was immediately used in the treatment of all wounds. Since the Carrel technique was found to be impracticable in ambulatory cases, as suggested above, experiments were made in various forms of dressing to facilitate the use of the solution in these cases. The procedure as finally developed out of these experiments is described by Dr. Schubmehl as follows:

All wounds occurring in this plant are considered infected wounds at the very beginning and are treated as such. A dressing is applied over the wounded area in such a way that the denuded or exposed tissue laceration is free from pressure. First, the wound is thoroughly, but carefully, cleansed with Dakin's solution, either by spray or swabbing off with cotton. Pressure is made around and about the outside edges of the wound, previously covering the uninjured parts to be included in the bandage, with vaseline gauze.<sup>1</sup> The bandage is then applied and the patient is instructed to pour through the depression in the bandage where the opening of the original dressing appears, sufficient of the Dakin solution, every two hours, to thoroughly wash out the chamber within. The patient is supplied with a bottle of the Dakin solution sufficient to carry him over to the next dressing. When the injury is a small one, the dressing is applied as above, and the patient is supplied with a medicine dropper in addition to the bottle of the solution, and is instructed about the use of the solution.

From an observation of 6,000 injuries, large and small, at this plant since the introduction of this treatment by Dakin's solution, Dr. Schubmehl expresses his belief that the treatment of ambulatory cases by the method above described is the most efficient that has yet come to his attention. "Many wounds," he states, "which come to us infected clear up most marvelously, and new injuries treated early with the solution heal by first intention." He mentions several striking instances of lacerated fingers and of compound fractures of the

<sup>1</sup> Dr. A. W. Colcord, secretary, Railway Surgeons Association, Clairton, Pa., in a paper read at the health service section of the sixth annual congress of the National Safety Council, held at New York in September, emphasized the importance of protecting the skin two to four inches about the wound with sterile vaseline gauze, since "we have had several rather severe burns of the skin from Dakin's solution. If sterile vaseline gauze is not at hand, sterile vaseline of 5 per cent boric acid ointment may be smeared over the skin."



bone in which by the use of Dakin's solution the partially severed members, held only by the slightest piece of integument, have been saved. The method of preparing Dakin's solution as used at the dispensary at West Lynn in the treatment of these cases is given by Dr. Schubmehl as follows:

DIRECTIONS FOR MAKING 15 LITERS OF CARREL-DAKIN SOLUTION, AFTER THE ORIGINAL FORMULA.

1. Weigh out 300 grams chloride of lime.
  2. Weigh out 210 grams sodium carbonate.
  3. Put the chloride of lime, with one-half liter of water, in a container where it may be thoroughly dissolved or macerated with a wooden or glass mixer. When this is thoroughly macerated, wash the whole mass into a large container, to hold the entire preparation.
  4. Dissolve the sodium carbonate in about 1 liter of hot water, and pour this solution also into the large container.
  5. Add 15 liters of cold water.
  6. Let the whole mass stand for at least 30 minutes.
  7. Weigh out 60 grams of powdered boric acid, and rub this to a consistency of soft putty by adding from 1 to 2 ounces of the solution from the large container.
  8. Then wash this mass into the large container. This will make 15 liters of the solution, plus.
  9. Add sufficient cold water to make a bulk of 18 liters.
  10. The whole mass should then be agitated vigorously for three or four minutes. Then it should be allowed to stand for any time over 30 minutes for the liquid to clarify.
  11. There will be about 3 liters of sediment at the bottom of the container which should not be disturbed.
  12. The 15 liters of clear liquid should then be syphoned off. The clear solution is then ready for use. The sediment remaining in large container is worthless and should be thrown away.
- The solution should be made frequently. Solutions as much as four or five days old have given us satisfactory results.
- This solution is used for primary cleansing of the wound, and for whatever subsequent redressings may be necessary. In addition, according to the extent of the injury, a 4 ounce or 8 ounce bottle of the solution is furnished to the injured, with instructions to keep the bandage over the injury continuously moistened with it between redressings.
- A method of preparing Dakin's solution, as described by Dr. G. E. Cullen, chemist in the Carrel clinic at the Rockefeller Institute, including directions for testing the same, will, according to Dr. Schubmehl, be introduced at the West Lynn dispensary. Dr. Cullen's description is as follows:

*Definition.*—Dakin's solution is a solution of sodium hypochlorite ( $\text{NaOCl}$ ) which contains not less than 0.45 per cent nor more than 0.50 per cent sodium hypochlorite, and which is not alkaline to solid phenolphthalein. If the percentage of sodium hypochlorite is less than 0.45 per cent the antiseptic power of the solution is too low; if greater than 0.50 per cent the solution is irritating. If the solution is alkaline to phenolphthalein, it is irritating.

*Titration of Dakin's solution.*—The percentage of sodium hypochlorite is determined by titrating with tenth normal sodium hyposulphite (thiosulphate) the amount of iodine liberated by a measured amount of Dakin's solution. The technique is as follows:

Measure 10 c. c. of Dakin's solution, using a bulb pipette, into a beaker or Erlenmeyer flask containing about 50 to 75 c. c. of water.

(NOTE.—The disappearance of color is most easily observed when the volume of fluid in the vessel is between 50 and 100 c. c.)

Add 10 c. c. of a 10 per cent potassium iodide solution and 2 c. c. of glacial acetic acid. Then run decinormal hyposulphite solution into the flask from a burette until the discoloration of the solution is complete.

The number of cubic centimeters decinormal hyposulphite required to decolorize the solution multiplied by the factor 0.03723 gives the percentage of sodium hypochlorite. For example, 12.10 c. c.  $\times$  0.03723 = 0.45 per cent, 13.43 c. c.  $\times$  0.03723 = 0.50 per cent.

*Test for alkalinity.*—A few crystals of powdered phenolphthalein are dropped on the surface of 10 to 20 c. c. of the solution to be tested. Dakin's solution should remain entirely colorless. If there is any red discoloration, the solution is too alkaline and must either be discarded or neutralized.

(NOTE.—It is important to remember that the tests of Dakin's solution for alkalinity and for strength of sodium hypochlorite are entirely independent, but equally important.)

*Preparation.*—Dakin's solution may be satisfactorily prepared in any one of several ways.

First: By the electrolysis of a sodium chloride solution. This method gives a more satisfactory product, but requires apparatus and electric current that are not always available.

Second: By the action of chlorine on sodium carbonate. This, the most direct method, has hitherto been practically unavailable because of the difficulty of measuring liquid chlorine. When this disadvantage has been overcome, this method should prove entirely satisfactory.

Third: By the double decomposition of calcium hypochlorite and sodium carbonate. This method, the one first used by Dakin, has been, because of the ease of obtaining the necessary chemicals, the most available one. The alkalinity of the solution, after the precipitation of the calcium carbonate, may be neutralized either by the addition of boric acid or by the use of a mixture of sodium carbonate and sodium bicarbonate in the precipitation. In either case it is necessary to determine the percentage of available chlorine in the bleaching powder with which one is working.

*Titration of bleaching powder.*—Exactly 20 grams of bleaching powder made up of small samples from different parts of the jar, in order to obtain a uniform sample, are well stirred up through a filter paper and a 10 c. c. sample of the filtrate is titrated in exactly the same manner as in the titration of Dakin's solution. In this case the number of c. c. of decinormal hyposulphite required to decolorize is multiplied by the factor 1.773 to give the percentage of active chlorine.

The following table by Daufresne gives directly, according to the amount of active chlorine contained in the bleaching powder, the quantity of bleaching powder, sodium carbonate (dry), and sodium bicarbonate to prepare 10 liters of Dakin's solution:

Percentage in active chlorine of the chloride of lime.	Quantities of ingredients to use for preparing 10 liters of Dakin's solution at 0.475 per cent of NaOCl.		
	Chloride of lime.	Dry sodium carbon- ate.	Sodium bicar- bonate.
	<i>Grains.</i>	<i>Grains.</i>	<i>Grains.</i>
20.....	230	115	96
21.....	220	110	92
22.....	210	105	88
23.....	200	100	84
24.....	192	96	80
25.....	184	92	76
26.....	177	89	72
27.....	170	85	70
28.....	164	82	68
29.....	159	80	66
30.....	154	77	64
31.....	148	74	62
32.....	144	72	60
33.....	140	70	59
34.....	136	68	57
35.....	132	66	55
36.....	128	64	53
37.....	124	62	52

*Example.*—If 10 c. c. of the filtrate require 16.6 c. c. of decinormal hyposulphite percentage of active chlorine is  $16.6 \times 1.773 = 29.4$  per cent. That is, we require to prepare 10 liters of the solution 159 grams bleaching powder, 80 grams carbonate of sodium, and 66 grams of bicarbonate of sodium. If dry sodium carbonate is unavailable one should use 2.85 times as much of the sodium carbonate crystals. That is, 228 grams sodium carbonate (crystals).

*Details of preparation.*—Place in a 20-liter flask or bottle the amount of bleaching powder indicated by the titration and mix well with 5 liters of tap water. Shake vigorously and allow to stand for several hours (overnight).

Dissolve the designated amounts of sodium carbonate and sodium bicarbonate in another 5 liters of tap water. In the morning, or after 6 to 12 hours, pour the solution of sodium carbonates into the bottle containing the bleaching powder; shake well, and allow the precipitated calcium carbonate to settle. After half an hour siphon off the clear liquid through a double filter paper. The product should be perfectly clear and should be titrated for strength of hypochlorite and tested for alkalinity.

*Preservation.*—Since light greatly accelerates the rate of decomposition of the hypochlorite solution, it is best to keep Dakin's solution either in dark bottles or a dark cupboard or an ice box. Daufresne has found that the addition of 5 milligrams potassium permanganate per liter of solution exerts a markedly stabilizing effect. It is convenient to make a half per cent (5 grs. per liter) solution of potassium permanganate and add 1 c. c. of this solution per liter of Dakin's solution. The color imparted by the permanganate does not interfere with the titration.

The following statement regarding the use of Dakin's solution is made by Dr. W. G. Hudson, medical director of E. I. du Pont de Nemours & Co., Wilmington, Del.:

*Dakin's solution.*—Without being able to offer any detail case history, I can say that Dakin's solution has been of considerable use to us and is undoubtedly a long step forward in the antiseptic treatment of wounds. We have

adhered to the original Dakin formula, which is prepared by one of our chemists. I believe, however, that there will be many improvements in the technique of making this solution, \* \* \*. We should not lose sight of the fact, however, that at least half of the Carrel-Dakin method of wound treatment lies in the method of application.

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#### TREATMENT OF BURNS WITH PREPARATIONS SIMILAR TO AMBRINE.

In connection with the use of Carrel-Dakin solution in treating wounds it is interesting to note the method of treating burns as used at the West Lynn dispensary of the General Electric Co. Dr. Schubmehl has supplied the bureau with directions for making and using a preparation similar to ambrine for this treatment, as follows:

Heat in separate containers until liquefied equal parts parowax, powdered rosin, and commercial white wax. Combine by stirring each into the other. While still hot, remove floating foreign particles by straining through three or four thicknesses of gauze. Pour into 1-ounce, 2-ounce, or 3-ounce molds as desired. Keep in sterile container.

To apply, heat until liquefied properly, not over 70° C. (158° F.). Cleanse burned area with Dakin solution. Cover wound temporarily with dry sterile gauze and apply blast from electric fan until wound is thoroughly dry. Remove temporary gauze from wound, then, with a fine camel's-hair brush, paint wound with the hot preparation, cover wound with thin layer of absorbent cotton, paint over the cotton-covered wound again, apply another thin layer of cotton, cover with sterile gauze and bandage lightly.

This dressing is easily removed without pain to the injured or harm to the injury by simply lifting the dressing from the wound. To re-dress, which should be done every 24 hours, the wound should be recleaned with Dakin's solution, the hot preparation applied, and the injury rebandaged as previously.

Regarding paraffin burn dressings, as used by E. I. du Pont de Nemours & Co., Dr. W. G. Hudson, the medical director of that company, says:

*Paraffin burn dressings.*—We have made some experiments in regard to artificial preparations resembling ambrine, but can not see that the addition of either rosin or white wax is any advantage. Both of these substances seem to me to impair the physical qualities of the paraffin, and the rosin, in particular, is prone to separate out in small spots. I do not believe there is any rosin in the original ambrine. \* \* \*

We have used a considerable amount of the genuine imported ambrine, and have lately been trying the mixture prepared by Johnson & Johnson under the name of Redintol with equally good results. Redintol seems to have the right physical characters, and is stated to be chiefly a mixture of paraffin with a small percentage of gutta-percha.

When our stock of these two materials is used up I propose to try a sample of plain paraffin submitted by the Standard Oil Co. as being adapted to the treatment of burns. It seems that different lots of paraffin differ widely in

their physical characters, and the Standard Oil Co. has succeeded in selecting a particular variety of paraffin which has all the appearances of possessing the right physical characteristics for burn treatment without the necessity of making any admixtures. \* \* \*

I believe an essential part of this treatment is to get the burned area into a reasonably aseptic condition before applying the paraffin mixture. There is room for considerable study here, for, while Dakin's solution undoubtedly does the work, there are some patients who complain bitterly of the pain which it causes. It is possible that some other antiseptic may be found equally applicable to this field and less painful, bearing in mind always the danger from poisoning by absorption of the material used.

In our early use of paraffin dressings we used a spraying apparatus, following the original technique reported from France. We found no spraying apparatus which the market afforded at that time was adapted for spraying such preparations, and I therefore had to design one for this purpose. \* \* \* Further experience, however, showed that there is not enough advantage to be gained from the use of sprays to pay for the complications introduced by such apparatus, and in applying this treatment at the present time our surgeons generally make use of sterilized brushes. The chief advantage of the spray is in connection with the first part of the application, the first coat when applied by a spray being practically painless, whereas it gives a slight amount of pain when a brush is used. The difference, however, is very slight.

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#### CONFERENCE OF INDUSTRIAL PHYSICIANS AT HARRISBURG, FEBRUARY, 1917.

Under the auspices of the Pennsylvania Department of Labor and Industry the fourth annual conference<sup>1</sup> of industrial physicians was held at Harrisburg, February 16, 1917, the proceedings of which were published in the Pennsylvania Medical Journal for June and reprinted as a pamphlet of 49 pages recently issued by the department. Dr. Francis D. Patterson, chief of the division of industrial hygiene and engineering of the State department of labor and industry, acted as chairman of the conference, and the address of welcome was delivered by Dr. John Price Jackson, commissioner.

Dr. W. L. Estes, of St. Luke's Hospital, South Bethlehem, discussed the workman's compensation law of Pennsylvania from the physician's standpoint. He pointed out that in his opinion the time during which the employer shall furnish reasonable medical, surgical, and hospital services, medicines, and supplies as provided by law, namely 14 days, and the maximum amount of the fee allowed physicians by law, namely \$25 except for a major operation, for which the fee allowed is \$75, are inadequate. He suggested that, as the records of hospitals show that the average treatment of each case in a hospital extends over 17 days, under the Pennsylvania law it may be neces-

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<sup>1</sup> An account of two similar conferences, one held on February 17 and the other on May 18, 1916, is given in the MONTHLY REVIEW for February, 1917, pages 267 to 272.



sary for a physician either to give up a case at the end of the 14 days or to treat it at a dead loss to himself. As to the amount of fee allowed, Dr. Estes showed that the expense to the physician in treating certain severe cases might amount to a considerable sum, leaving for his services for two weeks a remuneration wholly inadequate to compensate for the time spent and skill required. Mention was made of a commission of physicians organized to propose definite suggestions for amendments to the law, which commission has recommended (1) an extension of the period of direct compensation of physicians from 14 days to 30 days, and (2) an increase of the maximum compensation for treatment from \$75 to \$200.

Frederick L. Hoffman, of the Prudential Life Insurance Co., advocated the payment of compensation for industrial diseases, asserting that it is "most regrettable that there should not be a more active public interest in a condition which is obviously evidence of gross unfairness and inequality, in that the man who is injured by lead poisoning, or anthrax, or industrial phthisis, in consequence of his occupation, is as rightly entitled to compensation as the man who is injured by a boiler explosion, or a train collision, or the fall of a ladder." He suggested that the economic burden resulting from occupational diseases should rest directly and exclusively upon the industries concerned. The occurrence of obviously preventable diseases of workmen in the course of their employment is matter of community responsibility, the first essential requirement of which was declared to be the prompt reporting of all occupational diseases to the local or State board of health, for "it is the duty of every physician to assist the State to the fullest possible extent in this direction." The second requirement mentioned was the necessity for more frequent reporting of interesting cases of occupational diseases with regard to which the American medical literature at the present time is of very limited extent. The importance of perfecting a list of the more important or readily cognizable occupational diseases was also suggested. In this connection hernia was referred to as a "borderland" case, being often wrongfully attributed to occupational strain when it is in fact the resultant effect of normal causes. Pulmonary tuberculosis or fibroid phthisis was noted as a disease of the utmost importance to employers and employees, since its diagnosis frequently is difficult and often long delayed. The Massachusetts act providing compensation for occupational diseases was suggested as a possible model of legislation along this line, although the speaker declared that after all it is a primary question of social justice and the method or means of accomplishing this is of secondary importance.

A paper of more than ordinary interest and importance was read by Dr. William O'Neill Sherman, chief surgeon, Carnegie Steel



Co., Pittsburgh, describing the Carrel method of wound sterilization by the use of Dakin's solution. This solution is now being successfully employed in Europe in the treatment of wounded soldiers to abort or prevent infection and control suppuration. One of the great problems attached to the treatment of soldiers wounded in battle is that of combating wound infection, which appears to be far greater in the present war than in previous wars. "The virulence of infection surpasses anything known heretofore of wound infection. The first efforts to combat suppuration at the early outbreak of the war were woefully inefficient; malignant suppuration was very common, and all efforts to suppress it were futile."

Dakin's solution, as now used, is thus described by Dr. Sherman:

With chloride of lime (bleaching powder) having 25 per cent of active chlorine the quantities of necessary substances to prepare 10 liters of solution are the following: 200 grams chloride of lime (bleaching powder) (25 per cent active chlorine); 100 grams sodium carbonate, dry (soda of Solway); 80 grams sodium bicarbonate, dry. Put into a 12-liter flask the 200 grams of chloride of lime and 5 liters of ordinary water, shake vigorously for a few minutes, and leave in contact for 6 to 12 hours, one night for example. (Shake until dissolved—at least until the big pieces are dissolved. Not all the pieces will dissolve, large pieces float, notice only floating pieces.) At the same time dissolve in 5 liters of ordinary cold water the carbonate and bicarbonate of soda. After leaving from 6 to 12 hours pour the salt solution in the flask containing the macerated chloride of lime, shake vigorously for a few minutes, and leave to allow the calcium carbonate to be precipitated. In about one-half hour siphon the liquid and filter with a double paper to obtain a good, clear liquid, which should always be kept in a dark place.

The successful treatment of a wound depends upon a careful following of the technic of Carrel, for, it is stated, Dakin's solution represents 20 per cent of the cure and the technic of Carrel represents 80 per cent

The method is not one of drainage or multiple incisions; it is the opposite of this procedure. The success of the treatment is dependent on the thoroughness with which it is applied and the care given to the most minute details of the technic. \* \* \*

The area surrounding the wound should be disinfected with tincture of iodine, and an injection of Dakin's solution in the wound, if it is small or narrow, should be made. If it is wide and freely open a gauze pack which is saturated with Dakin's solution should be applied. The prognosis is materially aided if this dressing is used.

If the wounds are extensive or conditions warrant a general anesthetic should be administered and the operating field prepared in the usual way. A free incision and thorough exploration for foreign bodies of all wounds should be made at the earliest possible opportunity. The foreign bodies are localized with the fluoroscope or with stereoscopic skiagrams. All bleeding points should be ligated; the shell tract should be freely opened and all devitalized tissue excised. The Carrel tubes should be carried to the bottom of the wound and gauze loosely placed between them. Before completing the final dressing the solution can be injected in the wound to ascertain the amount of solution neces-

sary to fill the cavity completely and whether or not it is reaching all parts. The final dressing consists of a gauze pad saturated with Dakin's solution, over which a large pad of nonabsorbent cotton, which completely envelops the extremity, is placed. Turkish toweling can be used instead of nonabsorbent gauze pads, if desired.

Dr. Sherman stated that the Carrel method of wound sterilization has proved very effective in aborting or preventing infection, which causes a vast majority of the deaths, amputations, disabilities, and complications among soldiers. In conclusion he pointed out that it has been demonstrated that the great majority of wounds can be closed by sutures and without suppuration; that the stay in the hospital and period of convalescence is greatly shortened, many now leaving in four to six weeks who would have required treatment for from three to six months under former methods; that all complications such as atrophies, ankyloses, adhesions, septecemia, and amputations are minimized; and that the mortality rate is greatly reduced. One instance is mentioned where a certain surgeon has reported that he is now doing one amputation for sepsis and hemorrhage where formerly 20 were necessary; that there is now but 1 death where formerly there were 10, and that many cases which were labeled at the front "amputate on arrival" have been saved from amputation. The paper was concluded with the following summary:

1. Infection can be aborted if the treatment is begun within the first 24 hours.
2. Suppuration, when well established, can be controlled if the focus can be reached.
3. The success of the treatment is dependent on the perfection of the Carrel technic and the acceptance of all the details.
4. The effect of Dakin's solution is entirely local; there being no danger of toxemia from absorption, regardless of the amount used.
5. Carrel's technic, using Dakin's solution, is a specific against infection of wounds.

The application of Carrel's method to infections resulting from industrial injuries was briefly discussed by Dr. J. S. Lawrence, of Johns Hopkins University, Baltimore, who told how the method was being applied in Johns Hopkins Hospital.

At the afternoon session Dr. Edward Martin, professor of surgery, University of Pennsylvania, read a paper on the treatment of fractures of the long bones from the viewpoint of function, emphasizing the importance of immediate anatomic reduction and of ascertaining definitely whether such reduction is adequate or perfect in order to restore function. For the latter a radiogram or fluoroscopic examination was recommended.

The last speaker, Dr. J. C. Bloodgood, associate professor of clinical surgery, Johns Hopkins University, urged the value of standardization in first-aid methods so as to avoid conflict, possibly with serious consequences, in determining and using the most effective practices.

## SOCIAL INSURANCE.

### SOCIAL INSURANCE BY THE UNITED STATES GOVERNMENT.

Articles in the MONTHLY REVIEW for August, 1917 (pp. 92 to 104), and for September (pp. 100 to 103), gave some account of the action and proposed action of Congress with regard to the protection of persons and property exposed to hazards on account of war conditions and with regard to the compensation of persons injured. The act of September 2, 1914, creating a Bureau of War Risk Insurance in the Treasury Department, amended June 12, 1917, was further amended by an act approved by the President on October 6, the law as it now stands going far beyond its original intent. First enacted as a temporary provision for providing insurance for American vessels and cargoes against the risk of war, the act by the amendment of June 12, as pointed out in the MONTHLY REVIEW for August, provided also for the insurance of the persons and personal property of masters, officers, and crews of American vessels whenever it appeared that adequate war-risk insurance was not otherwise obtainable on reasonable terms. By the amendment of October 6, various amendments and additions are made to the original act as amended July 12, the whole becoming Article I of the act, and three new articles are added.

These amendments and additions relate in large measure to the personnel and administrative methods of the bureau, but also make appropriations for the amounts to be expended under the three additional articles enacted. Thus the expenses under Article II, which relates to military and naval family allowances, are provided for by an appropriation of \$141,000,000; those under Article III, which relates to a military and naval compensation system, by an appropriation of \$12,150,000; and those under Article IV, a military and naval insurance scheme, by an appropriation of \$23,000,000. A military and naval pay deposit fund, made up of such portions of one-half of an enlisted man's monthly pay, not allotted, as the Secretary of War and the Secretary of the Navy may require to be deposited, is also provided for, and whatever sum may be necessary for the payment of interest thereon is likewise appropriated.

In construing the law, the term "injury" is held to include disease. The term "child" includes a child adopted six months before the

enactment of the amendatory act or before enlistment or entrance into active service in the military or naval forces of the United States; also a stepchild, if a member of the man's household, and an illegitimate child, if acknowledged by the father in an instrument in writing, or if he has been judicially ordered to contribute to the child's support. Illegitimate children, to come within the act, must, if born after December 31, 1917, have been born in the United States. A child's dependency is assumed to cease on marriage, or on the attainment of 18 years of age unless insane, idiotic, or otherwise permanently helpless.

As already indicated, the second article of the act provides for allotments and family allowances, and directs certain payments to be made, not more than one-half the pay nor less than \$15 per month in amount; but if the payments are to a divorced wife the amount shall not exceed the amount specified in a court order or written agreement, or for an illegitimate child supported under a judicial order the amount fixed in the order or decree. The allotment from the pay of enlisted men will be supplemented by the Government to an amount not exceeding \$50 per month, on written application to the bureau in accordance with conditions and limitations provided in the act. Payments by the Government are \$15 monthly to a wife alone, \$25 to a wife and one child, \$32.50 to a wife and two children, and \$5 per month for each additional child. To an orphan child \$5 per month will be paid, to two such children \$12.50, to three \$20, and to four \$30, and to each additional child \$5 per month. One or two parents receive \$10 per month each; grandchildren, brothers, and sisters receive \$5 each from the Government, and parents in excess of two the same amount, grandparents and step-parents being included in that term. Payments to grandchildren, parents (including grandparents), brothers, and sisters, are to be made only if there is actual dependency, and payments to wife and children are made only if and while a compulsory allotment is being made from the pay of the enlisted man. Provision is also made for cases in which allotments are to be made to more than one class of dependents.

A notable departure appears in the provisions of Article III, in which there is established a system of compensation for death or disability, this system being designed to take the place of the pension system which has been supported by the Government practically since its foundation. Compensation is to be paid for death or disability resulting from personal injury suffered or disease contracted in the line of duty by commissioned officers or enlisted men, or by any member of the Army Nurse Corps (female), or the Navy Nurse

Corps (female), when employed in active service under the War Department or Navy Department. The phrase "in the course of the service" appearing in the act as it came from the House was stricken out by the Senate, and a provision added "but no compensation shall be paid if the injury or disease has been caused by his own willful misconduct." Beneficiaries under the act are the injured person, a wife or child, or a dependent widowed mother, and none other. The benefits in cases of death are fixed sums and are uniform for dependents of all classes of persons without regard to rank. Payments to a widow alone are \$25 monthly; to a widow and one child \$35; to a widow and two children \$47.50, with \$5 for each additional child up to two. An orphan child receives \$20, two orphans \$30, three \$40, and each additional child up to two \$5. The payment to a widowed mother is \$20 per month, but the aggregate of payments to dependents in any individual case may not exceed \$75. A widowed mother may receive benefits by reason of the death of one child only, and not then if she is receiving compensation benefits for the death of her husband. Payments to a widow or widowed mother continue until death or remarriage, and no widow is to be entitled to benefits if the marriage takes place later than 10 years after the time of the injury.

Payments for total disability are fixed at \$30 per month for a man alone, \$45 if he has a wife but no child, \$55 if there is a wife and one child, \$65 if wife and two children, and \$75 if wife and three or more children living. If the wife is not living, but there is one child, \$40 is to be paid, with \$10 for each additional child up to two. An additional \$10 is to be paid in case there is also a dependent widowed mother. If a constant attendant is required, an amount not exceeding \$20 per month may be paid in addition to the foregoing. For the loss of both feet or both hands or for total blindness, or where the person is helplessly and permanently bedridden from causes occurring in the line of duty in the service of the United States, the monthly payment is fixed at \$100 without other allowance.

Partial disability is to be compensated on the basis of reduction of earning capacity, no payments being made where the reduction is less than 10 per cent. A schedule of disability ratings, based upon the average impairments of earning capacity from such injuries in civil occupations and not upon the impairment in the individual case, so as to avoid reducing the rate of compensation where there has been successful rehabilitation is to be adopted and applied by the bureau.

Medical, surgical, and hospital services are to be furnished, with such supplies, including artificial limbs, as the director may determine to be useful and reasonably necessary. Where death ensues before discharge or resignation from service, burial expenses and



cost of return of the body to the home of the decedent may be met in an amount not to exceed \$100.

Provision is made for instruction in such courses of rehabilitation, reeducation, and vocational training as may be provided by the Government. If such course will interfere with a gainful occupation already engaged in, a form of enlistment may be required which will bring the person again into the service, and will entitle him to the rate of pay received during the last month of his active service and his family to family allowances during the period of his training. Refusal to accept such training and refusal to accept reasonable medical and surgical treatment are grounds for the suspension of compensation.

Provision is made for the review of awards. Benefits under the article are not payable while the person is in receipt of service or retirement pay, are not assignable, and are exempt from attachment, execution, and taxation. Payments because of disability or death of members of the Army Nurse Corps (female) or the Navy Nurse Corps (female) are to be in lieu of any compensation under the Federal Employees' Compensation Act of September 7, 1916. Injuries received under circumstances creating a legal liability upon third parties will be compensated by the Government on condition that the beneficiary assign to it any right of action he may have to enforce such liability.

The fourth article relates to insurance and permits every commissioned officer and enlisted man and every member of the Army Nurse Corps (female) and the Navy Nurse Corps (female), when employed in active service under the War Department or Navy Department, to take out insurance in amounts not less than \$1,000 nor more than \$10,000, in any multiple of \$500, the policy coming due in case of total disability or death. The premium rates are to be the net rates based upon the American Experience Table of Mortality, and interest at  $3\frac{1}{2}$  per cent per annum, all expense of administration and the excess mortality and disability cost caused by the hazards of war being borne by the United States. Beneficiaries that may be named are a spouse, child, grandchild, parent, brother, or sister. Beneficiaries may be changed by the insured within the above classes, subject to regulations; but if none of them survive the insured, the reserve value of the policy is payable to the estate of the insured. During the war and until conversion, the insurance is to be administered as term insurance for successive terms of one year, provision being made for conversion not later than five years after the date of the termination of the war into ordinary life, twenty-payment life, endowments maturing at age 62, or other usual forms of insurance.



The text of the act approved on October 6, 1917, is as follows:

[PUBLIC—No. 90—65TH CONGRESS.]

[H. R. 5723.]

An Act To amend an Act entitled "An Act to authorize the establishment of a Bureau of War Risk Insurance in the Treasury Department," approved September second, nineteen hundred and fourteen, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the first section of the Act entitled "An Act to authorize the establishment of a Bureau of War Risk Insurance in the Treasury Department," approved September second, nineteen hundred and fourteen, as amended, is hereby amended to read as follows:

"ARTICLE I.

"Section 1. That there is established in the Treasury Department a Bureau to be known as the Bureau of War Risk Insurance, the director of which shall receive a salary at the rate of \$5,000 per annum.

"That there be in such bureau a Division of Marine and Seamen's Insurance and a Division of Military and Naval Insurance in charge of a commissioner of Marine and Seamen's Insurance and a commissioner of Military and Naval Insurance, respectively, each of whom shall receive a salary of \$4,000 per annum."

Sec. 2. That such Act of September second, nineteen hundred and fourteen, as amended, is hereby amended by adding new sections, as follows:

"Sec. 12. That sections two to seven, inclusive, and section nine, shall be construed to refer only to the Division of Marine and Seamen's Insurance.

"Sec. 13. That the director, subject to the general direction of the Secretary of the Treasury, shall administer, execute, and enforce the provisions of this Act, and for that purpose have full power and authority to make rules and regulations, not inconsistent with the provisions of this Act, necessary or appropriate to carry out its purposes, and shall decide all questions arising under the Act, except as otherwise provided in sections five and four hundred and five. Wherever under any provision or provisions of the Act regulations are directed or authorized to be made, such regulations, unless the context otherwise requires, shall or may be made by the director, subject to the general direction of the Secretary of the Treasury. The director shall adopt reasonable and proper rules to govern the procedure of the divisions, to regulate the matter of the compensation, if any, but in no case to exceed ten per centum, to be paid to claim agents and attorneys for services in connection with any of the matters provided for in articles two, three, and four, and to regulate and provide for the nature and extent of the proofs and evidence and the method of taking and furnishing the same in order to establish the right to benefits of allowance, allotment, compensation, or insurance provided for in this Act, the forms of application of those claiming to be entitled to such benefits, the method of making investigations and medical examinations, and the manner and form of adjudications and awards.

"Sec. 14. That the bureau and its divisions shall have such deputies, assistants, actuaries, clerks, and other employees as may be from time to time provided by Congress. The bureau shall, by arrangement with the Secretary of War and the Secretary of the Navy, respectively, make use of the services of

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surgeons in the Army and Navy. The Secretary of the Treasury is authorized to establish an advisory board consisting of three members skilled in the practice of insurance against death or disability for the purpose of assisting the Division of Military and Naval Insurance in fixing premium rates and in the adjustment of claims for losses under the contracts of insurance provided for in article four and in adjusting claims for compensation under article three; compensation for the persons so appointed to be determined by the Secretary of the Treasury, but not to exceed \$20 a day each while actually employed.

"Sec. 15. That for the purposes of this Act, the director, commissioners, and deputy commissioners shall have power to issue subpoenas for and compel the attendance of witnesses within a radius of one hundred miles, to require the production of books, papers, documents, and other evidence, to administer oaths and to examine witnesses upon any matter within the jurisdiction of the bureau. The director may obtain such information and such reports from officials and employees of the departments of the Government of the United States and of the States as may be agreed upon by the heads of the respective departments. In case of disobedience to a subpoena, the bureau may invoke the aid of any district court of the United States in requiring the attendance and testimony of witnesses and the production of documentary evidence, and such court, within the jurisdiction of which the inquiry is carried on, may, in case of contumacy or refusal to obey a subpoena issued to any officer, agent, or employee of any corporation or other person, issue an order requiring such corporation or other person to appear before the bureau, or to give evidence touching the matter in question; and any failure to obey such order of the court may be punished by such court as a contempt thereof. Any person so required to attend as a witness shall be allowed and paid the same fees and mileage as are paid witnesses in the district courts of the United States.

"Sec. 16. That the director shall submit annually to the Secretary of the Treasury estimates of the appropriations necessary for the work of the bureau.

"Sec. 17. That for the purpose of carrying out the provisions of this Act there is hereby appropriated, out of any moneys in the Treasury not otherwise appropriated, the sum of \$100,000, for the payment of all expenses incident to the work authorized under this Act, including salaries of the director and commissioners and of such deputies, assistants, accountants, experts, clerks, and other employees in the District of Columbia or elsewhere, as the Secretary of the Treasury may deem necessary, traveling expenses, rent and equipment of offices, typewriters and exchange of same, purchase of law books and books of reference, printing and binding to be done at the Government Printing Office, and all other necessary expenses. With the exception of the director, the commissioners, and such special experts as the Secretary of the Treasury may from time to time find necessary for the conduct of the work of the bureau, all employees of the bureau shall be appointed from lists of eligibles to be supplied by the Civil Service Commission and in accordance with the civil-service law. Such fees, allowances, and salaries shall be the same as are paid for similar services in other departments of the Government.

"Sec. 18. That there is hereby appropriated from any money in the Treasury not otherwise appropriated, the sum of \$141,000,000, to be known as the military and naval family allowance appropriation, for the payment of the family allowances provided by Article II. Payments out of this appropriation shall be made upon and in accordance with awards by the Commissioner of the Division of Military and Naval Insurance.

"Sec. 19. That there is hereby appropriated, from any money in the Treasury not otherwise appropriated, the sum of \$12,150,000, to be known as the military

and naval compensation appropriation, for the payment of the compensation, funeral expenses, services, and supplies provided by Article III. Payments out of this appropriation shall be made upon and in accordance with awards by the director.

"Sec. 20. That there is hereby appropriated, from any money in the Treasury not otherwise appropriated, the sum of \$23,000,000, to be known as the military and naval insurance appropriation. All premiums that may be collected for the insurance provided by the provisions of Article IV shall be deposited and covered into the Treasury to the credit of this appropriation.

"Such sum, including all premium payments, is hereby made available for the payment of the liabilities of the United States incurred under contracts of insurance made under the provisions of Article IV. Payments from this appropriation shall be made upon and in accordance with awards by the director.

"Sec. 21. That there shall be set aside as a separate fund in the Treasury, to be known as the military and naval pay deposit fund, all sums held out of pay as provided by section two hundred and three of this Act. Such fund, including all additions, is hereby made available for the payment of the sums so held and deposited, with interest, as provided in section two hundred and three, and the amount necessary to pay interest is hereby appropriated.

"Sec. 22. That for the purpose of this amendatory Act the marriage of the claimant to the person on account of whom the claim is made shall be shown—

"(1) By a duly verified copy of a public or church record; or

"(2) By the affidavit of the clergyman or magistrate who officiated; or

"(3) By the testimony of two or more eyewitnesses to the ceremony; or

"(4) By a duly verified copy of the church record of baptism of the children; or

"(5) By the testimony of two or more witnesses who know that the parties lived together as husband and wife, and were recognized as such, and who shall state how long, within their knowledge, such relation continued: *Provided*, That marriages, except such as are mentioned in section forty-seven hundred and five of the Revised Statutes, shall be proven in compensation or insurance cases to be legal marriages according to the law of the place where the parties resided at the time of marriage or at the time when the right to compensation or insurance accrued; and the open and notorious illicit cohabitation of a widow who is a claimant shall operate to terminate her right to compensation or insurance from the commencement of such cohabitation: *Provided further*, That for the purpose of the administration of Article II of this Act marriage shall be conclusively presumed, in the absence of proof, that there is a legal spouse living, if the man and woman have lived together in the openly acknowledged relation of husband and wife during the two years immediately preceding the date of the declaration of war, or the date of enlistment or of entrance into or employment in active service in the military or naval forces of the United States if subsequent to such declaration."

In Articles II, III, and IV of this Act unless the context otherwise requires—

"(1) The term 'child' includes—

"(a) A legitimate child.

"(b) A child legally adopted more than six months before the enactment of this amendatory Act or before enlistment or entrance into our employment in active service in the military or naval forces of the United States, whichever of these dates is the later.

"(c) A stepchild, if a member of the man's household.

"(d) An illegitimate child, but, as to the father, only, if acknowledged by instrument in writing signed by him, or if he has been judicially ordered or decreed

to contribute to such child's support, and if such child, if born after December thirty-first, nineteen hundred and seventeen, shall have been born in the United States, or in its insular possessions.

" (2) The term 'grandchild' means a child as above defined of a child as above defined.

" (3) Except as used in section four hundred and one and in section four hundred and two the terms 'child' and 'grandchild' are limited to unmarried persons either (a) under eighteen years of age, or (b) of any age, if insane, idiotic, or otherwise permanently helpless.

" (4) The term 'parent' includes a father, mother, grandfather, grandmother, stepfather, and stepmother, either of the person in the service or of the spouse.

" (5) The terms 'brother' and 'sister' include brothers and sisters of the half blood as well as those of the whole blood, stepbrothers and stepsisters, and brothers and sisters through adoption.

" (6) The term 'commissioned officer' includes a warrant officer, but includes only an officer in active service in the military or naval forces of the United States.

" (7) The terms 'man' and 'enlisted man' mean a person, whether male or female, and whether enlisted, enrolled, or drafted into active service in the military or naval forces of the United States, and include noncommissioned and petty officers, and members of training camps authorized by law.

" (8) The term 'enlistment' includes voluntary enlistment, draft, and enrollment in active service in the military or naval forces of the United States.

" (9) The term 'commissioner' means the Commissioner of Military and Naval Insurance.

" (10) The term 'injury' includes disease.

" (11) The term 'pay' means the pay for service in the United States according to grade and length of service, excluding all allowances.

" (12) The term 'military or naval forces' means the Army, the Navy, the Marine Corps, the Coast Guard, the Naval Reserves, the National Naval Volunteers, and any other branch of the United States service while serving pursuant to law with the Army or the Navy.

" Sec. 23. That when, by the terms of this amendatory Act, any payment is to be made to a minor, other than a person in the military or naval forces of the United States, or to a person mentally incompetent, such payment shall be made to the person who is constituted guardian or curator by the laws of the State or residence of claimant, or is otherwise legally vested with responsibility or care of the claimant.

" Sec. 24. That the Bureau of War Risk Insurance, so far as practicable, shall upon request furnish information to and act for persons in the military or naval service, with respect to any contracts of insurance whether with the Government or otherwise, as may be prescribed by regulations. Said bureau may upon request procure from and keep a record of the amount and kind of insurance held by every commissioned and appointive officer and of every enlisted man in the military or naval service of the United States, including the name and principal place of business of the company, society, or organization in which such insurance is held, the date of the policy, amount of premium, name and relationship of the beneficiary, and such other data as may be deemed of service in protecting the interests of the insured and beneficiaries.

" Sec. 25. That whoever in any claim for family allowance, compensation, or insurance, or in any document required by this Act or by regulation made under this Act, makes any statement of a material fact knowing it to be false, shall

be guilty of perjury and shall be punished by a fine of not more than \$5,000, or by imprisonment for not more than two years, or both.

"Sec. 26. That if any person entitled to payment of family allowance or compensation under this Act, whose right to such payment under this Act ceases upon the happening of any contingency, thereafter fraudulently accepts any such payment, he shall be punished by a fine of not more than \$2,000, or by imprisonment for not more than one year, or both."

## ARTICLE II.

### ALLOTMENTS AND FAMILY ALLOWANCES.

Sec. 200. That the provisions of this article shall apply to all enlisted men in the military or naval forces of the United States.

Sec. 201. That allotment of pay shall, subject to the conditions, limitations, and exceptions hereinafter specified, be compulsory as to wife, a former wife divorced who has not remarried and to whom alimony has been decreed, and a child, and voluntary as to any other person; but on the written consent of the wife or former wife divorced, supported by evidence satisfactory to the bureau of her ability to support herself and the children in her custody, the allotment for her and for such children may be waived; and on the enlisted man's application or otherwise for good cause shown, exemption from the allotment may be granted upon such conditions as may be prescribed by regulations.

The monthly compulsory allotment shall be in an amount equal to the family allowance hereinafter specified except that it shall not be more than one-half the pay, or less than \$15; but for a wife living separate and apart under court order or written agreement or for a former wife divorced, it shall not exceed the amount specified in the court order, decree, or written agreement to be paid to her. For an illegitimate child, to whose support the father has been judicially ordered or decreed to contribute, it shall not exceed the amount fixed in the order or decree.

If there be an allotment for a wife or child, a former wife divorced and who has not remarried shall be entitled to a compulsory allotment only out of the difference, if any, between the allotment for the wife or child or both and one-half of the pay.

Sec. 202. That the enlisted man may allot any proportion or proportions or any fixed amount or amounts of his monthly pay or of the proportion thereof remaining after the compulsory allotment, for such purposes and for the benefit of such person or persons as he may direct, subject, however, to such conditions and limitations as may be prescribed under regulations to be made by the Secretary of War and the Secretary of the Navy, respectively.

Sec. 203. That in case one-half of an enlisted man's monthly pay is not allotted, regulations to be made by the Secretary of War and the Secretary of the Navy, respectively, may require, under such circumstances and conditions as may be prescribed in such regulations, that any proportion of such one-half pay as is not allotted shall be deposited to his credit, to be held during such period of his service as may be prescribed. Such deposits shall bear interest at the rate of four per centum per annum, with semiannual rests and, when payable, shall be paid principal and interest to the enlisted man, if living, otherwise to any beneficiary or beneficiaries he may have designated, or if there be no such beneficiary, then to the person or persons who would under the laws of the State of his residence be entitled to his personal property in case of intestacy.



Sec. 204. That a family allowance of not exceeding \$50 per month shall be granted and paid by the United States upon written application to the bureau by such enlisted man or by or on behalf of any prospective beneficiary, in accordance with and subject to the conditions, limitations, and exceptions hereinafter specified.

The family allowance shall be paid from the time of enlistment to death in or one month after discharge from the service, but not for more than one month after the termination of the present war emergency. No family allowance shall be made for any period preceding November first, nineteen hundred and seventeen. The payment shall be subject to such regulations as may be prescribed relative to cases of desertion and imprisonment and of missing men.

Subject to the conditions, limitations, and exceptions hereinabove and hereinafter specified, the family allowance payable per month shall be as follows:

Class A. In the case of a man, to his wife (including a former wife divorced) and to his child or children:

- (a) If there be a wife but no child, \$15.
- (b) If there be a wife and one child, \$25.
- (c) If there be a wife and two children, \$32.50, with \$5 per month additional for each additional child.
- (d) If there be no wife, but one child, \$5.
- (e) If there be no wife, but two children, \$12.50.
- (f) If there be no wife, but three children, \$20.
- (g) If there be no wife, but four children, \$30, with \$5 per month additional for each additional child.

Class B. In the case of a man or woman, to a grandchild, a parent, brother, or sister:

- (a) If there be one parent, \$10.
- (b) If there be two parents, \$20.
- (c) For each grandchild, brother, sister, and additional parent, \$5.

In the case of a woman, to a child or children:

- (d) If there be one child, \$5.
- (e) If there be two children, \$12.50.
- (f) If there be three children, \$20.
- (g) If there be four children, \$30, with \$5 per month additional for each additional child.

Sec. 205. That family allowances for members of Class A shall be paid only if and while a compulsory allotment is made to a member or members of such class. The monthly family allowance to a former wife divorced shall be payable only out of the difference, if any, between the monthly family allowance to the other members of Class A and the sum of \$50, and only then if alimony shall have been decreed to her. For a wife living separate and apart under court order or written agreement or to a former wife divorced the monthly allowance, together with the allotment, if any, shall not exceed the amount specified in the court order, decree, or written agreement to be paid to her. For an illegitimate child, to whose support the father has been judicially ordered or decreed to contribute, it shall not exceed the amount fixed in the order or decree.

Sec. 206. That family allowances to members of Class B shall be granted only if and while the member is dependent in whole or in part on the enlisted man, and then only if and while the enlisted man makes a monthly allotment of his pay for such member or members equal to the amount of the monthly family allowance as hereinabove specified, except that—

- (a) The maximum monthly allotment so required to be made to members of Class B shall be one-half of his pay.

(b) If he is making no allotment to a member of Class A, the minimum monthly allotment so designated to be made to members of Class B shall be \$15 per month.

(c) If he is making the compulsory allotment to a member of Class A, the minimum monthly allotment so designated to be made to members of Class B shall be one-seventh of his pay, but not less than \$5 per month.

On the enlisted man's application, or otherwise for good cause shown, exemption from this additional allotment under Class B as a condition to the allowance may be granted, upon such conditions as may be prescribed by regulations.

Sec. 207. That the amount of the family allowance to members of Class B shall be subject to each of the following limitations:

(a) If an allowance is paid to one or more beneficiaries of Class A, the total allowance to be paid to the beneficiaries of Class B shall not exceed the difference between the allowance paid to the beneficiaries of Class A and the sum of \$50.

(b) The total monthly allowance to beneficiaries of Class B added to the enlisted man's monthly allotment to them shall not exceed the average sum habitually contributed by him to their support monthly during the period of dependency but not exceeding a year immediately preceding his enlistment or the enactment of this amendatory Act.

Sec. 208. That as between the members of Class A and as between the members of Class B, the amount of the allotment and family allowance shall be apportioned as may be prescribed by regulations.

Sec. 209. The War and Navy Departments, respectively, shall pay over to the Treasury Department monthly the entire amount of such allotments for distribution to the beneficiaries, and the allotments and family allowances shall be paid by the bureau to or for the beneficiaries.

Sec. 210. That upon receipt of any application for family allowance the commissioner shall make all proper investigations and shall make an award, on the basis of which award the amount of the allotments to be made by the man shall be certified to the War Department or Navy Department, as may be proper. Whenever the commissioner shall have reason to believe that an allowance has been improperly made or that the conditions have changed, he shall investigate or reinvestigate and may modify the award. The amount of each monthly allotment and allowance shall be determined according to the conditions then existing.

### ARTICLE III.

#### COMPENSATION FOR DEATH OR DISABILITY.

Sec. 300. That for death or disability resulting from personal injury suffered or disease contracted in the line of duty, by any commissioned officer or enlisted man or by any member of the Army Nurse Corps (female) or of the Navy Nurse Corps (female) when employed in the active service under the War Department or Navy Department, the United States shall pay compensation as hereinafter provided; but no compensation shall be paid if the injury or disease has been caused by his own willful misconduct.

Sec. 301. That if death results from injury—

If the deceased leaves a widow or child, or if he leaves a widowed mother dependent upon him for support, the monthly compensation shall be the following amounts:

(a) For a widow alone, \$25.

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- (b) For a widow and one child, \$35.
- (c) For a widow and two children, \$47.50, with \$5 for each additional child up to two.
- (d) If there be no widow, then for one child, \$20.
- (e) For two children, \$30.
- (f) For three children, \$40, with \$5 for each additional child up to two.
- (g) For a widowed mother, \$20. The amount payable under this subdivision shall not be greater than a sum which, when added to the total amount payable to the widow and children, does not exceed \$75. This compensation shall be payable for the death of but one child, and no compensation for the death of a child shall be payable if such widowed mother is in receipt of compensation under the provisions of this article for the death of her husband. Such compensation shall be payable whether her widowhood arises before or after the death of the person and whenever her condition is such that if the person were living the widowed mother would have been dependent upon him for support.

If the death occur before discharge or resignation from service, the United States shall pay for burial expenses and the return of body to his home a sum not to exceed \$100, as may be fixed by regulations.

The payment of compensation to a widow or widowed mother shall continue until her death or remarriage.

The payment of compensation to or for a child shall continue until such child reaches the age of eighteen years or marries, or if such child be incapable, because of insanity, idiocy, or being otherwise permanently helpless, then during such incapacity.

Whenever the compensation payable to or for the benefit of any person under the provisions of this section is terminated by the happening of the contingency upon which it is limited, the compensation thereafter for the remaining beneficiary or beneficiaries, if any, shall be the amount which would have been payable to them if they had been the sole original beneficiaries.

As between the widow and the children not in her custody, and as between children, the amount of the compensation shall be apportioned as may be prescribed by regulations. The word "widow" as used in this section shall not include one who shall have married the deceased later than ten years after the time of injury.

Sec. 302. That if disability results from the injury—

(1) If and while the disability is total, the monthly compensation shall be the following amounts:

- (a) If he has neither wife nor child living, \$30.
- (b) If he has a wife but no child living, \$45.
- (c) If he has a wife and one child living, \$55.
- (d) If he has a wife and two children living, \$65.
- (e) If he has a wife and three or more children living, \$75.
- (f) If he has no wife but one child living, \$40, with \$10 for each additional child up to two.
- (g) If he has a widowed mother dependent on him for support, then, in addition to the above amounts, \$10.

To an injured person who is totally disabled and in addition so helpless as to be in constant need of a nurse or attendant, such additional sum shall be paid, but not exceeding \$20 per month, as the director may deem reasonable: *Provided, however,* That for the loss of both feet or both hands or both eyes, or for becoming totally blind or helpless and permanently bedridden from causes occurring in the line of duty in the service of the United States, the

rate of compensation shall be \$100 per month: *Provided further*, That no allowance shall be made for nurse or attendant.

(2) If and while the disability is partial, the monthly compensation shall be a percentage of the compensation that would be payable for his total disability, equal to the degree of the reduction in earning capacity resulting from the disability, but no compensation shall be payable for a reduction in earning capacity rated at less than ten per centum.

A schedule of ratings of reductions in earning capacity from specific injuries or combinations of injuries of a permanent nature shall be adopted and applied by the bureau. Ratings may be as high as one hundred per centum. The ratings shall be based, as far as practicable, upon the average impairments of earning capacity resulting from such injuries in civil occupations and not upon the impairment in earning capacity in each individual case, so that there shall be no reduction in the rate of compensation for individual success in overcoming the handicap of permanent injury. The bureau shall from time to time readjust this schedule of ratings in accordance with actual experience.

(3) In addition to the compensation above provided, the injured person shall be furnished by the United States such reasonable governmental medical, surgical, and hospital services and with such supplies, including artificial limbs, trusses, and similar appliances, as the director may determine to be useful and reasonably necessary: *Provided*, That nothing in this Act shall be construed to affect the necessary military control over any member of the military or naval establishments before he shall have been discharged from the military or naval service.

(4) The amount of each monthly payment shall be determined according to the family conditions then existing.

Sec. 303. That every person applying for or in receipt of compensation for disability under the provisions of this article shall, as frequently and at such times and places as may be reasonably required, submit himself to examination by a medical officer of the United States or by a duly qualified physician designated or approved by the director. He may have a duly qualified physician designated and paid by him present to participate in such examination. For all examinations he shall, in the discretion of the director, be paid his reasonable traveling and other expenses and also loss of wages incurred in order to submit to such examination. If he refuses to submit himself for, or in any way obstructs, any examination, his right to claim compensation under this article shall be suspended until such refusal or obstruction ceases. No compensation shall be payable while such refusal or obstruction continues, and no compensation shall be payable for the intervening period.

Every person in receipt of compensation for disability shall submit to any reasonable medical or surgical treatment furnished by the bureau whenever requested by the bureau; and the consequences of unreasonable refusal to submit to any such treatment shall not be deemed to result from the injury compensated for.

Sec. 304. That 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 allotment 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.

Sec. 305. That upon its own motion or upon application the bureau may at any time review an award, and, in accordance with the facts found upon such review, may end, diminish, or increase the compensation previously awarded, or, if compensation has been refused or discontinued, may award compensation.

Sec. 306. That no compensation shall be payable for death or disability which does not occur prior to or within one year after discharge or resignation from the service, except that where, after a medical examination made pursuant to regulations, at the time of discharge or resignation from the service, or within such reasonable time thereafter, not exceeding one year, as may be allowed by regulations, a certificate has been obtained from the director to the effect that the injured person at the time of his discharge or resignation was suffering from injury likely to result in death or disability, compensation shall be payable for death or disability, whenever occurring, proximately resulting from such injury.

Sec. 307. That compensation shall not be payable for death in the course of the service until the death be officially recorded in the department under which he may be serving. No compensation shall be payable for a period during which the man has been reported "missing" and a family allowance has been paid for him under the provisions of Article II.

Sec. 308. That no compensation shall be payable for death inflicted as a lawful punishment for a crime or military offense except when inflicted by the enemy. A dismissal or dishonorable or bad conduct discharge from the service shall bar and terminate all right to any compensation under the provisions of this article.

Sec. 309. That no compensation shall be payable unless a claim therefor be filed, in case of disability, within five years after discharge or resignation from the service, or, in case of death during the service, within five years after such death is officially recorded in the department under which he may be serving: *Provided, however,* That where compensation is payable for death or disability occurring after discharge or resignation from the service, claim must be made within five years after such death or the beginning of such disability.

The time herein provided may be extended by the director not to exceed one year for good cause shown. If at the time that any right accrues to any person under the provisions of this article, such person is a minor, or is of unsound mind or physically unable to make a claim, the time herein provided shall not begin to run until such disability ceases.

Sec. 310. That no compensation shall be payable for any period more than two years prior to the date of claim therefor, nor shall increased compensation be awarded to revert back more than one year prior to the date of claim therefor.

Sec. 311. That compensation under this article shall not be assignable, and shall be exempt from attachment and execution and from all taxation.

Sec. 312. That compensation under this article shall not be paid while the person is in receipt of service or retirement pay. The laws providing for gratuities or payments in the event of death in the service and existing pension laws shall not be applicable after the enactment of this amendment to persons now or hereafter entering the military or naval service, or to their widows, children, or their dependents, except in so far as rights under any such law shall have heretofore accrued.



Compensation because of disability or death of members of the Army Nurse Corps (female) or of the Navy Nurse Corps (female) shall be in lieu of any compensation for such disability or death under the Act entitled "An Act to provide compensation for employees of the United States suffering injuries while in the performance of their duties, and for other purposes," approved September seventh, nineteen hundred and sixteen.

Sec. 313. That if an injury or death for which compensation is payable under this amendatory Act is caused under circumstances creating a legal liability upon some person other than the United States or the enemy to pay damages therefor, the director, as a condition to payment of compensation by the United States, shall require the beneficiary to assign to the United States any right of action he may have to enforce such liability of such other person or any right which he may have to share in any money or other property received in satisfaction of such liability of such other person. The cause of action so assigned to the United States may be prosecuted or compromised by the director and any money realized thereon shall be placed to the credit of the compensation fund.

Sec. 314. That from and after the passage of this Act the rate of pension for a widow of an officer or enlisted man of the Army, Navy, or Marine Corps of the United States who served in the Civil War, the War with Spain, or the Philippine Insurrection, now on the pension roll or hereafter to be placed on the pension roll, and entitled to receive a less rate than hereinafter provided, shall be \$25 per month; and nothing herein shall be construed to affect the additional allowance provided by existing pension laws on account of a helpless child or child under sixteen years of age: *Provided, however,* That this Act shall not be so construed as to reduce any pension under any Act, public or private: *And provided further,* That the provisions of this section shall be administered, executed, and enforced by the Commissioner of Pensions.

#### ARTICLE IV.

##### INSURANCE.

Sec. 400. That in order to give to every commissioned officer and enlisted man and to every member of the Army Nurse Corps (female) and of the Navy Nurse Corps (female) when employed in active service under the War Department or Navy Department greater protection for themselves and their dependents than is provided in Article III, the United States, upon application to the bureau and without medical examination, shall grant insurance against the death or total permanent disability of any such person in any multiple of \$500, and not less than \$1,000 or more than \$10,000, upon the payment of the premiums as hereinafter provided.

Sec. 401. That such insurance must be applied for within one hundred and twenty days after enlistment or after entrance into or employment in the active service and before discharge or resignation, except that those persons who are in the active war service at the time of the publication of the terms and conditions of such contract of insurance may apply at any time within one hundred and twenty days thereafter and while in such service. Any person in the active service on or after the sixth day of April, nineteen hundred and seventeen, who, while in such service and before the expiration of one hundred and twenty days from and after such publication, becomes or has become totally and permanently disabled or dies, or has died, without having applied for insurance, shall be deemed to have applied for and to have been granted insurance, payable to such person during his life in monthly installments of \$25 each. If he shall die either before he shall have received

any of such monthly installments or before he shall have received two hundred and forty of such monthly installments, then \$25 per month shall be paid to his wife from the time of his death and during her widowhood, or to his child, or widowed mother if and while they survive him: *Provided, however,* That not more than two hundred and forty of such monthly installments, including those received by such person during his total and permanent disability, shall be so paid; and in that event the amount of the monthly installments shall be apportioned between them as may be provided by regulations.

Sec. 402. That the director, subject to the general direction of the Secretary of the Treasury, shall promptly determine upon and publish the full and exact terms and conditions of such contract of insurance. The insurance shall not be assignable, and shall not be subject to the claims of creditors of the insured or of the beneficiary. It shall be payable only to a spouse, child, grandchild, parent, brother or sister, and also during total and permanent disability to the injured person, or to any or all of them. The insurance shall be payable in two hundred and forty equal monthly installments. Provisions for maturity at certain ages, for continuous installments during the life of the insured or beneficiaries, or both, for cash, loan, paid-up and extended values, dividends from gains and savings, and such other provisions for the protection and advantage of and for alternative benefits to the insured and the beneficiaries as may be found to be reasonable and practicable, may be provided for in the contract of insurance, or from time to time by regulations. All calculations shall be based upon the American Experience Table of Mortality and interest at three and one-half per centum per annum, except that no deduction shall be made for continuous installments during the life of the insured in case his total and permanent disability continues more than two hundred and forty months. Subject to regulations, the insured shall at all times have the right to change the beneficiary or beneficiaries of such insurance without the consent of such beneficiary or beneficiaries, but only within the classes herein provided. If no beneficiary within the permitted class be designated by the insured, either in his lifetime or by his last will and testament, or if the designated beneficiary does not survive the insured, the insurance shall be payable to such person or persons, within the permitted class of beneficiaries as would under the laws of the State of the residence of the insured, be entitled to his personal property in case of intestacy. If no such person survive the insured, then there shall be paid to the estate of the insured an amount equal to the reserve value, if any, of the insurance at the time of his death, calculated on the basis of the American Experience Table of Mortality and three and one-half per centum interest in full of all obligations under the contract of insurance.

Sec. 403. That the United States shall bear the expenses of administration and the excess mortality and disability cost resulting from the hazards of war. The premium rates shall be the net rates based upon the American Experience Table of Mortality and interest at three and one-half per centum per annum.

Sec. 404. That during the period of war and thereafter until converted the insurance shall be term insurance for successive terms of one year each. Not later than five years after the date of the termination of the war as declared by proclamation of the President of the United States, the term insurance shall be converted, without medical examination, into such form or forms of insurance as may be prescribed by regulations and as the insured may request. Regulations shall provide for the right to convert into ordinary life, twenty-payment life, endowment maturing at age sixty-two and into other usual forms of insurance and shall prescribe the time and method of payment of the premiums thereon, but payments of premiums in advance shall not be required

for periods of more than one month each and may be deducted from the pay or deposit of the insured or be otherwise made at his election.

Sec. 405. That in the event of disagreement as to a claim under the contract of insurance between the bureau and any beneficiary or beneficiaries thereunder, an action on the claim may be brought against the United States in the district court of the United States in and for the district in which such beneficiaries or any one of them resides. The court, as part of its judgment, shall determine and allow such reasonable attorney's fees, not to exceed ten per centum of the amount recovered, to be paid by the claimant on behalf of whom such proceedings are instituted to his attorney; and it shall be unlawful for the attorney or for any other person acting as claim agent or otherwise to ask for, contract for, or receive any other compensation because of such action. No other compensation or fee shall be charged or received by any person except such as may be authorized by the commissioner in regulations to be promulgated by him. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof shall, for each and every such offense, be fined not exceeding \$500, or be imprisoned at hard labor not exceeding two years, or both, in the discretion of the court.

#### MEMBERSHIP OF SOCIAL INSURANCE COMMISSIONS.

Later information as to the personnel of the social insurance commissions created in a number of States (see pp. 149, 150, September MONTHLY REVIEW) indicates the appointment of the following persons as members of these commissions: Connecticut, Mr. William Brosmith, Hartford; Mr. Howard S. Neilson, Darien; Mr. Jacob B. Klein, Bridgeport; Mr. William J. Fitzgerald, Norwich; and Mr. George C. Clark, Plymouth. The Illinois commission has not as yet (Oct. 27) been appointed. The legislative members of the Pennsylvania commission have not been procured, but those appointed by the governor are: Mr. William Flinn, Pittsburgh; Prof. William Draper Lewis, University of Pennsylvania, Philadelphia; and Dr. J. B. McAlister, Harrisburg. The committee in Wisconsin is entirely legislative, and consists of Senators W. W. Albers, pharmacist, Wausau, and Theo. Benfey, attorney, Sheboygan; and Assemblymen John P. Donnelly, attorney, Milwaukee; W. L. Smith, manager telephone company, Neillsville; and Henry Ohl, jr., printer, Milwaukee.

#### ATTITUDE OF THE AMERICAN MEDICAL ASSOCIATION TOWARD SICKNESS INSURANCE.<sup>1</sup>

At the sixty-eighth annual session of the house of delegates of the American Medical Association, held at New York City, June 4 to 8, 1917, the committee on social insurance of the council of health and public instruction submitted an exhaustive report on the general subjects of health insurance, old-age insurance, workmen's compensation, and unemployment, both in this country and in Europe. On

<sup>1</sup> Data taken from the Journal of the American Medical Association, 535 North Dearborn Street, Chicago, June 9, 1917, pp. 1754 and 1755.

the subject of medical service under insurance laws the committee makes the following statement :

There are four fundamental principles in the consideration of any insurance laws in relation to the medical profession which seem to be essential for the just working of these laws: First, the freedom of choice of physician by the insured, because only in this way can conditions of mutual confidence between physician and patient be preserved. Second, a sufficient medical representation in the administration of the insurance laws, because only in this way can the profession be protected against exploitation by the insurance carriers and from destructive competition within its own ranks. Third, a standard of payment in proportion to the amount of work done, preferably on a basis of fees per visit. The payment by capitation, and competition and exploitation within its own ranks, will surely bring on contract practice and all its evils to the profession and to the patients. Fourth, there must be a separation between the medical superintendence of the funds and the daily medical care of the individual patient. The physician that superintends the medical questions relating to the funds must not be permitted to perform the duties of the personal care of the sick, nor can the physician who cares for the sick among the insured act in the position of superintending medical questions relative to the fund. These two can, to advantage, mutually help each other and mutually keep the medical questions between funds and patients in equilibrium; but it will surely be to the disadvantage of both funds and insured if the functions of these two physicians are blended in one man. Only by adherence to these general principles will the social insurance laws here discussed run smoothly and only by adherence to these principles will justice be done to the medical profession.

The committee offered to the house of delegates the following resolutions, which were adopted :

Whereas, the report of the committee on social insurance of the American Medical Association has shown that the world-wide movement for social insurance has made such rapid progress that it has become one of the most important branches of industrial legislation in many countries, and

Whereas, the growth of social insurance in this country is manifested by the wide acceptance of the principle that industrial accidents should be compensated and it is probable that this movement, as in other countries, will further demand protection of workers against the hazard of illness through sickness-insurance and other social-insurance legislation, and

Whereas, all matters affecting sanitation and the health of the community and the prevention of disease are the especial concern of the medical profession and affect the economic condition of the medical profession, be it therefore

*Resolved*, That the house of delegates of the American Medical Association in the interests of both the wage earners and the medical profession, authorize its council on health and public instruction to continue to study and to make reports on the future development of social insurance legislation and to cooperate when possible in the molding of these laws that the health of the community may be properly safeguarded and the interests of the medical profession protected, and be it further

*Resolved*, That the house of delegates instruct its council on health and public instruction to insist that such legislation shall provide for freedom of choice of physician by the insured; payment of the physician in proportion to the amount of work done; the separation of the functions of medical official supervision from the function of daily care of the sick, and adequate representation of the medical profession on the appropriate administrative bodies.

## HOUSING AND WELFARE WORK.

### CLUBS, GYMNASIUMS, AND RECREATION GROUNDS FOR EMPLOYEES.

BY ANICE L. WHITNEY.

In a recent study of industrial betterment<sup>1</sup> as carried on by employers, which was conducted by agents of the United States Bureau of Labor Statistics, schedules were taken for 431 establishments. These establishments cover a great variety of industries, such as mining, foundries and machine shops, manufacturing of iron and steel, electrical supplies, automobiles, furniture, boots and shoes, textiles, and explosives; also steam and electric railroads, telegraph and telephone companies, electric light and power companies, and stores.

Of the 431 establishments for which schedules were taken 256, with a total of 1,175,242 employees, provide one or more of the various features included under the general head of clubs, gymnasiums, and recreation grounds.

This section of the study of industrial betterment covers the various accommodations usually found in clubhouses, such as smoking rooms, billiard and pool rooms, bowling alleys, basket-ball courts, swimming pools and shower baths, as well as gymnasiums of varying degrees of excellence. Most of the outdoor sports are provided for and assisted financially by the different companies, the most popular ones, as would be expected, being baseball and tennis.

One hundred and thirty-seven firms with 813,904 employees provide club rooms or houses. These range all the way from a few small, plainly furnished rooms in the plant to large and elaborately furnished houses. Six companies provide club facilities for officials, superintendents, and foremen only, 1 restricts them to members of the benefit association, 10 did not report as to membership limitations, and 120 with 705,674 employees reported that the privilege of membership is open to all classes of employees.

Many of the establishments having club rooms or houses did not report as to the number of members, and many others did not report

<sup>1</sup> See "Medical, hospital, and surgical treatment for employees," in MONTHLY REVIEW of the Bureau of Labor Statistics for September, 1917; and "Rest and recreation rooms for employees," in REVIEW for October, 1917.



the amount of the club membership fee, but 53 establishments employing 175,770 persons reported the club membership to be 51,120, or 29 per cent of the total number of employees. Fifty-nine establishments reported as to the amount of the annual dues. These dues range from less than one dollar to \$25, the average being \$3.50 a year. Forty other establishments reported that no club dues are charged. These clubs are open to all employees and in several cases to members of their families and the entire community.

No special inquiry into the question of club management was made, but this information was furnished in 58 cases. In 23 instances the management of the club rooms or houses is kept entirely in the hands of the company. Twenty-five firms manage them in cooperation with the employees and 10 companies allow the members to have entire control.

There are 80 companies that have provided separate clubhouses for their employees. This number includes several cases where the house is, in a measure, a settlement house, but nevertheless serves all the purposes of a clubhouse, with a rather wider range of activities than the ordinary club, since it is not limited to the employees but is open to the families as well and sometimes to other members of the community.

Other companies, notably the railroads, have chosen the Y. M. C. A. as the medium through which their club work is carried on. In these cases, where large numbers of men are employed, the well-built-up organization of the Y. M. C. A. probably offers them the most effective means for carrying on this work. One large railroad system, in addition to its many branches of the Y. M. C. A., has a number of clubhouses maintained by various athletic associations which are fostered by the company. The company furnishes the buildings and equipment, while the running expenses are paid by the members, the dues being 50 cents and \$1 per year. In addition to the usual games, there are basket-ball and volley-ball courts and shooting galleries of an improved type. One of these clubs also has an athletic field, adjoining which is a commodious building with lockers and shower baths. This company also maintains a clubhouse at the seashore, accommodating about 60, under the direction of the Y. M. C. A. secretary, as a vacation place for the sons of its employees. The rates are nominal and the sports of swimming, surf bathing, and boating are supervised by older men. This house is reserved for girls for two weeks in the early part of the season and for wives of the employees for one week. This same company provides for a camp of its common laborers a recreation hall furnished with reading matter, cards, checkers, shuffleboard, a piano, and a phonograph.

The largest Y. M. C. A. of another great railroad system provides for its many members practically all club facilities. There is a large and excellently equipped gymnasium, with a physical director in charge, a very good library and reading room, a restaurant, and a dormitory for over 200 men, sleeping accommodations being furnished to members at a very low rate. Much social and educational work is done, many series of concerts and social affairs are arranged for throughout the year, and various classes and a good orchestra and glee club are maintained.

Still another large railroad company provides 13 clubhouses, which are not connected with the Y. M. C. A. These clubs are located, for the most part, in out of the way places, and the aim of the company is to furnish good food and lodging, a chance for baths, and also good, clean amusements to its employees. No membership dues are charged and only such rates and fees as barely cover the cost of maintenance.

Several of the smaller railway systems do not provide the clubhouses, but merely contribute to the support of the railroad branches of the Y. M. C. A. The membership fees charged for these clubs vary from \$1 to \$5 per year, according as the company contributes much or little toward their support.

A company employing over 2,000 women has a branch of the Y. W. C. A., with about 800 members, its employees composing the entire membership. Classes in music, domestic science, sewing, painting, and dancing are taught at nominal rates of tuition, and there is a well-equipped gymnasium, with a woman in charge as physical director. The classes meet in the recreation rooms of the plant. The membership fee is \$1 per year; no fees are charged for the gymnasium work. The company bears the greater part of the expenses, stipulating that the major part of the advantages offered shall be open to all girls, whether members or not. A summer cottage, under the supervision of the Y. W. C. A. secretary, is provided with accommodations for about 25 girls, and board is furnished at a very moderate rate.

Another large corporation whose employees are of many nationalities centers its club activities about the libraries by making liberal donations, and in several instances an officer or other employee of the company is a member of the board of library directors. In such cases the libraries are operated more as private clubs than as public institutions. The company's employees usually pay a smaller membership fee than that paid by nonemployees and a less charge is made for bowling, billiards and pool, and for the use of the gymnasium and baths. One of these libraries boasts a membership of more than 3,500, with a total attendance at games and social gatherings of 80,000 for the year, during which period 60,000 games of billiards

and 12,000 bowling games were played. There were 35 basket-ball teams and 1,000 members in gymnasium classes.

Another distinctive type of clubhouse found was the "community," "settlement," "neighborhood," or "mission" house which many companies have adopted as the center of their welfare work. This type was found more often where plants had been established in outlying sections. A striking example of this kind is where what was originally intended as a kindergarten house center has developed, within a very few years, into a large and well-appointed neighborhood house, with reading rooms and a free public library with books in different languages, and with the kindergarten feature still intact. In this clubhouse, classes in manual training, sewing, and cooking are conducted, as well as special classes in English for foreigners. Entertainments are given for the benefit of the townspeople from time to time in the gymnasium and dances are conducted at regular intervals. The gymnasium is open to the public on Saturday nights for general recreational purposes, and amusement and entertainment may be found for every class; some bowl, some play basket ball, some play games, some use the library, while others dance. It is said that the attendance on Saturday nights ranges from three to six hundred people of all ages, drawn from a community of 6,000 inhabitants of various nationalities. That the company has succeeded in cultivating a taste for clean, healthful, and protected amusement is evident from the fact that there is not a commercial dance hall in the town.

In connection with this clubhouse are to be found playgrounds with tennis courts, swings, and various out-of-door games, all free to the people of the town, with the gymnasium instructor in charge during the summer months.

In this clubhouse, the advantages of which are entirely free to all, practically all of the employees and townspeople meet on terms of friendship and equality, which is rather remarkable since many nationalities are represented. In striking contrast to this are some of the mining communities in Arizona in which the common labor is chiefly Mexican, where companies provide very good clubhouses for their American employees, but make no provision for the entertainment of the ordinary laborers. The club dues in some of these cases are in themselves prohibitive, being as much as \$25 per year. Some mines in other sections of the country report that the clubhouses are open to and used by all classes of white employees.

One company with many Negro employees has a club, run on the principles of the Y. M. C. A. but financed and managed by the company, in which club facilities are provided on separate floors of the club building for the colored and white employees and their families.

Another company employing about 2,400 men has three clubs, one for American employees, one for foreigners, and one for the Negro employees. The first club began in a small way but has outgrown two buildings and now occupies a well-equipped clubhouse. The club holds many entertainments and excursions and encourages athletics, having good baseball, basket ball and bowling. Club dues are 25 cents per month, 40 per cent of which goes into the club's benefit fund. This club is used for special or emergency needs among the members. The club also makes it a rule to help the needy at Christmas and other times. The foreigners' club is under the supervision of the welfare secretary and has resulted in instilling in the minds of the foreign workers a better idea of American ideals. The club for Negro workers is along the lines of the first club and a majority of the colored employees are members.

Another clubhouse, in the nature of a general recreation building, was erected by the company at a cost of a quarter of a million dollars, for the free use of all the people in the town, which has a population of about 8,000 and is located in a section remote from any large city. The building is a brick and stone structure of three stories and contains rest rooms, billiard and pool rooms for adults and children, gymnasium, bowling alleys, plunge and shower baths, library, and theater. No charge is made for the use of any part of the building, except the theater, where a 10-cent show is given daily except Sunday. The theater is said to be very popular, the attendance being about 20,000 per month.

The swimming pool is constructed of white tile, and is 25 by 75 feet, the depth of the water ranging from 4 to 9 feet. The water is filtered, disinfected, and warmed. It is changed once a week. The plunge is patronized by approximately 2,000 people per month, the number of the men, women, boys, and girls being about equal. There are six bowling alleys, which are kept well polished and which are equipped with automatic pin setters. Some 3,000 people use these alleys each month and tournaments are carried on throughout the winter. The pool and billiard rooms are equipped with seven tables, four for adults and three for children, and are used by 5,000 people per month. In the main rest room of the building are to be found card and chess tables, and ample room for lounging.

It is more often the rule than the exception, in the case of southern cotton mills, that any welfare work that is attempted is done through the "settlement" or "mission" house or through the school or church, which is established, taken over, or fostered by the mill owner. In one instance of this kind the "mission house" is mainly supported by several mills and is the center of industrial betterment for the entire community. In this mission a large hall, which is used for

kindergarten work in the morning, is provided for club meetings. There are also a chapel, a library, a domestic science room, shower and tub baths, and playground apparatus in the large yard about the mission. A training school for settlement workers is conducted here and the "mission" has charge of the hospital, where it is said that employees and members of their families are charged a weekly rate of less than one-third the rate charged others.

In a few instances the club work of the mills is carried on through the Y. M. C. A. and in others no intermediary is employed, but the work is administered directly by the company and employees. From the fact, however, that the majority of the cotton mills in the South form isolated communities, and also that the workers are recruited from all branches of the family, the work is necessarily more in the line of family work than of ordinary club activities.

The head of the firm of one large factory in New England presented a very beautiful and commodious clubhouse to his employees. The house has bowling alleys, smoking and lounging rooms for men, clubrooms for women, a large general recreation room, and a music hall, with stage, so constructed that it may be inclosed and heated in winter, but in the summer may be opened up to form a roofed-over summer garden. In connection with the clubhouse is an athletic field of 13 acres, which can be flooded in winter for skating. Club membership is open to all employees and members of their families and about one-third of the total number of employees belong to the club. The dues are \$2 a year and the government of the organization is in the hands of a board of directors, the majority of whom are elected from the rank and file of the factory workers. This club is located close to the factories so it can be used at the noon hour.

Another club, which is composed entirely of men, is a very live organization. It is open every day from 9 in the morning until midnight, and while it is not close enough to the factory to be used during the factory hours, it is used by practically all employees at other times. Each male employee automatically becomes a member after working one week for the firm; there are no club dues and only small fees for bowling and pool are charged.

The clubhouse is open to women employees and members of families one evening a month. This club manages an unusually successful savings and loan department. The control of the club is in the hands of the employees, who elect their own officers by secret ballot.

Another company with about 2,900 employees has donated to its force an excellent, large clubhouse. With the exception of one representative of the management on the board of governors, it is managed by the athletic association, which has a membership of about 2,000. Two



hundred of these are outsiders, it being a provision of the club rules that outsiders may belong to the club, but that they may never form more than 25 per cent of the membership. The annual dues are \$1. Many acres are devoted to athletics, baseball, football, cricket, field sports, and tennis, and there is also a fine shooting range. At a recent annual field day 10,000 persons assembled for the events.

The street railway companies almost universally provide rest and recreation rooms for their men, as has been discussed in an article in a previous issue of the REVIEW.<sup>1</sup> In addition to these rooms, one company with about 10,000 employees has a clubhouse at one of its terminals, which while plainly furnished meets the needs of the men and is very generally used by them. It has a billiard room, bowling alley, gymnasium, tub and shower baths, lockers and electric clothes dryers, a reading room, restaurant, and auditorium.

It is a fact of some interest that of the many clubhouses and rooms for men which were visited only two cases were found where liquor was sold to the members.

One company with many mining camps establishes clubs only when the people of the community ask for them. Usually an old building is remodeled and equipped by the company and the club is financed until such time as it becomes self-supporting. A board of governors is appointed from among the employees who are interested in the betterment of the town, and the management left entirely in their hands. The dues are usually 50 cents a month and the families of members also enjoy the privileges of the clubhouse.

There are a number of firms which maintain country clubs or summer camps for their employees. One company, employing about 1,200 women, has a very beautiful country place where the girls may spend their vacations or go to recuperate after illness. That it is extremely popular is attested by the fact that more than half of the women employees spent their vacations there last year.

One company, employing several thousand people, has four clubs, two in the town and two in the country. One of these is open to others than employees and is not largely used by the factory people, but the one which is maintained solely for the employees and their families is very popular. Field days, attended by thousands, are held here several times during the summer. In addition to the two clubhouses, one for men and one for women, there are booths, lunch houses, an outdoor stage for evening entertainments, and a dancing pavilion. In the women's clubhouse there is a nursery for the babies and small children.

Another country club, which can easily be reached by train or trolley, has a membership of 1,800, about half the employees of the company; membership dues for men and women are 10 cents and 5

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<sup>1</sup> MONTHLY REVIEW for October, pp. 151-156.

cents a week, respectively. It is managed entirely by the employees, the company exercising no powers other than those of a purely advisory character. In addition to the usual equipment there is a large concrete swimming pool.

Six of the department stores visited maintain summer camps for employees. One firm which provides a camp for its juvenile employees allows the boys and girls to go to it on alternate weeks at no cost whatever to the young people. Another camp which is much used charges for board on the basis of the employees' pay.

One large department store maintains a summer camp near the ocean for all of its employees. The junior employees, both boys and girls, are obliged to take systematic physical instruction, the boys being organized as a cadet regiment conforming to the United States regulations and fully equipped and uniformed. These cadets as part of their regular store duty are required to spend two weeks at the camp each summer. This camp is under military regulations, the boys sleeping in Army tents and spending much time in drilling and in athletic sports.

Attendance at the camp for the girls and adult employees is optional with the employees, but the opportunity is much appreciated, since the management provides all possible means of diversion and entertainment.

According to the reports received as to the hours that the clubrooms are kept open, the time ranges from an hour at noontime and a short while in the evening at a few clubs, to the entire 24 hours of the day at others. On this point, however, the establishments reporting may be placed in two groups—those that open early in the morning and remain open until late at night, and those that do not open until some time in the afternoon, but are usually open in the evening. There are 66 establishments in the former class and 22 in the latter. The remaining 49 establishments did not report as to the hours the clubrooms are kept open.

Of the 256 establishments having one or more of the features included under clubs, etc., 94 provide pool tables (sometimes referred to as pocket billiards) or bowling alleys; 31 of these provide pool tables only; 20 provide bowling alleys only; while 43 provide both pool tables and bowling alleys. Some of the pool rooms were found to be in connection with the rest rooms. This was especially true of the street railway companies, many of which provide pool tables in the employees' waiting rooms. In addition to the number of establishments mentioned above, several street railway companies reported that pool tables are to be found at most of their car houses, but did not state the number of barns.

Quite a few of the companies make no charge whatsoever for pool playing, and of those reporting on this point, only one charges as

much as 5 cents per cue, the other rates ranging from 1 to 2½ cents. In other establishments the charge is 10 to 30 cents per hour. The fees at the bowling alleys are correspondingly low.

As to the extent to which employees take advantage of the pool-room privileges, one company, employing 2,815 people, reported that 14,209 games were played during one year. Another establishment, with 2,600 employees, which has provided two Y. M. C. A. buildings, reported that the pool room at each was used by 200 employees daily. Still another, having 2,370 employees, said that nearly 5,000 per month used the pool rooms.

Reporting on the number using the bowling alleys, one establishment having 12,600 employees made the statement that 125 use the alleys daily. Another with 2,370 employees said the alleys were used by 3,000 per month. Still another said that 276 persons had played 17,392 games in one year.

It is owing to the fact that careful records of the numbers using these facilities are seldom kept, that such very incomplete reports on this point were secured. Reports were given, however, in a sufficient number of instances to indicate that such means of amusement are much used and appreciated.

Of the 137 establishments having clubrooms, 41 have provided baths or swimming pools. In 27 of these the pool is inside the clubhouse, in 13 establishments outdoor swimming pools are found, and one establishment did not report the location of its pool.

Among the comparatively few establishments reporting as to the number using the swimming pools, one, having 2,370 employees, said its indoor pool was used by 2,000 in a given month; another, with 2,815 employees, reported that the pool was used by 3,713 in one season; still another, having only 748 employees, said that 1,580 used the pool in one month. One concern, with 1,708 employees, said that its outdoor pool was used by 200 persons per day during hot weather, and another establishment, with 6,681 employees, that has an outdoor pool convenient to the homes of many of its employees, reported that 102,000 had made use of it during the season. This pool is very large and well constructed and there are very good bathhouses with showers for men and women.

Most of the reports, both as to indoor and outdoor pools, stated that the water was changed once, or in some cases, twice a week, and in one or two instances it was reported that a continuous flow of water was supplied.

Fifty-two establishments, with a total of 535,107 employees, were found to have provided gymnasium facilities for their employees. These places for exercise vary from small rooms with simple equipment to large and well-equipped rooms or buildings, with instruc-

tors in charge. Quite frequently, as a means of saving space, the auditorium, either in plant or clubhouse, has gymnasium equipment, thus securing double service for the one room.

In a few instances companies have built separate gymnasium buildings. One company employing several thousand people has built a very complete gymnasium for its office employees, with squash and hand-ball courts, and exercise room. There is a large swimming pool having a continuous flow of filtered and warmed water and rooms with shower, needle, and electric-light baths. This gymnasium is in charge of three instructors and classes are held alternately on employers' and employees' time.

Another company equipped a gymnasium very completely and turned it over to an association of employees to manage. A very competent instructor was engaged and a nominal fee for membership charged. There was not, however, sufficient interest shown to warrant retaining the instructor, and the result was an almost complete waste of space and valuable equipment.

Still another company has an excellent athletic field and grand stand, with a gymnasium and lockers and showers, as well as club-rooms for the athletic teams.

In addition to the 52 plants mentioned above, several companies which do not have gymnasiums of their own make it a practice to pay part or all of the membership fees in the Y. M. C. A. and Y. W. C. A. for those of their younger employees who wish to take the courses.

Not a great many of the 52 establishments having gymnasiums reported as to the number using these accommodations, but it would seem from those which did report that they are usually used by only a small proportion of the employees. Fourteen of the 52 plants reported that no fees were charged for the use of the gymnasiums; one establishment, having 15,000 employees, reported a charge of \$5 per year and a membership fee of \$4; another with 1,200 employees charged only \$1; while the remaining establishments did not report on this point.

When studied as a welfare feature, "the great American game" shows up with its usual popularity. One hundred and fifty-two establishments, employing 815,535 persons, reported having baseball grounds. In the majority of these establishments the company provides the ball grounds only, but in 38 cases the company also provides the equipment or makes cash donations to the teams. Twelve companies provide only equipment, which in most cases includes the uniforms; and half a dozen other establishments reported ball teams but made no statement as to where the games were played.

In several cases where companies have a number of plants the employees have formed leagues. One company had 25 teams in its various camps, forming a league, all these teams competing for the championship. For some time this company expended a large sum of money each year on baseball. It was found, however, that the superintendents were putting good ball players on the pay roll who were not good workers, and that the players were losing too much time, so the policy of the company was changed. The company now contributes \$50 annually to each ball team and helps maintain the grounds and stands.

Basket-ball courts were found at 50 establishments. In quite a few instances outdoor courts were found, but in most cases these courts are in the clubhouses or gymnasiums, where, as a rule, no fees are charged beyond the club dues. In some cases the companies provide uniforms and equipment.

Although tennis, like basket ball, is a game patronized chiefly by office workers, it is somewhat more popular than basket ball, as indicated by the fact that courts are provided at 82 establishments. In many instances several courts were found at a single establishment, and in exceptional cases as many as 7, 10, and 16.

In regard to fees charged for use of the tennis courts, a considerable number of establishments reported that no charge whatever is made, while the fees reported by others range from 50 cents to \$4 per season, the predominating fees being 50 cents and \$1. As in the case of basket ball, when the courts were found in connection with the club no fees other than the club dues were charged.

Reports from 19 establishments show that it is the custom to hold an annual "field day," and at one establishment, employing more than 25,000 people, "field day" is held twice a year. While only eight of these establishments reported as to "field day" attendance, the interest manifested in such events is shown by the fact that in the eight plants there were 40,100 employees and the total attendance on the eight "field days" was 35,650.

Twenty-eight establishments provide athletic fields for the use of their employees and their families in the enjoyment of outdoor sports. In most cases baseball, football, and tennis are provided for, and several establishments have good track teams. In many cases there is a good grand stand. One company, with about 16,000 employees, has a large athletic field with a house each for the men and women. These houses are equipped with lockers, showers, etc., and have porches with chairs. There are 16 tennis courts and 4 baseball diamonds. An instructor in tennis playing is hired by the company, and a court is always reserved for beginners. These courts are open to the public during the hours the plant is in operation. There are



eight baseball teams, and at the annual field day, when all the usual track events are scheduled, there is an attendance of about 20,000 persons.

Another large company has a federation of employees' clubs, educational as well as athletic, governed by a "central committee" composed of one representative from each club and one member representing the factory management. The company does not expect to finance these organizations so long as they can succeed by themselves, but if, for good reasons, they need assistance, the company stands ready to furnish it. A fine athletic field is provided for the employees. An unusual club is the aero club, with 40 active members. The company provides the balloon and keeps it in repair, and the running expenses of the club are provided for by dues and fees for flights.

Other sports which are found occasionally were golf, cricket, boating, indoor baseball, gun clubs, quoits, and hockey.

It would seem that the reason actuating employers to provide club rooms or houses and the means for athletic recreation for their employees is, in many cases, the belief that since in a large measure the success of the business depends upon the loyalty and efficiency of the employees, in many cases, the belief that in a large measure the employees, and that these qualities will be stimulated by providing opportunities for healthful and sane recreation which are usually beyond the reach of the average worker.

## CHILD LABOR.

### CHILD LABOR IN WISCONSIN.

An attempt was recently made by the Wisconsin Industrial Commission to secure information respecting such matters as the number of years children between 14 and 16, to whom permits to work are issued, have attended school, the grade completed, the particular occupations in which the children are engaged, reasons for working, frequency of change of positions, occupations of parents, and the like. Blanks were furnished officials issuing permits with the request that such information be sent to the commission. Since the matter was not compulsory, the commission reports considerable difficulty in getting the information desired, especially as respects specific occupations of the children, reasons for working, occupations of fathers, and frequency of change of position. However, data as to the number of permits issued, the number of years the children were in school, and the grades finished were obtained and published by the industrial commission in August, 1917, the facts tabulated covering the city of Milwaukee, other cities of the State, and the State as a whole.<sup>1</sup> Additional information relating to occupations of fathers and frequency of change of positions by the children was obtained for Milwaukee. The report covers the twelve-month period beginning August 1, 1915.

It should be explained that in Wisconsin children under 12 years of age may not be employed in gainful occupations; children between 12 and 14 may be employed in certain specified occupations, but only during the vacation period; labor permits may be issued to children between 14 and 16 authorizing their employment at any time during the year. In order to secure a permit such pupils must furnish proof of age, a certificate of educational attainments, and a letter from an employer showing that they have a promise of employment. The educational standard fixed by law for a regular labor permit is substantially the completion of the fifth grade, but under certain conditions children between 14 and 16 who have not completed the fifth grade may be given permits to work.

According to tables published in this report, 3,911 regular permits (2,292 to boys and 1,619 to girls) were issued during the year ending

<sup>1</sup> Industrial Commission of Wisconsin. Some statistics on child labor in Wisconsin. [Madison] August, 1917. 11 pp.

August 31, 1916, to children in Milwaukee. Of this number all but 223 children had at least completed the fifth grade, and about 74 per cent had completed the sixth grade or better, while more children had completed the eighth grade than any other grade.

To compare the amount of education received by the children 14 and 15 years of age granted regular permits with that received by public-school children in general of the same age, data were obtained from the State board of education covering the year 1913-14, the last year for which such statistics were available, and tabulated for Milwaukee, for other cities of the State, and for the State as a whole.

These tables show that the children who were granted regular child-labor permits were not as far advanced in school as were most public-school children of the same age. The percentage of the children 14 years old to whom permits were issued who had not completed the seventh grade was approximately 52.5 in Milwaukee and in other cities for which data were secured. Of the public-school children of the same age only 24.2 per cent in Milwaukee and 15.9 in other cities were so far behind. Only 25.8 per cent of the permit children in Milwaukee and 26.6 per cent of the permit children outside of Milwaukee had completed the eighth grade. These percentages are to be contrasted with the percentages of public-school children in general who at the age of 14 had completed at least the eighth grade, which according to the tables were 51.6 per cent in Milwaukee and 66.8 per cent in other cities of the State. The same contrast is to be observed as to children 15 years of age. It is shown that in Wisconsin as a whole 38.8 per cent of the children 15 years of age to whom regular child-labor permits were granted had not completed the seventh grade, while only 7.4 per cent of the public-school children in general of that age had not done so.<sup>1</sup> No definite explanation is offered as to the reason why permit children are more backward than the average children in school, although the report suggests that possibly the explanation is poverty with its attendant effects of bad housing and malnutrition; or foreign parentage with its frequent lack of knowledge of the English language; or, again, it may be inferior mental capacity.

As stated, data were obtained as to the occupations of fathers of children granted labor permits in Milwaukee, and also as to the number of positions held by such children. The fathers of 21.5 per cent of the 3,911 children to whom regular labor permits had been granted were dead, had deserted, or were sick or unemployed, while 27 per

<sup>1</sup> The report states in this connection that the number of years of school attendance does not take into consideration the question of regularity. The children to whom permits were granted may have been more irregular in their school attendance, although they were credited with having gone to school the same number of years as other children of their age.

cent had fathers who were common laborers, indicating, it would seem, that poverty is one of the chief reasons why children go to work.

A considerable shifting about of children is indicated by a table which shows that 27 per cent of the children granted permits were going to their first position, 30.2 per cent to their second position, 21.1 per cent to their third position, and 10.3 per cent to their fourth position.

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#### EDUCATIONAL REQUIREMENTS FOR THE ADMISSION OF CHILDREN TO INDUSTRY IN ITALY.

Up to the time of the enactment of the law of June 26, 1913, the regulations as to educational requirements for the admission of children to industrial labor varied greatly in the different communes of Italy. The above law, enacted to bring definitive order out of this chaos of existing regulations determines, in articles 2 and 3, the grade of primary education on the possession of which the issuance of a working pass book is conditioned. It provides that beginning with July 1, 1913, the admission of children to industrial labor shall be conditioned on the possession of a certificate of promotion to the second grade, or of completion of the lower elementary course, according to whether the proportion between the number of elementary public schools and the census population of the commune which issues the working pass book is lower than, the same as, or higher than the average proportion for the entire Kingdom.

The law does not determine this grade of education uniformly for the entire Kingdom, because it was the intention of the legislators to grade the educational requirements according to the varying local educational level, which was assumed to be indicated by the number of schools existing in each commune in proportion to its population. The scope of the law is, however, such, that ultimately all children who gain admission to industrial labor shall have complied with the requirements of the laws on elementary education. Therefore the law of 1913 establishes transitory periods during which the educational requirements on which the issuing of a working pass book is conditioned are gradually increased by one school grade.

These transitory periods begin with July 1 of the years 1913, 1916, and 1919, respectively. By July 1, 1922, it will become obligatory for all children 12 to 15 years of age to have complied with the requirements of the laws on elementary education before they may enter industrial employment.

Up to July 1, 1922, the law of 1913 has substantially a transitory character and merely establishes obligatory minimum grades of education. These minimum grades might, however, eventually happen

to be lower than the local educational level. To prevent the high educational standard of some communes being lowered in this manner, the law provides that the minimum grade of education prescribed by it may never be lower than the minimum grade already in practical operation in the individual communes.

The application of the law involved the two following preliminary tasks: First, the determination for each commune of the proportion of the number of existing schools to the census population; and, second, the determination of the grade of education in practice in each commune up to June 30, 1913, and which would be required for the issuing of a working pass book to children between 12 and 15 years of age.

The first task was accomplished by the Ministry of Public Instruction through data obtained with the aid of the school inspectors. The following rules were observed in the compilation of these data: (1) All individual classes to which a special teacher was assigned were considered as schools. (2) If the instruction in two or more classes of a school was intrusted to one teacher and given during the same hours these classes were counted as only one school. (3) If two or more classes of a school were in charge of the same teacher but were instructed at different hours, each of these classes was counted as one school. The compilation of the data obtained by this method gave the following results:

COMMUNES OF THE ITALIAN KINGDOM HAVING A SPECIFIED NUMBER OF ELEMENTARY SCHOOLS PER 1,000 INHABITANTS FOR THE SCHOOL YEAR 1911-12.

Number of schools per 1,000 inhabitants.	Number of communes.
Over 5.....	440
4.5 to 5.....	146
4 to 4.499.....	230
3.5 to 3.999.....	381
3 to 3.499.....	700
2.5 to 2.999.....	1,460
2.165 to 2.499.....	1,346
2.164 <sup>1</sup> .....	3
2 to 2.163.....	681
1.5 to 1.999.....	1,942
1 to 1.499.....	847
0.5 to 0.999.....	140
Less than 0.5.....	7
Total number of communes.....	8,323

<sup>1</sup> This is the average for the Kingdom.

The above-shown average number of schools for the entire Kingdom per 1,000 inhabitants is based on a total of 74,197 schools for a total population of 35,848,963.

The Ministry of Agriculture, Commerce, and Industry was charged with the second preliminary task, the determination of those communes which, prior to June 30, 1913, in practice required a higher



grade of education for the admission of children to industry than the minimum grade prescribed by the law of 1913. With the aid of the factory inspectors the ministry ascertained that on June 30, 1913, 2,719 communes had the following higher educational requirements:

	Communes.
Promotion to the third grade.....	76
Attendance in the third grade.....	47
Completion of the third grade.....	2,077
Attendance in the fourth grade.....	173
Promotion to the fifth grade.....	54
Attendance in the fifth grade.....	132
Promotion to the sixth grade.....	11
Attendance in the sixth grade.....	141
Completion of the sixth grade.....	8
Total .....	2,719

The above data have recently been published by the Italian Labor Office as a supplement to its bulletin.<sup>1</sup> This volume is divided into two parts, the first part showing the educational coefficient (number of schools per 1,000 inhabitants) of each commune, and the second part consisting of a list of communes having higher educational requirements for the admission of children to industry than those prescribed by the law of 1913 and showing the grade required.

<sup>1</sup> Italy. Ministero per l'Industria, il Commercio e il Lavoro. Ufficio del Lavoro. Requisiti d'istruzione per l'ammissione dei fanciulli al lavoro industriale (supplemento al Bollettino dell'Ufficio del Lavoro, No. 28). Rome, 1917. XXXII, 217 pp.

## ARBITRATION AND CONCILIATION.

### CONCILIATION WORK OF THE DEPARTMENT OF LABOR, SEPTEMBER 16 TO OCTOBER 15, 1917.

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 September 16 and October 15, 1917, in 71 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 NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, SUBSEQUENT TO SEPT. 16, 1917.

Name.	Workmen affected—		Result.
	Directly.	Indirectly.	
Strike of iron molders, Van Wie Pump Works, Syracuse, N. Y.	50	.....	Company operating full capacity under open shop rules.
Controversy, Georgia Marble Co., Atlanta, Ga.	.....	.....	Pending.
Strike of boiler makers, Volk & Murdock's Boiler Shop, Charleston, S. C.	.....	.....	Do.
Controversy, steam roller engineers, Chicago, Ill.	.....	.....	Adjusted.
Strike, L. Wolff Manufacturing Co., Chicago, Ill.	1,000	1,200	Pending.
Strike of box makers, Kansas City, Mo.	550	800	Unable to adjust.
Controversy between Ann Arbor R. R. Co. and its machinists.	.....	.....	Adjusted.
Shipbuilding controversy, San Francisco.	.....	.....	Pending.
Strike of railway clerks and freight handlers, 14 railroads entering Kansas City, Mo.	1,500	5,000	Adjusted.
Controversy between T. St. L. & W. R. R. (Clover Leaf) and its mechanical shop employees, Frankport, Ind.	88	120	Do.
Controversy, Loose-Wiles Co., Kansas City, Mo.	.....	.....	Pending.
Controversy, National Biscuit Co., Kansas City, Mo.	.....	.....	Commissioner reports no controversy exists.
Strike of bag makers, Chase Bag Co. and Bemis Bag Co., Kansas City, Mo.	200	.....	Adjusted.
Strike of bag makers, Forest & Mace, Kansas City Packing Box Co., C. F. Downey, and Inman Packing Box Co., Kansas City, Mo.	550	800	Commissioner withdrew from case.
Controversy, Jackson Iron & Steel Co., Jackson, Ohio.	150	.....	Adjusted before arrival of Commissioner.
Threatened strike of manganese miners, Philipsburg District, Mont.	357	.....	Unable to adjust.
Machinists' controversy, Buffalo, N. Y.	.....	.....	Strike averted.
Strike of boiler makers, Henry Goldner Boiler & Tank Works, Philadelphia, Pa.	.....	.....	Adjusted.
Labor disputes, Lazarus Raincoat Co., New York City	500	.....	Do.
Labor dispute, Plottel Raincoat Co., New York City	125	.....	Do.
Labor dispute, Manchester Waterproof Co., New York City	150	.....	Do.
Labor dispute, Pines Rubber Co., Brooklyn, N. Y.	165	.....	Do.
Labor dispute, Yorkshire Mfg. Co., New York City	75	.....	Do.
Labor dispute, Newark Rubber Co., New York City	180	.....	Do.
Labor dispute, Phoenix Auto & Raincoat Co., New York City.	125	.....	Do.
Labor dispute, Harry Goodman Co., New York City	100	.....	Do.
Labor dispute, Hannauer & Rosenthal, New York City	140	.....	Do.
Labor dispute, Louis J. Freid, New York City	70	.....	Do.

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, SUBSEQUENT TO SEPT. 16, 1917—Concluded.

Name.	Workmen affected—		Result.
	Directly.	Indirectly.	
Labor dispute, Peerless Co., Newark, N. J. ....	140		Adjusted.
Labor dispute, Kohen & Karsh, Brooklyn, N. Y. ....	175		Do.
Labor dispute, Washington Auto Coat Co., New York City.	40		Do.
Labor dispute, track laborers on Atlantic Coast R. R., at or near Rocky Mount, N. C. ....			Do.
Controversy between the Baltimore & Ohio R. R. and its clerks and station employees, Connellsville Pa., and Cumberland, Md. ....	400	Wholesystem.	Do.
Controversy between machinists and their employers, Atlanta, Ga. ....	35		Do.
Controversy between the C. C. C. & St. L. R. R. (Big Four) and its machinists on entire system. ....	520	2,500	Matter held in abeyance for present.
Controversy between the Central R. R. of New Jersey and its shopmen, Ashley, Pa. ....	800		Adjusted.
Controversy between Bethlehem Steel Co. and its pattern makers, Sparrows Point, Baltimore, Md. ....	30		Pending.
Strike of grain handlers, Chicago, Ill. ....	70		Do.
Strike, Cochran Coal Co., Salina, Pa. ....	129		Adjusted.
Controversy between the Burgess-Curtis Aeroplane Co. and its employees, Marblehead, Mass. ....	260		Do.
Strike, Jones & McLaughlin Co., Pittsburgh, Pa. ....	2,500	22,500	Do.
Strike at the packing house of Thomas Ruddy Co., Kansas City, Mo. ....	400		Do.
Strike in stockyards, Kansas City, Mo. ....	300	2,000	Do.
Controversy between Curtis Aeroplane Co. and its pattern makers, Buffalo, N. Y. ....			Pending.
Strike of miners, Monterey Coal Co., West Monterey, Pa. ....	140	2,000	Adjusted.
Strike, Bossert Machine Co., Utica, N. Y. ....	400		Men who went on strike are working elsewhere.
Strikes at the Hitchman Coal Co., Benwood and Glendale, W. Va.; Mound City Coal Co., Moundsville, W. Va. ....			Pending.
Strike of telephone operators, Fort Smith and Van Buren, Ark. ....			Do.
Controversy between the Lake Carriers' Association and seamen on Great Lakes. ....			Adjusted.
Strike, C. L. Best Traction Co. and Best Steel Casting Co., San Leandro, Cal. ....	500	550	Do.
Strike of boiler makers and helpers of the Denver & Rio Grande R. R. ....			Pending.
Controversy, car inspectors, Peoria, Ill. ....			Adjusted.
Controversy, inside wiremen, Los Angeles, Cal. ....	300	100	Pending.
Strike of machinists, Lake Torpedo Boat Co., Bridgeport, Conn. ....	150	250	Adjusted.
Strike, Flint glass workers, L. E. Smith Glass Co., Mount Pleasant, Pa. ....	108	22	Do.
Controversy between Northern Pacific R. R. and its railway clerks and station employees. ....	2,000	Indefinite.	Pending.
Controversy, Columbus Oil Producing Co., Fullerton, Cal. ....			Do.
Controversy, Belmont Stamping & Enameling Co., New Philadelphia, Pa. ....	300		Do.
Lockout, machinists, Anniston, Ala. ....	11		Do.
General controversy of weavers, Philadelphia. ....			Do.
Strike of machinists, Symington-Anderson Plant, Rochester, N. Y. ....			Do.
Strike, coal mines, Shoemaker Coal Mining Co., Pennsylvania. ....			Adjusted.
Controversy, jewelry employees and manufacturers, Newark, N. J. (18 shops). ....	700		1 adjusted.
Strike of velvet workers, American Velvet Co., Stonington, Conn. ....	168	150	Pending.
Strike, Graff Coal Co. mines at Conemaugh, Trunall, and White Station, Indiana County, Pa. ....			Do.
Strike of street railway employees, St. Paul, Minn. ....			Commissioner learned upon arrival that case had been adjusted.
Controversy, Texas & Pacific R. R. Co. and car department employees, Dallas, Tex. ....			Pending.
Lockout, American Lace Co., Elyria, Ohio. ....	34	250	Do.
Controversy between the Tampa Shipbuilding & Engineering Co. and its employees, Tampa, Fla. ....			Do.
Strike of roofers, Los Angeles, Cal. ....			Do.
Strike, Standard Shipbuilding Co. ....	2,000		Adjusted.

Cases noted in statement dated September 17 have been disposed of as follows:

Controversy, Furness, Withy & Co. (Ltd.) and its longshoremen, Norfolk and Newport News, Va.—Adjusted.

Strike of woodsmen, Saginaw & Manistee Lumber Co., Williams, Ariz. (Same as strike of lumbermen, Flagstaff, Ariz.)—Commissioner states no strike exists.

Controversy, Hercules Mining Co., Wallace, Idaho.—Adjusted.

Strike, Chattanooga Street Ry. Co., Chattanooga, Tenn.—Unable to adjust.

Controversy between Missouri & Northern Arkansas R. R. Co. and its maintenance-of-way employees, Harrison, Ark.—Adjusted.

Strike at Peet Bros. Mfg. Co., Kansas City, Mo.—Adjusted.

## IMMIGRATION.

### IMMIGRATION IN JULY, 1917.

The number of immigrant aliens admitted to the United States during the year 1916 was 355,767, as compared with 258,678 for the year 1915, an increase of 97,089, or 37.5 per cent. There was also an increase from month to month during 7 of the 12 months in 1916. During the current year the figures for the first three months show a considerable decrease from month to month. The decrease from the preceding month for January, February, and March, 1917, is 19.9, 22.3, and 19.4 per cent, respectively. For April, however, the number of immigrant aliens admitted shows an increase of 32.3 per cent over the number admitted in March. As compared with April, the figures for May show a decrease of 48.9 per cent. The figures for June indicate an increase of 5.5 per cent over those for May. During July immigration reached a very low point, only 9,367 immigrant aliens having been admitted, a total even smaller than that for May, which was the smallest total for any month in many years. Compared with the figures for June, those for July show a decrease of 15.6 per cent. These facts are brought out in the following table:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS,  
1913 TO 1917.

Month.	1913	1914	1915	1916	1917	
					Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	<sup>1</sup> 19.9
February.....	59,156	46,873	13,873	24,740	19,238	<sup>1</sup> 22.3
March.....	96,958	92,621	19,263	27,586	15,512	<sup>1</sup> 19.4
April.....	136,371	119,885	24,532	30,560	20,523	32.3
May.....	137,262	107,796	26,069	31,021	10,487	<sup>1</sup> 48.9
June.....	176,261	71,728	22,598	30,764	11,095	5.5
July.....	138,244	60,377	21,504	25,035	9,367	<sup>1</sup> 15.6
August.....	126,180	37,706	21,949	29,975	.....	.....
September.....	136,247	29,143	24,513	36,398	.....	.....
October.....	134,440	30,416	25,450	37,056	.....	.....
November.....	104,671	26,298	24,545	34,437	.....	.....
December.....	95,387	20,944	18,901	30,902	.....	.....

<sup>1</sup> Decrease.



Classified by races, the number of immigrant aliens admitted to and emigrant aliens departing from the United States during July, 1916 and 1917, was as follows:

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, JULY, 1916 AND 1917.

Race.	Admitted.		Departed.	
	July, 1916.	July, 1917.	July, 1916.	July, 1917.
African (black).....	797	631	140	145
Armenian.....	118	21	15	274
Bohemian and Moravian.....	15	4		7
Bulgarian, Servian, Montenegrin.....	160	13	6	4
Chinese.....	180	219	50	91
Croatian and Slovenian.....	33	1		6
Cuban.....	719	163	232	101
Dalmatian, Bosnian, Herzegovinian.....	3			
Dutch and Flemish.....	322	161	76	81
East Indian.....	2	2	3	2
English.....	3, 119	825	617	1, 087
Finnish.....	631	238	45	883
French.....	1, 526	441	325	870
German.....	783	199	55	54
Greek.....	1, 692	276	188	215
Hebrew.....	1, 031	506	12	135
Irish.....	1, 618	284	186	239
Italian (north).....	340	78	212	62
Italian (south).....	3, 004	676	489	958
Japanese.....	686	853	50	104
Korean.....	5	29	7	4
Lithuanian.....	37	9		20
Magyar.....	17	3	12	1
Mexican.....	1, 132	1, 052	101	55
Pacific Islander.....	3		4	
Polish.....	283	62	9	21
Portuguese.....	1, 118	69	53	197
Roumanian.....	49	7	2	6
Russian.....	413	119	522	1, 179
Ruthinian (Russniak).....	109	4	1	8
Scandinavian.....	1, 706	799	387	620
Scotch.....	1, 081	292	184	342
Slovak.....	12	11	3	113
Spanish.....	1, 467	1, 025	202	445
Spanish-American.....	211	181	46	90
Syrian.....	93	19	6	19
Turkish.....	39	2		6
Welsh.....	73	10	8	21
West Indian (except Cuban).....	205	60	20	37
Other peoples.....	203	23	54	92
Not specified.....			1, 107	
Total.....	25, 035	9, 367	5, 429	8, 594

# PUBLICATIONS RELATING TO LABOR.

## OFFICIAL—UNITED STATES.

GEORGIA.—*Department of Commerce and Labor. Fifth annual report of the commissioner, fiscal year ending December 31, 1916. Atlanta, 1917. 89 pp.*

In this report the commissioner comments upon the shortage of the labor supply, due largely to the exodus of negroes, and suggests the need for legislation to protect the people against too sudden a shortage of labor and to place them in a position to become independent of anyone preferring another section. Emigrant agents are required to pay a tax of \$500 a year in each county in which they operate, but it is thought that the law is not enforced, since no one person appears to be responsible for the collection of this tax. It is recommended that supervision of employment agencies and emigrant agents be given to the Department of Commerce and Labor, with the requirement of State licenses, and that the department itself be authorized to conduct an employment bureau at a minimum of cost to the State and at no cost to the man out of a job. The following table indicates the number of employees and the wages paid to them in the various textile mills of the State for the year ending December 31, 1916:

NUMBER OF EMPLOYEES, AND WAGES PAID, IN THE TEXTILE MILLS OF GEORGIA FOR THE YEAR ENDING DEC. 31, 1916.

Class of mills.	Number of wage earners.					Wages paid.	
	Males.		Females.		Total.	Amount.	Average per worker.
	12 to 16 years of age.	Over 16 years of age.	12 to 16 years of age.	Over 16 years of age.			
Cotton and silk.....	1,964	22,305	1,576	13,154	38,999	\$13,760,632.83	\$352.85
Woolen.....	155	333	149	257	694	269,422.38	388.22
Knitting.....	108	578	136	1,345	2,167	485,790.30	224.18
Mills that spin and knit..	80	698	110	1,073	1,961	649,306.74	331.11
Total.....	2,207	23,914	1,871	15,829	43,821	15,165,152.25	346.07

<sup>1</sup> None under 14½ years of age.

ILLINOIS.—*Board of Arbitration. Annual report, 1913. Springfield, 1917. 78 pp.*

States that there was an increase of over 42 per cent, as compared with the preceding year, in the number of localities in which strikes took place, and that at many places the strike was of short duration, in some cases settlement being effected in a day. "The year closed without any serious industrial disturbances unsettled." This report gives a brief history of the cases that came to the attention of the Board of Arbitration, and in the introduction to this résumé the board states that its observations have led to the conclusion that in the few strikes which were long drawn out and finally settled, or where

operations were resumed without a formal settlement being made, the strikers "would have been better off had they accepted the conditions on which an agreement could have been reached in the first place and thus avoided a struggle which apparently did no one any good."

ILLINOIS.—*Bureau of Labor Statistics. Eighteenth annual report of the Illinois free employment offices, and the supervision of private employment agencies, for the year ending September 30, 1916. Springfield, 1917. 73 pp.*

This report states that the Illinois free employment offices "have made a great advance this year over preceding years," the number of persons applying for positions in 1916 being almost twice the number that applied in 1915 and about two and one-half times the number applying in 1914. Of the calls for help, the number asked for was more than three times the number asked for in 1915 and about two and one-half times that of 1914. The number of persons placed in positions during 1916 was three times as great as in 1915 and twice as many as in 1914. The following table shows the combined business of the six free employment offices in 1916 as compared with 1915:

STATISTICS OF ILLINOIS FREE EMPLOYMENT OFFICES FOR THE YEARS ENDING SEPT 30, 1915, AND 1916.

Office.	Applications for employment.						Applications for help.			
	Number filed.		Number of positions secured.		Number unfiled.		Number filed.		Number unfiled.	
	1915	1916	1915	1916	1915	1916	1915	1916	1915	1916
Chicago .....	47,693	96,539	14,197	66,529	33,496	30,010	18,460	73,182	4,263	6,653
East St. Louis.....	10,022	20,748	6,697	13,072	3,325	7,676	6,850	18,016	153	4,944
Peoria.....	8,465	9,866	6,927	9,325	1,538	541	7,140	12,188	213	2,863
Rockford.....	5,613	12,053	3,954	9,541	1,659	2,512	4,168	12,597	214	3,056
Rock Island-Moline.	4,830	7,716	8,328	6,054	1,502	1,662	3,366	8,177	38	2,123
Springfield.....	4,863	6,894	3,037	6,358	1,826	536	3,042	7,496	5	1,138
Total.....	81,486	153,816	38,140	110,879	43,346	42,937	43,026	131,656	4,886	20,777

The report states that of the total number who applied for positions, 80.49 per cent were males and 19.51 per cent were females; that of the total number who were asked for by employers, 75.47 per cent were males and 24.53 per cent were females; that of the total number of positions filled, 78.84 per cent were by males and 21.16 per cent were by females. Classified by occupations, the largest number of males, 43,910, or 50.23 per cent, were placed in positions as laborers, and the next largest number, 4,564, or 5.22 per cent, were given positions as handy men. The largest number of females, 5,501, or 23.44 per cent, were placed as laundresses, and the next largest number, 4,802, or 20.47 per cent, were placed as day workers.

The total cost of maintaining the six offices and one branch office, according to the report, was \$73,824.23, or about 25 per cent more than in 1915. The per capita cost, based on applications for employment, was 48 cents, as compared with 72 cents in 1915.

A separate part of the report deals with licensed private employment agencies conducted for profit. The total received for license fees during the year ending August 31, 1916, was \$15,775. The department investigated 1,669 complaints, and refunds of money by agents to complainants were secured in 1,196 cases, the amount of refund being \$9,104.98, or an average of \$7.61 per case. Thirty-five warrants were issued for violations of the employment agency act.

ILLINOIS.—*Department of Labor, Division of Factory Inspection. Copy of child-labor law. 608 S. Dearborn Street, Chicago, 1917. 18 pp.*

This is the text of the new child-labor law, superseding the act of May 15, 1903.

— *Workmen's Compensation Act of the State of Illinois, in force July 1, 1917. Springfield, 1917. 30 pp.*

This is the text of the new workmen's compensation law of Illinois, which superseded the law of June 10, 1911. At the conclusion of the law tables are presented to facilitate the finding of the present value of any sum payable weekly for a specified number of weeks up to eight years and of any sum payable semimonthly for any term from one-half month up to eight years.

MONTANA.—*Industrial Accident Board. Second annual report for the twelve months ending June 30, 1917. Workmen's Compensation Act, in effect July 1, 1915. Helena [1917], 344 pp.*

This report is noted on pages 162 to 164 of this issue of the MONTHLY REVIEW.

NEW JERSEY.—*Department of Health. Fortieth annual report, 1916. Trenton, 1917. 343 pp.*

NEW YORK.—*Department of Labor. Special bulletin No. 85, July, 1917. Course of employment in New York State from 1904 to 1916. Albany, 1917. 50 pp. 24 charts.*

This bulletin presents a study of the general problems of unemployment, the charts picturing seasonal and cyclical fluctuations in employment, the former occasioned by climatic conditions and social habits and the latter caused by changes in business conditions. There are two parts to the bulletin, one showing the trend of employment in representative factories in New York State for the period June, 1914, to December, 1916, inclusive, and the other showing the idleness in representative trade-unions for the period January, 1904, to June, 1916, inclusive. Charts are presented for the various representative factories and mills, but one chart shows the general trend of employment in all factories from June, 1914, to December, 1916, inclusive, as measured by the number of workers employed and the total amount of wages paid.

Except for August, 1914, the month in which the shock of the European war first showed its effect upon American manufacturing industry, the low point in the number of employees was reached in January, 1915. The recovery from then until August, 1915, was gradual. Beginning in September, 1915, the number of employees increased very rapidly until by April, 1916, it was 25 per cent higher than the low mark of January, 1915. From April, 1916, until December, 1916, the number of employees increased but 4 per cent. The curve of total wages also reached its lowest point in January, 1915, and rose gradually until August, 1915. Starting with the latter month, it mounted upward almost continuously from month to month. By December, 1916, it was 65 per cent higher than its low mark of January, 1915.

The difference between the low and high marks of the wages curve is greater than the difference between the low and high marks of the employees curve for several reasons. During the period of depression in 1914, part time employment was common in many industries. Hence the total number of workers on the pay roll was relatively greater than the aggregate amount of their wages. With the beginning of industrial recovery full time for the workers already on the pay roll was resumed before new workers were added. This caused total wages to increase faster than the number of employees. With the continual increase in industrial activity new men were added and full time was succeeded by overtime in some cases. Whenever overtime was practiced this tended to increase total wages faster than the number of employees. Finally, the relative scarcity of labor which accompanied the return to prosperity resulted in increases in wage rates. This increase in rates augmented total wages proportionately and helped to account for the more rapid rise in the curve of total wages.

The chart showing trade-union idleness in all representative unions since January, 1904, indicates a maximum of idleness (approximately 40 per cent) in December, 1913, and January, 1915, and a minimum of idleness (approximately 6 per cent) in October, 1905, August, 1906, and September, 1912.

NEW YORK.—*Industrial Commission, Bureau of Statistics and Information. Workmen's compensation law, with amendments, additions, and annotations to July 1, 1917. Albany, 1917. 79 pp.*

As stated, this is an annotated copy of the workmen's compensation law of New York State. There is also a comprehensive general index and a finding list of employments mentioned in section 2 of the law.

PENNSYLVANIA.—*Committee of Public Safety for the Commonwealth of Pennsylvania. Outline of departmental activities. Philadelphia, August 31, 1917. 24 pp.*

This committee, composed of more than 300 representative citizens of the State, was appointed by the governor in the spring of 1917 to mobilize and conserve all State resources and energies and assist the Federal Government in prosecuting the war. Its activities have been carried on through five major divisions, viz: (1) Administration, which includes departments of finance, publicity, legislation, and allied bodies; (2) relief, including departments of sanitation, medicine, and Red Cross and civic relief; (3) equipment and supply, with departments of food supply, materials, plants and motors, and motor trucks; (4) service, with departments of civilian service and labor, military service, naval service, and guards, police, and inspection; and (5) transportation, with departments of railroads, electric railways and motors, and highways and waterways.

It is stated that up to the present the military and naval situation and acute food conditions have taken much of the time of the committee. This report outlines the work proposed to be done by the different departments, and gives a résumé of what has been accomplished. For example, the work of the department of civilian service and labor provides for the educating and instructing of labor recruits, as well as organizing and making more mobile and effective the existing labor force, and to this end efforts have been concentrated on a determination of the needs for industrial labor, the needs for agricultural labor, the establishment of employment offices, and the appointment of district superintendents of the Federal boys' working reserve. The department of food supply has undertaken to promote the cultivation of unused land, the substitution of necessary crops for luxuries, the elimination of waste in food production, and to find the necessary additional man power for the speeding up of agriculture. Considering the work of all the departments under the supervision of the committee, the report suggests that a concentration of effort has been effected "not paralleled at any other time in Pennsylvania's history and probably unexcelled by any other State mobilization of potential resources."

— *Department of Labor and Industry. Monthly bulletin, Vol. IV, No. 4, April, 1917. 119 pp.*

Nearly 50 pages of this bulletin are devoted to tables classifying, by months, 2,670 fatal industrial accidents during 1916, according to industry, cause, nature of injury, sex and social condition of the victims, the number of dependents, and whether the fatalities occurred in general industry, in mines, or in public service. It appears that the industries and mining groups were each responsible for approximately 42 per cent of the fatalities, the remainder occurring in public service; that 27.3 per cent were caused by power vehicles, 25.6 per cent



by falling objects, 15 per cent by explosives, electricity, fires, hot and corrosive substances, 10.5 per cent by falls of persons, and 8.2 per cent by machinery, the remainder being attributed to other causes; that 31.8 per cent of those killed met their death as the result of crushes and bruises, 25.3 per cent as the result of fractures, sprains, and dislocations, 7.5 per cent as the result of cuts and lacerations, and 6.7 per cent as the result of burns and scalds.

The bulletin also gives a summary of the activities of the bureau of employment through its five public employment offices during 1916. Of 28,432 workers applying for positions 19,260, or 67.7 per cent, were referred to positions, and of this number 16,115, or 83.7 per cent, received work. Employers asked for 35,314 workers. The bureau of employment turned in to the State treasurer \$25,500 in license fees collected from private employment agencies.

PENNSYLVANIA.—*Department of Labor and Industry. Proceedings of the fourth conference of industrial physicians, held at Harrisburg, February 16, 1917. Reprinted from the Pennsylvania Medical Journal, June, 1917. [Harrisburg, 1917.] 49 pp.*

A brief summary of some of the addresses contained in this pamphlet appears on pages 179 to 182 of this issue of the MONTHLY REVIEW.

— — — *Second annual report of the commissioner of labor and industry of the Commonwealth of Pennsylvania, 1915. Part II. Harrisburg, 1916. 621 pp.*

Annual reports of the various divisions and bureaus of this department. Contains a report by the division of hygiene and engineering on the physical condition of a group of textile operatives, numbering 497 males and 575 females, in a Pennsylvania textile center.

PORTO RICO.—*Bureau of Labor. Fifth annual report. San Juan, 1917. 34 pp.*

Lists 33 strikes occurring in 1916, giving the result of each, and presents a table showing for 187 investigations made in connection with the workmen's compensation act from July 1 to December 31, 1916, the occupations, age, and sex of the injured persons, and the nature of the injuries and industries where injured were employed. Under the law providing for the payment of salaries due it appears that 218 claims were filed, involving wages amounting to \$1,960.66; 118 claims were settled. According to the report the approximate numbers of laborers employed in the most important agricultural industries on the Island were: Coffee, 156,700; cane, 191,750; tobacco, 41,450; fruit, 15,075. "Only 50 per cent of said workers are occupied the whole year through; the other half working only about 6 months." In connection with the enforcement of the scaffold law a table shows the number of workers, wages, and hours of labor on the work under construction during the year 1916. Masons received \$1.31 to \$2.58 per day; carpenters from \$1 to \$2.28 per day; helpers from 50 cents to 94 cents per day. Hours of labor ranged from 8 to 10 per day. The employment agency reported 333 applicants for work. Of these, 220 were recommended to positions, 56 being finally placed. A large insert table gives the wholesale and retail prices of the principal articles of food for the period June to December, 1916, as compared with the same period in 1915. The following range of retail prices is taken from this table:

RANGE OF RETAIL PRICES PER POUND OF EACH SPECIFIED ARTICLE OF FOOD IN PORTO RICO, JUNE TO DECEMBER, 1915 AND 1916.

Article.	1915	1916
	<i>Cents.</i>	<i>Cents.</i>
Bacon.....	9 to 14.16	12 to 20
Beans, colored.....	6 to 16	6.75 to 18
Beans, white.....	5.5 to 12	6 to 15
Bread.....	(1)	4.18 to 16
Codfish.....	7 to 12	8.4 to 12
Coffee, first.....	10.5 to 18	12 to 28
Coffee, second.....	8 to 18	10 to 20
Ham.....	12 to 25	17 to 32
Lard.....	8 to 20	12 to 30
Meat.....	(1)	8 to 18
Milk (quart).....	(1)	5 to 16
Potatoes.....	2 to 4	2 to 7
Rice, first.....	4 to 6	4.5 to 6.5
Rice, second.....	3.5 to 5.5	4 to 6.5
Sugar, first.....	5.5 to 10	7 to 10
Sugar, second.....	4 to 8	6.2 to 8

<sup>1</sup> No quotation given.

The report recommends (1) a law regulating, in accordance with the value of the property, the rents to be obtained from every house occupied by workers; (2) a law prohibiting the working of prisoners; (3) a law fixing a minimum wage for women; (4) a law providing for safety devices in factories; (5) a law reorganizing the bureau of labor.

WISCONSIN.—*Industrial Commission. Some statistics on child labor in Wisconsin.* [Madison] August, 1917. 11 pp.

This report is noted on pages 213 to 215 of this issue of the MONTHLY REVIEW.

UNITED STATES.—*Department of Commerce, Bureau of the Census. Birth statistics for the registration area of the United States, 1915. First annual report.* Washington, 1917. 78 pp. Price 20 cents.

The registration area covered by this report includes the six New England States, New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia, representing about 10 per cent of the area of the United States and approximately 31 per cent of the total population. It is the first report ever published by the Census Bureau presenting statistics of births based upon data obtained from birth registration records.

— — — *General Statistics of cities: 1916.* Washington, 1917. 88 pp.

This volume includes also statistics of parks, playgrounds, museums and art galleries, zoological collections, music and entertainments, swimming pools and bathing beaches, and other features of the recreation service.

— *Department of the Interior, Bureau of Mines. Abstracts of current decisions on mines and mining. Report for September to December, 1916,* by J. W. Thompson. Bulletin 147. Law Serial 10. Washington, 1917. 84 pp.

— — — *Sandstone quarrying in the United States,* by Oliver Bowles. Bulletin 124. Mineral Technology 17. Washington, 1917. 143 pp.

This report contains a section on safety and health in sandstone quarrying, which includes a brief discussion of the causes of quarry accidents most common in this type of quarrying and the means that may be employed to overcome them. A table shows that in 1915 there were 431 employees injured and 6 killed in and about sandstone and bluestone quarries, and another table shows that of 46 men killed in the five-year period 1911 to 1915, 40, or 86.9 per cent, of the deaths were caused by falls of workmen, falls of rock or overburden, explosives, haulage, and machinery. The attention of workmen is called particularly to these dangers, and each is described in some detail with suggestions for minimizing it. Since tuberculosis or other lung trouble may result from

continued breathing of an atmosphere containing silica dust, the author suggests the importance of using a device for keeping dust away from workmen. This is accomplished in some plants where lathes for toning down grindstones are used, by providing powerful suction fans which blow the dust from the pit beneath the stone and conduct it through pipes to places where it can do no harm. However, it is stated that many crushing and pulverizing plants are very dusty and are provided with no adequate means for removing the dust.

UNITED STATES.—*Federal Trade Commission. Report on anthracite and bituminous coal. Washington, June 20, 1917. 420 pp.*

This report, prepared at the direction of the United States Senate, outlines the present conditions in the anthracite industry, and the outlook for anthracite; the impossibility of solving the anthracite problem without action by Congress that will at the same time cure the present evil conditions in the bituminous industry and in transportation; anthracite royalties; the panic conditions and prices in the anthracite trade last fall and winter; the response to the question of justification of the price increases in May, 1916, in relation to the wage agreement of that date; and the bituminous coal situation. The commission ascribes the high price of anthracite that prevailed last fall chiefly to a "buying panic," the consumers being induced to buy coal because they were led to believe there was a threatened shortage in the supply when such did not actually exist except to a limited extent—the shortage being approximately 3½ per cent less than in the year ending March 31, 1916. It is shown that there was an increase in the cost of production over the preceding year, but the commission concludes that the increase in price as measured by a comparison of the average sales receipts was not justified by the increase in cost.

"It is clear that the increase in labor cost alone did not justify the price increase. The average increase of direct labor cost was only 15 cents a ton and of indirect labor cost (included in general expense) probably not more than 3 cents a ton, making the total average labor cost increase about 18 cents, as against the average increase of 46 cents in sales receipts, though other items brought the increase in cost accepted as comparable up to 28 cents."

Briefly summarizing, the commission states that the serious condition as to anthracite has not been a matter of production but rather the fact that anthracite was being diverted from its ordinary use and storage to compete with and take the place of bituminous coal and coke in the industries, and that frequent embargoes also disorganized well-laid plans for prudent distribution and encouraged the diversion of anthracite from its proper and normal channels. The serious conditions with respect to bituminous coal, it is suggested, are unnecessarily curtailed production and a widely fluctuating market in which speculation feeds upon panic. Many remedies were urged upon the commission, but its chief recommendations are contained in the following paragraphs taken from the report:

*First.* That the production and distribution of coal and coke be conducted through a pool in the hands of a Government agency; that the producers of various grades of fuel be paid their full cost of production plus a uniform profit per ton (with due allowance for quality of product and efficiency of service).

*Second.* That the transportation agencies of the United States, both rail and water, be similarly pooled and operated on Government account, under the direction of the President, and that all such means of transportation be operated as a unit, the owning corporations being paid a just and fair compensation which would cover normal net profit, upkeep, and betterments.

## OFFICIAL—FOREIGN COUNTRIES.

AUSTRALIA (NEW SOUTH WALES).—*Bureau of Statistics. Monthly statistical bulletin, June, 1917. Sydney, 1917. 51 pp.*

— — *Department of Labor and Industry. Industrial Gazette, July, 1917. Sydney, 1917. 153 pp.*

The review of the industrial situation for the month of June contains under the heading, "New legislation of industrial import," the text of the regulations for carrying out the workmen's compensation act, 1916.

— (VICTORIA).—*Report of the chief inspector of factories and shops for the year ended 31st December, 1916. Melbourne. 28 pp.*

According to this report the number of factories returned for 1916 was 7,618, employing 92,320 persons, an increase over 1915 of 132 factories and 432 employees. It is explained, however, that in many factories the number of those employed was considerably reduced at the time the reports were filed early in December, 1916, owing to the far-reaching effects of the coal miners' strike, which began in November and "was more serious in its effects on manufactures in general than the other disputes," of which three are recorded. Tables are given showing the average weekly wages in the various trades for which special boards have been appointed, and in trades not regulated by special boards. In 144 factories 3,266 hours of overtime were worked by 14,952 females and 685 boys. For breaches of the factories and shops act during 1916, 262 prosecutions were brought, of which 223 resulted in convictions, the fines collected amounting to £247 4s. 6d. (\$1,203.12). The report records 503 accidents during the year, 10 being fatal. Most of these accidents (382 or 75.9 per cent) affected the hands. The percentage of accidents to employees in factories was about 0.5.

CANADA.—*Canadian Food Bulletin, No. 1. October 6, 1917. Ottawa. 8 pp.*

This bulletin is published under authority of the food controller for the information of official organizations cooperating in the work of food control, and of other bodies or individuals interested. It contains an article on the cost of lower prices by W. J. Hanna, food controller, and a statement of the policy of the United States food administrator. Several short items note that after November 1 the net profits of Canadian millers will be limited to a maximum average of 25 cents on the milling of sufficient wheat to make a barrel of flour of 196 pounds and the offals produced in connection therewith; that preliminary reports from hotels and restaurants in the chief cities of the Dominion indicate an average reduction of consumption during the month succeeding the institution of beefless and baconless days of 51 per cent of bacon and 40 per cent of beef, the standard of comparison being the immediately preceding month; and that an effort is being made to develop a market for Canadian fish.

— (SASKATCHEWAN).—*Department of Agriculture, Bureau of Labor. Sixth annual report for the 12 months ended April 30, 1917. Regina, 1917. 35 pp.*

The mine inspector reports 49 mines in operation in 1916-17 as against 29 in 1915, the number employed being 367 as compared with 388 in 1915. There were no fatal accidents and only 4 minor accidents. The tonnage mined was 267,234, an increase of 12.6 per cent over 1915. The number of industrial accidents during the period January 1, 1916, to April 30, 1917, was 25 fatal and 848 nonfatal, as compared with 13 fatal and 334 nonfatal in the preceding 12 months. In the 16-month period 68 per cent of the fatal and 69.6 per cent of

the nonfatal accidents were in connection with steam or electric railways. More than 33,000 laborers were sent to the harvest fields, an increase of 6,211 over 1915, and the wages paid averaged \$2.50 per day, with an average of \$3.50 per day during the rush period of the season. In 1915 wages averaged \$2 and \$3 per day, as compared with \$2.50 and \$3 per day in 1914. The wages paid to farm help in 1916-17 were \$450 to \$480 (with board) per year (yearly contract) to hired men, and \$20 to \$25 (with board) per month to servant girls. Through the employment offices 13,359 applications for help were filed and 9,575 positions were secured.

GREAT BRITAIN.—*Ministry of Food. The National Food Journal, No. 1. September 12, 1917. London. 16 pp. Price 2d. net.*

This is the initial issue of this publication, which is to be published on the second and fourth Wednesdays of each month. It contains a supplement giving statutory rules and regulations from August 22, 1917, which also includes a summary of orders issued before this date in order to make a complete record for reference. The Journal is noted more fully on pages 91 to 104 of this issue of the MONTHLY REVIEW.

— *Ministry of Pensions. Drafts of a royal warrant and of an order in council for the pensions of soldiers and sailors disabled and of the families and dependents of soldiers and sailors deceased in consequence of the present war, to which are appended an explanatory note and an actuarial report. London, 1917. 29 pp. Price 3d. net.*

— *Royal warrant for the pensions of soldiers disabled, and of the families and dependents of soldiers deceased, in consequence of the present war, together with order in council and regulations for pensions of British seamen and marines, their widows, relatives and dependents. London, 1917. 20 pp. Price 3d. net.*

— *National Insurance Audit Department. Third report, 1916. London, 1917. 22 pp. Price 2d. net.*

— *National relief fund. Report on the administration of the national relief fund up to the 30th September, 1916. London, 1917. 36 pp. Price 4d. net.*

The aggregate receipts of the Prince of Wales's Fund up to September 30, 1916, amounted to £5,964,895 (\$29,028,162); the total issues for naval and military relief were £2,920,800 (\$14,214,073), and for civil relief £487,385 (\$2,371,859). In reporting on an institution for training blinded soldiers and sailors, to which the fund has contributed, the statement is made that of the 142 cases which had passed through the institution the majority are now settled in trades or occupations in which they earn from 15s. to £3 (\$3.65 to \$14.60) a week.

INDIA.—*Annual report on the working of the Indian Factory Act, 1911, in the Punjab, Delhi, and Northwest Frontier Provinces for the year 1916. Lahore, 1917.*

Reports 184 factories, employing about 32,000 operatives, subject to control under the act; 149 of these factories were inspected, some several times. An improvement over the preceding year is noted in the lighting and general sanitary conditions and provisions for escape in case of fire. However, it is stated that Indian employers "show a marked indifference to the general well-being and comfort of their employees; the workers are merely considered as part of the machinery of production." Attention is directed to the excessive hours of work required of women and children, especially in the cotton-ginning factories. "The profits of illegal working are so large compared with any possible fines that may be inflicted that I believe occupiers and managers deliberately take the risk of prosecution rather than work reasonable hours." A tendency to avoid giving the proper rest interval is noted.



A wage statement is appended showing a monthly range for skilled laborers of from 8 rupees (\$2.59) paid to press distributors to 150 rupees (\$48.60) paid to engineers (first class); and for unskilled laborers a range of from 2 annas (4.1 cents) per day paid to coolies (children) on gins to 12 annas (24.3 cents) per day paid to coolies generally. There were 190 accidents during 1916, 11 being fatal and 13 serious. Thirty-one convictions were secured for violations of law.

ITALY.—*Comitato Centrale di Mobilitazione Industrial. Bollettino No. 1. July, 1917. Rome. 32 pp.*

The first number of a monthly bulletin published by the Italian central committee on industrial mobilization. The present number gives the text of the vice-regal decree of July 16, 1917, amending the regulations on industrial mobilization, and several circulars of the central committee to the district committees, one of which deals with protective measures for women and juvenile workers employed in the manufacture of war materials. The rest of the bulletin is given over to technical articles, opinions rendered by the commission on piece-work, and miscellaneous news relating to industrial mobilization in Italy and foreign countries. One of the technical articles describes appliances intended to facilitate the execution of heavy work by women and juvenile workers in arms and munition factories.

— *Ministero per l'Industria, il Commercio e il Lavoro. Ufficio del Lavoro. Ispettorato medico dell'industria e del lavoro. Legislazione igienico-sanitaria del lavoro all'estero. Europa. Rome, 1917. XVI, 671 pp.*

In order to acquaint the Italian public with legislation on industrial hygiene enacted in other European countries, the Italian Office on Credit and Insurance (Direzione Generale del Credito e della Previdenza), in connection with the work of a commission appointed in 1901 to study the cause of and preventive measures against industrial diseases, compiled all protective labor laws. This compilation was published in 1911. The continuous and rapid evolution in most European countries of this branch of legislation has made it necessary to bring this first compilation up to date. As Italy's existing laws for the prevention of accidents compare favorably with the best legislation enacted in this respect in other countries, such legislation was omitted in the present compilation and only strictly sanitary laws included in it, in which latter Italy is somewhat deficient.

The compilation of hygienic legislation presented in the volume under review includes the following European countries: Austria, Belgium, Bulgaria, Denmark, France, Germany, Greece, Great Britain, Luxemburg, Norway, the Netherlands, Portugal, Roumania, Russia, Serbia, Spain, Sweden, Switzerland, and Hungary. The text of the two international conventions on the use of white phosphorus in the match industry and on night work of women is also given. A subject index completes the volume. The volume seems to have been delayed in publication, as the compilation does not go beyond the year 1912.

— — — *Notizie sulla applicazione delle leggi 16 giugno 1907, n. 337, e 17 luglio 1910, n. 487, sulla risicoltura. (Supplemento al Bollettino dell'Ufficio del Lavoro, No. 29.) Rome, 1917. 84 pp.*

A report of the Italian Labor Office on the enforcement of the laws of June 16, 1907, and July 17, 1910, relating to the cultivation of rice and the protection of labor employed at it. The Italian Government is finding considerable difficulty in enforcing the above laws and their amendment is being requested by inspectors charged with their enforcement as well as by employers' and workmen's organizations. As the defects of a law can be best shown by the number and nature of contraventions against it and by the court decisions

relating to these contraventions, the labor office has compiled all contraventions of the laws on the cultivation of rice and the sentences pronounced by the courts of different instance and published them in the present volume.

From June, 1907, to December 31, 1915, the total number of contraventions was 2,035. Of this total, 119 related to the establishment of new rice fields, 359 to hours of labor and rest periods, 540 to housing of workmen and to drinking water, 326 to the contract of employment, 327 to birth and medical certificates, 44 to establishment hospitals, 12 to quarantine, and 308 were of a miscellaneous character. A total of 1,373 contraventions were reported by the inspectors during the three-year period 1913-1915, and conviction of the contraveners was obtained in 1,179 (86 per cent) of these cases. During the remaining period covered by the report (June, 1907, to December 31, 1912), the total number of contraventions was only 718. These figures demonstrate clearly that during the first years after the enactment of the protective law the inspection service for its enforcement was insufficient. During the period 1913-1915, the inspection service was considerably extended. In 1915 it covered 137,000 hectares (338,533 acres) of a total of 145,000 hectares (358,301 acres) under cultivation in rice.

ITALY.—*Ministero per l'Industria, il Commercio e il Lavoro. Ufficio del Lavoro. Requisiti d'istruzione per l'ammissione dei fanciulli al lavoro industriale. (Supplemento al Bollettino dell' Ufficio del Lavoro, No. 28.) Rome, 1917. XXXII, 217 pp.*

A supplementary volume to the bulletin of the Italian Labor Office, showing the legal educational requirements for the admission of children to industrial labor. The contents of this volume are being discussed in a special article in the present MONTHLY REVIEW on pages 215 to 217.

NEW ZEALAND.—*Registrar of friendly societies. Fortieth annual report, for the year ended 31st December, 1916. Friendly societies and trade-unions. Wellington, 1917. 36 pp.*

These societies are analogous to fraternal organizations in this country. The report states that at the close of 1916 there were 876 local societies, a decrease of 41 during the year. Tabulated returns from 727 lodges show a membership of 70,360, a decrease of 3.7 per cent from 1915, and total funds amounting to £1,954,940 (\$9,513,715.51), an increase of 5.5 per cent over 1915. The average capital is given as £27 15s. 8d. (\$135.21). The amount of sickness benefits paid was £75,677 (\$368,282.12), equal to £6 18s. 3d. (\$33.64) per member sick, and £1 1s. 1d. (\$5.13) per member, as against £6 9s. 1d. (\$31.41) and £1 0s. 9d. (\$5.05), respectively, for 1915. Based on the amount of time lost on account of sickness, the average benefit paid was 13s. (\$3.16) per week. The funeral benefits paid amounted to £26,855 (\$130,689.86), equal to 7s. 6d. (\$1.83) per member, as compared with 5s. 4d. (\$1.30) in 1915. The report states that there were 31 trade-unions on the register at the end of 1916.

The report notes that as the result of a conference held by the Government with representatives of the friendly societies in April, 1916, a scheme for the extension of State benefits to members of friendly societies, on special terms, was embodied in an act passed by the general assembly. The objects of this are threefold: (1) To enlarge the administration of maternity assistance by extending its operations to members of provident organizations; (2) to extend the State's propaganda for the establishment of a contributory system of provision for old age; (3) to enable friendly societies to secure a provision in old age for their members at specially low rates and at the same time relieve their funds in respect of aged-sickness liability.

To assist the societies in carrying their war risks, the Government agreed in November, 1914, to subsidize the reinsurance of death benefits of soldier

members on active service to the extent of paying one-half of the premiums. Up to September 30, 1916, the State liability had reached the sum of £11,867 5s. 9d. (\$57,752.15).

NORWAY.—*Statistiske Centralbyraa. Arbeidslønninger, 1915. Christiania, 1917. 12\*, 36 pp. Norges Officielle Statistik. VI. 93.*

In this report annual earnings of domestics and wages of laborers are reported in detail, for the year 1915, and comparative tables of similar wages for previous years are given. The wages and earnings reported for various industries are reproduced in this number of the MONTHLY REVIEW (pp. 110 to 113).

— — — *Statistisk Aarboek for Kongeriket Norge, 36th Aargang, 1916. Christiania, 1917. 198 pp.*

This volume gives the data usually found in yearbooks. The table relative to wages and earnings has been reproduced in this number of the MONTHLY REVIEW (pp. 111 to 113), in an article entitled "Wages and earnings in various occupations in Norway, 1915."

SWITZERLAND (ZÜRICH).—*Statistisches Amt der Stadt Zürich. Statistisches Jahrbuch der Stadt Zürich. Zehnter und Elfter Jahrgang 1914 und 1915, zum Teil auch 1916. Zürich, 1917. XXVII, 22\*, 456 pp.*

The present tenth and eleventh volume of the statistical yearbook of the city of Zürich gives for the years 1914 and 1915 and partly also for the year 1916 the same kind of local statistical data which were shown in preceding issues of this yearbook. Of interest to labor are the data on the distribution of the population by occupations, the labor market, retail prices, and housing. The data on retail prices and housing show the influence of the war on the price of foodstuffs and on rents of dwellings.

#### UNOFFICIAL.

AMERICAN IRON AND STEEL INSTITUTE. *Annual statistical report for 1916. New York, 1917. 96 pp.*

Contains statistics of the iron and steel and allied industries of the United States and Canada for 1916 and earlier years.

BLANCHARD, RALPH H. *Liability and compensation insurance. Industrial accidents and their prevention, employers' liability, workmen's compensation, insurance of employers' liability and workmen's compensation. New York, D. Appleton and Co., 1917. 394 pp.*

In this volume the author aims to present the results of the workmen's compensation movement in the United States, in terms of legislation and insurance practice, and to explain the industrial accident problem and the development of liability and compensation principles as a background for the comprehension of present problems. The presentation follows in general outline the course of instruction given by the writer in the Wharton School of the University of Pennsylvania. It deals with industrial accidents and their prevention, the law of negligence, the development of workmen's compensation, existing compensation statutes, and the principles and practices of insurance as applied to employers' liability and workmen's compensation.

BRITISH STEEL SMELTERS, MILL, IRON, TIN PLATE, AND KINDRED TRADES ASSOCIATION. *Annual report for 1916. 76-78 Swinton Street, Grays Inn Road, London WC 1. [1917] 151 pp. Illustrated.*

The membership of the association, according to this report, was 39,507 on December 31, 1916, an increase of 2,491 over 1915. The total funds of the society increased during the year by £32,022 (\$155,835.06), of which £6,250 (\$30,415.63) was credited to a special war fund. A reduction of nearly £1,000

(\$4,866.50) in unemployment and dispute benefits is reported, this being more than balanced by an increase of £2,385 (\$11,606.60) in accident and funeral benefits. Taking all benefits paid, the net increase reported was £1,544 10s. 5d. (\$7,516.41). Of 41 members who were paid accident benefits, 13 were disabled while serving in the army or navy and the amount paid on this account was £1,068 6s. 8d. (\$5,199.04). Funeral benefits paid as a result of deaths of 158 members who joined the forces amounted to £1,892 (\$9,207.42). The total benefits paid to members during 1916 amounted to £11,838 10s. 4½d. (\$57,612.15), or an average of 6s. 1¼ d. [\$1.49] per member, based on an average membership during the year of 38,778. The average payment per member per year to the benefit funds was £ 1 12s. 4¾d. [\$7.88], or a total of £62,837 5s. 8d. [\$305,797.64]. The following table shows the amount paid on account of each specified benefit, showing the average paid per member based on a membership of 39,507 as reported above:

BENEFITS PAID TO MEMBERS DURING 1916.<sup>1</sup>

Kind of benefit.	Amount.	Average per member.
Accident.....	\$16,994.79	\$0.43
Distress.....	3,734.43	.09
Funeral.....	29,914.38	.76
Grants, etc., to other trades.....	1,446.51	.04
Other.....	3,105.41	.08
Total.....	55,195.52	1.40

<sup>1</sup> This statement is taken from the report (page 151). The total does not agree with the total benefits paid as mentioned in the above paragraph. It does not appear which statement is correct.

CHAMBER OF COMMERCE OF THE UNITED STATES. *War convention of American business. Atlantic City, N. J., September 18-21, 1917. Summary of proceedings; resolutions adopted. Washington, 1917. 30 pp.*

This convention, representing nearly 1,000 chambers of commerce and commercial organizations in all the States of the Union, was called for the purpose of discussing questions directly pertaining to business and the war. Among the addresses was one by Secretary Wilson, of the Department of Labor, who discussed industrial relations, including in his remarks the following statement, as reported in the pamphlet under review:

There is a limit to which employers can go, no matter how generous they may be toward their employees, and that limit is the extent to which they are forced by their less generous competitors. Material things are not the only things for which we stand, and when I say "we" I mean both employer and employee. So far as the employee is concerned, while he may appreciate your generosity, admire your charity in the housing conditions and other fine surroundings in which you place him, he would rather live in a log cabin, a home of his own, and on hominy of his own production than live in a palace and feel that it came from charity.

The chamber of commerce recommended the creation of a Federal arbitration board and indorsed the United States employment service under the Department of Labor, in the following resolutions:

*Resolved*, That we recommend the creation of a Federal board to be constituted equally of representatives of employers, employees, and the Government to which shall be referred all major disputes between employers and employees during the war; and we affirm that during the adjustment of such disputes there should be no interruption of production by lockout, strike, or other causes within the control of employer or employee, and that the decisions of the board should be accepted as binding by both parties. To this end we invite the cooperation of labor and pledge our own efforts.

Whereas, in considering employment problems raised by the war, the Chamber of Commerce of the United States finds imperative need for a common agency whereby employers may be connected with workers seeking employment; and

Whereas, the evidence of business men who have used it agrees that the United States employment service of the Department of Labor as such an agency is lacking for war emergencies only because too limited in extent: Therefore be it

*Resolved*, That the Chamber of Commerce of the United States approves the usefulness of the United States employment service and recommends that Congress sustain the said service by ample appropriation and direct its immediate extension as a war measure.

COMMONWEALTH CLUB OF CALIFORNIA. *Oriental trade. Transactions, Vol. XII, No. 7. San Francisco, 1917. pp. 305-340.*

A discussion of American trade in the Orient, its present condition and its future possibilities.

COPELAND, MELVIN T., ED. *Business statistics. Cambridge (Mass.), Harvard University Press, and London (England), Humphrey Milford, 1917. 696 pp. Harvard Business Studies.*

Prepared, by the director of the bureau of business research of Harvard University, "to bring together, in a form accessible for class use, scattered articles and selections upon the subject of business statistics." Deals chiefly with statistics used in mercantile and manufacturing businesses. The main heads are as follows: I. Statistical methods; II. Statistical indices of business conditions; III. Sales and advertising statistics; IV. Factory statistics; and V. Statistics for the chief executive.

DEUTSCH-AMERIKANISCHE TYPOGRAPHIA.—*Vierundvierzigster Jahresbericht vom 1. Juli 1916 bis 30. Juni 1917. (Place of publication not shown.) 1917.*

The forty-fourth annual report, for the fiscal year ended June 30, 1917, of the Federation of German-American Typographical Unions, a branch of the International Typographical Union. According to this report the federation had 849 members at the close of the fiscal year under review. The total receipts of the federation were \$77,087.80 and the expenditures \$47,110.09, leaving in the treasury a balance of \$29,977.71. The federation disbursed \$3,586 for unemployed benefits, \$3,892.50 for sick benefits, \$8,930 for death benefits, and \$12,470 for old-age pensions. The expenses for administration amounted to \$951.39. The number of unemployed members varied between a minimum of 23 in August, 1916, and a maximum of 38 in September of the same year. Wage increases of \$1 per week are reported for members of the unions in Philadelphia, Pa., and Rochester, N. Y., and of \$1.20 per week for the union in Evansville, Ind. The union in Detroit, Mich., reports a wage increase of \$2 per week for compositors and the grant of a working week of five days for hand compositors.

ELMER, MANUEL C. *Technique of social surveys. Lawrence (Kans.), World Co., 1917. 93 pp.*

A handbook for social survey workers by the author of *Social Surveys of Urban Communities*.

HAMMOND, J. L. AND BARBARA. *The town laborer, 1760-1832: The new civilization. London and New York, Longmans, Green & Co., 1917. 346 pp.*

The first part of a remarkable study of the industrial revolution in Great Britain, describing the general features, as a later volume is to give a detailed history of the working people, of the new civilization. The Home Office papers, now accessible to students, have been freely consulted, as have the journals of both houses of Parliament and other public records.



HOAGLAND, H. E. *Collective bargaining in the lithographic industry*. New York, Columbia University (Longmans, Green & Co., agents), and London, P. S. King, 1917. 130 pp. Columbia University studies in history, economics, and public law, No. 176. Price \$1.

One of a series of investigations of wage bargaining made for the United States Commission on Industrial Relations, supplemented by later study. Four stages in the method of wage determination are noted: 1. By custom; 2. By union dictation; 3. By mutual agreement between unions and employers; and 4. By dictation by an employers' association. "In each stage most of the terms of the labor contract were standardized; and in every stage some of its terms, especially the differentials from the standard wage rate, varied according to the different capacities of individual workmen."

The poster artists constitute only about 5 per cent of the workmen employed in the lithographic industry. The success of their union "in maintaining the balance of power against an organization of employers which has succeeded in wresting such power from all other unions in the same industry, is due to the restrictive apprenticeship policy of that one union in the face of a growing demand for the products of the labor of its members."

INTERNATIONAL MARKET OF MILK AND MILK PRODUCTS. *Second quarter, 1917.*

A pamphlet compiled by the price inquiry office of the Swiss Agricultural Association from data received from 12 or more countries. "Owing to the increasing difficulties of supplying the population with provision, the States are compelled to take energetic measures with a view to stimulate the production, to control the shapening of prices, and to regulate the consumption and manufacturing of milk and dairy produce."

LAMBERT, HENRI. *Pax Economica*. New York, John C. Rankin Co., August, 1917. 99 pp.

In this book the author endeavors to show that "force can not solve international problems any more than other problems, can not make the world more secure in the future than it has made it in the past, can not establish a peace worthy to be lived, can not save civilization—that these results can be attained only by justice and morality in international relations." It is maintained that only an economic peace can be a permanent peace, that free trade between nations is the only solution to the present conflict. "It fortunately remains possible for both sides to surrender to a principle," which is, "that freedom, equity, equality in the economic relations, rights, and opportunities of the nations form the natural and necessary basis of international harmony, security, and peace." There are four parts to the book, viz.: The economic cause and solution of the European crisis; International morality and exchange; The way to salvation—an economic peace; and The treaty of economic peace, being a sketch of the conclusive settlement of the international problem.

[NATIONAL EDUCATION ASSOCIATION.] *National Council of Education. Committee on thrift education. Agricultural preparedness and food conservation: A study in thrift*. [San Francisco, 1917.] 32 pp.

At a meeting of the National Council of Education held at Portland, Oreg., in July, 1917, an entire session was devoted to consideration of the problem of thrift, of waste, and of food, and the addresses delivered at that session are here reproduced in pamphlet form through the efforts of the committee on thrift education which was appointed in August, 1915, upon the recommendation of the International Congress for Thrift, to investigate the advisability and feasibility of teaching thrift in the public schools of the country. The titles of the addresses are: Thrift—a patriotic necessity, by S. W. Straus, president American Society for Thrift, New York City; How the schools may help in-

crease food production, by R. H. Wilson, State superintendent of schools, Oklahoma, Okla.; Waste of food from the producer to the household, by J. A. Bexell, dean, School of Commerce, Oregon Agricultural College, Corvallis, Oreg.; Thrift in the home, by Katherine Devereux Blake, principal public school No. 6, New York City; Adaptation of courses in domestic economy and industrial arts to meet existing demands, by Clarence H. Dempsey, superintendent of schools, Haverhill, Mass.; Food storage and preservation, by Henry R. Daniel, secretary American Society for Thrift, Chicago, Ill.; and The schools and the food problem, by Arthur H. Chamberlain, chairman committee on thrift education.

On the last page of the pamphlet is a copy of resolutions adopted by the National Council of Education at its Portland meeting, suggesting "that it is the urgent duty and patriotic opportunity of this committee to take such immediate action as shall look toward the introduction of the study of thrift in our schools, \* \* \*" and that "this committee recommend the preparation of such literature as shall be advantageous in making possible the application of thrift studies in connection with arithmetic, domestic science, history, and English composition, and other school branches."

POOR LAW CONFERENCES (GREAT BRITAIN). *Official reports, 1915-16.* London, W. G. Lewis, 1916. 96 pp.

In three parts: 1. Report of the reception by the president of the local government board, March 4, 1915, of a deputation from the central committee of poor-law conferences and the Association of Poor Law Unions of England and Wales on the question of the overlapping of old-age pensions and national insurance and poor-law relief; 2. Report of the forty-sixth annual poor-law conference for the West Midland district, in May, 1915, with papers on "Treatment and care of children whose parents are receiving outrelief" and "Treatment of sane epileptics"; 3. Report of the Metropolitan Poor Law Conference, in May, 1915, with papers on "Management of poor-law schools" and "Value and scope of women's work as poor-law officers."

RHODES, J. E., 2d. *Workmen's compensation.* New York, The Macmillan Co., 1917. 300 pp. Price \$1.50 net.

This contribution to workmen's compensation literature, declares the author in a foreword, has been written in an attempt to give a brief history of the movement in this country and an outline of the principles on which the system is based. Details have been omitted. The position is taken that the problem is one which is national in scope, but local in its solution because of constitutional restrictions, and it has been considered in its national rather than its local aspects. Differences in the various State laws have not been emphasized, attention being given entirely to the general fundamental principles upon which all are based. Copious references to the literature of this movement are given, so that a student of the subject who desires to make a deep study may do so. The chapters include introductory survey, industrial accidents and accident insurance, the European background, the agitation in the United States, early attempts in the United States, the constitutionality of compensation legislation, compensation legislation in the United States, the insurance of the compensation obligation, the administration of compensation laws, and some social aspects of workmen's compensation. Three appendixes give the workmen's compensation movement in New York, standards for workmen's compensation laws, and a digest of workmen's compensation laws.