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U. S. DEPARTMENT OF LABOR  
JAMES J. DAVIS, SECRETARY  
WOMEN'S BUREAU  
MARY ANDERSON, Director

BULLETIN OF THE WOMEN'S BUREAU, NO. 21

# WOMEN IN RHODE ISLAND INDUSTRIES

A Study of Hours, Wages, and  
Working Conditions



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1922

[PUBLIC—No. 259—66TH CONGRESS.]

[H. R. 13229.]

An Act To establish in the Department of Labor a bureau to be known as the Women's Bureau.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there shall be established in the Department of Labor a bureau to be known as the Women's Bureau.

SEC. 2. That the said bureau shall be in charge of a director, a woman, to be appointed by the President, by and with the advice and consent of the Senate, who shall receive an annual compensation of \$5,000. It shall be the duty of said bureau to formulate standards and policies which shall promote the welfare of wage-earning women, improve their working conditions, increase their efficiency, and advance their opportunities for profitable employment. The said bureau shall have authority to investigate and report to the said department upon all matters pertaining to the welfare of women in industry. The director of said bureau may from time to time publish the results of these investigations in such a manner and to such extent as the Secretary of Labor may prescribe.

SEC. 3. That there shall be in said bureau an assistant director, to be appointed by the Secretary of Labor, who shall receive an annual compensation of \$3,500 and shall perform such duties as shall be prescribed by the director and approved by the Secretary of Labor.

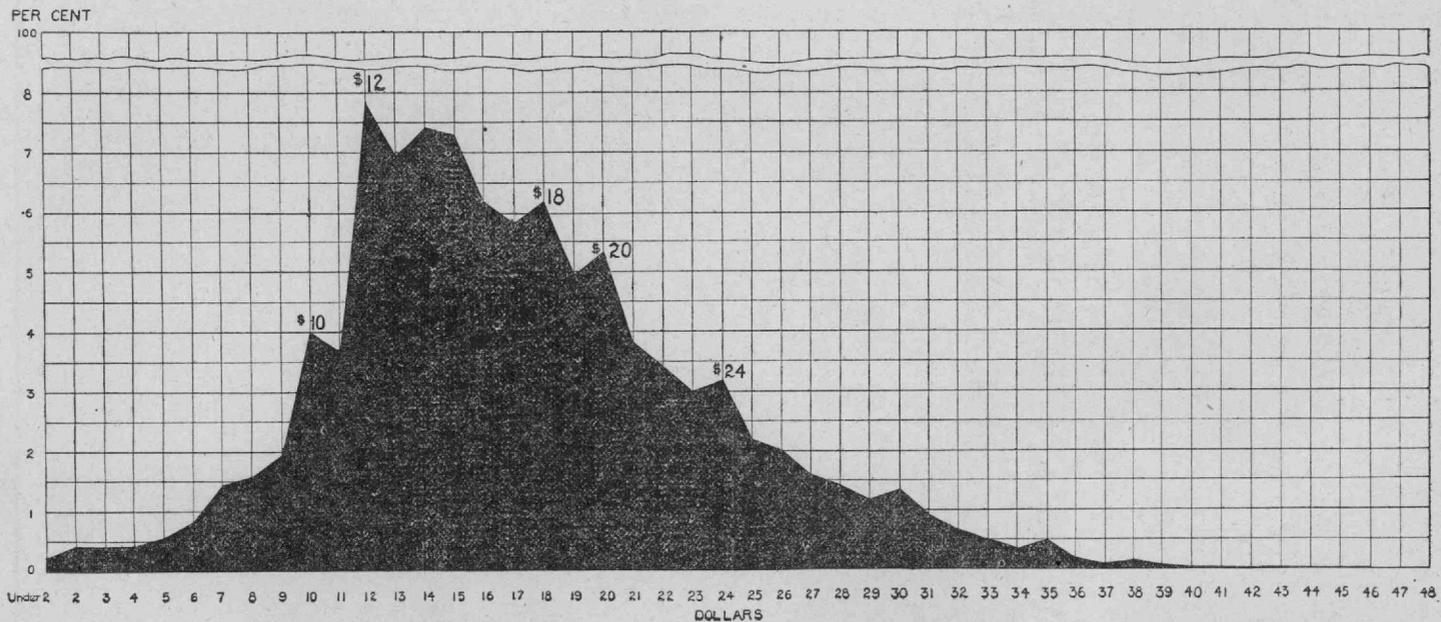
SEC. 4. That there is hereby authorized to be employed by said bureau a chief clerk and such special agents, assistants, clerks, and other employees at such rates of compensation and in such numbers as Congress may from time to time provide by appropriations.

SEC. 5. That the Secretary of Labor is hereby directed to furnish sufficient quarters, office furniture, and equipment, for the work of this bureau.

SEC. 6. That this act shall take effect and be in force from and after its passage.

Approved, June 5, 1920.

# WEEKLY EARNINGS OF WOMEN - RHODE ISLAND



U. S. DEPARTMENT OF LABOR  
JAMES J. DAVIS, SECRETARY  
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MARY ANDERSON, Director

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U. S. DEPARTMENT OF LABOR  
JAMES H. BEVERLY, SECRETARY  
WOMEN'S BUREAU  
MARY ANDERSON, CHIEF

BULLETIN OF THE WOMEN'S BUREAU, NO. 3

# WOMEN IN RHODE ISLAND INDUSTRIES

A Study of Hours, Wages, and  
Working Conditions



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1917

## CONTENTS.

	Page.
Letter of transmittal.....	v
Part I: Introduction:	
Scope and method of investigation.....	2
Facts about the industries.....	4
Summary.....	10
Conclusion.....	12
Part II: Hours:	
Weekly hours.....	15
Daily hours.....	20
Vacations.....	24
Part III: Wages:	
Wages and cost of living.....	25
Weekly earnings.....	26
Yearly earnings.....	35
Conclusion.....	39
Part IV: Working conditions:	
General workroom conditions.....	41
Hazard and strain.....	44
Sanitation.....	47
Service facilities.....	50
Employment management.....	52
Training.....	52
Part V: The workers.....	53
Appendix A. General tables.....	61
Appendix B. Schedule forms.....	71

### TEXT TABLES.

TABLE 1. Number of establishments studied and number of persons of each sex employed therein, by industry.....	4
2. Number of establishments and number of women, with scheduled weekly hours as specified, by industry.....	16
3. Number of establishments and number of women, with scheduled daily hours as specified, by industry.....	21
4. Number of women and their median earnings on timework, on piecework, and on both time and piece work, by industry.....	30
5. Year's earnings of women for whom 52-week pay-roll records were secured, by industry.....	36

### GENERAL TABLES.

TABLE I. Number of women working each specified number of hours, one weekly pay-roll period, by industry.....	61
II. Per cent distribution, according to amount of time lost, of women who worked less than the scheduled weekly hours, by industry.....	62

	Page.
TABLE III. Per cent distribution, according to amount of overtime, of women who worked beyond the scheduled weekly hours, by industry-----	63
IV. Number of women receiving each classified amount during one weekly pay-roll period, by industry-----	64
V. Number of women receiving each classified amount during one weekly pay-roll period, by hours worked-----	65
VI. Number of timeworkers receiving each classified weekly rate, by industry-----	66
VII. Median weekly earnings of women, by age group and industry--	66
VIII. Median weekly earnings of women, by experience in the industry-----	67
IX. Number of women working each specified number of weeks, of those for whom 52-week pay-roll records were secured, by industry-----	67
X. Nativity of the women employees who supplied personal information, by industry-----	68
XI. Age of the women employees who supplied personal information, by industry-----	69
XII. Length of experience of the women employees who supplied personal information, by industry-----	69
XIII. Conjugal condition of the women employees who supplied personal information, by industry-----	70
XIV. Living condition of the women employees who supplied personal information, by industry-----	70

## LETTER OF TRANSMITTAL.

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U. S. DEPARTMENT OF LABOR,  
WOMEN'S BUREAU,  
*Washington, November 21, 1921.*

SIR: I have the honor to submit the accompanying report of a survey of hours, wages, and working conditions of women in selected industries in the State of Rhode Island.

The investigation was made at the invitation of Gov. R. L. Livingston, and the Women's Bureau was in constant consultation with the commissioner of labor statistics and the chief factory inspector.

Mrs. Ethel L. Best was in charge of the survey and the report was written by Miss Mary V. Robinson. A manuscript copy of the report has been submitted to the governor of the State.

Respectfully submitted.

MARY ANDERSON, *Director.*

HON. JAMES J. DAVIS,  
*Secretary of Labor.*

v

# WOMEN IN RHODE ISLAND INDUSTRIES.

## PART I. INTRODUCTION.

This study of hours, wages, and working conditions of women in industrial and mercantile establishments in Rhode Island was made by the Women's Bureau of the United States Department of Labor upon the invitation of the governor of the State. The Consumers' League of Rhode Island was influential in instigating the survey. The investigation was begun October 5 and continued until December 10, 1920. During the course of the survey the commissioner of labor statistics and the chief factory inspector were consulted, as were also the secretary of the Chamber of Commerce of Rhode Island, the president and secretary of the Jewelers' Protective Association, the secretary of the Retail Merchants' Association, the secretary of the Metal Trades' Association, the secretary of the Consumers' League, and the industrial secretary of the Young Women's Christian Association. The courtesy and cooperation extended by these officials were appreciated by the representatives of the Women's Bureau.

The significance of the investigation is evident in view of the industrial status of Rhode Island and the position of its women wage earners. Despite its small area the State is an important industrial center. The preliminary statement of the United States Bureau of the Census concerning the manufactures in Rhode Island for 1919 showed a consistent increase in manufacturing in all respects as compared with 1914, and among other items was a 23.1 per cent increase in the number of wage earners.<sup>1</sup> The 1920 census figures for the number and sex of the wage earners are not yet available, but the 1910 census showed that the number of females over 10 years of age gainfully employed was large in proportion to the total number living in the State (32.1 per cent), a larger percentage, in fact, than in the neighboring States of Massachusetts, Connecticut, and New York.<sup>2</sup>

The Rhode Island factory inspection department showed that for 1919 the number of women wage earners over 16 years of age in the establishments inspected by the State was 64,031, and of those under 16 years, 3,948, making a total of 67,979.<sup>3</sup> These figures show an increase of 1,877 women during the year 1919 alone. Similar in-

<sup>1</sup> U. S. Bureau of the Census. Manufactures in Rhode Island. Summary concerning the State for 1919. News release, June 8, 1921.

<sup>2</sup> U. S. Bureau of the Census. Thirteenth Census 1910. V. 4, Population: Occupation statistics, p. 37.

<sup>3</sup> Rhode Island. Factory Inspection Department. Twenty-sixth annual report, 1919, pp. 5-7. Providence, 1920.

creases could doubtless be shown in the years immediately preceding, as it is probable Rhode Island shared in the marked increase of women in industry which took place throughout the country as a result of the war. Another significant feature in the problem of women in industry in the State is the fact brought out by the 1910 census<sup>4</sup> that the number of girls from 16 to 20 years of age working for wages was especially large, 66.9 per cent, or two-thirds, of the whole number in this age group in the State.

#### SCOPE AND METHOD OF INVESTIGATION.

As it was impossible in the limited time of the survey to include all establishments employing women, a representative number of plants in the various industries employing women were chosen. Seventy stores, laundries, and manufacturing establishments were visited. These were distributed in the following centers: Providence, East Providence, Pawtucket, Central Falls, Woonsocket, Bristol, and Newport. The manufacturing group showed a variety of products; electrical appliances, rubber manufactures, metal goods, jewelry, paper boxes, candy, optical goods, chemicals, shoe laces, and novelties. Textile mills, employing a much larger number of women than any other industry in the State (37,104 according to the 1920 Factory Inspection Report), were not included in the present study for two reasons. In the late summer of 1920 the Bureau of Labor Statistics of the United States Department of Labor, had included Rhode Island in an investigation of the hours and wages of employees in representative establishments in the important cotton manufacturing States, and it was unnecessary to duplicate this study in Rhode Island. Also the period of investigation of the Women's Bureau was marked by a striking depression in the textile industry. Many of the mills were entirely closed or running short time, and any wage and hour data secured from them would not have been representative of normal conditions.

In other industries the trade depression affecting both the numbers of workers and the hours worked did not begin to be noticeable until the last part of November. In stores and in such industries as paper box, jewelry, and candy manufacturing the general slackness was somewhat counterbalanced by the Christmas trade. On the whole, however, the period was one of abnormal conditions. Although wages were still nominally at their highest peak a feeling of apprehension was generally current among the workers. Wage cuts seemed imminent. The amount of unemployment was increasing

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<sup>4</sup> U. S. Bureau of the Census. Thirteenth Census 1910. V. 4, Population: Occupation statistics, p. 73.

steadily. There was scarcely a family that had not begun to feel the pinch of "hard times" through loss of a job or through part-time work for some member. Always there was the disquieting fear that each worker might, as one girl expressed it, "get the sack with the next pay envelope." With one job lost there was slight prospect of getting another, since a steady stream of applicants was besieging almost every mercantile and industrial establishment. Managers complained of the falling off in orders and the inevitable curtailment of production. Plants that were still running full time and enjoying continued prosperity expected a period of retrenchment after the holidays. It is important that these facts should be borne in mind in the consideration of the various sections of this report. It must be emphasized, however, that the hour figures given in the report represent the normal hourly schedules of the plants visited, and that the wage data are an index of the wage crest and not of the downward trend.

The inquiry was carried on along several main lines. Definite information about numbers of employees, hours, wages, and working conditions was scheduled by the investigators from interviews with employers, managers, and foremen, from inspection of plants, and from examination of pay rolls.<sup>5</sup> In order to obtain accurate and reliable information data were taken personally from pay rolls by the investigators. A special form was used for recording the weekly earnings, rates, and hours of each woman in each occupational group for a representative week. The week chosen was one in October or early November in which no holiday occurred and which was regarded by the management as fairly normal. With this information were combined the facts obtained from cards filled out by the employees as to their age, nativity, experience in the trade, and conjugal and living conditions. Individual yearly earnings for a representative number of women, usually 10 per cent in each establishment, were recorded on 52-week schedules. Furthermore, the human side of the situation, the necessary supplement to the foregoing data, was disclosed by home visits to a number of the women in each industry. Information was obtained about their educational and industrial history as well as their home responsibilities.

The kinds of industries included in the investigation, the number of establishments in each, and the distribution of employees by age and sex are shown in the accompanying table. The group designated "other manufacturing" in this table comprises several important industries not usually placed in a miscellaneous group but treated so here because of the small number of establishments visited and hence the impossibility of separate tabulation.

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<sup>5</sup> Copies of the forms and schedules used for the survey may be found in the appendix.

TABLE 1.—Number of establishments studied and number of persons of each sex employed therein, by industry.

Industry.	Number of establishments.		Total employees.		Employees 16 years of age and over.				Employees under 16 years of age.			
			Number.	Per cent.	Male.		Female.		Male.		Female.	
	Number.	Per cent.			Number.	Per cent.	Number.	Per cent.	Number.	Per cent.		
	Rubber manufacturing	6	8,604	100.0	4,873	56.6	3,549	41.2	68	0.8	114	1.3
Metal shops.....	8	10,778	100.0	9,065	84.1	1,696	15.7	12	.1	5	(1)	
Electrical manufacturing	4	2,020	100.0	766	37.9	1,091	54.0	39	1.9	124	6.1	
Jewelry manufacturing	17	1,713	100.0	855	49.9	800	46.7	21	1.2	37	2.2	
Paper-box manufacturing	6	689	100.0	231	33.5	421	61.1	9	1.3	28	4.1	
Other manufacturing..	13	1,956	100.0	1,057	54.0	832	42.5	21	1.1	46	2.4	
General mercantile....	6	2,008	100.0	757	37.7	1,184	59.0	31	1.5	36	1.8	
5-and-10-cent stores....	6	244	100.0	28	11.5	213	87.3	1	.4	2	.8	
Laundries.....	4	257	100.0	81	31.5	166	64.6	2	.8	8	3.1	
All industries.....	70	28,269	100.0	17,713	62.7	9,952	35.2	204	.7	400	1.4	

<sup>1</sup> Less than 0.05 per cent.

The foregoing table shows that the number of women and girls included in the survey was 10,352, or more than one-third of the total number of employees. The greatest number of women in any one industry was in the rubber industry. In the manufacturing group the largest proportion of women as compared with men was in the paper-box factories (65.2 per cent) and the smallest proportion in the metal shops (15.7 per cent). When all industries are considered, the largest proportion of women was in the 5-and-10-cent stores, where nearly nine-tenths (88.1 per cent) of the entire force were women, and the next largest in laundries, where over two-thirds (67.7 per cent) were women.

In the establishments visited the girls under 16 constituted 3.9 per cent of the total number of women. Electrical manufacturing showed the highest proportion of young people, with 10.2 per cent of the women employees under 16; paper-box manufacturing followed, with 6.2 per cent.

#### FACTS ABOUT THE INDUSTRIES.

A better appreciation of the opportunities and problems of the women in regard to the various industries as well as of the position of these industries in the State can be derived from a brief summary of the striking characteristics of the most important manufactures.

#### Rubber manufacturing.

Rubber manufacturing, which operates in large plants and employs a great number of women, is a leading industry in the State, and one that has increased in size and importance since the last census. It

employed by far the largest number of women and girls of all the industries included in the investigation—3,663, or over one-third of the total number. The proportion of women in the 6 rubber establishments visited was large, 42.5 per cent of the total working forces. The industry is one of comparatively recent and rapid development, appearing under a separate classification for the first time in the United States in the census of 1880. It is not shadowed by reactionary traditions nor, on the whole, by efforts to operate under old-fashioned methods in inadequate buildings. With the increased demand for all kinds of rubber goods the expansion has been rapid. Despite this sudden growth the plants in Rhode Island were found to be well organized and the working conditions for the most part exceptionally good.

There is a great variety in the products and processes of the industry. As a rule, however, women in Rhode Island were not found engaged in the heavy, disagreeable operations. These were left to the men. The work of the women had comparatively few objectionable features. It comprised the making of rubber footwear, bathing caps, medical supplies, novelties, and thread. The majority of the women were doing bench or hand work such as cutting, assembling parts, cementing, binding, finishing, inspecting, and packing. Except for the braiding in one plant, the machine work for women was not heavy, consisting of the operation of power sewing machines, light machines for binding and spooling, and occasionally foot presses for punching and clamping. The occupations varied considerably in the amount of skill required. Certain processes in the manufacture of such articles as shoes and gloves necessitated experience and skill, and the making of bright-colored fancy bathing caps even called into play an artistic sense. The industry was not seasonal but seemed normally quite steady.

### **Jewelry manufacturing.**

The manufacture of jewelry is another leading industry in the State, for Rhode Island is one of the four chief jewelry-making centers in the country. Providence, the largest city, is almost exclusively the site of these factories. In 1905 this State led in both the value of products and the number of employees in this trade. In recent years, however, Rhode Island has been characterized by the extensive production of a cheap grade of jewelry, the kind known as rolled plate or gold filled. The plants visited listed among their products chiefly rings, chains and their findings, pins, buttons, rosaries, crucifixes, novelties, and enameled jewelry of various kinds.

Although only 7.7 per cent of the women included in the investigation were working in this industry, more jewelry establishments were visited than any other one kind. Of the 70 plants, 17, or almost

one-fourth, were in this group. In the matter of distribution of employees, the jewelry industry formed a striking contrast to rubber manufacturing. Except for a few large plants, not all of which were included in this study, jewelry making was carried on in many small establishments with small forces. The 1910 census showed that about four-fifths of the jewelry factories employed each not more than 50 workers.<sup>6</sup>

The majority of the plants visited were operating on such a small scale that they occupied only a floor or two in general factory buildings. Since a considerable number of these firms had cramped quarters in old structures, the conditions under which the women worked were in many cases far from ideal.

The proportion of women in the plants visited was about one-half of the total number of employees, showing the industry to be one offering equal opportunities to men and to women. Although occasionally women competed with men in the more taxing occupations of burnishing and washing the metals, of handling acids, or of operating heavy presses, most of the women were engaged in bench work varying greatly in kind and in the amount of skill called for. Some of the processes, such as carding, packing, and wrapping, were so simple as to require practically no experience; other jobs, involving the handling of small parts, necessitated great delicacy and accuracy of touch, and a few occupations entailed a high degree of skill. Assembling and soldering pins and chains, stringing beads, enameling, swedging, finishing, and inspecting were some of the most usual kinds of work performed by the women. Other women were engaged in the more artistic processes of stone setting, hand painting, and decorating.

Almost all the work was of such a nature as to necessitate close application of the eyes. The questions of light and posture had not received sufficient attention from individual managers, and in many establishments old-fashioned methods survived. In the opinion of the president of the Jewelers' Protective Association, considerable education along these lines is necessary for the development of the industry and the safeguarding of the workers.

The business was not definitely seasonal, though almost one-half of the jewelry establishments visited showed a slack period during the year, occurring with the different firms anywhere from the first of the year to early summer. The fall months naturally were the busiest. One plant stated that it had been able to avoid a dull season by a careful adjustment of its production. The abnormal conditions prevailing at the time of the investigation had begun to affect the industry and to counteract somewhat the usual Christmas trade.

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<sup>6</sup> U. S. Bureau of the Census. Thirteenth Census 1910. V. 9. Manufactures, p. 1124.

### Electrical manufacturing.

A brief discussion of electrical manufacturing is of interest because of the large percentage of women in the industry as compared with men—women forming 60 per cent of the working forces—and because of the high proportion of young workers. As already shown, there was a larger percentage of girls under 16 years of age in this industry than in any other.

The electrical establishments visited were engaged chiefly in the production of electric lamps or bulbs. The processes of lamp making are mechanical in nature. The occupations of the women included gauging and cutting tubes and rods of glass, winding copper wire, etching trade-marks on bulbs, welding glass parts, inserting copper filaments, sealing bulbs, tubulating tips, testing, cementing lamps to brass bases, repairing, polishing, inspecting, labeling, and packing. More than one-half of these processes involve the tending of automatic or semi-automatic machines. Hand tools are used in gauging, inserting, winding, and repairing lamps. For accuracy in the placing of parts, from one day to six weeks of practice is required; for speed in the work more experience is necessary. Fingers must be deft and nimble in handling the delicate and fragile parts of the lamp, and every waste motion must be eliminated.

The four electrical establishments visited were large, and the conditions in three of them were fairly good. As to the seasonal nature of the industry, two plants reported that the work was steady, one that it was slack in the summer, and the fourth that work had been very steady for the last four years, with the busiest time in August of each year.

### Metal manufacturing.

Although women and girls constituted only 15.8 per cent of the working forces in the eight metal shops visited, there were altogether 1,701 of them in these shops, or 16.4 per cent of the total number of women included in the investigation. This fact is both interesting and important, because it indicates that some women probably have continued in occupations in which they proved their ability during the war. It has been prophesied that this new field opened up to women during the war would prove to be permanent, and the situation in Rhode Island seemed to bear out this prophecy. The products of the metal shops comprised tools, machinery, insulated wire, machine needles, brass rods, and tin cans. Some of the operations performed by women were highly monotonous, repetitive jobs, such as soldering, wrapping, packing, and the operating of automatic power presses. These occupations, though confining, were light but had some elements of danger in the case of unguarded presses and the flames used in soldering. They required neither special

skill nor experience; they provided neither interest nor opportunities for advancement. As a contrast to the women engaged in such uninspiring operations, however, were those employed on drills and lathes, at milling, grinding, and polishing machines; others were filing, assembling parts, inspecting tools and machines with gauges, and even in some instances manipulating lathes by means of hand screws. The somewhat detailed analysis of all these jobs given in the bulletin of the Women's Bureau entitled "The New Position of Women in American Industry,"<sup>7</sup> shows that they require much skill and judgment, close application, a high degree of accuracy, and sometimes the ability to read blue prints, to understand the characteristics of different metals and tools, and to set up the work in machines.

The industry was not of a seasonal nature, for in this group only one establishment, a tin can factory, reported any seasonal variation. In plants differing as widely in size and organization as did the metal shops visited the conditions under which the women worked naturally showed great variety.

#### **Paper-box manufacturing.**

According to the figures obtained in this investigation the paper-box industry in Rhode Island was one employing comparatively few women, as there were only 449 in the six plants visited. Even so, the proportion of women in these factories was high—65.2 per cent—showing that the industry was more largely the province of women than of men. There were, however, more opportunities in this trade than would appear from the foregoing figures. Since so many other firms packed their products in paper boxes, a number of establishments had their own box-making departments with women employed in each case in the manufacture of these boxes. It was not feasible, however, in tabulating the numbers employed in the various industries, to separate the box making from other departments.

The women in box manufacturing were engaged in both hand and machine work, most of it being rather light and monotonous in character and requiring little skill. A few women operators of printing presses were found in connection with the industry.

Although the industry is usually regarded as somewhat seasonal there is a growing tendency to regulate the business to prevent definite slack periods and to keep it fairly steady throughout the year. This was done in Rhode Island establishments by the manufacture of a variety of boxes, the so-called standardized boxes. Of the six paper-box factories investigated, four reported no difference in seasonal production; the other two, one of which specialized in

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<sup>7</sup> U. S. Department of Labor. Women's Bureau. The New Position of Women in American Industry. Bulletin 12, 1920, pp. 94-113.

jewelry boxes and pads, claimed to be busy all year, but to be exceptionally so while preparing for the Christmas trade.

### **Stores, laundries, miscellaneous.**

As there were no distinctive features in the stores and laundries in Rhode Island differentiating them from those in other places, no preliminary discussion seems necessary. Also, there is such diversity in the miscellaneous group of industries, and there are so few establishments in each, that individual treatment is not practicable.

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## SUMMARY.

The salient facts disclosed by this investigation, which are developed at length in other sections of this report, are here summarized briefly:

### Extent of survey.

In the 70 establishments visited the total number of women, who formed 36.6 per cent of the working forces, was 10,352, distributed as follows: 8,743 (84.5 per cent) in manufacturing establishments, 1,435 (13.9 per cent) in stores, and 174 (1.7 per cent) in laundries.

### Hours.

Hour data for 69 plants showed:

1. *Weekly.*—(a) A schedule of 48 hours a week or less in 32 plants employing more than one-half (53.5 per cent) of the total number of women in the survey.

(b) A schedule corresponding to the legal weekly limit of 54 hours a week in 5 plants, employing 6.5 per cent of the total number of women.

(c) Of the women whose hour record was obtained 43.7 per cent worked less and 12.4 per cent more than the firm's weekly schedule.

2. *Daily.*—(a) A schedule of 8 hours a day or less in 11 establishments, employing 4.9 per cent of the women.

(b) A schedule of 10 hours a day or more in 5 establishments, employing 1.5 per cent of the women.

(c) A schedule of between 8 and 9 hours a day in 28 establishments, or 40.6 per cent of all, and for the largest group of women, 5,576, or 56.1 per cent of the total number.

3. *Saturday.*—Saturday entirely free from work in 4 establishments, with a half-holiday in 52, and with a full working day, or one longer than usual, in 11.

4. *Lunch period.*—No establishment with a lunch period of less than half an hour, 47 establishments with a one-hour period, and 11 establishments with more than one hour for lunch.

### Wages.

Data on weekly and yearly earnings revealed the following:

1. The median weekly earnings for 7,780 women in all industries included in the investigation were \$16.85, in manufacturing establishments \$17.85, in stores \$12.95, and in laundries \$12.45.

2. The median weekly earnings for 3,714 time workers were \$14.55 and for 3,417 pieceworkers \$20.35.

3. The median yearly earnings of 617 women in all industries were \$829, in manufacturing establishments \$857, in stores \$699, and in laundries \$767.

4. Of all women in all industries nearly one-fourth (23.2 per cent) earned less than \$13 a week and 7.7 per cent less than \$10. From one-half to three-fourths of the women employed in laundries, paper-box factories, and 5-and-10-cent stores earned less than \$13 a week, about one-quarter earning less than \$10.

5. Women were at the height of their earning power between 25 and 40 years of age. Earnings after 40 years of age decreased less in proportion for women in general mercantile establishments and laundries than in other industries.

### Working conditions.

In the tabulation of working conditions the term "unsatisfactory" was applied only to those establishments falling conspicuously below the standards set by the Women's Bureau. In other places, although the conditions more nearly approximated the standards, they could be considered ideal only in rare cases.

1. The general workroom conditions were as follows:
  - (a) Space, cleaning, heating, and ventilation fairly satisfactory in the 70 stores, factories, and laundries.
  - (b) Natural lighting unsatisfactory in some respects in 16 plants; artificial lighting unsatisfactory in 20.
  - (c) Seating, in general, fair, but in 12 plants no seats or not enough and in 16 plants the wrong kind of seats.
2. The report on hazard and strain showed:
  - (a) An occupational hazard for women in 28 plants and a strain from the job in 51 plants.
  - (b) Workroom hazards, such as unguarded machinery, in 28 plants.
  - (c) Fire hazards in 21 plants.
3. The need for improved sanitation is shown by the following:
  - (a) Drinking facilities unsatisfactory in 37 plants.
  - (b) Washing facilities inadequate in 65 plants.
  - (c) The toilets insufficient in number in 30 plants and unsatisfactory as to kind, ventilation, or location in 58 plants.
4. The record of service facilities disclosed:
  - (a) Facilities for wraps inadequate in 56 plants.
  - (b) No lunch room in 55 plants. Lunch sold to employees in only 11 plants.
  - (c) No rest room in 49 plants.

## 4. The record of service facilities disclosed—Continued.

(d) No first-aid equipment in 11 plants. A hospital room provided in 29 plants. Health records kept in 13. A nurse in attendance reported in 11 and a doctor in 9.

(e) A professional employment manager in only 5 plants.

**Workers.**

1. Of the 2,674 women whose nativity was ascertained, 78.8 per cent were American born and 21.1 per cent were foreign born.

2. Of the 2,587 women reporting their age, almost one-third were between 16 and 20 years of age. The greatest proportions in this age group were in the 5-and-10-cent stores, with 57.1 per cent, and the electrical industry, with 45.9 per cent, of all their women employees so reported. The general mercantile establishments showed the highest proportion of women who were 40 years of age and over (22.4 per cent).

3. Of the 2,576 women giving information about their conjugal condition, 77.3 per cent were single, 14.8 per cent married, and 7.9 per cent widowed, separated, or divorced. The electrical establishments showed the highest proportion of single women (89 per cent), the laundries the highest proportion of married (25 per cent), and rubber factories, general mercantile establishments, and metal shops the highest proportions of widowed, separated, or divorced (10.1, 10.4, and 11 per cent).

4. Of the 2,529 women reporting on their living conditions, 92.2 per cent were living at home and 7.8 per cent were living independently.

5. Of the 2,599 women whose trade records were secured, about one-fifth had been in the industry under 6 months, more than one-half under 3 years, and one-seventh for 5 and under 10 years.

**CONCLUSION.**

In general the findings of the survey show Rhode Island to occupy a rather middle ground in the matter of the industrial status of women. Although superior to the most backward States, it is so inferior to the most progressive as to make very desirable some amendments and additions to the labor legislation for women.

Despite the 54-hour week and 10-hour day for women permitted by Rhode Island legislation, a number of establishments have adopted the 48-hour week and some the 8-hour day. State laws should be enacted, however, to make these standards universal. On the whole, the wage data from Rhode Island compare favorably with the minimum wage rates adopted in various localities, but, as is pointed out in detail in subsequent sections of this report, the average for the State is brought up by the unusually high wages paid in a few manu-

facturing industries despite the fact that the wages recorded for laundries, paper-box factories, and stores fell below the subsistence level. A minimum wage law requiring all industries to pay a living wage is needed. The report on working conditions reveals not only the necessity for a sanitary code providing for adequate drinking, washing, and toilet arrangements, but the need for improved service facilities, especially more satisfactory cloakrooms, rest rooms, and lunch rooms. Finally, the information obtained from the workers about their personal and industrial history proves the value of such progressive legislation, to guarantee the welfare of the women wage earners, to increase the efficiency of the industry, and to insure the prosperity of the State.



## PART II. HOURS.

In a study of the hours of labor in different establishments certain facts are of special significance: The maximum hours of labor as fixed by the laws of the State, the scheduled hours of the firms investigated, and the hours actually worked by the employees in these establishments during a definite pay-roll period.

The Rhode Island State law sets a maximum of 54 hours a week and 10 hours a day for women in manufacturing and mercantile establishments. Rhode Island, which has, industrially, so many points in common with Massachusetts, presents in its hour legislation a striking contrast to Massachusetts, in which State a 48-hour week for women was legalized in 1919. An investigation made by the Women's Bureau of the effects of this law in Massachusetts revealed that "on the whole, opinions as well as definite facts given by the managers of the various factories seemed to show that a reduction of working hours was a good thing from their point of view."<sup>8</sup>

This investigation also showed "that none of the many working women interviewed in the course of this investigation reported any discrimination against them since the 8-hour law went into effect, and the great majority reported that the increased time for rest and recreation had been of great benefit and that the decreased working hours had resulted in only a few instances in reduced pay."<sup>9</sup>

It would seem desirable, therefore, for Rhode Island to take legal steps to adopt an hour standard for women as progressive as that of Massachusetts.

### WEEKLY HOURS.

#### Scheduled hours.

That many of the plants visited in Rhode Island were more advanced than the State law, but that the majority of them still required more than the 48-hour week is shown by the table following, which gives the scheduled hours of the establishments and women in the various industries.

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<sup>8</sup> U. S. Department of Labor, Women's Bureau. Some effects of legislation limiting hours of work for women. Bulletin 15, 1921, p. 23.

<sup>9</sup> *Ibid.*, p. 24.

TABLE 2.—Number of establishments and number of women, with scheduled weekly hours as specified, by industry.

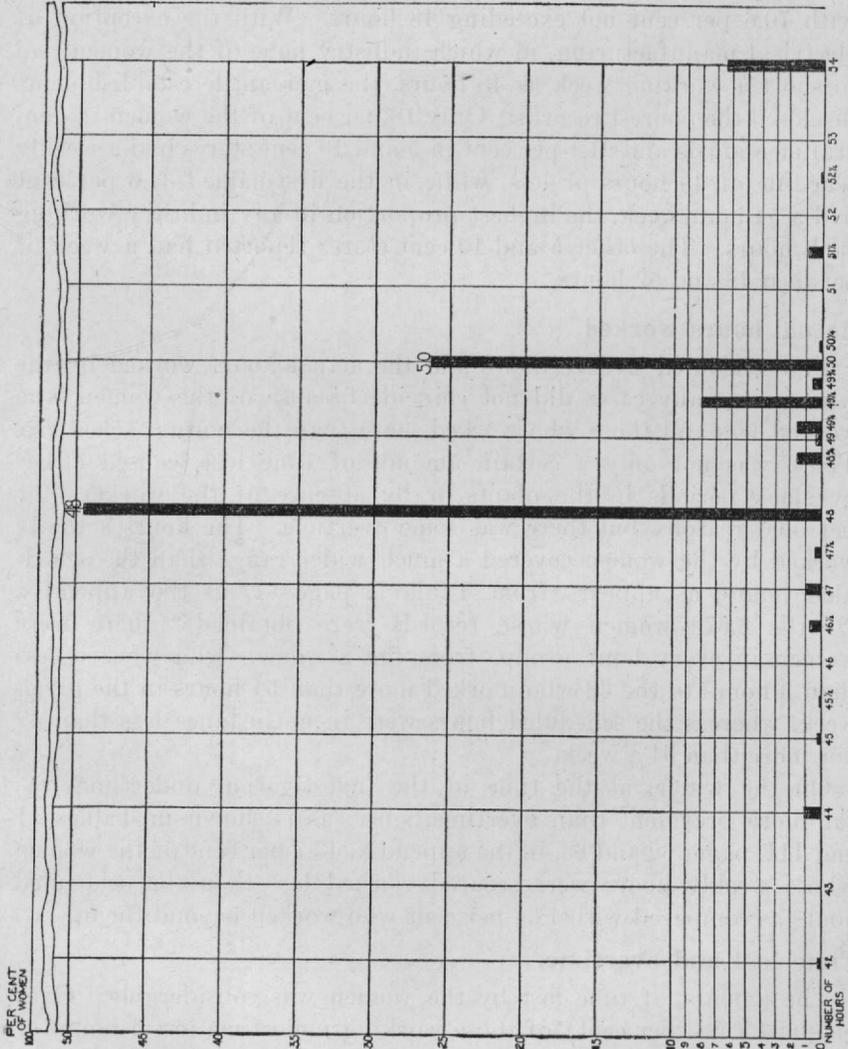
Industry.	Number of establishments <sup>1</sup> and number of women 16 years of age or over whose weekly hours of work were—															
	Total.		Under 48 hours.		48 hours.		Over 48 and under 52 hours.		52 hours.		Over 52 and under 54 hours.		54 hours.		Over 54 hours.	
	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.
Rubber manufacturing.....	6	3,549			5	3,493	2	56								
Metal shops.....	8	1,696			2	457	5	1,227					1	12		
Electrical manufacturing.....	4	1,091					4	1,091								
Jewelry manufacturing.....	17	800	1	15	10	550	6	235								
Paper-box manufacturing.....	<sup>2</sup> 5	403			2	260	3	143								
Other manufacturing.....	13	832	3	126	1	107	7	424	1	3			2	172		
General mercantile.....	6	1,184	3	160	1	53	2	541			1	20	1	410		
5-and-10-cent stores.....	6	213	2	45			4	168								
Laundries.....	4	166	2	50			1	67					1	49		
Total.....	<sup>2</sup> 69	9,934	11	396	21	4,920	34	3,952	1	3	1	20	5	643		
Per cent distribution.....		100.0		4.0		49.5		39.8		( <sup>3</sup> )		0.2		6.5		

<sup>1</sup> Establishments having women working under different hour schedules are tabulated under more than one classification.

<sup>2</sup> Excludes one place (18 women working 52 or 54 hours) not reporting number of women in each group.

<sup>3</sup> Less than 0.05 per cent.

SCHEDULED WEEKLY HOURS FOR WOMEN—RHODE ISLAND.



Although only 5 of the 69 plants reporting had a 54-hour week, 41 plants showed a week of more than 48 hours for some or all of the women employed therein. On the other hand, 32 plants, employing slightly over one-half of the total number of women (53.5 per cent), had a week of 48 hours or less. In this respect the rubber industry was far ahead of all others, with 98.4 per cent of the women having a weekly schedule of 48 hours. Jewelry manufacturing was next, with 70.6 per cent not exceeding 48 hours. With the exception of electrical manufacturing, in which industry none of the women had so short a working week as 48 hours, the mercantile establishments disclosed the poorest records. Only 18 per cent of the women in general mercantile and 21.1 per cent in 5 and 10 cent stores had a weekly schedule of 48 hours or less, while in the first-named 34.6 per cent had a 54-hour week, the highest proportion in any industry working such hours. The other 5 and 10 cent stores reported had a week of between 48 and 52 hours.

#### **Actual hours worked.**

The scheduled weekly hours and the actual hours worked by the women in many cases did not coincide because of the women who worked less and those who worked more than the normal schedules. There was not only a certain amount of time lost, caused either by slack periods in the plants or by absence of the workers for personal reasons, but there was some overtime. The hours actually worked by the women covered a much wider range than the scheduled hours, as appears from Table I, page 61, in the appendix. Of the 6,679 women whose records were obtained<sup>10</sup> there were women in every hour group, from the 2 women who worked less than 3 hours to the 32 who worked more than 54 hours in the given week, whereas the scheduled hours were in no instance less than 42 nor more than 54 a week.

On the whole, at the time of the investigation undertime was far more prevalent than overtime, since, as is shown in Tables II and III, pages 62 and 63, in the appendix, 43.7 per cent of the women whose weekly hours were secured worked less than the scheduled hours as compared with 12.4 per cent who worked beyond them.

#### **Time lost and overtime.**

The amount of time lost by the women was considerable. Over one-half (52.3 per cent) of those working undertime lost 5 hours or more and one-quarter (25 per cent) lost 10 hours or more in the week selected. The jewelry industry, with 63 per cent of the women losing some time; paper-box manufacturing, with 52.9 per cent;

<sup>10</sup> It was not possible to secure the hourly records for all women, since usually the actual weekly hours of pieceworkers and sometimes those of time-workers were not kept on pay rolls.

miscellaneous manufacturing, with 52.5 per cent; and rubber factories, with 49.8 per cent, showed the highest percentages of women working less than the scheduled weekly hours. The 5 and 10 cent stores and the general mercantile establishments reported a much smaller amount of lost time. This is due partly to the fact that stores do not reduce the hours of operation when trade is slack, as is the custom in the manufacturing world. Also some stores make no record of an hour or two lost by individual workers. Some of the women who gave reasons for lost time had been compelled to stay away from work on account of personal or family sickness and various home responsibilities, others reported that the shutting down of the factory or of certain departments in the factory for several hours a day or several days a week was the cause of their lost time.

The amount of overtime during the week varied for individual women from a fraction of an hour up to nine hours more than the scheduled hours. The rubber and electrical industries showed the greatest amount of overtime. In rubber establishments nearly one-quarter of the women (24.4 per cent) worked longer than the regular weekly schedule; of these practically one-half (49 per cent) worked less than two hours extra, but 17.2 per cent worked from four to nine hours overtime. In electrical establishments 15.4 per cent of the women were found working longer than the regular hours, one-third of whom showed four hours or more overtime. In the other industrial groups the amount of overtime was small, in no case affecting as many as 8 per cent of the women, and in metal and jewelry manufacturing affecting less than 1 per cent. No overtime was reported for the workers in stores, though two establishments stated that it was occasionally required.

The matter of overtime should be considered, however, in connection with the length of the weekly schedules of the firms. A comparison between stores showing no overtime and rubber establishments, with one woman in four working beyond hours, is of interest. It has already been noted that 98.4 per cent of the women in rubber plants had a scheduled week of 48 hours, whereas only 18 per cent of the women in general mercantile establishments and 21.1 per cent of those in the 5 and 10 cent stores had a week of 48 hours or less. Furthermore, although 34.6 per cent of the women in general mercantile stores had a 54-hour week, none of the women in rubber manufacturing had such a long weekly schedule.

Table I, page 61 in the appendix, makes a further comparison possible by showing that of the women for whom hours worked were recorded 25.7 per cent of those in general mercantile establishments actually worked 54 hours, while less than 1 per cent of those in the rubber establishments worked as long as that, even with overtime.

## DAILY HOURS.

Of equal importance with the problem of the weekly schedule was that of the hours worked daily by the women in industry in Rhode Island. It is as necessary to regulate the length of the working day as the length of the working week. Investigation has proved that long daily hours are a menace to the health and efficiency of the worker, since continuous overexertion causes an excessive fatigue, which acts like a poison to the system, predisposing to more serious illness. Undue fatigue also lessens accuracy and speed, checks output, and increases accidents. The Rhode Island law, however, permits a 10-hour day. Only 10 States allow a longer daily schedule than does Rhode Island. Table 3 shows that the majority of Rhode Island firms pursued a middle course in this matter, since very few had adopted the 8-hour standard and very few were as nonprogressive as the State law.

TABLE 3.—Number of establishments and number of women, with scheduled daily hours as specified, by industry.

Industry.	Number of establishments <sup>1</sup> and number of women 16 years of age or over whose daily hours of work were—													
	Total.		Under 8 hours.		8 hours.		Over 8 and under 9 hours.		9 hours.		Over 9 and under 10 hours.		10 hours.	
	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.	Estab-lish-ments.	Women.
Rubber manufacturing.....	6	3,549					5	3,493	2	56				
Metal shops.....	8	1,696					2	457	4	1,168			2	71
Electrical manufacturing.....	4	1,091							2	714	2	377		
Jewelry manufacturing.....	17	800					13	605	4	195				
Paper-box manufacturing.....	<sup>2</sup> 5	403					2	260	2	127	1	16		
Other manufacturing.....	13	832			2	122	2	111	5	302	3	268	2	29
General mercantile.....	6	1,184	2	140	1	53	3	581	1	410				
5-and-10-cent stores.....	6	213	4	80	1	64	1	69						
Laundries.....	4	166			1	24			2	93			1	49
Total.....	<sup>2</sup> 69	9,934	6	220	5	263	28	5,576	22	3,065	6	661	5	149
Per cent distribution.....		100.0		2.2		2.6		56.1		30.9		6.7		1.5

<sup>1</sup> Establishments having women working under different hour schedules are tabulated under more than one classification.

<sup>2</sup> Excludes one place (18 women working 9½ or 10 hours) not reporting number of women in each group.

This table shows that 11 establishments (8 stores, 2 manufacturing plants, and 1 laundry) in the total of 69 reporting had a day of 8 hours or less, affecting in all only 4.9 per cent of the 9,934 women whose scheduled hours were obtained. At the other end of the scale 5 establishments (1 laundry and 4 manufacturing plants), employing 1.5 per cent of the women, had a daily schedule of 10 hours or more. The largest number of establishments (28) and the largest number of women (5,576) had a working day of between 8 and 9 hours. About three-fifths of the women (61 per cent) had scheduled hours of less than 9 a day; for 30.9 per cent the day was 9 hours long and for 8.2 per cent it was more than that. A comparison of the various industries shows that all women in stores had a schedule of 9 hours a day or less, 90.9 per cent of the women in the manufacturing group were in this class, and 70.5 per cent of the laundry workers.

It should be emphasized that the foregoing figures are the scheduled daily hours and not the hours actually worked by the women. It was impossible to ascertain actual daily hours, since, in many establishments, a record of such is not available. Accordingly, no figures on daily overtime can be given.

### **Overtime policies.**

The various establishments visited were questioned in regard to overtime practices and policies. Almost all the stores reported no overtime except for a few nights before Christmas, at which season the employees were expected to remain until 9 or 9.30 in the evening. Two stores stated that at other times girls occasionally stayed longer than the regular hours, one store paying the girls extra for this, the second permitting them to take some time off from their regular hours to make up for the overtime.

Fifteen of the 53 manufacturing plants reported occasional overtime. Some of these plants stated that the women worked overtime only an hour or two a day in a busy season or when a department had fallen behind. One plant asserted that formerly women had worked as much as four hours a day extra during the Christmas rush; another that the women sometimes stayed until 8.30 or 9 at the Christmas season. Of the eight manufacturing establishments reporting on the rate paid for overtime, five paid time and a half, one time and a quarter, and two straight time; one of the last-mentioned allowed a bonus of 50 cents if an employee worked more than six hours overtime in any one week.

The hours of laundries were more indefinite than those of the other establishments. Since workers frequently were permitted to leave before closing time if they finished their regular quota of work, and since they occasionally remained after hours to make up time lost by a

holiday—a penalty which strips the holiday of much advantage—it was difficult to ascertain whether there was any actual weekly over-time.

### **Need of an 8-hour day for women.**

In any discussion of hours of labor, it is necessary to bear in mind that women wage earners frequently are home workers and home makers as well, that many of them look after families and perform home duties before and after the hours spent in industrial plants. Furthermore, the actual hours of the job often are prolonged and the fatigue is increased by the trip to and from work, an illustration of which was the experience of one worker who left home at 6.30 a. m. and did not get back until 6.15 p. m. Although this woman liked the work and the pay in the plant, she was compelled, because she was a widow with a family and a home to take care of, to give up the position and take one nearer home in order to devote less time to her job and more time to her home. The experience of another woman, forced to supplement her husband's income, is typical. She got up at 5 o'clock in order to get breakfast and to attend to other household duties before going to work. After a 9-hour day in a box factory she came home, prepared supper, put the baby to bed, and finished her domestic tasks. She appeared nervously unstrung by her steady grind. Dr. George W. Webster, in discussing the value of an 8-hour day for women, says: "We should see to it that while engaged in the industries her hours of labor are short enough to enable her to develop into a normal, healthy, valuable member of society."<sup>11</sup> This standard was certainly not observed in Rhode Island, where some women were obliged to work 10 hours a day in a factory and many additional hours in their own homes.

### **Saturday half holidays and lunch periods.**

Closely allied with the subject of over-fatigue in industry are the questions of Saturday half holidays and the daily lunch period. That the large majority of the establishments visited realized the value of a Saturday half holiday is apparent from the fact that 52 had a short Saturday, two others a half holiday on some other day, and four did not operate at all on Saturday. Eleven plants, however, all of which were stores, had a full day or one longer than usual on Saturday. For a lunch period no plant had less than half an hour, 47 plants had an interval of one hour, and 11 had more than one hour to permit women to go home for lunch. Only one plant was reported as having an extra rest period, this consisting of 10 minutes in the morning and 10 in the afternoon.

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<sup>11</sup> U. S. Department of Labor, Women's Bureau. A physiological basis for the shorter working-day for women. Bulletin 14, 1921, p. 18.

## VACATIONS.

A vacation with pay has long been customary for employees in mercantile establishments, and in Rhode Island this practice was followed in almost all the stores visited. The amount of vacation usually varied from one to two weeks with the length of service, and in one store even as much as three weeks was allowed. There is at present a trend toward giving a vacation with pay to the factory worker. A few of the manufacturing plants visited reported a paid vacation of one week for the workers. Others stated that the establishment was closed for one week during the year for a so-called vacation week, generally so timed as to occur during the slack season or when the plant was in need of repairs. In these cases no pay was given to the workers during such period; they were forced to take a vacation whether they were financially able to do so or not. A week's rest with pay is desirable for manual as well as for mental workers, and several women who were sick, when visited in their homes, stated that they attributed their illness to the fact that they had had no vacation during the previous summer. In industries where it would not be feasible to close the plant for any one week, vacations could be adjusted so that only a few workers would be out at one time.

## PART III. WAGES.

### WAGES AND COST OF LIVING.

The soaring prices in the cost of living in war and postwar days need no discussion, nor does the fact that these prices had abated but little by the fall of 1920, when the Rhode Island wage study was made. In general, according to the Bureau of Labor Statistics of the United States Department of Labor, the cost of living in December, 1920, showed an increase over 1914 of 100.4 per cent throughout the United States.<sup>12</sup> No specific figures for Rhode Island are available, but the record for Boston (the nearest city scheduled) showed in December, 1920; an increase over 1914 of 97.4 per cent.

Satisfactory figures for a comparison of the increases in the cost of living and in wages for women are not available, since the textile industry is the only one for which the Bureau of Labor Statistics of the United States Department of Labor has published figures on the increase in women's wages. It is interesting, however, to compare the data recently published by the National Industrial Conference Board<sup>13</sup> on the rise in women's weekly earnings for a definite period and the costs of living reported by the Bureau of Labor Statistics<sup>14</sup> for about this same period. The National Industrial Conference Board, which as a group of manufacturers is not likely to underestimate wage figures, shows the increase in women's earnings in 11 industries from September, 1918, to November, 1920, to be 20 per cent, with a 20 per cent higher peak in June and July of 1920; whereas the Bureau of Labor Statistics shows an increase in the cost of living of 26 per cent from December, 1918, to December, 1920, with a 16.1 per cent higher peak in June, 1920. It would seem from this that even though wages increase phenomenally they tend to lag behind increases in the cost of living. Also, as it is generally conceded to be true that wage cuts precede a drop in the cost of living, the wage earners may not get the benefit of falling prices.

Consequently, even though the wages in Rhode Island at the time of this investigation were nominally at the highest peak ever reached in the State, it will be clearly seen that they had only about one-half the purchasing power of the wages received in 1914, so that the

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<sup>12</sup> U. S. Department of Labor, Bureau of Labor Statistics. Changes in cost of living. News release, June 13, 1921.

<sup>13</sup> National Industrial Conference Board. Wage changes in industry, September, 1914-December, 1920. Research report 35. March, 1921, p. 3.

<sup>14</sup> U. S. Department of Labor, Bureau of Labor Statistics. Changes in cost of living. News release, June 30, 1921.

weekly median already quoted for Rhode Island, \$16.85, was about the equivalent of \$8.43 a week in 1914. Another striking factor in the wage situation of November and December, 1920, was that although wage rates were still high, already the shadows of a business and wage depression were drawing over the industries included in this study. Expectation of imminent wage cuts without a corresponding reduction in the cost of living caused an anxiety among the workers that tended to offset any satisfaction that might have been derived from high wages. This expectation was justified, for the textile mills already had been caught in the advancing paralysis of production and were to a large extent closed down. Such a condition naturally was upsetting to the industrial equilibrium of Rhode Island on account of the importance of the textile industry, which normally employs one-half of the wage earners in the State.

The textile industry has been a strongly influential factor in causing recent variations in women's wages in Rhode Island. During the World War period textiles and other industries where women had been employed for many years were forced to raise wages to compete with the newer and more highly paid jobs opened up to women at that time. For some time after the close of the war the textile mills were able to keep up high wage rates, as the mills continued to operate at high speed not only with a full day force but in many cases with a large night force also. Such was true in Rhode Island as in other parts of the country and was of great significance in a place so definitely a textile center as this State. Certain figures compiled by the Bureau of Labor Statistics<sup>15</sup> are of interest at this point. These show that for women engaged in cotton manufacturing throughout the country there was an increase of 63.4 per cent in wages from 1918 to 1920. Rhode Island, with its 34,278 women engaged in the textile industry, naturally shared in this increase. On the other hand the turning of the tide in textile production in Rhode Island as elsewhere, which caused the closing of many mills and the releasing of thousands of women as available labor, was becoming a threatening factor for the precipitation of wage cuts in the closing months of 1920.

#### WEEKLY EARNINGS.

The effect of several high-paid industries in Rhode Island in the raising of the median for all industries can be seen from a detailed

<sup>15</sup> U. S. Department of Labor, Bureau of Labor Statistics. Wages and hours of labor in cotton-goods manufacturing, 1907 to 1920. *Monthly Labor Review*, v. 12, No. 2, February, 1921, pp. 70-72.

NOTE.—In order to find from the figures available in the tables of this article the per cent of increase for the women, the weekly earnings of women in all occupations for 1918 and 1920 were averaged and the average per cent of increase obtained.

wage analysis of the industries investigated. The median earnings for 7,780 women in the various industries for one week in October or November of 1920 are shown in the following summary, taken from Table IV, page 64 of the appendix.

<i>Industry:</i>	Median earnings.
Rubber manufacturing.....	\$20.70
Metal shops.....	18.65
Electrical manufacturing.....	17.25
Jewelry manufacturing.....	14.70
Other manufacturing.....	14.55
General mercantile.....	13.20
Laundries.....	12.45
Paper-box manufacturing.....	12.30
5-and-10-cent stores.....	11.90
All industries.....	16.85

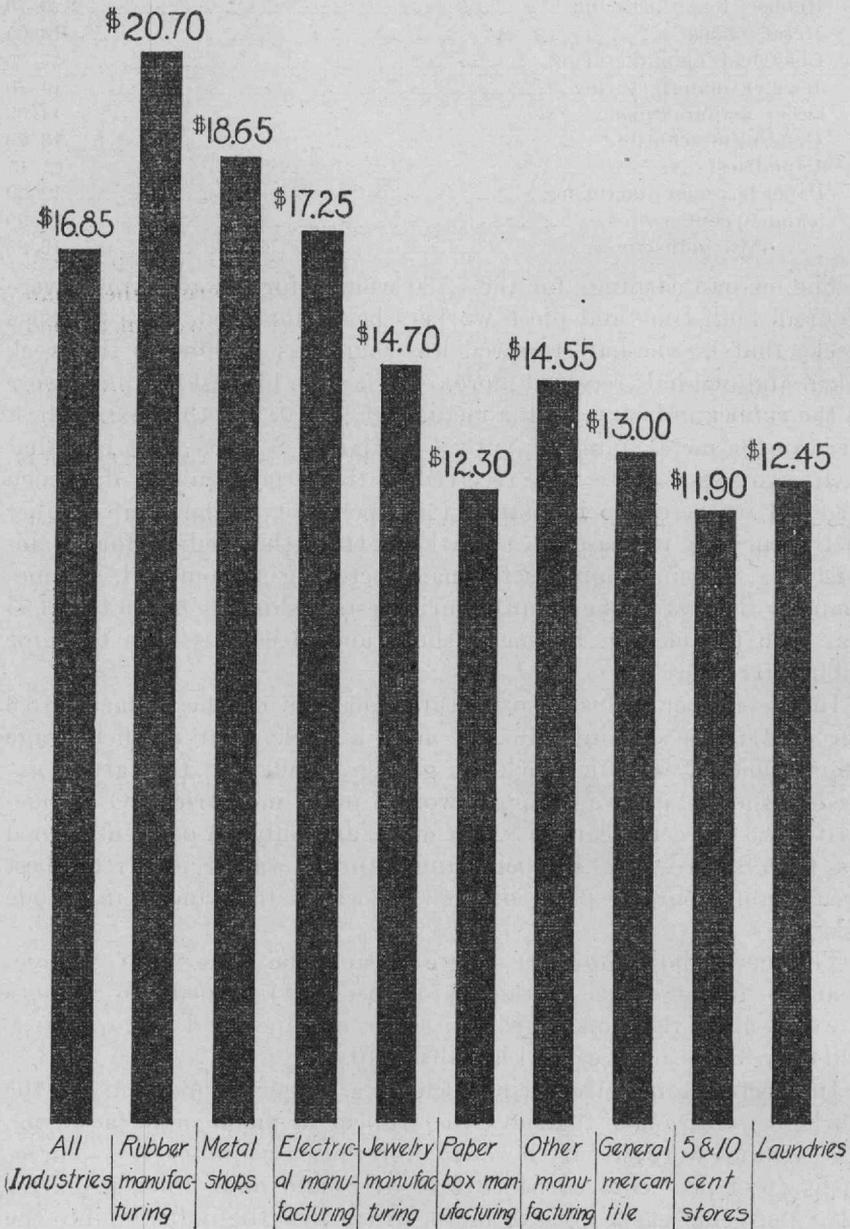
The median earnings for the 7,780 women for whom records were secured, both time and piece workers being included, were \$16.85 a week; that is, one-half received less than this amount in the week taken and one-half received more. By far the highest earnings were in the rubber industry, with a median of \$20.70, and the next highest were in the metal industry, with a median of \$18.65. The fact that such earnings as these were received by the large numbers of women engaged in these two industries (49.9 per cent of the total number in the survey) increases to a marked extent the median for all industries. If rubber and metal manufacturing are omitted, the median for the rest of the manufacturing establishments is \$15.10, \$3.55 less than the median for metal shops and \$5.60 less than that for rubber factories.

In the rubber industry over three-quarters of the women (76.6 per cent) were earning \$16 and more a week; that is, their wage approximated, and for much the greater number in this group exceeded, the median wage for all women in all industries. Over one-half (54.3 per cent) earned \$20 or more, and only 3.3 per cent earned less than \$10 a week. Rubber manufacturing was decidedly the best occupation from the point of view of wages for women in Rhode Island.

The metal shops, however, offered nearly the same wage. Three-quarters of the women workers (75.9 per cent) earned \$16 or more a week, more than one-third (37.9 per cent) earned \$20 or more, and only 3.5 per cent earned less than \$10.

In electrical manufacturing, where a larger proportion of the workers were women than in either rubber or metal manufacturing, the earnings were slightly lower than in those two industries. Three-fifths (60.4 per cent) earned \$16 or over, and more than a quarter (28.8 per cent) earned \$20 or more, which lifts the industry into the

## MEDIAN WEEKLY EARNINGS OF WOMEN



high earning class. The group earning less than \$10 was 6.7 per cent of the total number in the industry, twice that in rubber or metal manufacturing.

Jewelry and paper-box making ranked low in the scale of earnings, dropping almost to the level of the mercantile group. The percentage of women earning \$20 or more was a trifle higher in jewelry manufacturing (8.9 per cent), a trifle lower in paper-box making (4.9 per cent) than in general mercantile establishments (6.2 per cent). Nearly one-tenth (9.2 per cent) of the women in jewelry earned less than \$10, and nearly one-fourth (24.2 per cent) of the workers in paper-boxes earned less than that amount.

Women in the 5-and-10-cent stores were the lowest paid group. Of the 157 women for whom pay-roll data were secured only 2 earned as much as \$20, while more than one-fourth earned less than \$10 a week. Earnings in the general mercantile group were higher than in the 5-and-10-cent stores, since 6.2 per cent of the women earned \$20 or more a week and but 10.6 per cent less than \$10.

Laundry work was paid at a rate lower than general mercantile but higher than 5-and-10-cent stores. Only 12 women, or 7.3 per cent, earned \$20 or more, and nearly one-quarter (23.2 per cent) earned less than \$10.

It should be remembered that these figures represent the highest wages ever paid to women in these industries in Rhode Island. Of all women in all industries for whom wage data were obtained, nearly one-fourth (23.3 per cent) had earnings of less than \$13 a week, and 7.7 per cent received less than \$10. Almost two-thirds of the women (62.8 per cent) employed in 5-and-10-cent stores, laundries, and paper-box factories earned less than \$13 a week. These were underpaid according to minimum-wage rates effective in several States, as proved by the following statement of the minimum wage required in the places specified:

State.	Manufacturing.	Mercantile.	Laundries.
California.....	\$16. 00	\$16. 50	\$15. 00
District of Columbia.....		16. 50	15. 00
Massachusetts.....	<sup>a</sup> 16. 50		
North Dakota.....	16. 50	17. 50	16. 50
Oregon.....	13. 20	13. 20	13. 20

<sup>a</sup> Paper box.

### Time, piece, and time and piece workers.

The wages in this survey were based on three different methods of computing: On time worked, paid for according to an hourly, daily, or weekly rate; on amount of work produced, paid for according to a piece rate; and on a combination of these two, when the worker performed in the same week some work paid for by the hour and

some paid for by the piece. The numbers and the median earnings of women employed under each of these methods are shown in the following table:

TABLE 4.—*Number of women and their median earnings on timework, on piecework, and on both time and piece work, by industry.*

Industry.	Number of employees reporting complete data.	Women reported as doing—								
		Timework.			Piecework.			Time and piece work.		
		Number.	Per cent.	Median earnings.	Number.	Per cent.	Median earnings.	Number.	Per cent.	Median earnings.
Rubber manufacturing .....	3,067	810	26.4	\$17.30	1,963	64.0	\$22.95	294	9.6	\$21.00
Metal shops .....	794	421	53.0	18.65	335	42.2	19.60	38	4.8	20.70
Electrical manufacturing .....	896	212	23.7	14.10	600	67.0	18.25	84	9.4	18.35
Jewelry manufacturing .....	639	487	76.2	14.55	129	20.2	15.60	23	3.6	11.65
Paper-box manufacturing .....	327	231	70.6	11.90	81	24.8	14.10	15	4.6	15.50
Other manufacturing .....	780	416	53.3	14.00	285	36.5	14.65	79	10.1	16.55
General mercantile .....	840	840	100.0	13.20	.....	.....	.....	.....	.....	.....
5-and-10-cent stores .....	157	157	100.0	11.90	.....	.....	.....	.....	.....	.....
Laundries .....	164	140	85.4	11.80	24	14.6	18.00	.....	.....	.....
All industries .....	7,664	3,714	48.5	14.55	3,417	44.6	20.35	533	7.0	19.25

The table shows that 3,714 (48.5 per cent) of the women were timeworkers, 3,417 (44.6 per cent) pieceworkers, and 533 (7 per cent) time and piece workers. About two-thirds of the workers in the rubber and electrical industries were pieceworkers, whereas in all the other industries most of the women—in stores, all of the women—were paid according to the time worked. The wage figures show that the median earnings of timeworkers, \$14.55 a week, were considerably lower than the median earnings for pieceworkers, \$20.35 a week, and also lower than those of the combination time and piece workers, who showed a median of \$19.25. It should be noted, however, that the median for timeworkers was reduced somewhat by the fact that all beginners were in this class.

### Wages and hours.

The earnings discussed in the foregoing paragraphs were tabulated without relation to the hours worked during the pay-roll period. It might seem that wages would vary in direct proportion to the number of hours worked. This is true for timeworkers in any one establishment but not for pieceworkers. For the latter, wide variations in earnings were found even among those in any one plant who were working the same number of hours. Furthermore, women working the same number of hours in the different establishments on jobs requiring about the same degree of skill showed a wide range in pay. Obviously it is of much importance to the worker whether she receives \$15 for 40 or for 50 hours of work.

Accordingly, a study of wages in connection with hours worked is important. The following summary from Table V, page 65, in the appendix, shows the median earnings for timeworkers and such pieceworkers as reported hours worked:

Hours worked.	Number of women.	Median earnings.
Under 33.....	431	\$7.65
33 and under 42.....	797	15.00
42 and under 45.....	678	16.50
45 and under 48.....	853	17.30
48 and under 51.....	3,125	17.75
51 and under 54.....	433	21.25
54 and over.....	362	15.90
Total.....	6,679	.....

By far the largest group—3,125 women, or 46.8 per cent of the total number—is found in the 48 to 51 hour classification, with a median of \$17.75. This is next to the highest median of \$21.25 earned by a small group of women working from 51 to 54 hours a week. The more detailed figures of the table show that in the group of 3,125 women who worked from 48 to 51 hours a week there was a wide variation of earnings. At one extreme were 22 women earning from \$6 to \$8 a week and at the other were 166 women who earned \$30 or more. This variation in earnings is equally true of each of the other groups. The middle point or median, however, showed that earnings increased with the number of hours worked until 54 hours was reached, when the median dropped to an amount lower than that for women working from 42 to 45 hours a week. The sudden drop in the median of those who worked 54 hours was probably due to the fact that this group included the smaller and less standardized establishments, where lower wages were paid and long hours required.

#### Earnings and rates.

Earnings and rates do not necessarily coincide. That the earnings of pieceworkers fluctuate so that it is difficult for these workers to know how much money they may expect for a week's labor is a well-recognized fact. Even with timeworkers who have an hourly, daily, or weekly rate, there is some variation. In some establishments an attendance bonus and in some stores a commission on sales may increase the earnings above the rates. On the other hand, time lost frequently decreases the actual amount received below the rate expected. Nevertheless on this rate, as a rule, is based the worker's budget. With this rate as a measure, she estimates what expenditures she can make, what standard of living she can set, sometimes overlooking the possibility of a wide discrepancy between rate and earnings. A comparison of the actual earnings and the rates of the group of timeworkers

included in the investigation is given in the following summary of Tables IV and VI, pages 64 and 66, in the appendix.

	Median earnings (Table IV).	Median rates (Table VI).
All industries.....	\$16.85	\$15.00
General mercantile.....	13.20	13.15
5-and-10-cent stores.....	11.90	12.30
Laundries.....	12.45	12.60
All manufacturing.....	17.85	16.10

The median earnings for all industries were found to be \$1.75 above the median rate—that is, the employees, by means of overtime or a bonus, were able to raise their earnings above the schedule set by the employers. In mercantile establishments the rate was \$13.15; the earnings were \$13.20. Since hours and pay are more fixed in this employment and there is little overtime, the time lost (for, of course, time is lost in every industry) was more than compensated for by the bonus or commission. In 5 and 10 cent stores, on the contrary, the rate, \$12.30, showed an excess of 40 cents over the earnings, a difference due both to lost time and to the fact that the business was not on a commission basis. In laundries also the weekly earnings were lower than the rates, with a difference of 15 cents.

Manufacturing establishments offered apparently the greatest opportunities to earn more than the rates. The median rate for women in manufacturing was \$16.10, the median earnings were \$17.85, the difference between expectation and result being \$1.75, to be accounted for partly by bonuses and partly by overtime work.

### Age and earnings.

There are many other factors entering into the earning power of women besides the actual hours worked. It is interesting to note, for instance, how important a part age plays in the earning capacity, in which industries youth is the most valuable asset and in which more mature years command the highest wages. Some idea of the relationship between age and opportunities for women in the industries investigated in Rhode Island can be obtained from the following summary of Table VII, page 66 in the appendix:

Age:	Median earnings.
16 and under 18 years.....	\$14.40
18 and under 20 years.....	16.30
20 and under 25 years.....	16.45
25 and under 30 years.....	17.15
30 and under 40 years.....	16.30
40 years and over.....	14.95

For all industries combined, women in Rhode Island were at the height of their earning power between 25 and 30 years of age, in which group were 13.4 per cent of all those for whom wages were reported. The lowest earnings were received by women under 18 years and those of 40 years and over.

Even in the different age groups there was considerable variation in earnings according to industry. The median weekly earnings, by industry, for the older and younger women are shown in the following statement from the original figures of Table VII:

	16 and under 20 years.	40 years and over.
Rubber manufacturing.....	\$18.55	\$16.40
Metal shops.....	15.10	16.35
Electrical manufacturing.....	17.45	17.00
Jewelry manufacturing.....	14.00	14.90
Paper-box manufacturing.....	13.30	(a)
Other manufacturing.....	15.70	14.30
General mercantile.....	12.50	13.85
5-and-10-cent stores.....	12.00	(b)
Laundries.....	10.90	13.50

<sup>a</sup> Only 4 persons, receiving between \$11 and \$14.

<sup>b</sup> Only 2 persons, receiving \$12 and \$14.

Workers under 20 had their highest median in rubber manufacturing (\$18.55) and their lowest in laundries (\$10.90). Older workers, 40 years of age and over, had their highest median in electrical manufacturing (\$17) and their lowest in laundries (\$13.50), with the exception of the two industries having so few women in this age group that medians have not been computed. It should be noted that in one or two other industries the numbers of older women are so small as to render figures about their earnings less convincing than those about the younger age groups representative of more women.

The detailed figures in Table VII show that the rise in earnings was greatest in rubber manufacturing and metal shops. From 16 to 18 years the median earnings in rubber manufacturing were \$16.70, which increased to \$22.85 for the age group of 25 to 30 years. The median for the youngest group in the metal shops was \$13.60, which rose to \$19.45 for women between 20 and 40. This increase was followed in the rubber industry, however, by a sharp decline for the women 40 years of age and over, the median earnings being about the same as those of the girls of 16 to 18. Increase in earnings for the general mercantile worker and the laundry worker was slow, but the decrease after 40 years of age was not great.

### Experience and earnings.

In practically every industry the employee's experience in the trade is of value to the employer, and consequently it should mean an

increase in pay as a reward for an increase in ability. Even in occupations requiring practically no skill, length of service should be one determinant for increased wages, since the speed, steadiness, and trustworthiness of employees is of great importance to employers. The length of service which leads to the highest wage naturally varies in different industries and in different occupations. High wages for beginners do not always mean correspondingly high wages for the well trained; low wages for beginners may lead to high wages after years of service; in fact, the length of experience which yields the greatest pay and the largest percentage of increase over the initial rate follows no rule. Some idea of the significance of experience in the various industries investigated in Rhode Island can be gained from the following summary of Table VIII, page 67, in the appendix. The median weekly wage for those employed less than six months is compared with the highest median reached by experienced workers in each industry, the length of service producing this median being given in each case.

Industry.	Median for less than 6 months.	Highest median.	Years of experience.	Per cent increase.
Electrical manufacturing.....	\$17.05	\$23.50	10 to 15	37.8
Metal shops.....	14.65	20.90	5 to 10	42.7
Rubber manufacturing.....	13.60	25.50	20 and over	87.5
General mercantile.....	12.60	16.80	20 and over	33.3
Jewelry manufacturing.....	12.35	16.80	10 to 15	36.0
Laundries.....	11.35	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )
5-and-10-cent stores.....	10.50	14.80	5 to 10	41.0
Paper-box manufacturing.....	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )

<sup>1</sup> For certain groups the median could not be computed, since the number of women in these groups was too small.

Every industry reveals that increase in earnings came with experience; that the steady worker who continued in one employment had an advantage, shown by a rising wage. The value of experience measured by earnings can be observed by the amount of the increase from the beginners' median wage to the highest earned in the industry, and also by the length of time it took the worker to secure this maximum wage. The rubber industry showed the greatest increase (87.5 per cent) and the general mercantile showed the lowest (33.3 per cent). Both required 20 years and over for employees to reach the maximum. The earnings of new workers in the rubber industry show a median only \$1 higher than that in the mercantile, whereas in the rubber industry the median after 20 years' service surpasses that in the mercantile by \$8.75. Thus the mercantile not only showed the smallest percentage of increase in wages of all the industries, but spread this increase out over the longest stretch of years. The detailed figures of the table show that the rubber and general mercantile industries were the only ones where the maxi-

imum wage median fell in the maximum experience class. In the others, after a certain point was reached, of from 5 to 15 years of experience, the median decreased with greater length of service. The lowest median for a beginning group, \$10.50, was found in the 5-and-10-cent stores, as was also the lowest maximum median for an experienced group, \$14.80, reached after from 5 to 10 years of service.

#### YEARLY EARNINGS.

The foregoing wage figures are those for a given week, irrespective of the other 51 weeks in the year. A week representative of normal conditions in the plants, without a holiday or a slack period, was chosen. It is, however, a well-known fact that there are many vicissitudes in industrial jobs, so that workers frequently do not receive a steady wage throughout the year, but may suffer many variations below normal. Accordingly, it is important to know not only what wages women in Rhode Island industries actually earned during one specific week, but how much they earned during the year. The question of yearly income is the important one in judging whether a worker is receiving a living wage, since it is the year's and not the week's wage by which she maintains her standard of living. The possibility of losing money through sickness, slackness in the industry, unemployment, change of job, fines or cuts in wages, must be considered. Furthermore, some pieceworkers complained of loss of money due to the necessity of cleaning machines without extra pay, or of waiting for work to arrive and for machines to be repaired. In fact, many circumstances besides those for which the worker is responsible are the causes of deductions in pay.

Stability of employment is a two-sided problem dependent upon the employer and the employee and is a matter of utmost importance to both. Industry has not yet been so organized that it can use all of its workers steadily and all workers are not yet so contented with jobs and the conditions of their work that they have abandoned the habit of change. Nevertheless, in every industry were found women workers who had been in their employment sufficiently long for their wages to be considered representative of the wage opportunities for steady women workers in that industry.

In the study of yearly earnings an effort was made to secure the wage data of women who were steady workers, who had been with the establishment for at least one year, and who had not been absent from work for more than a few weeks during the year. Inexperienced and new workers were not included. In most cases the women for this study were selected by the managers in the various plants. Altogether annual earnings were recorded for 617 women, 7.9 per cent of the entire number for whom the weekly pay roll was secured.

These women worked in the various plants in a variety of occupations and may be considered representative of what experienced women who were employed in the industries investigated in Rhode Island earned during the year from the fall of 1919 to the fall of 1920.

The following table shows the year's earnings of these 617 women according to industry.

TABLE 5.—Year's earnings of women for whom 52-week pay-roll records were secured, by industry.

Actual year's earnings.	Number of women receiving each specified amount in—											
	All industries.		Rubber manufacturing.	Metal shops.	Electrical manufacturing.	Jewelry manufacturing.	Paper-box manufacturing.	Other manufacturing.	All manufacturing.	General mercantile.	5-and-10-cent stores.	Laundries.
	Number.	Per cent.										
Under \$350.....												
\$350 and under \$400.....	2	0.3										
\$400 and under \$450.....	1	.2							1	1		
\$450 and under \$500.....	6	1.0										1
\$500 and under \$550.....	21	3.4		1	1	3	1	2	3	1		
\$550 and under \$600.....	25	4.1	2			2	1	7	16	1	2	2
\$600 and under \$650.....	41	6.6	3		3	10	2	11	16	3	6	
\$650 and under \$700.....	56	9.1	3		2	7	4	7	25	10	6	
\$700 and under \$750.....	61	9.9	8		1	7	4	15	37	16	1	2
\$750 and under \$800.....	59	9.6	11		3	11	4	10	46	11	1	3
\$800 and under \$850.....	64	10.4	12		8	9	6	5	50	5	1	3
\$850 and under \$900.....	59	9.6	16		7	11	4	8	51	10	1	2
\$900 and under \$1,000.....	90	14.6	27		19	10	3	4	50	6	1	2
\$1,000 and under \$1,100.....	49	7.9	20		8	15	1	6	79	10		1
\$1,100 and under \$1,200.....	39	6.3	23		8	15			46	3		
\$1,200 and under \$1,400.....	27	4.4	22		7	3		1	37	1		1
\$1,400 and under \$1,600.....	13	2.1	13		5				27			
\$1,600 and under \$1,800.....	4	.6	2		2				13			
\$1,800 and over.....									4			
Total.....	617	100.0	172	71	79	75	26	76	499	80	21	17
Median earnings.....	\$829		\$978	\$929	\$868	\$793	\$758	\$687	\$857	\$727	\$604	\$758

The table shows that the yearly median for all industries was \$829; that is, one-half of the women earned less than this amount and one-half earned more. The yearly earnings received in different industries show wide variations. The rubber industry had the highest yearly median, \$978, and the 5-and-10-cent stores the lowest, \$604. The median for all stores, \$699, is \$158 less than the median for all manufacturing establishments and \$59 less than the median for laundries, placing the mercantile group last in the wage scale.

In a classification of women with incomes of less than \$1,000 a year, the manufacturing establishments show 74.5 per cent in this class as compared with 94.1 per cent in laundries and 96 per cent in stores. None of the women whose yearly earnings were recorded received as much as \$1,800 a year. One-fourth of the women in the manufacturing establishments received \$1,000 and up to \$1,800. None of the women in either stores or laundries earned as much as

KEY

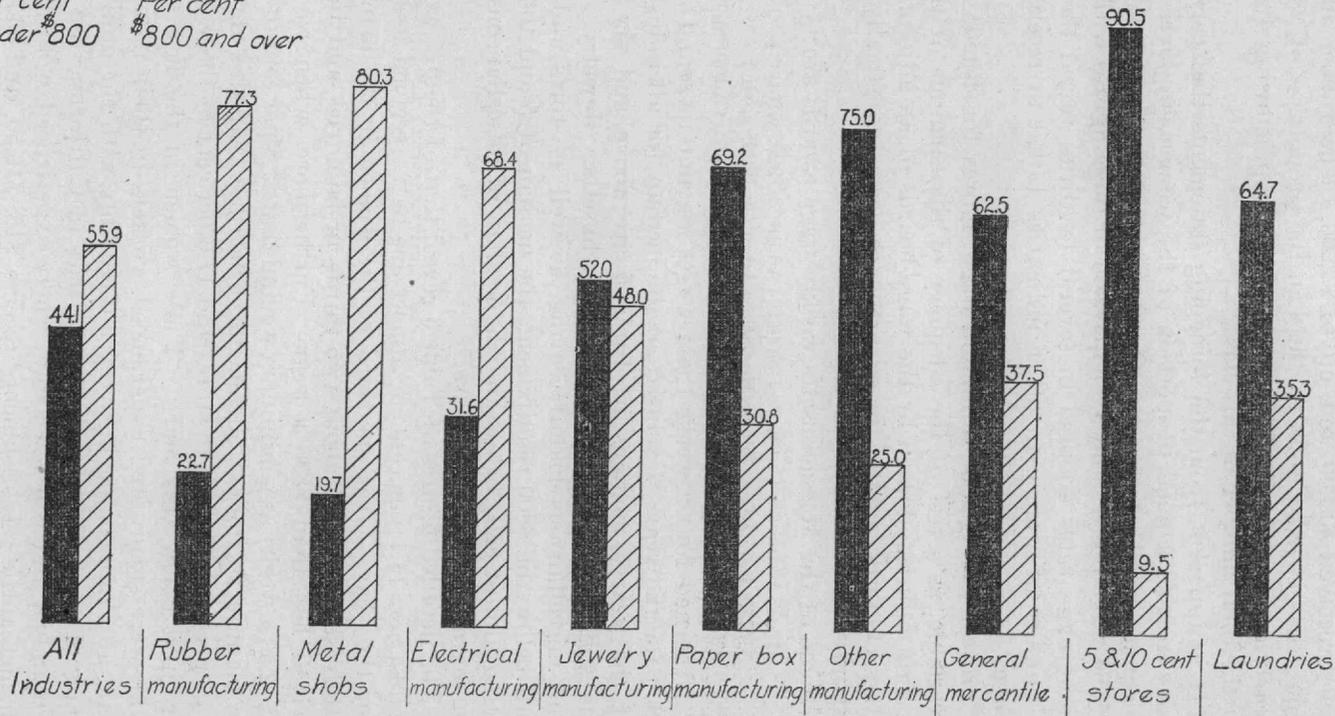


Per cent  
under \$800



Per cent  
\$800 and over

# ANNUAL EARNINGS OF WOMEN



WOMEN IN RHODE ISLAND INDUSTRIES.

\$1,200 a year, and only 4 per cent in stores and 5.9 per cent in laundries received \$1,000 and up to \$1,200. The rubber industry, as would be expected, took the lead in the proportion of women with yearly earnings in the \$1,000 to \$1,800 group, showing 46.5 per cent of the total number in this class.

It is apparent from the foregoing statements that certain industries enabled a good proportion of the women employees to obtain adequate yearly earnings. On the other hand, a further analysis of the wage figures and a comparison of these figures with the minimum wage rates adopted in several localities reveal the fact that a number of women in other industries failed to receive a living wage.

Since no budget or minimum-wage figures for Rhode Island are available, as a test of the adequacy of the earnings of the women, certain figures adopted by the wage boards of an adjoining State—Massachusetts, similar in so many respects industrially to Rhode Island—may be used.

Some of the Massachusetts weekly-wage awards are:

\$15.25 Women's Clothing Board. (Adopted 1920, winter.)

\$15.50 Paper-Box Wage Board. (Adopted 1920, spring.)

\$15.40 Office and Other Building Cleaners' Board. (Adopted 1921, spring.)

If earned for 52 weeks these wages amount in round numbers to \$800 for the year. Exclusive of the median for all industries, three of the yearly medians in Table 5 are above and six are below the subsistence level set by Massachusetts. Jewelry, paper-box, and miscellaneous manufacturing, as well as stores and laundries, fall below the \$800 requirement, the median of 5-and-10-cent stores being almost \$200 below and the median of miscellaneous manufacturing more than \$100 below.

The detailed figures of Table 5 reveal that of the 617 women in all industries, 44.1 per cent, or almost one-half, received less than \$800 for the year. Over one-third of the women in the manufacturing establishments and about two-thirds in laundries and in stores received less than \$800 a year. Furthermore, when we take \$650 (\$12.50 a week) as a minimum we find that 11.8 per cent of the women in manufacturing establishments earned less than this amount, while 33.7 per cent of those in stores and 17.6 per cent of those in laundries dropped below this mark. Those women in the last two groups who were steady and experienced workers in their industries were paid at a rate comparing very unfavorably with the minimum wage rates of women in the same industries in California, the District of Columbia, and North Dakota, where experienced women employees in mercantile establishments receive \$16, \$16.50, and \$17.50 respectively, and experienced women employees in laundries receive \$16, \$15, and \$16.50 respectively.

The degree of steadiness of the women workers whose annual earnings were ascertained is shown in Table IX, page 67, in the appendix. Of the total number of 617 women, nearly three-quarters (72.1 per cent) worked 50 or more weeks during the year, nearly one-quarter (23.3 per cent) working every week. Only 6 women of the 617 worked less than 43 weeks in the year. This is excellent testimony, not only to the stability of this picked group of workers but also to their health stability as women.

The detailed figures show that the earnings of the workers who lost not more than two weeks varied greatly from one girl with a yearly wage of between \$350 and \$400 to four women in rubber factories and metal shops who earned between \$1,600 and \$1,800. Over one-half (55.1 per cent) of this same group of women losing not more than two weeks earned between \$700 and \$1,000, about one-fourth (23.8 per cent) earned less than \$700, and a smaller proportion (21.1 per cent), \$1,000 and over.

#### CONCLUSION.

In a discussion of wage figures the important fact must not be lost sight of that women are compelled as a rule not only to support themselves but to provide a large part—in many cases all—of the support of other persons as well. An adequate minimum wage rate should therefore cover the cost of living for dependents, and not merely for the individual.

In Rhode Island, although about one-half of the women received what might be deemed a fair amount of pay, many others fell far enough below the line of a maintenance wage to make essential a special consideration of the subject of a minimum wage by all those interested in the industrial betterment of women in the State.

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COMMISSION

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## PART IV. WORKING CONDITIONS.

Realization that the conditions under which women work are of vital importance is gradually growing in industrial circles. More and more are employers coming to grasp the truth that good working conditions for women mean increased efficiency; more and more are women workers learning to expect comfortable conditions for their hours of industrial labor. Finally, since women have become such a definite and necessary factor in the industrial world the social consciousness of the Nation is becoming aroused to the necessity for establishing and enforcing good standards for women in industry in order that the health of the individual women, and hence the welfare of the Nation, may be preserved. Despite the general knowledge about these matters, some managers linger—either from indifference or from ignorance—in the rear guard of the movement for maintaining health and efficiency.

### GENERAL WORKROOM CONDITIONS.

The general working conditions, such as the location, structure, and size of the plants, the space in the workrooms, the general arrangement of machinery and work tables, were found satisfactory in 51 of the 70 plants visited in Rhode Island. In the other plants unsatisfactory conditions of one sort or another were noted. The machine rooms of one factory, for example, had aisles so narrow as to make passing difficult. When a hand truck was pushed down the aisle it was necessary for the workers to stand on and lean over the frames of their machines to enable the truck to pass. In another building, six stories high, the only stairway used by the women was a small spiral one, difficult and dangerous for the general use to which it was put. Stock was carried from floor to floor by this route, and, as two persons could not pass on the stairs, congestion resulted. In a third plant the workrooms were overcrowded, with a haphazard placement of machines and tables and with narrow and obstructed aisles. Such objectionable arrangements should be avoided in order to facilitate the work and to safeguard the workers.

Other general workroom conditions, such as cleaning, heating, ventilation, and lighting, were, on the whole, fair.

#### Cleaning.

The cleaning of workrooms was reported unsatisfactory in some respects in 20 plants. Either the floors were caked with accumulated dirt and littered with débris of some days' standing or the windows and walls were dingy. In some cases the systems of cleaning were inadequate. A number of plants, however, were reported with a good cleaning record. In several large establishments a corps of

cleaners occupied constantly with sweeping and scrubbing produced excellent results. The reaction of employees to such conditions is illustrated by a girl working in one of these plants. She expressed her appreciation of the high standards maintained, referring by way of contrast to another plant where she had formerly worked. "That whole place was so dirty," she said, "I just couldn't stand it."

### Heating.

The heating seemed satisfactory as a rule; in only 5 plants was it reported as insufficient or too great for the workers. Either arrangement may be detrimental to health. A great deal of discomfort is likely to result if girls work constantly in close proximity to the heating pipes, as was the case in one plant where the pipes were placed along the wall under the worktables, close to the girls' feet. When such low-lying pipes are covered with asbestos they are less objectionable.

### Ventilation.

Ventilation is a technical problem requiring more detailed study than could be given in this general investigation. However, in 53 of the 70 plants the ventilation seemed to be adequate. In many cases ventilation by windows was sufficient, but the following description of conditions in one plant is illustrative of the failure to solve the ventilation problem:

On the morning of the visit the air was hot and "stuffy." The inadequate ventilation was due to the crowded workroom with the low ceiling, and to the fact that most of the windows were kept closed to prevent the gas flames used by the workers immediately facing the windows from being blown out.

In some plants artificial exhausts were needed to improve the atmosphere of the workrooms; in a jewelry factory, for example, where chains were dipped into a chemical solution, the air was heavy because there were no exhausts to carry off the fumes. Very effective mechanical means for improving the ventilation were found in one plant, described by the investigator as follows:

The workrooms were ventilated by means of the windows; and, in addition, in all the departments where flames from the blowers and heat from hot glass increased the temperature the washed-air system of ventilating was used. In these departments the hot air was blown away from the face of the worker by small individual electric fans placed near each worker.

### Lighting.

Such a technical subject as lighting also could be given only a rather superficial treatment in the general survey. Of the 70 plants visited, the natural lighting was reported as unsatisfactory in 16 and the artificial as inadequate in 20. The description given of one plant, that "apparently none of the workers were placed with any reference to the daylight," was applicable to other establishments in which women were found facing a decided glare from windows

only a few feet away, sometimes with the sun shining directly on their work, or to establishments where the supply of light was insufficient, either because of too few windows or of obstructions between the workers and the windows. As these conditions occurred sometimes where women were doing fine work in the jewelry and metal establishments, they constituted a serious problem. If the nature of the work requires that the workers face the windows, as has been claimed by the managers of some jewelry establishments, the condition should be rendered less objectionable by the proper shading of the eyes and the work. The president of the Jewelers' Protective Association voiced the opinion that more definite education along the lines of improved lighting in the jewelry industry was necessary, since the fine work required such close application of the eyes. In the various industries improvements were needed not only in natural but in artificial lighting. Unshaded electric lights frequently caused a glare; in other cases the wrong placement of lights cast objectionable shadows on the work. Other defective lighting conditions were caused by irregularly placed lights or by the lack of bulbs in the light sockets. In conclusion it may be said that some managers believed that if enough light was supplied the problem was solved, not knowing that too much illumination or glare is as detrimental to eyesight as is insufficient light. Other managers, however, had given careful study to the question, realizing that inadequate lighting of any sort not only produces impaired vision, which in time causes nervous fatigue of the whole body, but also limits production. The lighting in such cases was excellent, as is illustrated by the following description:

Large factory windows, with several sections each, on at least three sides of workrooms. Windows of frosted or ground glass. In two workrooms the top section of the window was frosted with a soft, restful shade of green. Adjustable white shades at windows. No glare. No girls faced windows.

Artificial lighting excellent. General lighting throughout, electric bulbs, with shades, on cords about 6 feet above the heads of workers when standing; these lights placed at regular intervals. For close work at machines, individual bulbs with cuplike shades, attached to machines by adjustable brackets.

### Seating.

In general the seating throughout the plants was fair. There was frequently an attempt made to furnish seats with backs, also occasionally with foot rests, and to adjust the seats to the work. In one plant some of the machines were equipped with arm rests to facilitate the comfort of the operators. Twelve of the 70 plants, however, had no seats or had an insufficient number, and 16 were definitely reported as having entirely wrong kinds of seats. Illustrative of the failure to make suitable adjustment was the arrangement in a jewelry factory where the worktables with a projecting ledge for materials between the girls and their work made

it necessary for them to lean forward in an uncomfortable posture. Constant sitting, even under the most propitious circumstances, is tiring, and ideal seating arrangements are rare. One girl who sat all day at her job said, "It's awfully hard sitting all day even when you take along a couple of towels to sit on." In some establishments, and especially in stores and laundries where girls stood constantly at work, there were in most cases neither adequate nor satisfactory seats for an occasional rest. One girl in a 5-and-10-cent store complained that the first two weeks of standing all day made her feet ache so badly that she could scarcely wait to reach home at night to take off her shoes. In one small store the only seat provided was a small bench on the second floor which the girls shared with customers. A girl who stood at her work in a factory complained that although standing was tiring she had become accustomed to it, but that she did not like standing on a concrete floor; it wore her shoes out in a short time and was so cold and damp in winter that she had to put newspapers under her feet.

The importance of the posture and seating of women in industrial work is strongly emphasized by health authorities. The realization that a bad position at work means fatigue for the workers and hence lowered vitality and limited production needs to become more widespread in industrial circles, and there is needed also a careful study of the most satisfactory seats for particular jobs. A detailed and scientific investigation of the whole matter has been made by the Bureau of Women in Industry of the State of New York and the findings are published in a report.<sup>16</sup> One of the chief conclusions reached is that posture should be varied, that continuous sitting and continuous standing both are harmful, and that there are comparatively few processes where either is really necessary. Arrangements have been made whereby workers can sit or stand at occupations in which formerly only one posture was considered possible. Even in laundry work, for example, machines with seats have been found feasible. An important conclusion reached in the report and endorsed by all who are interested in the elimination of the unnecessary fatigue of the worker is not only that a seat is needed but that it must have back, legs, and seat so devised that the worker can be comfortably adjusted to her work.

#### HAZARD AND STRAIN.

From the point of view of safety for industrial workers, the matter of hazard and strain was considered both in general and for individual jobs.

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<sup>16</sup> State of New York Department of Labor. Special bulletin prepared by the Bureau of Women in Industry. Industrial posture and seating. No. 104. April, 1921.

### Fire hazards.

Definite fire hazards were noted in 16 of the 70 establishments, and possible danger in case of fire in 5 others. These hazards were of various kinds. In some plants the entrance doors or the doors of workrooms opened inward instead of outward. Several buildings of more than two stories, one with as many as five, were reported as having no fire escape. In a few instances unsatisfactory stairways constituted a danger, where they were narrow, dark, or difficult of access. The narrow spiral stairway in one plant would have been a decided hazard in case of fire, as would also the stairways described in the following:

The plant was composed of a number of old wooden buildings of one, two, and three stories. The stock was highly inflammable. There were no fire escapes on any of the buildings. The stairs were of wood, mostly without handrails, very steep and dark. In the two-story building the main exit from the second floor was a stairway composed of a slide for conveying boxes of work down to first floor on one side of the stair well, and a flight of steps on the other side with no rail between. There was another similar stairway in the three-story building leading from the second to the first floor, only here the slide was in the middle of the stair well, and a flight of steps about 18 or 20 inches wide on each side, with no rail between.

A striking illustration of carelessness and indifference on the part of the management is shown in another report:

One wooden stairway from the second floor. Exit through window. Access to window was obstructed by piles of stock, an old barrel, and a discarded machine. There was, in addition to the regular wooden stairway, an emergency fire stairway. This was the one originally used in the factory, but discarded because it was too narrow and steep, and the new one was built. The first six steps from the bottom of the old stairway had been cut away, leaving a drop of almost 5 feet. The opening was closed by a door. Below the door there were several old boxes and barrels that would somewhat handicap an attempt to make the drop from the stairway in case of emergency.

Fire regulations should prohibit such a condition. An effort has been made in Rhode Island to pass a more adequate fire law, but despite the strong backing of the factory-inspection department this has not yet been accomplished.

### Workroom hazards.

There were reported also other hazards of a rather general nature in workrooms. In 28 of the 70 plants unguarded machinery and other dangerous conditions were noted, with the possibility of injury to women working near by. One girl was reported to have gashed her arm badly on an unguarded saw. Another girl who worked in the same plant near an unguarded belt described a startling experience. "Not long ago," she said, "I almost scalped myself when my hair got caught on that belt." A number of side belts without guards were seen in dangerous locations, on narrow aisles and near enough to the floor

to catch workers' skirts. There were also unguarded overhead belts. In one plant a rapidly revolving wheel, uninclosed and located on an aisle, and in another an unguarded saw projecting into the aisle, constituted serious hazards. Only one instance was reported where molten metal was exposed so that it formed a menace to the women workers. The excellent guards against general hazards seen in some plants proved what could be done in the way of safety.

### Occupational hazards.

Certain conditions which might prove detrimental to the health and safety of women in particular occupations also were noted. In 51 of the 70 plants a possible strain and in 28 a definite hazard in connection with women's jobs were recorded. In various operations the strain on the eyes, nerves, or muscles of the workers frequently could have been greatly reduced by more scientific arrangements. The introduction into one jewelry plant of arm rests to minimize the arm strain for women doing fine bench work is illustrative of the kind of adjustment that is desirable and possible for the elimination of unnecessary fatigue.

Presses and machines without guards were observed in various establishments. In such cases the operators ran the risk of catching and mashing their hands. For instance, a 17-year-old girl had caught her hand in a cylinder press, apparently through no fault of her own. As it was not automatically reversible, she was obliged to stop the machine herself. As a result of the accident she lost four fingers and afterward could work only as an errand girl in the plant.

In some places women were exposed to fumes and dust, which sometimes were present in such large quantities as to be extremely disagreeable. In a few plants the dust was greatly reduced by the use of special hoods and exhausts, devices essential in all establishments where dust and fumes constitute a menace.

Girls burned themselves frequently with gas flames in jewelry making or on the machines in laundries with the possibility of infection unless the burns were carefully looked after. In one plant the hazard of burns from soldering flames had been minimized by the careful adjustment of the height and angle of the workbench.

In conclusion it should be said that although hazards and strains are not always avoidable in industrial occupations, the risks and dangers can be reduced by more careful management, by the installation of guarded machines and comfort facilities, and by the adoption of an 8-hour day. The fatigue resulting from working under a strain for an excessively long day may become so acute and so poisonous to the system as to constitute a hazard, and may be responsible also for industrial accidents, since workers when over-fatigued are apt to be less careful.

## SANITATION.

In the consideration of the health and efficiency of the workers the question of sanitation is of paramount importance. Just as the machines in industrial plants would not run smoothly if treated in a haphazard fashion, so the human factor in production should not be neglected if the best results are to be obtained. Although it is extremely necessary for machines to be carefully inspected, cleaned, oiled, and repaired, it is obviously much more essential that the workers' health and welfare should be safeguarded, since the workers are not only cogs in the industrial wheels of a nation but threads in the social fabric as well.

**Drinking facilities.**

The drinking facilities reported unsatisfactory in 37 plants were either insanitary or not easily accessible. In many cases individual drinking cups were not supplied; sometimes a tin cup was chained to the faucet or a common glass provided. The practice reported in a number of establishments of having the girls furnish their own cups frequently resulted in the use of a common cup or of none at all. The evils of the common drinking cup have been sufficiently advertised to require no discussion here, but the need for the abolition of such a menace can not be emphasized too much. The use of individual paper cups, customary in some establishments, is easily possible for all.

The following reports show how little effort in this respect was made by some firms to look after the health and comfort of the girls:

Girls drink from barrels in workrooms and use the glass that happens to be there or supply their own. In the warm weather the girls provide their own ice for the barrel, but in the cold weather they use the faucet water. The barrel is of wood and unlined.

Girls drink from faucet in basin in toilet room on first floor. They supply their own glasses. This room is kept locked, with the stock helper, a woman, in charge of the key.

Some plants had installed bubble fountains. It must be pointed out, however, that such fountains frequently are of an insanitary nature. The exposure of the danger lurking in what was believed to be an ideal drinking arrangement was given in an article entitled "Possible dangers of the bubble fountain," in the *Journal of the American Medical Association*<sup>17</sup> several years ago. Here it was shown that an epidemic of streptococcus tonsillitis in the University of Wisconsin was traced directly to the bubble fountains in the buildings. This circumstance led to an extensive bacteriological

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<sup>17</sup> Possible dangers of the bubble fountain. *Journal American Medical Association*, v. 67, No. 20, Nov. 11, 1916, p. 1454.

investigation of the hygiene of the bubble fountain in general, with the discovery that it may be a powerful factor in transmitting disease, since germs left in the jet of water may fall back on the fountain and remain a menace for several hours. This difficulty is obviated, however, if the tube is inclined at an angle of  $15^{\circ}$  or more from the vertical and is equipped with an adequate collar to prevent possible contact of the lips with the orifice. The need for education on this subject is urgent, since, to quote from the article referred to, "Danger disguised in the cloak of safety is a menace of the most potent sort, particularly when it receives the approbation of health authorities in the way that the bubble fountain has shared it."

### **Washing facilities.**

Washing facilities varied widely in the different plants, being inadequate in some respect in 65. The cleaning of washrooms was unsatisfactory or partially so in 12 of the 70 establishments. Occasionally the girls were expected to do the cleaning. In 25 plants there was no hot water, and in 6 others there was hot water for only some of the workers. In 38 plants no soap was supplied. In 51 there were no towels, and in 7 others towels were provided for only part of the force. That the washing arrangements varied from the crudest to the most ideal is shown by the following contrasting reports from three plants:

No washrooms. In one workroom the girls have an iron sink with two cold-water faucets. In the machine shops there is an iron sink, but the girls use a galvanized iron pail which they or the men fill a couple of times a day. They also use this water to mix with the oil for their machines. Several girls use the same pail. In the inspecting room the girls have a longer trough than in the other rooms, with three cold-water faucets. In the machine rooms there is warm water from a faucet where the pails are filled. No soap or towels are furnished.

Iron sink in corner of workroom. Hot and cold water. No individual soap or towels. Manager said there was "always plenty of laundry soap and something around they could wipe their hands on."

Washroom recently installed. Lockers and walls enameled white. White tile floor. Outside light and ventilation. Very clean. Matron in charge. Twelve porcelain basins with hand spray (hot and cold control) over each. Green liquid soap. Paper towels provided. Mirror.

It may not be possible for all establishments to install such a complete equipment as the last, but it is reasonable to expect every plant to provide hot water, soap, and individual towels for the health and comfort of the workers. In practically all the operations in which the women were engaged they handled materials or machines which necessitated the use of hot water and soap to cleanse the hands before eating lunch or leaving the plant. Too frequently the policy was followed of expecting the women to supply their own

towels. With towels as with drinking cups, workers neglect to bring their own and resort to the one used in common, another generally acknowledged means of spreading disease.

### Toilets.

On this subject the State law of Rhode Island reads:<sup>19</sup>

The owner of any building, in which said building is located one or more factory, manufacturing, or mercantile establishments employing more than twenty-five persons, shall equip each of such establishments with one effectively trapped and ventilated water-closet for every *forty employees or fraction thereof exceeding one-half*: Provided, however, that if the employees are of different sex then there shall be separate water-closets for the different sexes with separate entrances properly designated and so built as to insure privacy.

Plants were reported, however, with one seat for 61, 66, and even as many as 75 women. The use of the standard of one seat for every 20 women as a test of the adequacy of toilet arrangements showed 30 of the 70 plants, or about 40 per cent, with an insufficient number of toilet seats.

Toilets were reported unsatisfactory in other respects in 58 plants. In 18 plants there was no designation on the toilet doors. In three plants men and women used the same toilets. In 14 plants the ventilation was inadequate, as there were no outside windows and the toilets were ventilated from the workrooms. In 21 of the 70 plants the cleaning was unsatisfactory; in 7 others it was partially so. Sometimes the girls were required to clean the toilets; sometimes the janitor cleaned them during working hours. Other unsatisfactory arrangements were found, such as when they were inconveniently or conspicuously located, and when they were separated from the workroom or the men's toilet by an inadequate partition. In one plant they were kept locked, with the bookkeeper in charge of the key, while in another plant the doors had no lock of any sort.

### Uniforms.

Uniforms must be considered from two points of view—sanitation and safety.

The advisability of the wearing of special working clothing depends largely upon the job. However, in all occupations where workers handle food products, or where they operate machines with the possibility of skirts and hair being caught, or where they are exposed to oil, dust, or other substances detrimental to clothing, uniforms are desirable. The type of garment should vary with the job. In only 7 of the 70 plants was any sort of uniform or cap provided for the workers. In one plant where a food product was handled the girls wore caps and enveloping aprons, which were furnished,

<sup>19</sup> Acts of Rhode Island, January session, 1920, chap. 1907, sec. 8, pp. 144-145. Italics not in original.

laundered, and mended by the firm. In two plants some of the machine operators were provided with tan denim overalls and blouses. The messengers in a department store, girls of 16 and under, were supplied with dark-blue middy suits.

#### SERVICE FACILITIES.

Other facilities for the comfort of the women, such as lunchrooms, cloakrooms, rest rooms, and first-aid equipment, were found to vary greatly in the establishments inspected.

#### Lunchrooms.

Lunchrooms were found in only 15 of the 70 plants. In 11 of these lunch of some sort was sold to the employees, as a rule, varied and nourishing food sold practically at cost. In a few cases there was a cafeteria, where girls were encouraged to eat even though their lunch was brought from home. Some plants located in small towns allowed sufficient time for the girls to go home if they so desired. In the great majority of plants, however, the workers were unable to go home; no provision whatsoever was made for a place in which to eat lunch, and the girls ate in the workrooms at their machines or tables. This is a system to be discountenanced, for too frequently the materials and débris of the work make unappetizing surroundings. In any case it is much better for the worker to eat in a comfortable place with no reminder of her job, so that when she resumes it after a satisfactory lunch she will feel fresher mentally and physically.

#### Cloakrooms.

In general, facilities for wraps were inadequate in 56 establishments. No cloakrooms were provided in 25 of the 70 plants, and in 6 others the space was inadequate. In 5 of the plants lacking definite cloakrooms, however, lockers were supplied in the workrooms. In the other cases the workers hung their wraps on hooks or racks in the workrooms, or occasionally, as was reported in one plant, "they put them anywhere." In 20 plants where cloakrooms were found they were unsatisfactory in some respect—untidy, poorly ventilated, or overcrowded. A condition such as the following is highly insanitary but is typical of the "inadequate cloakrooms:"

On the second floor wraps were hung in two wooden cupboards at end of workroom. These cupboards had no outside ventilation and were crowded with coats and hats hung several deep on each hook.

In another plant having a similar situation, the statement of one worker was not surprising. "I like everything about the place but the cloakroom, where we have to keep our wraps three or four on one hook," she said. "The girls have had trouble with their heads. I did, too, so I went to the forelady and told her I couldn't put my wraps in the cloakroom any more."

The few establishments where each girl had a full-length steel locker with perforated doors would serve as a model to those plants permitting unhygienic crowding. Some authorities on the subject, however, prefer other arrangements to lockers. A type of cloakroom recommended is one equipped with iron racks, coat hangers, and shelves or boxes above for hats and personal belongings. The system of having a matron to supervise the service facilities and to look after the cleaning of the rooms and the comfort of the girls is said to produce excellent results.

### **Rest rooms.**

A rest room of some sort is desirable in every plant for use in case of sickness or emergency. In 49 of the 70 plants, however, there was no such provision. Its absence frequently means the loss of an entire day for a girl who is compelled to go home for a slight indisposition when a short rest is all that is necessary. In an emergency the lack of a rest room may cause a distressing situation, such as arose in one plant where a woman suffered a paralytic stroke while at work. She lay on the floor for a time, until carried and put in a chair in the superintendent's office and later sent home in an automobile. One of the other women said that the incident upset most of the other girls so much that they were unable to work afterwards. At the time of the visit to another plant in which there was no rest room a girl who was ill was sitting on a chair in a toilet room, leaning back against the wall, with another girl trying to help her. A properly equipped and furnished rest room requires little space and outlay of money, and should be provided without fail if such situations are to be relieved.

### **First aid.**

In some plants were found excellent measures for looking after the health of the women; in others there were none at all. In 11 of the 70 plants there was no first-aid equipment of any sort. In 29 plants there was a dispensary, usually a room fitted up for emergency cases. In only 11 of these plants was a nurse in attendance, and in only 9 was there any definite medical treatment given by a doctor. Health records were kept in 13. The health service in one large plant had been well organized. There were several hospital rooms, including an examining room and others fitted up with complete hospital equipment—beds, toilets, and so forth. Two nurses were in attendance, and an additional nurse made home visits. A doctor and dentist had office hours for a certain time each day. A physical examination of each new employee was required. Complete records were kept of the nature of illness or accident and of the services rendered. In contrast to this was the haphazard arrangement in a small plant where a first-aid cabinet was kept in the office

in the charge of "just anybody." Naturally it is not to be expected that a small establishment employing only a few women can afford extensive service facilities such as the hospital equipment described above, but at least every plant, no matter how small, could have a good first-aid equipment with one person definitely in charge.

#### EMPLOYMENT MANAGEMENT.

Employment management is an extensive subject about which only a limited amount of information could be obtained in this investigation. Questions were asked as to who was responsible for employing, transferring, and discharging women workers. Several methods were found in use. In 36 plants the employment management was centralized; that is, it was attended to by the superintendent, the manager, or the owner. In 12 other plants the foremen or forewomen were in charge of such matters. In 7 establishments some system of consultation was used, either the manager or the foreman having the authority to act, but only after consultation with the other. In one of these plants the department superintendents and the paymaster consulted with each other. Only 5 establishments had a professional employment manager. In small plants, where it would not be feasible to have a separate employment manager, it would be possible and practical to have one person of intelligence and judgment definitely in charge of these matters. In 16 plants, however, a lack of such centralization was found. Misunderstandings and injustices are likely to arise in cases of this sort, reacting against employer and employees, preventing the right sort of cooperation in the plant, and producing a high labor turnover. In three of the five plants with an employment manager there was a woman assistant to take up specifically all problems dealing with women. Employment records of some sort were kept in 37 plants.

#### TRAINING.

Several stores and rubber establishments showed a more progressive attitude toward training their workers than any plants in the other industries. In a large department store there was a woman in charge of regular classes wherein new employees were instructed in salesmanship and general efficiency. The girls in a 5-and-10-cent store were required for the first three months to attend classes conducted in the store on the subject of efficiency. The new employees in a large rubber establishment were given training for their jobs in a vestibule school and were paid while learning. In another rubber establishment, where there were many foreign-born workers, Americanization classes were held and the employees were paid 25 cents an hour while attending the classes. Such efforts on the part of employers tend to promote satisfactory adjustments within establishments.

## PART V. THE WORKERS.

The total number of women in the 70 plants included in this survey was 10,352, according to Table 1, page 4. Wage data were obtained for approximately 7,800 of these and personal records for something over 2,700. This means that definite personal information, supplied by the workers themselves on cards given out in the plants, was secured for more than one-third of the women for whom wage data were obtained and for more than one-fourth of all the women affected by the hours and the working conditions noted. Since statistical data do not convey sufficiently the real human interest in the problems of working women, supplementary information was obtained for 155 women by visits to their homes. Facts about the industrial and educational history of the women and about their home responsibilities are helpful in the consideration of the intricate subject of women in industry.

### Nativity.

Of the 2,674 women reporting on their country of birth, 78.8 per cent were born in the United States, according to Table X, page 68 in the appendix. Other countries of birth for which 5 or more women were reported include Austria, the Azores, Canada, England, France, Germany, Ireland, Italy, Poland, Portugal, Russia, Scotland, and Sweden. This shows a racial diversity in Rhode Island of interest when it is compared with other sections of the country. There is, for instance, a striking difference between Rhode Island and Georgia. In a similar survey made in the latter State, of 2,526 women only four-tenths of 1 per cent were foreign born as compared with the 21.2 per cent foreign born in Rhode Island. In Georgia 16 per cent were Negro women, but in Rhode Island the number of Negro workers was so small that no effort was made to tabulate them separately from the white. The situation in the Middle West is shown by a study in Kansas, where 96.3 per cent of the 5,627 women reporting (including the 5 per cent Negro women), were American born and only 3.7 per cent were foreign born. A diversity of nationality may mean a more complicated labor situation unless an effort is made to prevent misunderstandings.

The figures above cited on the proportion of native and foreign born in Rhode Island can not, however, be taken as entirely representative of all women in industry in the State. The numbers of American born supplying personal records naturally would be higher,

as the foreign born often had difficulty in answering the questions, some of them being unable to read and write English. Occasionally in a home visit it was necessary to carry on the interview by means of an interpreter. Even among the American born many were of foreign-born parents.

The English-speaking countries—Canada, England, Ireland, and Scotland—together contributed 44 per cent of the foreign born; Portugal and Italy each contributed 15 per cent, but no other country is credited with more than about 5 per cent.

The laundries show the largest proportion of foreign-born workers, practically one-half, followed by the rubber and metal establishments, with about 31 and 33 per cent, respectively.

### Age.

According to Table XI, page 69 in the appendix, of the 2,587 women reporting their age, 6.6 per cent were under 16 years. The highest proportion of these under 16 was in paper-box manufacturing (13 per cent of the women reporting in this industry), and the next highest in electrical manufacturing and laundries (about 11 per cent). The lowest proportion, one-half of 1 per cent, was in the metal shops. Almost one-third of all the women in all industries were between 16 and 20 years. The greatest proportions of young people were in the 5 and 10 cent stores with almost two-thirds of the workers (64.3 per cent), and in electrical manufacturing with well over one-half (57.1 per cent) under 20 years of age. Over one-third of all the women (36.4 per cent) were in the group 20 and less than 30 years of age, whereas there were only 13.7 per cent in the 30 and less than 40 years group and 11.5 per cent who were 40 years of age and over. The general mercantile industry showed the largest proportion in this oldest group, 22.4 per cent, and the rubber factories and laundries followed with about 16 per cent. In other words, the 5 and 10 cent stores and the electrical industry were more generally the province of the young workers, the general mercantile establishments the field for older women. Young, inexperienced workers are likely to enter the mercantile world through the 5 and 10 cent stores, and to engage in an industry where a light, quick touch is an asset, as in electrical manufacturing. Most of the industries showed more than one-half of their workers to be between 20 and 40 years of age.

### Years in the trade.

Of the 2,599 women giving information about their years of experience in the trade in which they were employed, according to Table XII, page 69 in the appendix, the largest proportion in any one group, one-fifth of the total number of women, had been in the in-

dustry less than six months. The next highest proportion (14.4 per cent) was in the 5 to 10 years group. On the whole, almost one-half (45.8 per cent) of the women reporting had been in the industry three years or more. Electrical manufacturing showed by far the highest percentage of those with less than six months' experience, whereas rubber and general mercantile establishments had the largest percentages in the 5 to 10 years group. The preponderance of young workers in electrical manufacturing—a fact already set forth—indicates that there was a group of young girls who had been at work only a short time or for one reason or another were shifting about. On the other hand, the significant proportion of women with from 5 to 10 years' experience in the trade shows that there was a large class of steady, skilled workers.

### Labor turnover.

The foregoing figures testify to certain facts about the effect of trade training upon labor turnover. In the first place they are of interest in an analysis of the so-called shiftlessness of young workers. It is asserted by authorities acquainted with the habits and tendencies of young workers that many of them go into what are called "blind-alley jobs;" that is, work giving no trade training and leading to nothing better; that they shift from job to job, seeking to improve their condition and adjust themselves in the industrial world. What they lack is definite training. They are, accordingly, a handicap to industry as well as to themselves, since they help to increase unduly the labor turnover. On the other hand, the fact that the next to the highest percentage of women reporting on length of service had been in the industry between 5 and 10 years indicates that many workers do acquire a trade and stick to it. As has been shown in an earlier section of this report, the rubber and general mercantile industries in Rhode Island were doing more to train their workers than any other, and these were the industries with the highest record for steady workers.

In line with the foregoing discussion were the reasons given by some women for leaving former jobs. It is difficult to ascertain the real causes for such changes, and too much importance should not be attached to reasons given by workers during brief interviews. It seems significant, however, that 40, or about one-third of the girls reporting, had been laid off because of the shutting down of the plant or department or because of a reduction in force. Twenty-four had left because the pay was poor or because they could get more money and would have better opportunities elsewhere. Quite a number had left for such personal reasons as sickness, marriage, or moving to another locality. Some complained of "not liking the work," some of long hours, and some of strain connected with the

operation. The only apparent relations that could be traced between the industry and the reasons for leaving were in munition plants and textile mills. All of the workers in munition plants were laid off, and 9 of the 28 who had left textile mills had been dropped because of a depression in the business. No other of the 14 or 15 industries where the girls had worked seemed to have had any unusual condition.

Only very fragmentary information could be secured from the plants about labor turnover. Although many firms complained that labor had shifted about a great deal during and since the war, very few could give any definite figures on the subject. In fact, only 12 of the 70 establishments visited (4 electrical, 4 rubber, and 3 metal plants, and 1 department store) had kept any record. Figuring the turnover on a monthly average for from 6 to 10 months of 1920, we find that establishments in the rubber industry had both the highest monthly turnover, 25.3 per cent, and the lowest, 4.2 per cent. Electrical manufacturing varied from one factory showing a monthly average turnover of 9.9 per cent to one averaging 21 per cent. In the 3 metal shops the range was less, from 6 to 10.5 per cent. The 1920 record for the one department store reporting was not obtainable, but for 1919 the turnover averaged 16 per cent a month. It would seem from these figures that high or low turnover was not attributable to the industry but to special conditions within the plant. Furthermore, the matter of the location of a plant—that is, whether there is competition from many neighboring plants or no opportunity to change—has a bearing on this question.

### Education.

In a consideration of the industrial position of women the matter of general and technical education naturally is of interest. In home visits to the women the agents ascertained, wherever it was possible to secure the information, the reason for leaving school, the age on leaving, and the grade completed. Of the 135 girls reporting, over two-thirds (69.6 per cent) gave economic necessity as the reason for leaving. Other typical answers given to this question were: "Through school," "Tired of it," "Wanted to get married," "In poor health."

The need to go to work supplied women to every industry, but paper-box manufacturing showed the highest percentage (90 per cent) of young girls who started work for economic reasons.

The record of 131 girls reporting their age at leaving school showed that 91 of them were under 16 years of age, and of these 69.2 per cent left for economic reasons. It is impossible to say how nearly true this is of the total group of young girls in Rhode Island who leave school to go to work, but as these workers were chosen at random they would seem to be fairly representative. The majority of these

girls leaving school under 16 were found working in jewelry, metal, and various miscellaneous establishments, such as candy, chemical, novelty, and optical goods.

One-third of the 120 women reporting on the grade completed at school had not finished grammar school. Only 15.8 per cent had had any high-school education, and most of these only one year. A few of the girls stated that they had tried to supplement their education by attending night school, several of them for a business course. Two sisters who had been compelled to leave school to go to work had continued at night school until they had completed the grammar grades. "Many a time we had to go without our supper," one of them remarked, "as we didn't have time to eat it before going to school." Usually girls are too tired to go to school after a day's work in a factory, or if they are ambitious enough to make the attempt they are likely to be too lacking in energy to gain enough from the experience to make it worth while.

If the conditions above cited may be taken as fairly representative, then the general educational level in the State would seem in danger of being held down by the economic needs which are forcing young people into industry.

Another great drawback to the industrial advancement of women is the lack of opportunities for trade training. Except in a few cases women either have not been admitted to or have not been encouraged to attend the public vocational schools. In a recent analysis of industrial opportunities for women,<sup>20</sup> it was shown that women in Rhode Island needed especially courses in technical subjects such as machine-shop practice, shop mathematics, machine drafting, blueprint reading, ship drafting, auto repair, and woodworking, but that in only two schools were women enrolled in any trade courses, these being garment making, dressmaking, and textile design.

It would appear, therefore, that the majority of women in industry in Rhode Island as elsewhere were engaged in work which they had not chosen nor prepared for, but had been forced into because of economic necessity; that they had been deprived of opportunities for educational and trade advancement; and that with their limited training, efficient adjustment in the economic world would be difficult.

### **Conjugal condition.**

The old theory that women do not need trade training because they marry and abandon the industrial world is being discarded. That it is frequently an economic necessity for married women to engage in work outside the home is a well-established fact in Rhode Island as elsewhere. According to Table XIII, page 70 of the appendix, of the

<sup>20</sup> U. S. Department of Labor, Women's Bureau. Industrial opportunities and training for women and girls. Bulletin 13, 1920, pp. 37 and 40.

2,576 women reporting on their conjugal condition, 14.8 per cent were married, 7.9 per cent were widowed, separated, or divorced, and 77.3 per cent were single. The laundries showed the highest percentage (25 per cent) of married women, followed by metal shops, paper-box factories, and general stores. It is interesting to note that the metal shops, formerly considered "men's work," take the lead in the percentage of women who were or had been married. General mercantile establishments and laundries follow, each of the three industries reporting more than 30 per cent of their women in this classification. The highest percentage of unmarried women (89 per cent) was found in the electrical establishments, and the next highest (86.6 per cent) in the 5-and-10-cent stores. This is to be expected, since the greatest percentages of young workers also were found in these industries.

### **Living condition.**

In a study of women's hours and wages, it is helpful to know not only the conjugal state of the workers but their living condition as well, to ascertain whether they board or live at home, and what financial and domestic obligations they must meet.

Table XIV, page 70 in the appendix, shows that of the 2,529 women reporting their living condition, 92.2 per cent were living at home and 7.8 per cent were living independently. Many of those at home said that they paid board varying from \$5 to \$10 a week. Figures obtained from women who boarded away from home showed practically the same range of rates. When visited in their homes women living with their families were found in many cases to have heavy responsibilities, demanding the expenditure of time, money, and energy.

### **Home responsibilities.**

The extensive subject of dependency could be treated only briefly during this survey. Sufficient information was obtained in home visits, however, to establish the fact that many women supported or assisted in the support of others. Widows or deserted wives, or even women with husbands, were found to be the entire or partial mainstay of their families. Some idea of the problems confronting a widow left with the support of a family can be derived from the following stories of women interviewed in their homes:

Mrs. S. was a capable, energetic widow, 44 years old, who had been supporting her family since her husband's death 9 years before. She had five children. Two of these, girls of 17 and 15 years, were able to work, but the three boys were too young to work, being only 13, 11, and 8 years old. The mother said that hers were nice boys but "very hard on shoes," and that this made quite an item in the family budget. She had a comfortable home, for which she paid \$23 a month. She did her housework be-

fore and after work hours, and her washing on Saturday afternoon. Just after her husband's death, when the children were too small to be left all day, she had done odd jobs in housework. Then for four years she had worked as an overseer in a factory at \$17.50 a week, but she had left this because the remoteness of the plant from her home made it difficult for her to attend to her home duties. At the time of the visit she was working in a paper-box factory. She liked the job because the plant was near her home and she had no responsibility, but she thought her wages, \$13 a week, were low. She said that she feared the factory would soon be running only part time as the work was slack. Her 15-year-old daughter had been dropped from one factory, and although she had got another job she expected to lose that soon. The older daughter's wages also had been cut, as the establishment where she worked was operating only four days a week.

Another widow, with two little girls of 4 and 7 years, had lost her husband during the influenza epidemic two years before. Left penniless, she had gone to work four days after the funeral. Now she was obliged to leave her children every morning at the day nursery and call for them again at night. She never went anywhere, she said, because by the time she had put the children to bed and washed the supper dishes she was too tired. She had tried piecework in the factory, but it had made her exceedingly nervous—not the actual work, but the worry of never knowing what amount she could depend upon, with expenses continuing just the same.

It is not the actual work always that is the greatest burden for women who are the family mainstay but the fear that they may not be able to "make ends meet." As one worker said, "Even though your work don't keep up all the time, your expenses do. You have to eat just the same all the time and have coal and pay house rent. Of course you can scrimp some, but you've got to eat in order to work."

Many cases could be cited where daughters were bearing heavy financial and domestic burdens, because the mother was a widow or the father's wages were too low to maintain the family. Other daughters interviewed were caring for and supporting old or sick parents. A 17-year-old girl, whose father was a semi-invalid, unable to work continuously, was helping to support the family of seven. Her sister, the only other wage-earner among the five children, had been laid off at the time of the visit. The mother was nervous and unstrung from constant worry and fear that there would not be enough money to keep the family together. Another girl, whose mother had been a widow for five years, had, with the help of two brothers, supported the family of seven. A third girl was taking

care of an old father and a younger sister. Her mother and three brothers had died of heart trouble and tuberculosis after lingering illnesses; "and always," the father said, "everything came heaviest on Sarah."

The responsibility which women and girls were carrying was in many cases made heavier by the growing unemployment, and by the fact that men had lost their jobs or were working only part time. Such a remark as, "Mary is the only one who has a job now" was not uncommon.

Furthermore, the burden of women wage earners is likely to be double. They perform not only their industrial job outside the home, but household duties besides; frequently they do the cooking, cleaning, washing, ironing, sewing, and caring for the family before and after their regular working hours. In such a situation they are unable to do justice to the job, to the home, or to themselves. Driven by economic necessity they struggle along under their burdens.

It is desirable and possible to improve the situation by lightening the load which many women are called upon to carry. Certain remedial measures which have already been emphasized in the preceding pages, such as the eight-hour day, the minimum wage, and good working conditions—standards already adopted in a number of States and attainable by all—would do much toward relieving the strain on women in industry.

In Rhode Island, although wages were higher than in some other localities, there were women whose earnings were below the subsistence level. A minimum wage for their protection, and the guaranty of an eight-hour day and safe and healthful working conditions, are not too much to ask for the women in industry in this important industrial State.

APPENDIX A.  
GENERAL TABLES.

TABLE I.—Number of women working each specified number of hours, one weekly pay-roll period, by industry.

Industry.	Number of employees reporting complete data.	Number of women whose actual hours worked during the week were—																			
		Less than 3 hours.	3 and under 6 hours.	6 and under 9 hours.	9 and under 12 hours.	12 and under 15 hours.	15 and under 18 hours.	18 and under 21 hours.	21 and under 24 hours.	24 and under 27 hours.	27 and under 30 hours.	30 and under 33 hours.	33 and under 36 hours.	36 and under 39 hours.	39 and under 42 hours.	42 and under 45 hours.	45 and under 48 hours.	48 and under 51 hours.	51 and under 54 hours.	54 hours.	Over 54 hours.
Rubber manufacturing.....	2,546	1	4	8	3	5	16	4	8	19	31	43	64	96	184	387	391	1,082	182	6	12
Metal shops.....	731			2	4	2	1	2	8	5	5	14	12	8	64	40	56	498	8	2	
Electrical manufacturing.....	806		1	1	4	4	1	5	11	5	10	17	3	14	53	28	94	433	80	24	18
Jewelry manufacturing.....	492			2	1	1	2	1	6	3	7	9	17	15	51	89	77	209	2		
Paper-box manufacturing.....	273		3	5		1	1	3	4	13	2	7	7	16	11	23	39	129	1	8	
Other manufacturing.....	792	1	1	3	3	5	5	10	9	5	15	9	25	12	76	83	72	267	107	84	
General mercantile.....	786			3	1		6	1	1	3	23	3	7	8	33	8	103	358	26	202	
5-and-10-cent stores.....	143			1			1			2				6	9	3	18	103			
Laundries.....	110		1		1	1				1					1	5	17	46	27	4	2
All industries.....	16,679	2	10	25	17	19	33	26	47	56	94	102	141	170	486	678	853	3,125	433	330	32
Percent distribution.....	100.0	0.03	0.15	0.37	0.25	0.28	0.49	0.39	0.70	0.84	1.41	1.53	2.11	2.55	7.28	10.15	12.77	46.79	6.48	4.94	0.48

<sup>1</sup> Of the 7,780 employees for whom data were secured, 1,101 did not report number of hours worked.

TABLE II.—Per cent distribution, according to amount of time lost, of women who worked less than the scheduled weekly hours, by industry.

Industry.	Number of establishments.	Number of employ-ees re-ports com-plete data.	Number and per cent of women work-ing less than sched-uled hours.		Uvertime workers who lost time to the extent of—																
					Less than 1 hour.	1 and under 2 hours.	2 and under 3 hours.	3 and under 4 hours.	4 and under 5 hours.	5 and under 6 hours.	6 and under 7 hours.	7 and under 8 hours.	8 and under 9 hours.	9 and under 10 hours.	10 and under 15 hours.	15 and under 20 hours.	20 and under 25 hours.	25 and under 30 hours.	30 and under 35 hours.	35 and under 40 hours.	40 hours and over.
						Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.								
Rubber manufactur-ing.....	6	2,546	1,267	49.8	13.2	7.6	7.3	11.3	15.4	5.4	4.8	4.1	6.2	3.6	10.2	5.1	2.1	0.9	1.4	0.9	0.7
Metal shops.....	7	731	258	35.3	12.4	11.2	1.9	1.6	14.0	5.8	2.3	1.2	10.9	9.7	9.7	9.3	3.1	2.7	.8	1.2	2.3
Electrical manufactur-ing.....	4	806	296	36.7	8.8	5.7	1.7	2.0	19.6	10.8	4.4	1.0	2.7	15.2	7.8	5.7	4.1	4.7	1.7	2.0	2.0
Jewelry manufactur-ing.....	17	492	310	63.0	12.3	12.3	5.2	3.9	11.3	12.6	5.2	2.6	3.9	10.6	9.4	4.5	2.9	1.9	.3	1.0	.3
Paper-box manufactur-ing.....	4	1,263	139	52.9	18.7	5.0	2.9	12.9	5.8	2.9	.7	3.6	2.2	14.4	3.6	10.1	4.3	1.4	4.3	2.2	
Other manufacturing.....	13	792	416	52.5	20.0	12.3	7.0	3.6	7.5	5.8	1.7	1.0	5.5	12.0	6.3	5.5	3.8	2.9	2.4	2.6	2.2
General mercantile.....	5	786	162	20.6	.6	3.7	3.7	11.7	3.7	3.7	3.1	17.3	1.2	12.3	5.6	8.0	4.3	14.2	4.3	.....	2.5
5-and-10-cent stores.....	4	143	25	17.5	.....	.....	.....	.....	24.0	.....	.....	.....	32.0	.....	4.0	24.0	8.0	.....	4.0	.....	4.0
Laundries.....	3	110	44	40.0	31.8	25.0	4.5	.....	9.1	2.3	.....	.....	.....	4.5	9.1	2.3	.....	4.5	.....	2.3	4.5
All industries.....	63	16,669	2,917	43.7	13.3	8.7	5.6	7.0	13.3	6.6	3.8	3.4	5.7	7.6	9.1	5.8	3.4	2.6	1.6	1.4	1.1

<sup>1</sup> This figure disagrees with that in Table I because for 10 women the scheduled hours were not reported and therefore the time lost is not obtainable.

TABLE III.—Per cent distribution, according to amount of overtime, of women who worked beyond the scheduled weekly hours, by industry.

Industry.	Number of establishments.	Number of employes reporting complete data.	Number and per cent of women working beyond scheduled hours.		Overtime workers who worked beyond scheduled hours to the extent of—									
					Less than one hour.	1 and under 2 hours.	2 and under 3 hours.	3 and under 4 hours.	4 and under 5 hours.	5 and under 6 hours.	6 and under 7 hours.	7 and under 8 hours.	8 and under 9 hours.	9 hours and over.
Rubber manufacturing.....	6	2,546	Number	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Metal shops.....	7	731	621	24.4	23.7	25.3	18.8	15.1	7.4	6.8	2.6	0.2	0.2	.....
Electrical manufacturing.....	4	806	124	15.4	.8	43.5	14.5	100.0	7.3	20.2	.8	4.0	5.6	3.2
Jewelry manufacturing.....	17	492	2	.4	.....	.....	50.0	.....	50.0	.....	.....	.....	.....	.....
Paper box manufacturing.....	4	1,263	16	6.1	43.8	.....	.....	6.3	.....	.....	50.0	.....	.....	.....
Other manufacturing.....	13	792	57	7.2	33.3	19.3	12.3	15.8	5.3	5.3	5.3	1.8	1.8	.....
General mercantile.....	5	786	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5-and-10-cent stores.....	4	143	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laundries.....	3	110	3	2.7	.....	66.7	.....	.....	.....	.....	33.3	.....	.....	.....
Total.....	63	16,669	829	12.4	21.0	27.0	17.2	14.4	9.0	5.5	4.0	1.1	.7	.....

<sup>1</sup> This figure disagrees with that in Table I because for 10 women the scheduled hours were not reported and therefore the time worked beyond scheduled hours is not obtainable.

TABLE IV.—Number of women receiving each classified amount during one weekly pay-roll period, by industry.

Actual weekly earnings.	All industries.		Rubber manufacturing.	Metal shops.	Electrical manufacturing.	Jewelry manufacturing.	Paper-box manufacturing.	Other manufacturing.	All manufacturing.	General mercantile.	5-and-10-cent stores.	Laundries.
	Number.	Per cent.										
Less than \$2.....	14	0.2	4		3		3	3	13			1
\$2 and under \$3.....	34	.4	5	1	5	2	7	7	27	4	1	2
\$3 and under \$4.....	30	.4	8	6	2	4	1	7	28		1	1
\$4 and under \$5.....	29	.4	6	1	4	3	4	7	25			
\$5 and under \$6.....	46	.6	12	3	4	5	5	8	37	7	1	1
\$6 and under \$7.....	66	.8	6	1	11	7	11	14	50	12	4	
\$7 and under \$8.....	110	1.4	14	9	8	12	12	12	67	25	16	2
\$8 and under \$9.....	123	1.6	14	3	17	8	19	22	83	16	15	9
\$9 and under \$10.....	149	1.9	32	4	9	18	17	22	102	21	4	22
\$10 and under \$11.....	309	4.0	38	13	18	38	38	52	197	66	24	16
\$11 and under \$12.....	290	3.7	44	9	33	52	29	53	225	35	14	13
\$12 and under \$13.....	609	7.8	90	22	40	57	55	87	351	208	37	10
\$13 and under \$14.....	537	6.9	109	26	78	69	32	85	399	110	18	20
\$14 and under \$15.....	574	7.4	184	50	74	66	19	53	451	96	7	13
\$15 and under \$16.....	568	7.3	155	44	66	84	16	102	467	82	6	8
\$16 and under \$17.....	481	6.2	148	87	76	58	17	44	430	39	4	4
\$17 and under \$18.....	454	5.8	175	35	96	52	12	47	417	31	2	6
\$18 and under \$19.....	481	6.2	184	129	49	32	6	54	454	20	1	2
\$19 and under \$20.....	379	4.9	180	52	76	20	8	29	365	12		2
\$20 and under \$21.....	410	5.3	185	104	45	16	5	34	389	18	1	2
\$21 and under \$22.....	295	3.8	181	22	51	11	3	18	286	6		2
\$22 and under \$23.....	266	3.4	127	29	51	9	3	35	254	10		2
\$23 and under \$24.....	233	3.0	148	37	24	7	3	11	230	1	1	1
\$24 and under \$25.....	248	3.2	173	20	46	3		4	246	2		
\$25 and over.....	1,045	13.4	860	90	54	11	2	9	1,026	15		4
Total.....	7,780	100.0	3,082	797	940	644	327	829	6,619	840	157	164
Median earnings.....	\$16.85		\$20.70	\$18.65	\$17.25	\$14.70	\$12.30	\$14.55	\$17.85	\$13.20	\$11.90	\$12.45

TABLE V.—Number of women receiving each classified amount during one weekly pay-roll period, by hours worked.

ALL INDUSTRIES.

Hours actually worked.	Women reporting complete data.		Number of women whose actual earnings were—																			
	Number.	Median earnings.	Less than \$2.	\$2 and under \$3.	\$3 and under \$4.	\$4 and under \$5.	\$5 and under \$6.	\$6 and under \$7.	\$7 and under \$8.	\$8 and under \$9.	\$9 and under \$10.	\$10 and under \$11.	\$11 and under \$12.	\$12 and under \$13.	\$13 and under \$14.	\$14 and under \$16.	\$16 and under \$18.	\$18 and under \$20.	\$20 and under \$25.	\$25 and under \$30.	\$30 and over.	
Under 3.....	2	( <sup>1</sup> )	2																			
3 and under 6.....	10	( <sup>1</sup> )	7	2	1																	
6 and under 9.....	25	\$2.90		14	8		3															
9 and under 12.....	17	2.75	1	10	3	1	2															
12 and under 15.....	19	4.10		2	7	5	4	1														
15 and under 18.....	33	5.45	1		2	10	8	3	4	1	2											
18 and under 21.....	26	5.00	1		4	8	3	3	1	2												
21 and under 24.....	47	7.15			1	1	8	12	9	2	4	3	1	3	2			1				
24 and under 27.....	56	7.55			1		5	17	9	3	3	2	5	1	3	2		2				
27 and under 30.....	94	8.70				1	2	10	21	18	8	6	4	4	1	7	3	6	3			
30 and under 33.....	102	11.10					1	5	9	12	13	10	9	10	9	8	9	4	3			
33 and under 36.....	141	14.65					1	1	5	12	12	9	8	8	7	23	19	9	22	4	1	
36 and under 39.....	170	15.20						1	2	6	7	21	13	8	14	22	15	18	29	14		
39 and under 42.....	486	15.05							3	7	24	52	41	41	33	79	69	38	61	27	11	
42 and under 45.....	678	16.50						2	4	5	13	45	46	50	48	103	91	52	114	61	42	
45 and under 48.....	853	17.30							2	4	4	43	53	90	50	116	90	68	168	95	65	
48 and under 51.....	3,125	17.75						4	18	10	13	45	50	255	259	525	438	453	625	263	166	
51 and under 54.....	433	21.25							2	3	4	12	10	22	15	45	29	53	104	66	72	
54.....	330	15.50							8	2	4	10	4	55	25	75	27	37	59	21	3	
Over 54.....	32	22.95											1		1	1	3	17	2		7	
Total.....	*6,679	16.80	12	28	27	26	37	50	93	84	110	263	244	552	473	1,007	793	744	1,207	553	367	

<sup>1</sup> Not computed, owing to the small number involved.

\* Of the 7,780 employees for whom data were secured, 1,101 did not report number of hours worked.

TABLE VI.—Number of timeworkers receiving each classified weekly rate, by industry.

Weekly rate.	All industries.	Rubber manufacturing.	Metal shops.	Electrical manufacturing.	Jewelry manufacturing.	Paper-box manufacturing.	Other manufacturing.	All manufacturing.	General mercantile.	5-and-10-cent stores.	Laundries.
Under \$6.....											
\$6 and under \$7.....	4								2	2	
\$7 and under \$8.....	29		1				1	2	12	14	1
\$8 and under \$9.....	27						3	3	6	12	6
\$9 and under \$10.....	49				2	7		11	14	3	21
\$10 and under \$11.....	141	3			7	25	17	52	40	25	24
\$11 and under \$12.....	159	1		1	15	78	24	119	20	9	11
\$12 and under \$13.....	624	82	12	7	52	34	65	252	314	46	12
\$13 and under \$14.....	404	59	7	52	82	30	58	288	88	19	9
\$14 and under \$15.....	406	80	33	47	50	8	47	265	111	8	22
\$15 and under \$16.....	380	45	50	29	66	15	60	265	94	8	13
\$16 and under \$17.....	211	60	15	23	50	7	9	164	35	5	7
\$17 and under \$18.....	237	118	18	24	30	6	11	207	24	2	4
\$18 and under \$19.....	399	72	178	9	34	5	67	365	26	2	6
\$19 and under \$20.....	193	128	19	4	23	3	2	184	9		
\$20 and under \$22.....	265	106	66	7	36	2	27	244	17	1	3
\$22 and under \$24.....	82	17	14	3	13		23	70	10	1	1
\$24 and under \$26.....	50	20	4		9			39	11		
\$26 and under \$28.....	18	17			1			18			
\$28 and under \$30.....	4	1	3					4			
\$30 and over.....	9	1	1					2	7		
Total.....	3,691	810	421	212	475	220	416	2,554	840	157	140
Median rate.....	\$15.00	\$17.65	\$18.40	\$15.00	\$15.45	\$12.00	\$14.80	\$16.10	\$13.15	\$12.30	\$12.60

TABLE VII.—Median weekly earnings of women, by age group and industry.

Industry.	Women reporting complete data.		16 and under 18 years.	18 and under 20 years.	20 and under 25 years.	25 and under 30 years.	30 and under 40 years.	40 and under 50 years.	50 and under 60 years.	60 years and over.
	Number.	Median earnings.								
All industries.....	2,417	\$15.80	\$14.40	\$16.30	\$16.45	\$17.15	\$16.30	\$14.90	\$15.35	\$14.15
Rubber manufacturing.....	511	20.10	16.70	20.70	21.90	22.85	20.60	17.00	17.00	(1)
Metal shops.....	183	17.85	13.60	16.30	19.45	19.30	19.35	16.50	17.00	(1)
Electrical manufacturing.....	476	18.10	16.90	18.25	18.90	19.70	20.40	(1)	(1)	
Jewelry manufacturing.....	276	15.05	12.70	15.10	15.55	16.65	15.25	15.00	(1)	(1)
Paper-box manufacturing.....	40	13.50	(1)	(1)	(1)	(1)	(1)	(1)	(1)	
Other manufacturing.....	408	15.65	14.90	17.00	15.10	16.40	17.75	13.90	15.00	(1)
General mercantile.....	354	13.25	12.15	12.70	12.95	13.80	14.55	14.00	13.65	(1)
5-and-10-cent stores.....	104	12.30	11.40	12.40	13.65	(1)	(1)	(1)	(1)	
Laundries.....	65	12.05	10.50	(1)	12.50	(1)	12.50	(1)	(1)	(1)

<sup>1</sup> Not computed, owing to small number involved.

TABLE VIII.—Median weekly earnings of women, by experience in the industry.

Time in the trade.	Number of employees reporting complete data.	All industries.	Rubber manufacturing.	Metal shops.	Electrical manufacturing.	Jewelry manufacturing.	Paper-box manufacturing.	Other manufacturing.	General mercantile.	5-and-10-cent stores.	Laundries.
Under 6 months.....	463	\$13.70	\$13.60	\$14.65	\$17.05	\$12.35	(1)	\$13.05	\$12.60	\$10.50	\$11.35
6 months and under 1 year.....	198	14.35	15.20	13.90	17.35	(1)	(1)	13.70	12.70	(1)	(1)
1 and under 2 years.....	323	15.10	16.00	17.40	16.90	14.75	(1)	16.10	12.50	12.55	(1)
2 and under 3 years.....	334	16.10	18.85	16.99	18.70	15.10	(1)	18.05	12.95	12.00	(1)
3 and under 4 years.....	252	16.45	21.45	17.85	19.80	15.10	(1)	16.80	13.35	(1)	(1)
4 and under 5 years.....	156	17.55	25.00	(1)	20.50	16.00	(1)	17.35	12.85	(1)	(1)
5 and under 10 years.....	374	17.25	24.90	20.90	20.90	15.80	(1)	16.45	14.15	14.80	(1)
10 and under 15 years.....	168	18.90	22.90	19.40	23.50	16.80	(1)	(1)	14.80	(1)	(1)
15 and under 20 years.....	89	17.80	24.40	(1)	(1)	(1)	(1)	(1)	15.65	(1)	(1)
20 years and over.....	74	19.15	25.50	(1)	(1)	(1)	(1)	(1)	16.80	(1)	(1)
Total.....	2,431	15.75	20.15	17.85	18.15	15.15	\$13.65	15.55	13.40	12.20	12.05

<sup>1</sup> Not computed, owing to small number involved.

TABLE IX.—Number of women working each specified number of weeks, of those for whom 52-week pay-roll records were secured, by industry.

Weeks worked.	All industries.	Rubber manufacturing.	Metal shops.	Electrical manufacturing.	Jewelry manufacturing.	Paper-box manufacturing.	Other manufacturing.	General mercantile.	5-and-10-cent stores.	Laundries.
37 and under 38.....	1			1						
38 and under 39.....										
39 and under 40.....										
40 and under 41.....	1			1						
41 and under 42.....	2			1	1					
42 and under 43.....	2						1		1	
43 and under 44.....	4		1	1	1			1		
44 and under 45.....	6	4		1	1					
45 and under 46.....	11	7	1	1						
46 and under 47.....	15	4	1	4	1		3	2		
47 and under 48.....	29	16	3	5	1		2	2		
48 and under 49.....	41	18	2	8	4		3		1	
49 and under 50.....	60	20	7	6	2	6	11	7		1
50 and under 51.....	107	24	16	16	15	4	15	11	2	4
51 and under 52.....	194	42	30	29	42	5	16	17	8	5
52.....	144	37	10	5	7	7	25	37	9	7
Total.....	617	172	71	79	75	26	76	80	21	17
Median earnings.....	\$829	\$978	\$929	\$968	\$793	\$758	\$687	\$727	\$604	\$753

TABLE X.—Nativity of the women employees who supplied personal information, by industry.

Industry.	Number of employees reporting complete data.	Women born in the United States.		Women born in—													
		No.	Per cent.	Austria.	Azores.	Canada.	England.	France.	Germany.	Ireland.	Italy.	Poland.	Portugal.	Russia.	Scotland.	Sweden.	Other countries.
Rubber manufacturing.....	538	372	69.1	2	2	15	15	1	3	35	18	17	43		5	4	10
Metal shops.....	181	121	66.9			9	7	1		12	20		3	3	1	1	1
Electrical manufacturing.....	538	433	80.5		1	24	23	1	1	6	18	9	6	5	5	4	2
Jewelry manufacturing.....	308	268	87.0	3		7	3		6	3	3	1	2	4	2	6	
Paper-box manufacturing.....	53	44	83.0			2	4			1	1	1					
Other manufacturing.....	464	368	83.6	1	3	9	8	1		6	19		9	2	4	11	3
General mercantile.....	399	344	86.2	1		16	10	2	3	7	3		3	3	2	1	7
5-and-10-cent stores.....	122	102	83.6	1		2	1	1		1	4	1		8			1
Laundries.....	71	36	50.7			2	2			3			25	1		2	
All industries.....	12,674	2,108		8	6	86	73	6	13	74	86	29	88	26	19	28	24
Per cent distribution.....	100.0		78.8	0.3	0.2	3.2	2.7	0.2	0.5	2.8	3.2	1.1	3.3	1.0	0.7	1.0	0.9

<sup>1</sup> Of the 2,720 workers who supplied personal record cards, 46 did not report country of birth.

TABLE XI.—Age of the women employees who supplied personal information, by industry.

Industry.	Number of employees reporting complete data.	Number whose age was—									
		14 but not 15 years.	15 but not 16 years.	16 but not 18 years.	18 but not 20 years.	20 but not 25 years.	25 but not 30 years.	30 but not 40 years.	40 but not 50 years.	50 but not 60 years.	60 years and over.
Rubber manufacturing.	540	7	22	67	63	128	79	89	50	30	5
Metal shops.....	184	1	.....	19	28	37	35	38	14	10	2
Electrical manufacturing.....	536	26	34	128	118	133	55	28	8	6	.....
Jewelry manufacturing.	303	13	14	36	46	73	37	53	22	8	1
Paper-box manufacturing.....	46	1	5	8	7	8	5	8	3	1	.....
Other manufacturing.....	432	6	18	84	78	118	37	47	29	12	3
General mercantile.....	361	.6	1	22	39	84	60	68	58	16	7
5-and-10-cent stores.....	112	4	4	40	24	22	9	7	1	1	.....
Laundries.....	73	.....	8	11	4	16	6	16	9	2	1
All industries.....	12,587	64	106	415	407	619	323	354	194	86	19
Per cent distribution..	100.0	2.5	4.1	16.0	15.7	23.9	12.5	13.7	7.5	3.3	0.7

<sup>1</sup> Of the 2,720 workers who supplied personal record cards, 133 did not report their age.

TABLE XII.—Length of experience of the women employees who supplied personal information, by industry.

Industry.	Number of employees reporting complete data.	Number who have been in the trade—									
		Less than 6 months.	6 months but not 1 year.	1 but not 2 years.	2 but not 3 years.	3 but not 4 years.	4 but not 5 years.	5 but not 10 years.	10 but not 15 years.	15 but not 20 years.	20 years and over.
Rubber manufacturing.....	525	62	61	63	68	41	26	97	50	34	23
Metal shops.....	184	20	18	31	27	25	8	28	17	6	4
Electrical manufacturing.....	513	212	63	60	47	34	30	45	20	1	1
Jewelry manufacturing.	300	30	24	53	40	34	22	50	20	14	13
Paper box manufacturing.....	48	11	11	8	3	7	2	5	1	.....	.....
Other manufacturing.....	453	96	40	78	77	57	34	53	10	5	3
General mercantile.....	380	46	26	38	47	38	24	69	43	23	26
5-and-10-cent stores.....	123	35	14	20	18	10	7	16	1	2	.....
Laundries.....	73	20	3	8	7	6	3	12	6	4	4
All industries.....	12,599	532	260	359	334	252	156	375	168	89	74
Per cent distribution	100.0	20.5	10.0	13.8	12.9	9.7	6.0	14.4	6.5	3.4	2.8

<sup>1</sup> Of the 2,720 workers who supplied personal record cards, 121 did not report years in the trade.

TABLE XIII.—*Conjugal condition of the women employees who supplied personal information, by industry.*

Industry.	Number of employees reporting complete data.	Women who were—					
		Single.		Married.		Widowed, separated, or divorced.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Rubber manufacturing.....	504	363	72.0	90	17.9	51	10.1
Metal shops.....	182	120	65.9	42	23.1	20	11.0
Electrical manufacturing.....	525	467	89.0	42	8.0	16	3.0
Jewelry manufacturing.....	293	245	83.6	28	9.6	20	6.8
Paper-box manufacturing.....	50	36	72.0	11	22.0	3	6.0
Other manufacturing.....	454	352	77.5	58	12.8	44	9.7
General mercantile.....	384	263	68.5	81	21.1	40	10.4
5-and-10-cent stores.....	112	97	86.6	10	8.9	5	4.5
Laundries.....	72	49	68.1	18	25.0	5	6.9
All industries.....	<sup>1</sup> 2,576	1,992	77.3	380	14.8	204	7.9

<sup>1</sup> Of the 2,720 workers who supplied personal record cards 144 did not report conjugal condition.

TABLE XIV.—*Living condition of the women employees who supplied personal information, by industry.*

Industry.	Number of women reporting complete data.	Women reported as <sup>1</sup> —			
		Living at home or with relatives.		Boarding.	
		Number.	Per cent.	Number.	Per cent.
Rubber manufacturing.....	513	459	89.5	54	10.5
Metal shops.....	170	161	94.7	9	5.3
Electrical manufacturing.....	520	487	93.7	33	6.3
Jewelry manufacturing.....	286	255	89.2	31	10.8
Paper-box manufacturing.....	45	42	93.3	3	6.7
Other manufacturing.....	449	419	93.3	30	6.7
General mercantile.....	372	339	91.1	33	8.9
5-and-10-cent stores.....	121	119	98.3	2	1.7
Laundries.....	53	51	96.2	2	3.8
All industries.....	<sup>2</sup> 2,529	2,332	92.2	197	7.8

<sup>1</sup> Women who reported that they both lived at home and boarded are tabulated as living at home.

<sup>2</sup> Of the 2,720 workers who supplied personal record cards 191 did not report living condition.

**APPENDIX B.**  
**SCHEDULE FORMS.**

U. S. DEPARTMENT OF LABOR    **FACTORY SCHEDULE.**  
WOMEN'S BUREAU  
WASHINGTON

1. Name of factory.....	Address.....
2. Product.....	Person interviewed.....

3. Number employed:

	Men.	Women.	Total.....
Under 16.....	.....	.....	.....
Over 16.....	.....	.....	.....
Total.....	.....	.....	.....

4. Hours:

	Daily	Total.....	Begin.....	End.....	Lunch period.....
Shifts	.....	.....	.....	.....	.....
Seasonal	.....	.....	.....	.....	.....
Pieceworkers	.....	.....	.....	.....	.....
Saturday	.....	.....	.....	.....	.....
Weekly	.....	.....	.....	.....	.....

5. Overtime.....

.....

.....

6. Seasonal.....

.....

.....

7. Wages:

Pay period..... Initial rate.....

Fines.....

.....

Bonus.....

.....

8. Labor turnover.....  
.....  
.....

Date..... Agent.....

(93)

U. S. DEPARTMENT OF LABOR,  
WOMEN'S BUREAU,  
WASHINGTON.

HOME VISIT SCHEDULE (Georgia).

Name of the worker..... Address.....

Firm..... Occupation.....

Hours: Regular..... Irregular.....

Overtime.....

Lost time.....

Reasons.....

Wages: Piecework..... Timework.....

Increases in past year.....

Decreases.....

Variations in past year.....

Fines.....

Bonuses.....

Former job: Industry..... Occupation.....

Hours..... Daily..... Weekly.....

How long held..... Earnings when leaving.....

Reasons for leaving.....  
.....

Personal facts: Age left school..... Grade completed.....

Reasons for leaving school.....

Living at home.....

Boarding..... Amount paid.....

Date..... Agent.....

U. S. DEPARTMENT OF LABOR, WOMEN'S BUREAU, WASHINGTON.

Firm..... Product.....  
 Name of worker..... Occupation.....  
 Pieceworker.                      Timeworker.                      Piece and time worker.

Earnings for 52-week period.

Week ending.	Wages.	Remarks.	Week ending.	Wages.	Remarks.
1.....			27.....		
2.....			28.....		
3.....			29.....		
4.....			30.....		
5.....			31.....		
6.....			32.....		
7.....			33.....		
8.....			34.....		
9.....			35.....		
10.....			36.....		
11.....			37.....		
12.....			38.....		
13.....			39.....		
14.....			40.....		
15.....			41.....		
16.....			42.....		
17.....			43.....		
18.....			44.....		
19.....			45.....		
20.....			46.....		
21.....			47.....		
22.....			48.....		
23.....			49.....		
24.....			50.....		
25.....			51.....		
26.....			52.....		

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## PUBLICATIONS OF THE WOMEN'S BUREAU.

### BULLETINS.

- No. 1. Proposed Employment of Women During the War in the Industries of Niagara Falls, N. Y. 16 pp. 1918.
  - No. 2. Labor Laws for Women in Industry in Indiana. 29 pp. 1918.
  - No. 3. Standards for the Employment of Women in Industry. 7 pp. 1919.
  - No. 4. Wages of Candy Makers in Philadelphia in 1919. 46 pp. 1919.
  - No. 5. The Eight Hour Day in Federal and State Legislation. 19 pp. 1919.
  - No. 6. The Employment of Women in Hazardous Industries in the United States. 8 pp. 1919.
  - No. 7. Night-Work Laws in the United States. 4 pp. 1919.
  - No. 8. Women in the Government Service. 37 pp. 1920.
  - No. 9. Home Work in Bridgeport, Connecticut. 35 pp. 1920.
  - No. 10. Hours and Conditions of Work for Women in Industry in Virginia. 32 pp. 1920.
  - No. 11. Women Street Car Conductors and Ticket Agents. 90 pp. 1920.
  - No. 12. The New Position of Women in American Industry. 158 pp. 1920.
  - No. 13. Industrial Opportunities and Training for Women and Girls. 48 pp. 1920.
  - No. 14. A Physiological Basis for the Shorter Working Day for Women. 20 pp. 1921.
  - No. 15. Some Effects of Legislation Limiting Hours of Work for Women. 26 pp. 1921.
  - No. 16. State Laws Affecting Working Women. 1920. 104 pp. 1921.
  - No. 17. Womens' Wages in Kansas. 1920. 104 pp. 1921.
  - No. 18. Health Problems of Women in Industry. 11 pp. 1921.
  - No. 19. Iowa Women in Industry. 73 pp. 1921.
  - No. 20. Negro Women in Industry. 65 pp. 1921.
  - No. 21. Women in Rhode Island Industries. A study of hours, wages, and working conditions. 73 pp. 1922.
  - No. 22. Women in Georgia Industries. A study of hours, wages, and working conditions. 1921. (In press.)
- Second Annual Report of the Director.  
Third Annual Report of the Director.

### CHARTS.<sup>1</sup>

- I. Eight-hour and eight-and-a-half-hour laws for women workers.
- II. Nine-hour laws for women workers.
- III. Ten-hour laws for women workers.
- IV. Ten-and-a-quarter-hour, ten-and-a-half-hour, eleven-hour, and twelve-hour laws for women workers.
- V. Weekly hour laws for women workers.
- VI. Laws providing for a day of rest, one shorter work day, time for meals, and rest periods for women workers.
- VII. Night-work laws for women workers.
- VIII. Home-work laws for women.
- IX. Minimum wage legislation in the United States. 3 sections.
- X. Mothers' pension laws in the United States. 4 sections.

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<sup>1</sup> Separate charts out of print. Revised and published in pamphlet form in Bulletin No. 16.