

UNITED STATES DEPARTMENT OF LABOR  
WOMEN'S BUREAU  
Bulletin No. 129

INDUSTRIAL INJURIES  
TO WOMEN IN 1930 AND 1931  
COMPARED WITH INJURIES  
TO MEN

**UNITED STATES DEPARTMENT OF LABOR**

FRANCES PERKINS, *Secretary*

**WOMEN'S BUREAU**

MARY ANDERSON, *Director*

BULLETIN OF THE WOMEN'S BUREAU, No. 129

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By

MARGARET T. METTERT



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UNITED STATES DEPARTMENT OF LABOR

TRAINING DIVISION

WOMEN'S BUREAU

1400 K STREET, N.W., WASHINGTON, D.C.

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MARSHALL S. MERTZ



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## LETTER OF TRANSMITTAL

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UNITED STATES DEPARTMENT OF LABOR,  
WOMEN'S BUREAU,  
*Washington, January 18, 1935.*

MADAM: I have the honor to transmit the third report issued by the Women's Bureau in its series dealing with industrial injuries to women.

The period covered in this bulletin is the 2 years 1930 and 1931. Data for 16 States were available for these years. Though the important States of Pennsylvania and Illinois had temporarily abandoned their publication, they supplied figures for this report.

A comparison of 1931 data with those of 1929 for the 12 States reporting in these years shows that injuries to women increased in 4 States, though injuries to men decreased in all 12. Unemployment in such industries as construction, iron and steel, and mining undoubtedly is largely responsible for this difference.

The cooperation of State officials and other persons in making these figures available to the Women's Bureau is gratefully acknowledged.

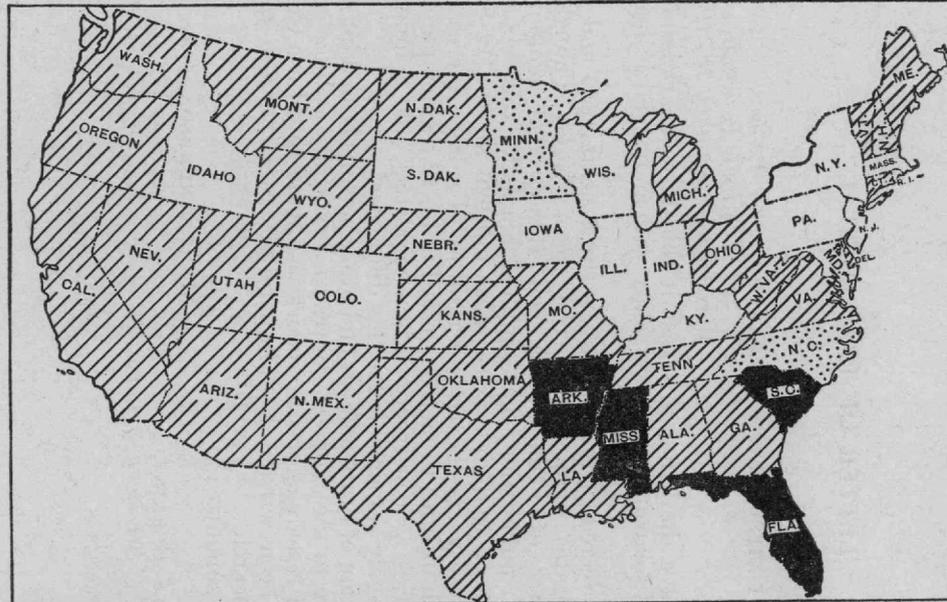
Much of the research for this report was done by Marie Correll. The text has been written by Margaret T. Mettert, also of the Division of Research.

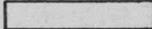
Respectfully submitted.

MARY ANDERSON, *Director.*

Hon. FRANCES PERKINS,  
*Secretary of Labor.*

PLATE I. STATES REPORTING NUMBER OF WOMEN INJURED, 1930 AND 1931



-  Data available for both years (14 States)
-  Data available for one year (2 States)
-  No data (28 States)
-  No compensation laws (4 States)

# INDUSTRIAL INJURIES TO WOMEN IN 1930 AND 1931 COMPARED WITH IN- JURIES TO MEN

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## INTRODUCTION

This study continues the series of Women's Bureau reports on industrial injuries to men and women. The series was initiated by Industrial Accidents to Men and Women (Bul. 81), an analysis of the facts on this subject available in State reports for 1927 or the most recent previous years since 1919. Following this, Industrial Injuries to Women in 1928 and 1929 Compared with Injuries to Men (Bul. 102) was published. The present study covers the State data available for the years 1930 and 1931.

The significant developments of 1930 and 1931 in the reports of injuries classified by sex (see chart I) are that South Dakota and North Carolina appear in the list for the first time; Minnesota, that had not classified its data by sex since 1924, does so for 1931; and New Jersey, that failed to classify its data by sex in 1929, does so for 1930 and 1931. Unfortunately, Georgia and Michigan, that published such data in 1928 or 1929, failed to do so in 1930 and 1931; and Illinois data for both years, and Pennsylvania data for 1931, were not published.

## SUMMARY

Data on injuries classified by sex for one or both of the years 1930 and 1931 are given for the following 16 States: Colorado, Idaho, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Dakota, and Wisconsin. As these data cover the accident experience of several industrially important States, the facts regarding the injury experience of women are significant.

### Number of injuries

The number of injuries decreased in this period, the decline being especially marked in 1931. In general, women's injuries decreased less than did men's. In one State they showed an increase in 1931 over 1930 and in four an increase over 1929. While injuries to women are still absolutely and relatively fewer than those of men, they are an increasing proportion of total injuries. In 1931 there were only 2 States of 15 where women's injuries were less than 5 percent of the total. In 1930 there were 6 of 15 States where this was true. In 1931 each of 7 States reported over 1,500 injuries to women, 3 of them reporting over 4,500 such injuries.

### **Severity of injuries**

Fatal and permanent total injuries to women were not so much as 0.5 percent of all injuries reported in any State, and not more than 1.8 percent of injuries to men in any State. Small as the figures are, each such case deserves particular attention from State authorities to prevent repetition. The difference in proportion that permanent partial injuries were of men's and of women's cases was slight. In 1930 and 1931 there were increases in this severe type of injury for both men and women in several States. Data from Illinois as to time lost are evidence that temporary total injuries are about as severe for women as for men.

### **Nature of injuries**

In the case of both men and women (1) cuts and lacerations and (2) bruises, contusions, and abrasions were the most frequent injuries. A much larger proportion of women than of men suffered from infections. In Indiana and Illinois, the only States with location reported, injuries to fingers, hands, and arms occurred most frequently. More of women's than of men's injuries were to these parts of the body, due largely to women's employment as machine operators. Other parts of the body were injured more commonly in men's than in women's accidents.

### **Age of injured persons**

A much greater proportion of injuries to women than to men are to persons 20 years of age or under. In each State the women under 21 years had more injuries than any other woman's age group. The proportion of injuries to these young women is greater than can be accounted for by their number among all gainfully occupied women. On the other hand, women over 45 years of age, from these statistics, seem to be particularly good accident risks. Data as to disability and age show that young persons' injuries are likely to be as severe as those of older persons. Falls are the most frequent source of injury to women over 21, while machinery causes most of the accidents to girls under 21. Handling of objects or tools is the most frequent injury to both the younger and older male worker.

### **Marital status and number of children**

Illinois and North Carolina are the only States reporting on marital status by sex. In Illinois married women had more than their share of industrial injuries, and in North Carolina this was the case for both married and single women. Available data seem to show occupational differences to be the causal factor.

Of the married women injured in Illinois almost half had children and over 10 percent had 3 or more children.

### **Industries in which injuries occurred**

Manufacturing outranked other industries in number of injuries both to women and to men, and generally had a larger proportion of women's accidents than of men's. Clerical, professional, and other service were important groups in number of women's injuries; construction and mining (particularly in Pennsylvania, Illinois, and Indiana) were important in men's injuries. Girls under 21 had a higher proportion of their injuries in manufacturing than had older women, and the latter had a higher proportion of their injuries in the clerical, professional, and other service groups than had girls under 21.

### Cause

Falls and machinery caused most of women's accidents. Handling of objects and falls ranked high as causes of men's accidents. Falling objects and vehicles also were important factors to men's injuries, minor in the case of women.

### Wages and compensation

As would be expected, the women injured were receiving much less wages than were men at time of injury. The great majority earned under \$20 a week, while only a small percent of the men earned so little. Chiefly due to their smaller wages, even for comparable disability women received much less in compensation than did men.

## SOURCE AND SCOPE OF DATA

The available information on injuries to women in the United States is that given in the reports of certain State agencies, usually those administering compensation laws. In a few cases this information is for female workers only, but most of the reports cited give information for each sex. Chart I is a record of all data published by the States on injuries to women in the period 1920 to 1931. Only data classified by sex are listed in the body of the chart, footnote references being given to special reports on female workers.

Only published State reports were used in the two earlier bulletins, but economy measures in 1930 and 1931 having restricted the amount of published material in some cases, the present report includes unpublished information from Illinois and Pennsylvania, States that had published data by sex throughout the period 1920 to 1929.

In the period 1920 to 1931, 24 States published some facts on injuries classified by sex. North Carolina and South Dakota did so for the first time in 1930. Data are available for every year in the period in the 8 States following:<sup>1</sup> Colorado, Idaho, Illinois, Indiana, Kentucky, Massachusetts, New York, and Pennsylvania.

The incomplete and inadequate character of the data has been fully discussed in the first and second reports of this series. The present study, using the data available for 1930 and 1931, emphasizes more recent practice.

Colorado, Kentucky, and South Dakota classify by sex only the numbers of injuries in the 2 years. For one or both of the years data by sex are available for more than 1 State on cause (4 States), industry (5), wage (3),<sup>2</sup> extent of disability (9), nature of injury (3), and marital status (2). Seven States—Illinois, Maryland, Massachusetts, Minnesota, New Jersey, New York, and Wisconsin—give extent of disability by age. Nature and location of injury are cross classified in Illinois and Indiana and age and industry in New Jersey and Illinois. These are the only correlations made by more than one State. The following list summarizes the nature of the available data.

Published information about the number of industrial injuries to men and women during one or both years of this period is available in only 15 States. (See chart I.) Unpublished data can be secured in only a few other instances. This means that in most States it is impossible to get any accurate indication of the number of women injured in industry.

<sup>1</sup> Maryland excluded because published data incomplete for 1922 to 1924

<sup>2</sup> Indiana reports wage data for women only.

CHART I.—Extent of information on injuries to women for the period 1920 to 1931 in State reports giving the same information for men <sup>1</sup>

[Asterisk (\*) indicates States for which data are published for 1930 or 1931. Reports are those available July 1, 1933]

Type of information <sup>2</sup>	Number of States publishing <sup>2</sup>	State <sup>4</sup>	Period covered by published reports <sup>5</sup>	Source
Number injured.....	24	Alabama.....	1920 to 1922.....	First quadrennial report of Workmen's Compensation Commission, 1919-1922.
		California.....	1920 and 1921.....	Annual reports of Industrial Accident Commission, years ended June 30, 1921 and 1922.
		*Colorado.....	1919-20 to 1930-31.....	Annual and biennial reports of Industrial Commission, fourth to twelfth, periods ended Nov. 30, 1920 to 1932.
		Georgia.....	1927-1928.....	Seventh and eighth annual reports of Industrial Commission, 1927 and 1928.
		*Idaho.....	1919-20 to 1921-22-1922-1924 to 1930-1932.....	Biennial reports of Industrial Accident Board, second to eighth, periods ended Oct. 31, 1920 to 1932.
		Illinois <sup>3</sup> .....	1920 to 1929 <sup>3</sup> .....	Annual report of Industrial Commission, year ended June 30, 1921; annual reports of Department of Labor, fifth to thirteenth, years ended June 30, 1922 to 1930; and Labor Bulletin of Department of Labor, vol. VII, no. 12, June 1928.
		*Indiana.....	1919-20 to 1930-31.....	Annual reports of Industrial Board, years ended Sept. 30, 1920 to 1931.
		*Iowa.....	1925-26 and 1927-28; 1928-1930 and 1930-1932.....	Biennial report of Bureau of Labor Statistics, period ended June 30, 1926; biennial reports of Bureau of Labor, periods ended June 30, 1928 to 1932.
		*Kentucky.....	1919-20 to 1930-31.....	Annual reports of Workmen's Compensation Board, years ended June 30, 1920 to 1931.
		*Maryland.....	1919-20 to 1930-31 (1922 to 1924, incomplete periods).....	Annual reports of Industrial Accident Commission, sixth to seventeenth, years ended Oct. 31, 1920 to 1931.
		*Massachusetts.....	1919-20 to 1930-31.....	Annual reports of Department of Industrial Accidents, years ended June 30, 1920 to 1931.
		Michigan.....	1928-29.....	Labor and Industry, quarterly bulletin of Department of Labor and Industry, vol. I, no. 1, December 1930.
		*Minnesota.....	1919-20 to 1923-24; 1930-1932.....	Seventeenth biennial report of Department of Labor and Industries, period ended June 30, 1920; biennial reports of Industrial Commission, first and second, periods ended June 30, 1922 and 1924, sixth, period ended June 30, 1932 (in twenty-third biennial report of Department of Labor and Industry).
		Missouri.....	1927 (period incomplete).....	First annual report of Workmen's Compensation Commission, Jan. 9 to Dec. 31, 1927.
		Nebraska.....	1927.....	Biennial report of Department of Labor, 1926-1927.
		*New Jersey.....	1927, 1928, 1930, 1931.....	Industrial Bulletin of Department of Labor: Vol. 2, no. 9, September 1928; vol. 3, no. 9, September 1929; vol. 5, no. 9, September 1931; and Industrial Accident Report (mimeographed), year ended Dec. 31, 1931.
		*New York.....	1919-20 to 1929-30, <sup>6</sup> 1930 and 1931.....	Special bulletins of Department of Labor: No. 126, September 1924, Analysis of workmen's compensation cases closed July 1, 1922, to June 30, 1923; no. 142, March 1926, Compensation awards year ended June 30, 1924; Compensated accidents, July 1914, to June 1922; no. 144, June 1926, Some recent figures on accidents to women and minors; no. 146, July 1926, Accidents compensated in year ended June 30, 1925, Cost of compensation; no. 148, January 1927, Compensation of statistics year ended June 30, 1926; no. 152, August 1927, Causes of compensated accidents two years ended June 30, 1926; no. 157, August 1928, Compensation statistics year ended June 30, 1927; no. 160, June 1929, Cost of compensation year ended June 30, 1928; no. 170,

			[June 1931], Cost of compensation 2 years ended June 30, 1930; no. 178, [June 1932], Cost of compensation 2 years, 1930 and 1931; and Industrial Bulletin of Department of Labor, vol. 6, no. 7, April 1927; and vol. 7, no. 9, June 1928.
		*North Carolina 1929-30.....	First annual report of Industrial Commission, 1929-30.
		*Pennsylvania <sup>3</sup> 1920 to 1930 <sup>3</sup> .....	Report of Bureau of Workmen's Compensation, 1920; special bulletin of Department of Labor and Industry, no. 17, 1926, an analysis of compensated accidents to minors for the year 1924; Labor and Industry, monthly bulletin of Department of Labor and Industry, vol. I, no. 7, November 1922; vol. XIII, no. 12, December 1926; vol. XVIII, no. 6, June 1931.
		*Rhode Island 1925-27 to 1930-31.....	Reports of Commissioner of Labor for the years 1927 to 1931.
		*South Dakota 1929-30 and 1930-31.....	Annual Reports of Industrial Commissioner, thirteenth and fourteenth, periods ended June 30, 1930 and 1931.
		Tennessee 1919-20.....	Eighth annual report of Bureau of Workshop and Factory Inspection, 1920.
		Virginia 1919-20 and 1920-21; 1921-1923 and 1923-1925. (Figures for 1920-21 include nonfatal cases only; 1921-1923 and 1923-1925, temporary total disability only.)	Annual reports of Industrial Commission, second and third, periods ended Sept. 30, 1920 and 1921; biennial reports of Industrial Commission, periods ended Sept. 30, 1923 and 1925.
		*Wisconsin 1923 to 1931 (1923, 1924, 1925 cover injuries by machinery only).	Labor Statistics, vol. II, nos. 1 and 2, January-February 1924; vol. III, nos. 1 and 2, January-February 1925; vol. IV, nos. 4 and 5, April-May 1926; no. 25, Mar. 14, 1930; no. 28, July 28, 1930; no. 31, Sept. 25, 1930; no. 35, July 10, 1931; no. 36, Dec. 28, 1931; no. 41, July 31, 1932; and no. 42, June 14, 1932.
Frequency rate.....	1	Pennsylvania 1924.....	Special bulletin of Department of Labor and Industry, no. 17, 1926, An analysis of compensated accidents to minors for the year 1924.
Industry.....	9	California 1920 and 1921.....	Same as for number injured.
		Illinois <sup>3</sup> 1928 and 1929 <sup>3</sup> .....	Annual reports of Department of Labor, twelfth and thirteenth, years ended June 30, 1929 and 1930.
		*Indiana 1919-20, 1920-21, 1925-26 to 1930-31.....	Annual reports of Industrial Board, years ended Sept. 30, 1920, 1921, and 1926 to 1931.
		Kentucky 1919-20.....	Annual report of Workmen's Compensation Board, year ended June 30, 1920.
		*New Jersey 1927, 1928, 1930, 1931.....	Same as for number injured.
		New York 1924-25 to 1926-27.....	Special bulletins of Department of Labor: No. 144, June 1926, Some recent figures on accidents to women and minors; no. 146, July 1926, Accidents compensated in year ended June 30, 1925, cost of compensation; no. 148, January 1927, Compensation statistics year ended June 30, 1926; and Industrial Bulletin, vol. 6, no. 7, April 1927, and vol. 7, no. 9, June 1928.
		Pennsylvania <sup>3</sup> 1920 to 1930 <sup>3</sup> .....	Report of Bureau of Workmen's Compensation, 1920; Labor and Industry, vol. XIII, no. 12, December 1926, and vol. XVIII, no. 6, June 1931.
		Tennessee 1919-20.....	Same as for number injured.
		*Wisconsin 1926 to 1931.....	Labor Statistics, no. 28, July 28, 1930; no. 31, Sept. 25, 1930; no. 41, July 31, 1932; and no. 42, June 14, 1932.

See footnotes at end of chart.

CHART I.—Extent of information on injuries to women for the period 1920 to 1931 in State reports giving the same information for men—Contd.

Type of information	Number of States publishing	State	Period covered by published reports	Source
Cause.....	7	Illinois <sup>3</sup> .....	1928 and 1929 <sup>3</sup> .....	Same as for industry.
		*Indiana.....	1919-20, 1920-21, 1925-26 to 1930-31.....	Do.
		*Iowa.....	1925-26 and 1927-28; 1928-1930 and 1930-1932.....	Same as for number injured.
		Michigan.....	1928-29.....	Do.
		*New Jersey.....	1927, 1928, 1930, 1931.....	Do.
		New York.....	1924-25 to 1926-27.....	Special bulletins of Department of Labor: No. 144, June 1926, Some recent figures on accidents to women and minors; no. 152, August 1927, Causes of accidents 2 years ended June 30, 1926; and Industrial Bulletins, vol. 6, no. 7, April 1927 and vol. 7, no. 9, June 1928.
		Pennsylvania.....	1924.....	Labor and Industry, vol. XIII, no. 12, December 1926.
		Illinois <sup>3</sup> .....	1928 and 1929 <sup>3</sup> .....	Same as for industry.
		*Indiana.....	1919-20, 1920-21, 1925-26 to 1930-31.....	Do.
		*Iowa.....	1927-28; 1928-1930 and 1930-1932.....	Biennial reports of Bureau of Labor, periods ended June 30, 1928 to 1932.
Nature of injury.....	5	Nebraska.....	1927.....	Same as for number injured.
		Pennsylvania.....	1920 and 1924.....	Report of Bureau of Workmen's Compensation, 1920; Labor and Industry, vol. XII, no. 5, May 1925.
		Illinois <sup>3</sup> .....	1928 and 1929 <sup>3</sup> .....	Same as for industry.
		*Indiana.....	1919-20, 1920-21, 1925-26 to 1930-31.....	Annual reports of Industrial Board, years ended Sept. 30, 1920, 1921, 1926 to 1931.
		*Alabama.....	1920 to 1922.....	Same as for number injured.
Location of injury.....	2	*Idaho.....	1919-20 to 1921-22; 1922-1924 to 1930-1932.....	Do.
		Illinois <sup>3</sup> .....	1920 to 1929 <sup>3</sup> .....	Same as for number injured with the exception of tenth annual report of Department of Labor, year ended June 30, 1927.
Extent of disability.....	13	Iowa.....	1925-26 and 1927-28.....	Biennial report of Bureau of Labor Statistics, period ended June 30, 1926; biennial report of Bureau of Labor, period ended June 30, 1928.
		*Maryland.....	1919-20 to 1930-31 (1922 to 1924, incomplete periods).....	Same as for number injured.
		*Massachusetts.....	1919-20 to 1930-31.....	Do.
		Michigan.....	1928-29.....	Do.
		*Minnesota.....	1919-20; 1930-1932.....	Seventeenth biennial report of Department of Labor and Industries, period ended June 30, 1920, and sixth biennial report of Industrial Commission (in twenty-third biennial report of Department of Labor and Industry), period ended June 30, 1922.
		*New Jersey.....	1927, 1928, 1930, and 1931.....	Same as for number injured.
		*New York.....	1919-20 to 1929-30; * 1930 and 1931.....	Same as for number injured, with the exception of special bulletin 144 and the industrial bulletins.
		*Pennsylvania <sup>3</sup> .....	1920 to 1930 <sup>3</sup> .....	Report of Bureau of Workmen's Compensation, 1920; Labor and Industry, vol. I, no. 7, November 1922, and vol. XVIII, no. 6, June 1931.

		Virginia.....	1919-20 and 1920-21; 1921-23 and 1923-25.	Same as for number injured.
		* Wisconsin.....	1930 and 1931.....	Labor Statistics, no. 42, June 14, 1932.
Time lost.....	4	Alabama.....	1920 to 1922.....	Same as for number injured.
		Illinois <sup>3</sup> .....	1925 <sup>4</sup> .....	Ninth annual report of Department of Labor, year ended June 30, 1926.
		New York.....	1926-27.....	Industrial Bulletin, vol. 7, no. 9, June 1928.
		Virginia.....	1921-1923 and 1923-1925.....	Biennial report of Industrial Commission, periods ended Sept. 30, 1923 and 1925.
Age.....	12	Alabama.....	1920 to 1922.....	Same as for number injured.
		Georgia.....	1927-1928.....	Do.
		Illinois <sup>3</sup> .....	1920 to 1929 <sup>5</sup> .....	Same as for number injured with the exception of the Labor Bulletin.
		* Indiana.....	1919-20, 1920-21, 1925-26 to 1930-31.....	Same as for industry.
		* Maryland.....	1923, 1924, 1924-25 to 1930-31 (1923 and 1924 incomplete periods).	Annual reports of Industrial Accident Commission, ninth to seventeenth, years ended Oct. 31, 1923 to 1931.
		* Massachusetts.....	1919-20 to 1930-31.....	Same as for number injured.
		* Minnesota.....	1919-20 to 1923-24; 1930-1932.....	Do.
		* New Jersey.....	1927, 1928, 1930, 1931.....	Do.
		* New York.....	1919-20 to 1929-30; <sup>6</sup> 1930 and 1931.....	Same as for the number injured, with the exception of special bulletin 144 and the industrial bulletins.
		Pennsylvania.....	1924.....	Special bulletin of Department of Labor and Industry, no. 17, 1926, An analysis of compensated accidents to minors for the year 1924.
		* Rhode Island.....	1926-27 to 1930-31.....	Same as for number injured.
		* Wisconsin.....	1926 to 1931.....	Labor Statistics, no. 25, Mar. 14, 1930; no. 28, July 28, 1930; no. 36, Dec. 28, 1931; and no. 42, June 14, 1932.
Marital status.....	8	Georgia.....	1927-28.....	Same as for number injured.
		Illinois <sup>3</sup> .....	1929 <sup>3</sup> .....	Thirteenth annual report of Department of Labor, year ended June 30, 1930.
		Maryland.....	1919-20 to 1921-22.....	Annual reports of Industrial Accident Commission, sixth to eighth, years ended Oct. 31, 1920 to 1922.
		Missouri.....	1927 (period incomplete).....	Same as for number injured.
		Nebraska.....	1927.....	Do.
		* North Carolina.....	1929-30.....	Do.
		Pennsylvania.....	1920.....	Report of Bureau of Workmen's Compensation, 1920.
		Virginia.....	1919-20 and 1920-21; 1921-1923.....	Annual reports of Industrial Commission, second and third, periods ended Sept. 30, 1920 and 1921; biennial report of Industrial Commission, period ended Sept. 30, 1923.
Nationality.....	1	* North Carolina.....	1929-30.....	Same as for number injured.

See footnotes at end of chart.

CHART I.—Extent of information on injuries to women for the period 1920 to 1931 in State reports giving the same information for men—Contd.

Type of information	Number of States publishing	State	Period covered by published reports	Source
Wage	5	Illinois <sup>1</sup>	1920 to 1924, 1926, 1928, 1929 <sup>3</sup>	Annual report of Industrial Commission, year ended June 30, 1921; annual reports of Department of Labor, fifth to eighth, tenth, twelfth, and thirteenth, years ended June 30, 1922 to 1925, 1927, 1929, and 1930.
		*Indiana	1919-20 to 1930-31 <sup>1</sup>	Same as for number injured.
		Nebraska	1927	Do.
		*New York	1919-20 to 1929-30; <sup>6</sup> 1930 and 1931	Same as for number injured, with the exception of special bulletin 144 and the industrial bulletins.
		*Wisconsin	1926 to 1931	Labor Statistics, no. 28, July 28, 1930; no. 35, July 10, 1931; and no. 42, June 14, 1932.

<sup>1</sup> This chart does not include the following published data on women injured:

- A. Compensation per disability for eye, arm, hand, foot, and leg losses. In report of Workmen's Compensation Bureau, Pennsylvania, 1920.
  - B. Machine accidents analyzed according to cities and counties in the State. Wisconsin Labor Statistics, vol. II, nos. 1 and 2, January-February 1924; vol. III, nos. 1 and 2, January-February 1925; vol. IV, nos. 4 and 5, April 1926. Analysis of temporary disability cases to females, 1926, 1927, 1928, in Wisconsin Labor Statistics, no. 25, Mar. 14, 1930.
  - C. Fatal accidents classified by industry, conjugal condition, and part of body injured; also blood-poison cases. In report of Workmen's Compensation Bureau, Pennsylvania, 1920. Fatal accidents by industry, cause, and nature of injury, 1924; in Labor and Industry, monthly bulletin of Pennsylvania Department of Labor and Industry, vol. XII, no. 5, May 1925.
  - D. Fatal cases classified by marital status and number of dependents, 1919-20. In second annual report of Industrial Commission of Virginia, 1920.
  - E. Special study of 102 accidents to women classified by industry and cause of injury, 1924. In fifth annual report of Court of Industrial Relations, Kansas, year ended Dec. 31, 1924.
  - F. Special reports—New York Department of Labor: Some social and economic effects of work accidents to women. A study of 500 women compensated for permanent partial injuries, 1918-20. Classified according to age, wage, occupation, industry, nature of injury, location of injury, cause of accident, manner of occurrence of machine accidents, extent of disability, degree of impairment, proportion of infections, present earning capacity, ability to speak English, schooling, change of employer, experience on machines, and length of time machine operators had been on accident job. Special Bulletin 127, November 1924. An analysis of 100 accidents on power punch presses, 1923-24. Classified by number of establishments, product of plant, and nature and location of injury. Special Bulletin 131. New York food-canning accidents, July 1, 1928, to June 30, 1929, cases closed, classified by age and extent of disability, in New York Industrial Bulletin, vol. 9, no. 7, April 1930. Compensated back injuries among women, year ended June 30, 1930, in New York Industrial Bulletin, vol. 10, no. 7, April 1931.
  - G. Special study—Cases of anthrax, by industry and extent of disability, 1922 to 1926. In Labor and Industry, monthly bulletin of Pennsylvania Department of Labor and Industry, vol. XIV, no. 6, June 1927.
  - H. Illinois tables for 1929 classified by sex and the place where accidents occurred (county, city); number of children under 16 years of age that injured person had; and total and average amount of compensation paid; in thirteenth annual report of Department of Labor, year ended June 30, 1930.
- <sup>2</sup> Type of injuries tabulated varies in different States and in some States from year to year.
- <sup>3</sup> Unpublished information has been used for Illinois, 1930 and 1931, and Pennsylvania, 1931. Illinois unpublished tables classified by sex cover: In 1930, number injured, industry, cause, nature of injury, location of injury, extent of disability, time lost, age, marital status, number of children under 16, place where accident occurred (county, city), wage, total and average amount of compensation paid, and days lost in temporary disability cases; in 1931, number injured, industry, cause, extent of disability, time lost, age, and wage. The Pennsylvania unpublished tables classified by sex cover numbers injured, industry, and extent of disability (fatals and nonfatals).
- <sup>4</sup> It should be noted that since 1919 the following 24 States and the District of Columbia have not published any accident data by sex: Arizona, Arkansas, Connecticut, Delaware, Florida, Kansas, Louisiana, Maine, Mississippi, Montana, Nevada, New Hampshire, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, Texas, Utah, Vermont, Washington, West Virginia, Wyoming; and the following additional States did not publish<sup>3</sup> such data in 1930 or 1931: Alabama, California, Georgia, Illinois, Michigan, Missouri, Nebraska, Tennessee, and Virginia. Arkansas, Florida, Mississippi, and South Carolina have no compensation laws.
- <sup>5</sup> The following examples illustrate the system used in indicating periods covered: 1920—calendar year; 1920-21—other than calendar year; 1927-1928—2 calendar years combined in biennial report; 1927-1929—2 years other than calendar years combined in biennial report.
- <sup>6</sup> Both calendar-year and fiscal-year reports were published for industrial injuries in New York, 1930. Since the State plans to tabulate figures for the calendar year in succeeding reports, these have been used by the Women's Bureau for 1930, and no further reference is made to the report of the fiscal year.
- <sup>7</sup> Wage for men not given.

CHART II.—Injuries tabulated, minimum period of disability, and employments covered by law, in the 16 States that reported the sex of injured persons in 1930 or 1931, or both

[Source: State laws and reports; U. S. Bureau of Labor Statistics, series of reports of compensation laws, Bulletins 272, 332, 379, 423, and 496; and Monthly Labor Review, March 1930, December 1930, and January 1932]

State	Period covered by figures tabulated	Injuries tabulated	Minimum period of disability of injuries tabulated	Employments covered <sup>1</sup> by accident-reporting law (marked *) or compensation law (where only injuries under compensation law are tabulated)		Election or compulsory compensation law (where only injuries under law are tabulated)
				Private	Public	
Colorado	Years ended Nov. 30, 1927 to 1931.	Compensation claims.....	More than 10 days.....	All except those having regularly less than 4 employees, farm and ranch labor, private domestic service, and casual employees not in the usual course of employer's business. Voluntary as to excepted employments.	All except elective officials, National Guard, and members of volunteer fire departments. <sup>1</sup>	Election presumed in absence of written notice. <sup>2</sup> Compulsory as to public employees.
Idaho	2-year periods ended Oct. 31, 1928, 1930, and 1932.	Closed compensable cases.....	More than 1 week.....	All except agricultural pursuits, domestic service, outworkers, casual employment, crews of aircraft while under way, employment not carried on by the employer for pecuniary gain, <sup>1</sup> and charitable institutions. Voluntary as to excepted employments.	All except judges of election, clerks of election, and jurors.	Compulsory.
Illinois	1927 to 1931.....	do. <sup>3</sup> .....	do.....	"Extrahazardous" employments as enumerated, <sup>4</sup> totally blind persons, members of fire patrols (of any board of underwriters). <sup>1</sup> Farm labor and persons not in usual course of employer's business excepted. Voluntary as to excepted employments.	All except officials and duly appointed members of fire departments in cities of 200,000 or more.	Do.
Indiana	Years ended Sept. 30, 1927 to 1931.	Cases reported.....	More than 1 day.....	*All.....	*All.....	
Iowa	Year ended June 30, 1928; 2-year periods ended June 30, 1930 and 1932.	do.....	2 days.....	*All except mines and railway train service <sup>5</sup> .....	*do.....	
Kentucky	Years ended June 30, 1927 to 1931.	do. <sup>6</sup> .....	More than 1 day.....	All except those having less than 3 employees, agriculture, domestic service, and common carriers engaged in interstate commerce. Threshing and hulling grains and seeds are within the act. Voluntary as to excepted employments.	All municipal corporations having 3 or more employees. Voluntary as to others.	Election in writing by employer and employee. <sup>2</sup>
Maryland	Years ended Oct. 31, 1927 to 1931.	Compensation claims allowed.....	More than 3 days.....	"Extrahazardous" employments as enumerated. <sup>4</sup> Casual employees, farm labor, domestic service, country blacksmiths, wheelwrights, or similar rural employments excepted. Voluntary as to works not extrahazardous.	All workmen employed for wages and engaged in extrahazardous employments, including the State police force and guards of penal institutions. Voluntary as to other employments.	Compulsory.
Massachusetts	Years ended June 30, 1927 to 1931.	Tabulatable injuries <sup>8</sup> .....	1 day or 1 shift.....	*All.....	*All.....	
Minnesota	2-year period ended June 30, 1932.	Closed cases <sup>9</sup> .....	More than remainder of day, shift, or turn. <sup>10</sup>	All including commercial threshing and baling, except steam railroads, domestic servants, farm laborers, or casual employees not in usual course of employer's business. Voluntary for farm labor.	All except officials.....	Election presumed in absence of written notice. <sup>2</sup>
New Jersey	1927, 1928, 1930, 1931.....	Closed compensable cases <sup>9</sup> .....	More than 1 week.....	All except casual employees.....	All except elective officials and those retired on pensions. <sup>1</sup>	Election presumed in absence of written notice. <sup>10</sup> Compulsory as to public employments.
New York	Years ended June 30, 1927 to 1929; calendar years 1930, 1931.	do. <sup>9</sup> .....	do.....	All enumerated "hazardous" employments, <sup>4</sup> and all others having 4 or more workmen. <sup>1</sup> Farm labor and domestic service excluded. Voluntary as to other employments.	All employees.....	Compulsory.
North Carolina	Year ended June 30, 1930.....	All involving time lost with medical or compensation costs.	More than 3 days.....	All except those having regularly less than 5 employees, agriculture, domestic service, railroads, casual employees not in usual course of employer's business, and persons selling agricultural products for the producer. Voluntary as to excepted employment.	All employees of the State and its subdivisions except elective officials and appointees of the Governor. Federal Government employees and State and county prisoners are also excepted.	Election presumed in absence of written notice. <sup>2</sup> Compulsory as to public employees.
Pennsylvania	1927 to 1931.....	Cases reported.....	2 days.....	*All except casual employments.....	*All.....	
Rhode Island	Years ended Sept. 30, 1927 to 1931.	Closed compensable cases.....	More than 1 week.....	All except those having less than 6 employees, farm labor, domestic service, casual employees, and employees receiving over \$3,000 a year. Voluntary as to excepted employments.	All employees of State, cities, and towns, except fire and police departments.	Election in writing by employer, <sup>2</sup> and presumed in absence of written notice by employee. Compulsory as to State employees.
South Dakota	Years ended June 30, 1930 and 1931.	Cases reported <sup>6</sup> .....	None.....	All except farm and domestic service and employees not in usual course of employer's business; employees in interstate and foreign commerce excepted if United States laws provide for their compensation. Compulsory for operation, for profit, of threshing machines, grain combines, corn shellers, corn huskers, shredders, silage cutters, and seed hullers, including traction engines used therewith. Voluntary as to excepted employments.	All except officials.....	Election presumed in absence of written notice. <sup>2</sup> Compulsory as to public employees.
Wisconsin	1927 to 1931.....	Closed compensable cases. <sup>11</sup>	More than 3 days after Apr. 24, 1931; more than 1 week previously.	All except those usually employing less than 3 employees, domestic service, farmers or farm labor, and employees not in usual course of employer's business. <sup>1</sup> Voluntary as to excepted employments.	do.....	Compulsory. <sup>1 12</sup>

<sup>1</sup> Changes in features of laws given in chart II are as follows: A—1927 to 1929. Colorado—Members of volunteer fire departments excepted by session law 1927, ch. 197, sec. 2, effective May 1, 1927. Idaho—Judges of election, clerks of election, and jurors excepted by session law 1927, ch. 106, sec. 1, effective Mar. 2, 1927; crews of aircraft while under way excepted by session law 1929, ch. 88, sec. 1, effective May 7, 1929. New York—Employments not conducted for pecuniary gain included by session law 1928, ch. 755, sec. 1, effective Oct. 1, 1928. Wisconsin—Domestic service specifically excepted; voluntary election provided for employees not in usual course of employer's business; session laws 1929, ch. 453, sec. 3, effective Sept. 3, 1929. B—1930 and 1931. Colorado—Defined employees to include sheriffs, deputy sheriffs regularly employed and any person called to serve upon any posse, session laws 1931, ch. 175, effective July 25, 1931. Idaho—Agricultural pursuits defined to include care taking and handling of livestock on enclosed lands and public ranges; exclusion of employments not carried on by the employer for the sake of pecuniary gain from the compulsory application of the act clarified; session laws 1931, ch. 222, secs. 1 and 2, effective June 5, 1931. New Jersey—Volunteer firemen were added to coverage of the law by Session Laws 1931, ch. 172, effective Apr. 21, 1931; public employees earning over \$1,200 were added to coverage of the law and public employees retired on pensions were excluded, Session Laws 1931, ch. 355, effective July 4, 1931. New York—Additional occupational diseases made compensable, Session Laws 1930, ch. 60, effective Oct. 1, 1931; private chauffeurs in cities of 2,000,000 or more included under coverage of act, Session Laws 1931, ch. 510, effective Apr. 20, 1931. South Dakota—Operation, for profit, of grain combines, corn shellers, corn huskers, shredders, silage cutters, and seed hullers added to compulsory coverage by Session Law 1931, ch. 269, approved Feb. 27, 1931. Wisconsin—Waiting time made more than 3 days by Session Laws 1931, ch. 66, effective Apr. 24, 1931. Act made compulsory for private employers who usually employ three or more employees, except farmers or farm labor, domestic service, and employees not in usual course of employer's business; voluntary as to excepted employments; voluntary (joint election) for steam railroads repealed; Session Laws 1931, ch. 87, effective May 7, 1931.

<sup>2</sup> Inducement to election is offered by abrogation of common-law defenses where employer rejects the law.  
<sup>3</sup> Also reports compensable cases occurring in 1928, 1929, 1930, and 1931. Type of injury tabulated is indicated, for this State, on each table in this report. Includes occupational diseases in certain occupations.  
<sup>4</sup> The principal industrial employments are included.  
<sup>5</sup> Reports of accidents to workers in mines or in railway service are not received by the bureau of labor. All industrial accidents are reported, however, to the compensation commissioner.  
<sup>6</sup> Only employees subject to compensation act are required to report.  
<sup>7</sup> Includes injury from gas or smoke in mines or from any gas.  
<sup>8</sup> Occupational diseases included by court decision.  
<sup>9</sup> Designated occupational diseases included.  
<sup>10</sup> "Nondisabling cases", presumably with no time lost but with medical and hospital costs reported, are included in the tabulation.  
<sup>11</sup> Includes occupational diseases.  
<sup>12</sup> Common-law defenses abrogated for employers covered by compulsory features of law. Employers of fewer than 3 persons lose defense of assumed risk if they do not elect law.

Data on injuries classified by sex published by States for 1930 and 1931 <sup>1</sup>

[Calendar years or fiscal years ending in 1930 or 1931]

States reporting injuries by sex and—

Number	Industry	Cause	Nature of injury	Location of injury	Extent of disability	Age	Nation-ality	Wage	Marital status
1930									
Colo.....									
Idaho.....					Idaho.....				
Ind.....	Ind.....	Ind.....	Ind.....	Ind.....		Ind.....		Ind. <sup>2</sup>	
Iowa.....		Iowa.....	Iowa.....						
Ky.....									
Md.....					Md.....	Md.....			
Mass.....					Mass.....	Mass.....			
N. J.....	N. J.....	N. J.....			N. J. <sup>3</sup>	N. J.....			
N. Y.....					N. Y.....	N. Y.....		N. Y.....	
N. C.....							N. C.....		N. C.
Pa.....	Pa.....				Pa. <sup>4</sup>				
R. I.....						R. I.....			
S. Dak.....									
Wis.....	Wis.....				Wis. <sup>5</sup>	Wis.....		Wis.....	

1931

Colo.....									
Idaho.....					Idaho.....				
Ind.....	Ind.....	Ind.....	Ind.....	Ind.....		Ind.....		Ind. <sup>2</sup>	
Iowa.....		Iowa.....	Iowa.....						
Ky.....									
Md.....					Md.....	Md.....			
Mass.....					Mass.....	Mass.....			
Minn.....					Minn.....	Minn.....			
N. J.....	N. J.....	N. J.....			N. J.....	N. J.....			
N. Y.....					N. Y.....	N. Y.....		N. Y.....	
R. I.....						R. I.....			
S. Dak.....									
Wis.....	Wis.....				Wis. <sup>5</sup>	Wis.....		Wis.....	

<sup>1</sup> On account of their unbroken series of reports, 1920 to 1929, unpublished figures for Illinois in 1930 and 1931 and for Pennsylvania in 1931 were accepted for the present study. (See footnote 3 of chart I.)

<sup>2</sup> Comparable data for men not available.

<sup>3</sup> Fatais and permanent totals only.

<sup>4</sup> Fatais and nonfatais only.

<sup>5</sup> Permanent partials only.

Illinois, not included in the foregoing lists because its 1930 and 1931 data had not been published, classified by sex several more types of information than did any other State. This is clear from chart I. Indiana ranked second in this respect. Colorado, Kentucky, and South Dakota reported by sex only the total number of injuries.

In addition to the problem of analyzing scattering and incomplete reports, lack of uniformity and resulting noncomparability of data have made close analysis of available statistics difficult in each of the bulletins of the accident series. In the interest of accident prevention it cannot be emphasized too strongly that States should at least be guided in their collecting, classifying, analyzing, and publishing of statistics by the standard methods advocated by the International Association of Industrial Accident Boards and Commissions.<sup>3</sup>

<sup>3</sup> U. S. Bureau of Labor Statistics. Standardization of Industrial Accident Statistics. Bul. 276. 1920. The revision of this bulletin has not been completed.

### CHARACTER OF DATA

Study of chart II will bring out distinctions in the definition of tabulated cases that must be taken into consideration in any interpretation of the tables in this report. These distinctions have been carefully described in the two earlier reports, but it may be well to give them again before taking up an analysis of statistics.

The most important difference lies between States reporting all cases without regard to their compensation status—reportable cases and tabulatable injuries (8 States)—and States reporting only cases that have been or are eligible for compensation—compensation claims allowed and closed compensable cases (8 States). Of the latter, 7 States report the number of injuries that have been paid or will be paid compensation (1, Illinois, reports compensable cases occurring, also), and the other reports the number of compensation claims.

Another distinction closely connected with this one is the difference in minimum period of disability of tabulated injuries. In all but 1 of the 8 States in the first group just mentioned all cases are tabulated in which the time lost is as much as 1 day or shift to more than 3 days. In the remaining State all accidents were to be reported. For all the 8 States in the group reporting compensable cases, from 3 to 10 days must have been lost from work for an injury to be included.

A further limitation upon comparability follows from differences in employments covered by the State reports. These vary from all employments in Massachusetts and Indiana to enumerated "extra-hazardous" employments in Illinois. The other States make various exceptions. In some States employers may elect to come under these reporting requirements, in others it is compulsory.

A minor difference lies in reporting periods. Some States report for calendar-year periods, some for fiscal-year periods. Where figures cover a 2-year period they have been divided by 2 to give an estimate for 1 year for the present study.

These variations must be clearly understood to arrive at valid conclusions, but it will be evident that, if used with care, the figures are comparable. The data for any one State for the 5 years 1927 to 1931 are reasonably comparable, as most of the changes made in the phases of the compensation laws analyzed here are minor ones. The only exception is Wisconsin, where the reduction of the waiting period from 1 week to 3 days in 1931 undoubtedly brought many more injuries under the law.

While it is essential to be cautious in their use, the value of the data available should not be underestimated. Several of the States furnishing the most complete data are important industrially, and analysis of the injury experience of even a sampling of women workers will suggest trends significant in an understanding of the character, cause, and means of prevention of accidents in industry.

## DATA AS TO INJURIES

## Changes in number of injuries, 1927 to 1931

Table 1 is a compilation of the data on industrial injuries occurring to women and to men in the 5-year period 1927 to 1931. The tabulation shows for each State a substantial decrease from 1930 to 1931 in the total number of accidents. The percentage decrease was greater for men than for women in 8 of the 12 States that can be compared. In one State—Idaho—the number of women's injuries reported increased by almost 9 percent, while men's injuries decreased by about 19 percent. A substantial decline in 1931 in accident frequency shows in the annual survey by the United States Bureau of Labor Statistics of accidents in manufacturing industries<sup>4</sup> and in the rates published by the National Safety Council.<sup>5</sup> Probably the basic cause of the decline in numbers noted in this study is the decrease in exposure to industrial hazards resulting from unemployment. That this was not the only factor is evidenced by the Bureau of Labor Statistics and National Safety Council studies. In these studies hours of exposure are available and the frequency rates based on these show considerable decline. It seems logical to conclude, therefore, a measure of progress made in safety. This conclusion is borne out by a survey of the trend of accidents over the 5-year period. Eight of the ten States<sup>6</sup> with comparable data for 1927-29 reported a decrease in number of accidents in 1928, before the onset of the depression, though 8 of the 10 showed some increase in 1929.

It has been stated that the decrease in women's accidents from 1930 to 1931 was somewhat different from that of men. This difference is evident throughout the 5 years.

Plate II presents a graphic comparison of the years 1929 to 1931 with 1928, a time of comparatively normal employment, for the 11 States reporting.<sup>6</sup> The trend from 1928 to 1929 is uneven. Women's injuries increased more than men's increased in 5 of the 10 States reporting, and advanced while men's declined in 1. Men's injuries, on the other hand, increased while women's decreased in 2 States. Declines in number were reported for both sexes in 1 State, somewhat greater for women than for men. One State had a slight advance for each sex. The decrease in women's injuries was very marked in 1 State.

The picture is quite different for 1930, presumably due to the unemployment of men. Women's injuries increased in all but 1 State and there the decrease was slight and was less than for men. The number of accidents to men fell off in 8 States and in the other 3 the increase was considerably less than in the case of women. For the significance of these figures to be clear it would be necessary to compare them with the numbers of the two sexes employed.

Just as marked is the difference in trend of men's and women's cases from 1928 to 1931. In this period men's accidents declined

<sup>4</sup> U. S. Bureau of Labor Statistics. Monthly Labor Review, April 1933, p. 780 ff.

<sup>5</sup> National Safety Council. Accident Facts, 1932 edition, Chicago, p. 19.

<sup>6</sup> For Idaho and Iowa, where biennial reports combine the figures for 2 years (divided by 2 to arrive at yearly average for the present report), no comparison of numbers injured in first and second year of the period is possible.



Kentucky.....	100.0	98.1	1.9	100.0	98.9	1.1	100.0	98.9	1.1	100.0	98.6	1.4	100.0	98.6	1.4						
Maryland.....	100.0	94.2	5.8	100.0	94.7	5.3	100.0	94.8	5.2	100.0	93.4	6.6	100.0	93.3	6.7						
Massachusetts..	100.0	90.7	9.3	100.0	90.7	9.3	100.0	90.5	9.5	100.0	90.5	9.5	100.0	90.3	9.7						
Minnesota.....													6	100.0	91.2	8.8					
New Jersey.....	100.0	93.0	7.0	100.0	92.9	7.1				100.0	92.5	7.5	100.0	91.5	8.5						
New York.....	100.0	92.5	7.5	100.0	92.5	7.5	100.0	91.9	8.1	100.0	91.1	8.9	100.0	90.5	9.5						
North Carolina..										100.0	93.1	6.9									
Pennsylvania...	100.0	96.4	3.6	100.0	96.1	3.9	100.0	95.8	4.2	100.0	95.7	4.3	100.0	95.0	5.0						
Rhode Island...	100.0	87.3	12.7	100.0	87.8	12.2	100.0	87.3	12.7	100.0	87.5	12.5	100.0	87.3	12.7						
South Dakota...										11	100.0	92.4	7.6	100.0	94.6	5.4					
Wisconsin.....	100.0	96.0	4.0	100.0	96.5	3.5	100.0	96.0	4.0	100.0	95.4	4.6	100.0	94.8	5.2						

<sup>1</sup> For similar information for 1927, 1928, or 1929 from States not reporting injuries classified by sex in period 1930-31, see Women's Bureau Buls. 81 and 102.

<sup>2</sup> U. S. Bureau of the Census. Fifteenth Census, 1930: Population, Occupations, vol. V, p. 57.

<sup>3</sup> Ibid., p. 61.

<sup>4</sup> Ibid. Fourteenth Census, 1920: Population, Occupations, vol. IV, p. 51.

<sup>5</sup> For period covered and injuries tabulated see chart II, facing p. 9.

<sup>6</sup> The numbers reported for a 2-year period have been divided by 2.

<sup>7</sup> Increase.

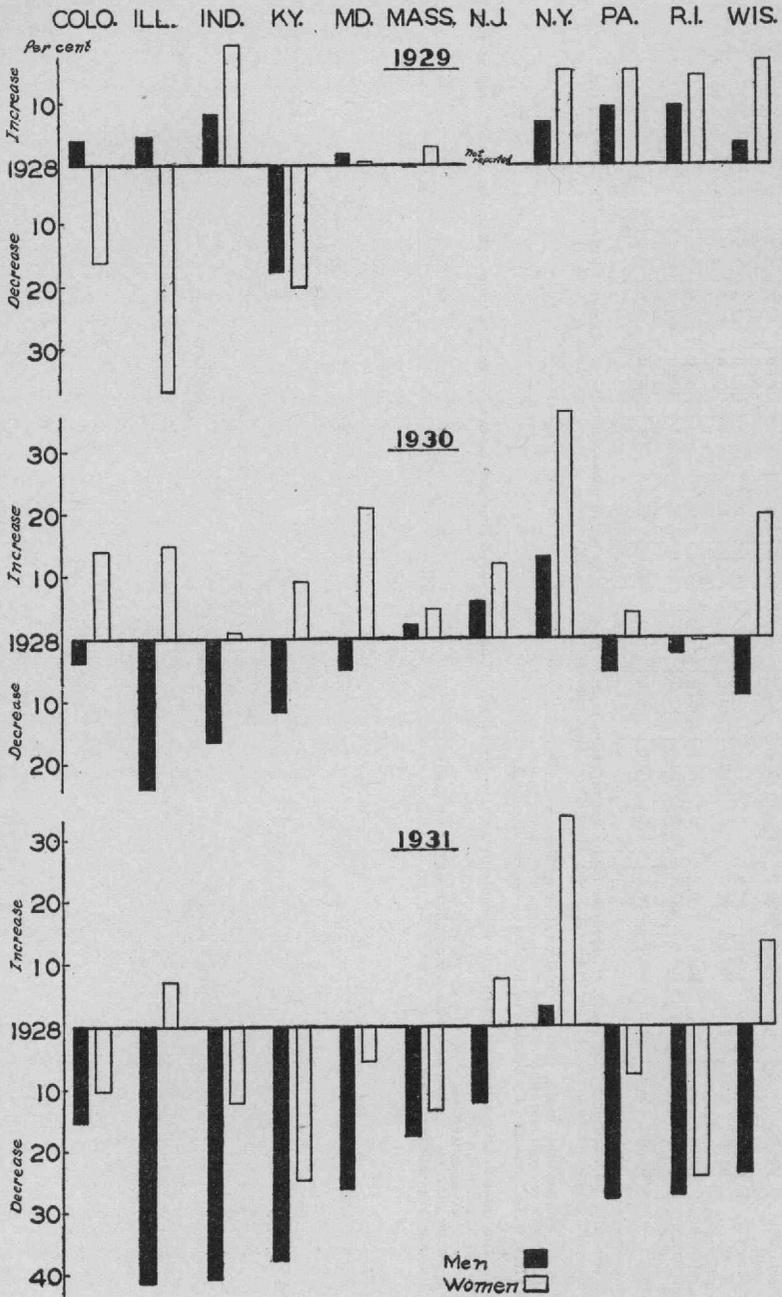
<sup>8</sup> For this table figures showing compensable cases occurring have been used. The cases closed show an increase for women from 1930 to 1931 of 10.83 percent and a decrease for men of 28.93 percent.

<sup>9</sup> Only closed cases were tabulated by sex for 1927.

<sup>10</sup> Excludes 203 cases reported for 2-year period not classified by sex.

<sup>11</sup> Includes 11 public accidents.

PLATE II. INJURIES TO MEN AND WOMEN, 1929-1931: PERCENT INCREASE OR DECREASE FROM 1928



considerably in all but 1 State, and there the advance was slight. On the other hand, the number of women's injuries increased in 4 States—in 1 of them greatly—and in the other 7 the decline was less than in the case of men.

Comparing 1931 statistics with 1929, the prosperous business year, accidents to males decreased in every one of 12 States reporting, while accidents to females actually increased in 4 States, Colorado, Idaho, Illinois, and New York.

These facts may be summed up in this statement: *While the trend throughout the period is downward for both males and females, it is less marked for females than for males.*

Unemployment figures help to explain this situation. Unemployment has not been proportionately so high in woman-employing industries as in certain heavy industries employing only men, for example, construction, steel, mining. A slighter decrease in exposure to hazards has kept women's accident rates from so consistent a decline.

### **Proportion women form of all injured persons**

Corresponding to the slighter decrease in number of women's injuries than of men's, there appear for 1931 only 2 States in 14 in which the proportion of accidents that were injuries to women was less than 5 percent, though in 1930 the proportion was less than 5 percent in 7 of the 14 States. Women's accidents formed a slighter highly percentage of all accidents in 1931 than in 1930 in 11 of the 14 States in which such a comparison is possible.

Ranking the States according to the proportion women formed of injured persons in 1931 and in each other year of the 5-year period, there is little variation in their position. Rhode Island, Massachusetts, and New York had the highest proportions in each year. The point to be noted is the relation of this ranking to the proportion women formed of all persons gainfully employed, or those in manufacturing and mechanical industries, in 1930. Giving due consideration to the lack of uniformity of reports there can be no doubt of the validity of the correlation shown.

In *Industrial Accidents to Men and Women* (Bul. 81), covering the years 1920 to 1927, the same tendency was apparent from a comparison of those data with statistics from the census of 1920. Since 1930 census data are available, this comparison for 1927-31 is useful as corroboration. The tendency may be stated simply as follows:

*Generally speaking, the proportions of accidents to women in the accidents reported are greater where women constitute more considerable proportions of the gainfully occupied and of those in manufacturing and mechanical industries.*

A survey of table 1 shows Rhode Island, Massachusetts, and New York to have the highest proportions of accidents to women in each of the 5 years. These 3 States also had in 1930 the largest proportions of women among those gainfully occupied and, with one exception (North Carolina), among those occupied in manufacturing and mechanical industries.

Probably the basic explanation of the low proportion of women in all accidents in Kentucky, Colorado, and Pennsylvania compared to the percentage women were of the gainfully employed in these States lies in the greater extent of employment of men in hazardous occupations. In Pennsylvania the iron and steel industry and mining con-

stitute the great employers of men, and women are entirely excluded from their most hazardous phases. In Kentucky and Colorado, too, mining is one of the principal hazardous industries, and in the latter State it is one from which women are excluded by law.

Though it has been mentioned in connection with chart II, it may be well to emphasize here that in excluding accidents to household employees from the reports of most States one of the largest groups of employed women is omitted and a considerable number of women's injuries are left out of consideration. Even with this important omission injuries to women are by no means of small importance. In 1931 each of 3 States reported over 4,800 injuries to women and each of 7 States reported 1,500 or more injuries to women. As far as the proportion women's injuries are of the total is concerned, the omission of household employees is offset by the omission of agricultural employees, an important group from the standpoint of men's injuries.

### Extent of disability

As in the earlier studies, death and permanent total disablement form a very small part of all injuries and a smaller part of women's injuries than of men's. Combined they amount to less than 0.5 percent of all injuries to women in each of the 8 States<sup>7</sup> reporting for 1930 or 1931. For men they range from 0.6 percent to 1.8 percent of all injuries.

These percentages may make the problem of deaths in industry seem slighter than is actually the case. Fifty-seven women in the 7 States reporting in 1930, and 53 women in the 8 States in 1931, lost their lives in the course of gainful employment.

While by far the largest group of injuries, both to men and to women, were temporary, a considerable number left some permanent impairment. The fact that New York reported over 1,500 such serious disabilities to women in both years, New Jersey reported over 500 in 1931, and Illinois almost 400 in 1930, almost 500 in 1931, emphasizes the need for analysis of women's injuries and the formulation of a definite program for prevention.

<sup>7</sup> Pennsylvania included, though only fatal cases reported.

TABLE 2.—Distribution of injuries to male and female employees by extent of disability, 1930 and 1931

[For sources of information, see appendix]

State	Number <sup>1</sup>										Percent <sup>1</sup>									
	Male					Female					Male					Female				
	Total	Fatal	Perma- nent total	Perma- nent partial	Tempo- rary	Total	Fatal	Perma- nent total	Perma- nent partial	Tempo- rary	Total	Fatal	Perma- nent total	Perma- nent partial	Tempo- rary	Total	Fatal	Perma- nent total	Perma- nent partial	Tempo- rary
1930																				
Idaho.....	<sup>2</sup> 7,544	63	1	343	7,137	<sup>2</sup> 295	-----	-----	9	286	<sup>2</sup> 100.0	0.8	( <sup>3</sup> )	4.5	94.6	<sup>2</sup> 100.0	-----	-----	3.1	96.9
Illinois <sup>4</sup> .....	<sup>5</sup> 44,000	683	38	<sup>6</sup> 12,840	<sup>7</sup> 30,439	<sup>8</sup> 1,882	2	-----	6,383	<sup>9</sup> 1,497	<sup>8</sup> 100.0	1.6	0.1	<sup>6</sup> 29.2	<sup>7</sup> 69.2	<sup>8</sup> 100.0	0.1	-----	<sup>6</sup> 20.4	<sup>9</sup> 79.5
Maryland.....	12,517	107	1	578	11,831	889	2	1	34	852	100.0	.9	( <sup>3</sup> )	4.6	94.5	100.0	.2	0.1	3.8	95.8
Massachusetts.....	55,906	340	7	1,072	54,487	5,835	4	-----	107	5,724	100.0	.6	( <sup>3</sup> )	1.9	97.5	100.0	.1	-----	1.8	98.1
New Jersey.....	25,525	339	12	( <sup>10</sup> )	( <sup>10</sup> )	2,058	5	1	( <sup>10</sup> )	( <sup>10</sup> )	100.0	1.3	( <sup>3</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	100.0	.2	( <sup>3</sup> )	( <sup>10</sup> )	( <sup>10</sup> )
New York.....	97,733	1,301	50	21,300	75,082	9,579	27	-----	1,647	7,905	100.0	1.3	.1	21.8	76.8	100.0	.3	-----	17.2	82.5
Pennsylvania.....	138,423	1,745	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	6,256	17	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	100.0	1.3	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	100.0	.3	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )
Wisconsin.....	19,143	( <sup>10</sup> )	( <sup>10</sup> )	2,164	( <sup>10</sup> )	927	( <sup>10</sup> )	( <sup>10</sup> )	100	( <sup>10</sup> )	100.0	( <sup>10</sup> )	( <sup>10</sup> )	11.3	( <sup>10</sup> )	100.0	( <sup>10</sup> )	( <sup>10</sup> )	10.8	( <sup>10</sup> )
1931																				
Idaho.....	<sup>2</sup> 5,796	47	3	277	5,469	<sup>2</sup> 321	-----	-----	9	312	<sup>2</sup> 100.0	0.8	0.1	4.8	94.4	<sup>2</sup> 100.0	-----	-----	2.8	97.2
Illinois <sup>4</sup> .....	<sup>11</sup> 31,266	547	31	<sup>6</sup> 9,165	21,523	2,087	3	-----	6,474	1,610	<sup>11</sup> 100.0	1.7	.1	<sup>6</sup> 29.3	68.8	100.0	0.1	-----	<sup>6</sup> 22.7	77.1
Maryland.....	9,705	77	3	469	9,156	696	-----	-----	35	661	100.0	.8	( <sup>3</sup> )	4.8	94.3	100.0	-----	-----	5.0	95.0
Massachusetts.....	45,180	278	5	959	43,938	4,826	4	-----	72	4,750	100.0	.6	( <sup>3</sup> )	2.1	97.3	100.0	.1	-----	1.5	98.4
Minnesota.....	<sup>12</sup> 18,779	202	5	1,393	17,179	<sup>13</sup> 1,795	4	1	79	1,711	<sup>12</sup> 100.0	1.1	( <sup>3</sup> )	7.4	91.5	<sup>12</sup> 100.0	.2	0.1	4.4	95.3
New Jersey.....	21,229	287	16	6,795	14,131	1,979	2	-----	504	1,473	100.0	1.4	.1	32.0	66.6	100.0	.1	-----	25.5	74.4
New York.....	89,033	1,143	64	18,302	69,524	9,391	34	4	1,503	7,850	100.0	1.3	.1	20.6	78.1	100.0	.4	( <sup>3</sup> )	16.0	83.6
Pennsylvania.....	105,928	1,476	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	5,530	6	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	100.0	1.4	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )	100.0	.1	( <sup>10</sup> )	( <sup>10</sup> )	( <sup>10</sup> )
Wisconsin.....	16,067	( <sup>10</sup> )	( <sup>10</sup> )	1,601	( <sup>10</sup> )	876	( <sup>10</sup> )	( <sup>10</sup> )	78	( <sup>10</sup> )	100.0	( <sup>10</sup> )	( <sup>10</sup> )	10.0	( <sup>10</sup> )	100.0	( <sup>10</sup> )	( <sup>10</sup> )	8.9	( <sup>10</sup> )

<sup>1</sup> For period covered and injuries tabulated see chart II, facing p. 9.  
<sup>2</sup> The numbers reported for a 2-year period have been divided by 2.  
<sup>3</sup> Less than 0.05 percent.  
<sup>4</sup> Closed compensable cases.  
<sup>5</sup> 38, with extent of disability not reported, excluded.  
<sup>6</sup> Includes disfigurement.  
<sup>7</sup> Includes 534 with combinations of some kind of disability.

<sup>8</sup> 1, with extent of disability not reported, excluded.  
<sup>9</sup> Includes 17 with combinations of some kind of disability.  
<sup>10</sup> Not reported.  
<sup>11</sup> 34, with extent of disability not reported, excluded.  
<sup>12</sup> Excludes 8,410 nondisabling cases.  
<sup>13</sup> Excludes 841 nondisabling cases.

Six States reported comparable data on permanent partial disabilities, 5 States on temporary disabilities, in both 1930 and 1931, and for 4 of these a comparison with 1929 is possible.

Comparison of these States indicates that severity of injury, especially in the case of men, has not yielded to preventive methods and decrease in exposure to the same extent as has frequency of injury.

In two States, Illinois and Maryland, the percentage of men suffering permanent partial disability increased throughout the 3-year period. In Massachusetts there was a slight decrease in 1930; the percentage in 1931 was higher than in 1930 but lower than in 1929. In New York there was considerable increase in 1930 followed by a decrease in 1931, the 1931 percentage remaining higher than the figure for 1929. Wisconsin, reporting only for 1930 and 1931, shows a decrease in this proportion.

In the case of women's permanent partial injuries, the proportion decreased throughout the 3-year period reported for Massachusetts and the 2 years reported for Wisconsin. In Maryland there was a drop in 1930, but the 1931 percentage was the same as for 1929. In Illinois the proportion decreased in 1930 but increased in 1931. In New York the proportion increased in 1930 and decreased in 1931 but the 1931 proportion was higher than that for 1929.

Table 3 following indicates that in one State at least permanent partial injuries were almost as serious for women as for men from the standpoint of time lost from work.

TABLE 3.—Number of days lost on account of temporary and permanent partial disability cases, by extent of disability and sex—Illinois<sup>1</sup>

[For sources of information, see appendix]

Extent of disability	Number of injuries with days lost reported			Number of days lost			Average number of days lost per injury		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1930									
Total temporary and permanent partial cases <sup>2</sup> .....	41,864	40,057	1,807	1,651,917	1,593,322	58,595	39.4	39.8	32.4
Permanent partial.....	10,622	10,280	342	751,603	731,937	19,666	70.8	71.2	57.5
Temporary total.....	31,165	29,707	1,458	898,328	859,472	38,856	28.8	28.9	26.7
Temporary partial.....	77	70	7	1,986	1,913	73	25.8	27.3	10.4
1931									
Total temporary and permanent partial cases.....	32,772	30,688	2,084	1,270,967	1,205,217	65,750	38.8	39.3	31.5
Permanent partial.....	9,639	9,165	474	603,803	578,793	25,010	62.6	63.2	52.8
Temporary total.....	22,965	21,370	1,595	667,164	626,424	40,740	29.1	29.3	25.5
Temporary partial.....	168	153	15	-----	-----	-----	-----	-----	-----

<sup>1</sup> Closed compensable cases.

<sup>2</sup> Excludes the group "not otherwise classified", a combination of temporary total and temporary partial cases. There were 499 so classed, 484 men averaging 89 days lost and 15 women averaging 69.8 days lost.

Women lost an average of slightly over 8 weeks per injury in 1930, men about 10 weeks; 7½ weeks per injury was the average for women in 1931, and 9 weeks for men. Of these permanent injuries in 1930,

11.4 percent of the women's and 6.3 percent of the men's were disfigurements; in 1931 the figures were respectively 11.8 percent and 10.2 percent. In 1930 women lost an average of 28.5 days, men an average of 32.4 days, by the injuries whose permanent effect was disfigurement; in 1931 the average was practically the same for women (28.6 days), but men's average dropped to 16.8 days.

Turning to the most important group of injuries in point of number affected, it should be remembered that the severity of temporary injuries reported varies from State to State. In Idaho, Illinois, New Jersey, New York, and Wisconsin until April 24, 1931, only temporary injuries that disabled for over 1 week are included. Massachusetts, Minnesota, Maryland, Pennsylvania, and Wisconsin since April 24, 1931, have included injuries causing disability varying by State from 1 shift to over 3 days.

Some data as to the actual severity of these injuries in terms of the number of days lost on account of disability have been made available for Illinois, 1930 and 1931 (table 3). In this State the average of days lost per injury is much greater than the minimum required for reporting. For the largest group of injuries to both men and women, the temporary total disabilities, injuries to men were only slightly more severe than those to women. Women averaged 26.7 days lost from work in 1930, 25.5 days in 1931, and men averaged 28.9 days in 1930, 29.3 days in 1931. From this discussion the conclusion may be drawn that while the frequency of injury is much greater for men than for women, differences in severity in other than fatal injuries are slight.

### Nature of injury

Considered by the nature of injury, the differences as between men and women were slight. Cuts and lacerations were the type of injury most common with women and usually next to the most common with men; bruises, contusions, or abrasions generally rank first with men and second with women. For each sex these two groups combined were from about two-fifths to almost one-half of all injuries. In each State more than 10 percent of men's cases were fractures, as were more than 10 percent of women's injuries in one State in 1930.

The most striking difference between men's and women's injuries in this classification is in the proportion of infections. In Illinois in 1930 the proportion of women's injuries that were infections was not far from twice the proportion of men's. In Iowa in both 1930 and 1931 women had about  $2\frac{1}{2}$  times as high a proportion as men had. In the latter State infections ranked second in women's injuries in both years. This is a type of injury almost completely preventable and one that may have the most serious results. Woman-employing industries might conduct an intensive educational campaign to reduce the number of infections.

Two significant points in connection with infections stated by Dr. Mayers<sup>8</sup> may properly be emphasized here: (1) A small, jagged, and irregular wound is much more dangerous from the standpoint of infection than is a clean-cut one, no matter how large and dangerous looking the latter may be; (2) when the wound is large and the injury is a dramatic one, medical care usually is sought, but workers need educating as to the dangers of infection and the need for early treatment of even minor injuries.

<sup>8</sup> New York. Department of Labor. Industrial Bulletin, June 1932, p. 282. Infection, by May R. Mayers, M. D.

TABLE 4.—Distribution of injuries to male and female employees by nature of injury, 1930 and 1931

[For sources of information, see appendix]

Nature of injury	Number <sup>1</sup>										Percent <sup>1</sup>									
	1930					1931					1930					1931				
	Illinois <sup>2</sup>		Indiana		Iowa <sup>3</sup>	Indiana		Iowa <sup>3</sup>			Illinois <sup>2</sup>		Indiana		Iowa <sup>3</sup>	Indiana		Iowa <sup>3</sup>		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total.....	44,038	1,883	30,003	1,815	6,880	315	21,264	1,579	5,045	270										
Not reported and indefinite.....	562	33	616	43			491	44												
Total reported.....	43,476	1,850	29,387	1,772	6,880	315	20,773	1,535	5,045	270	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Amputation.....	1,609	66	521	15	125	3	388	14	80	4	3.7	3.6	1.8	.8	1.8	1.0	1.9	.9	1.6	1.5
Asphyxiation.....	37	1									.1	1								
Bruise, contusion, or abrasion.....	10,137	381	6,275	322	1,457	52	4,295	285	960	39	23.3	20.6	21.4	18.2	21.2	16.5	20.7	18.6	19.0	14.4
Burn or scald.....	4 2,094	4 124	1,599	127	351	21	1,039	106	242	11	4 4.8	4 6.7	5.4	7.2	5.1	6.7	5.0	6.9	4.8	4.1
Concussion.....	59	5	20	3	20	1	15	1	12	1	.1	.3	.1	.2	.3	.3	.1	.1	.2	.4
Crushing.....	227	1	381	14			290	8			.5	.1	1.3	.8			1.4	.5		
Cut or laceration.....	8,955	416	5,770	486	1,693	99	4,124	439	1,138	79	20.6	22.5	19.6	27.4	24.6	31.4	19.9	28.6	22.6	29.3
Dislocation.....	369	19	( <sup>6</sup> )	( <sup>6</sup> )	48	3	( <sup>6</sup> )	( <sup>6</sup> )	61	2	.8	1.0	( <sup>6</sup> )	( <sup>6</sup> )	.7	1.0	( <sup>6</sup> )	( <sup>6</sup> )	1.2	.7
Drowning.....	6		3								( <sup>7</sup> )		( <sup>7</sup> )							
Electric shock.....	67	2			24				14	1	.2	.1			.3				3	.4
Foreign substance in eye.....					342	5			205	3					5.0	1.6			4.1	1.1
Fracture.....	7,557	201	3,322	87	804	19	2,253	85	530	11	17.4	10.9	11.3	4.9	11.7	6.0	10.8	5.5	10.5	4.1
Freezing.....	88				7						.2				.1					
Gas fumes.....					17				13						.2				3	
Infection.....	3,371	240			620	66			549	72	7.8	13.0			9.0	21.0			10.9	26.7
Inflammation.....	600	33									1.4	1.8								
Internal injury.....			60	7	10	1	37	2	11				.2	.4	.1	.3	.2	.1	.2	
Puncture.....	896	61			( <sup>8</sup> )	( <sup>8</sup> )					2.1	3.3			( <sup>8</sup> )	( <sup>8</sup> )				
Sickness.....	278	6									.6	.3								
Sprain or strain.....	9 6,932	9 280	10 4,875	10 217	9 1,083	9 33	10 3,812	10 198	9 934	9 38	9 15.9	9 15.1	10 16.6	10 12.2	9 15.7	9 10.5	10 18.4	10 12.9	9 18.5	9 14.1
Multiple injuries.....					213	5			296						3.1	1.6			5.9	3.3
Not otherwise classified.....	194	14	6,561	494	66	7	4,520	397			.4	.8	22.3	27.9	1.0	2.2	21.8	25.9		

<sup>1</sup> For period covered and injuries tabulated see chart II, facing p. 9.<sup>2</sup> Closed compensable cases.<sup>3</sup> Some classifying done by Women's Bureau. The numbers reported for a 2-year period have been divided by 2.<sup>4</sup> Includes blisters not otherwise classified.<sup>5</sup> Includes punctures.<sup>6</sup> Included in sprain or strain.<sup>7</sup> Less than 0.05 percent.<sup>8</sup> Included in cut or laceration.<sup>9</sup> Includes cases of hernia.<sup>10</sup> Includes dislocations and cases of hernia.

Sewing-machine needle injuries are a kind of punctured wound that in many cases becomes infected, and there are thousands of such injuries.<sup>9</sup> There were 912 sewing-machine needle injuries compensated in New York State in 1931—45 percent of all injuries in the textile industries of the State. They cost in compensation \$64,350. An average of about 40 needle injuries a day are reported in New York City alone. These amount to about 12,000 injuries in 1 year and about 20 percent are infected. Most of the injuries do not involve a loss of time of more than a week, so they are not compensated, but each one is a potential infection hazard.

Another large group of injuries to both men and women are sprains and strains. This class constituted over 15 percent of men's injuries and over 10 percent of women's injuries in both years.

### **Location of injury**

Illinois for 1930 and Indiana for 1930 and 1931 give a more detailed analysis showing, by nature of injury, the part of the body injured. This is shown in tables 5 and 6, which include percentage distribution according to nature and to location. About 60 percent of women's injuries in each State were to the upper extremities. This was also the principal part of the body affected in men's injuries but in a less proportion (about 40 percent) of all men's injuries. Lower extremities were second in rank, being involved in over one-fifth of women's injuries and about three-tenths of men's. Injuries to the trunk were twice as common among men's injuries as among women's. In Illinois the largest proportion of the injuries to upper extremities was cuts or lacerations, infections ranking second with women and fractures with men. Contusions ranked second with both men and women in Indiana.

<sup>9</sup> Ibid., p. 283. Needle Accidents in the Clothing Trades, by Robert B. Northrup.

TABLE 5.—*Nature and location of injuries to male and female employees, Illinois, 1 1930*

[For source of information, see appendix]

Nature of injury	Location of injury																	
	Total number		Not reported		Total reported		Head (not otherwise classified)		Face and neck		Trunk		Upper extremities		Lower extremities		Other and not classified	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER																		
Total.....	39,928	2,408	193	8	39,735	2,400	2,376	112	1,277	59	6,924	221	16,573	1,400	11,530	565	1,055	43
Not reported.....	720	61	170	7	550	54	103	10	12	-----	134	12	142	19	143	13	16	-----
Total reported.....	39,208	2,347	23	1	39,185	2,346	2,273	102	1,265	59	6,790	209	16,431	1,381	11,387	552	1,039	43
Amputation or enucleation.....	1,227	87	-----	-----	1,227	87	39	-----	-----	-----	2	-----	1,106	87	80	-----	-----	-----
Asphyxiation (except drowning).....	27	2	-----	-----	27	2	-----	-----	-----	-----	4	-----	-----	-----	-----	-----	23	2
Blister, not otherwise classified.....	21	6	-----	-----	21	6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Bruise, contusion, or abrasion.....	8,953	457	5	-----	8,948	457	484	29	136	12	1,788	92	2,533	150	3,768	157	239	17
Burn or scald.....	1,904	145	-----	1	1,904	144	147	-----	188	11	35	5	713	88	581	31	240	9
Concussion.....	61	9	-----	-----	61	9	56	9	-----	-----	3	-----	1	-----	-----	-----	1	-----
Crushing.....	106	-----	1	-----	105	-----	17	-----	-----	-----	35	-----	-----	-----	-----	-----	53	-----
Cut or laceration.....	8,030	540	2	-----	8,028	540	821	36	765	26	140	2	5,184	426	1,040	46	78	4
Dislocation.....	319	26	-----	-----	319	26	-----	-----	-----	-----	31	4	206	18	82	4	-----	-----
Drowning.....	5	-----	-----	-----	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	5
Electric shock.....	57	2	1	-----	56	2	2	-----	-----	-----	2	-----	2	-----	1	-----	49	2
Fracture.....	7,200	293	1	-----	7,199	293	218	6	98	4	923	24	2,830	177	3,080	82	50	-----
Freezing.....	64	-----	-----	-----	64	-----	1	-----	-----	-----	1	-----	45	-----	15	-----	1	-----
Infection (septic).....	3,126	322	2	-----	3,124	322	142	5	33	2	33	3	2,366	280	538	32	12	-----
Inflammation.....	518	42	3	-----	515	42	265	11	8	1	38	-----	116	20	75	8	13	2
Puncture.....	781	65	-----	-----	781	65	45	1	5	-----	30	-----	299	53	402	11	-----	-----
Sickness (general).....	282	4	1	-----	281	4	1	-----	-----	-----	22	-----	1	-----	2	-----	255	3
Sprain or strain (including hernia).....	6,290	320	4	-----	6,286	320	-----	-----	20	3	3,628	74	968	74	1,663	175	7	3
Not otherwise classified.....	237	18	3	-----	234	18	35	5	10	-----	75	5	46	2	55	5	13	1

PERCENT DISTRIBUTION BY NATURE OF INJURY

Total reported	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	( <sup>2</sup> )
Amputation or enucleation	3.1	3.7	1.7						( <sup>2</sup> )		6.7	6.3	.7			2.2
Asphyxiation (except drowning)	.1	.1							.1							
Blister, not otherwise classified	.1	.3				.1					.1	.4	( <sup>3</sup> )			
Bruise, contusion, or abrasion	22.8	19.5	21.3	28.4	10.8	20.3	26.3	44.0	15.4	10.9	33.1	28.4	23.0			
Burn or scald	4.9	6.2	6.5		14.9	18.6	.5	2.4	4.3	6.4	5.1	5.6	23.1			
Concussion	.2	.4	2.5	8.8			( <sup>3</sup> )		( <sup>2</sup> )				.1			
Crushing	.3		.7				.5						5.1			
Cut or laceration	20.5	23.0	36.1	35.3	60.5	44.1	2.1	1.0	31.6	30.8	9.1	8.3	7.5			
Dislocation	.8	1.1					.5	1.9	1.3	1.3	.7	.7				
Drowning	( <sup>2</sup> )												.5			
Electric shock	.1	.1	.1				( <sup>2</sup> )	( <sup>3</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	4.7			
Fracture	18.4	12.5	9.6	5.9	7.7	6.8	13.6	11.5	17.2	12.8	27.0	14.9	4.8			
Freezing	.2		( <sup>3</sup> )		.1		( <sup>3</sup> )		.3		.1		.1			
Infection (septic)	8.0	13.7	6.2	4.9	2.6	3.4	.5	1.4	14.4	20.3	4.7	5.8	1.2			
Inflammation	1.3	1.8	11.7	10.8	.6	1.7	.6		.7	1.4	.7	1.4	1.3			
Puncture	2.0	2.8	2.0	1.0	.4		.4		1.8	3.8	3.5	2.0				
Sickness (general)	.7	.2	( <sup>3</sup> )				.3		( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.2	24.5			
Sprain or strain (including hernia)	16.0	14.0			1.6	5.1	53.4	34.5	5.9	5.4	14.6	31.7	.7			
Not otherwise classified	.6	.8	1.5	4.9	.8		1.1	2.4	.3	.1	.5	.9	1.3			

PERCENT DISTRIBUTION BY LOCATION OF INJURY

Total reported	100.0	100.0	5.8	4.3	3.2	2.5	17.3	8.9	41.9	58.9	29.1	23.5	2.7	1.8
Amputation or enucleation	100.0	100.0	3.2				.2		90.1	100.0	6.5			
Asphyxiation (except drowning)	( <sup>2</sup> )	( <sup>2</sup> )												
Blister, not otherwise classified	( <sup>2</sup> )	( <sup>2</sup> )												
Bruise, contusion, or abrasion	100.0	100.0	5.4	6.3	1.5	2.6	20.0	20.1	28.3	32.8	42.1	34.4	2.7	3.7
Burn or scald	100.0	100.0	7.7		9.9	7.6	1.8	3.5	37.4	61.1	30.5	21.5	12.6	6.2
Concussion	100.0	( <sup>2</sup> )	91.8				4.9		1.6				1.6	
Crushing	100.0		16.2				33.3						50.5	
Cut or laceration	100.0	100.0	10.2	6.7	9.5	4.8	1.7	.4	64.6	78.9	13.0	8.5	1.0	.7
Dislocation	100.0	( <sup>2</sup> )					9.7		64.6		25.7			
Drowning	( <sup>2</sup> )													
Electric shock	100.0	( <sup>2</sup> )	3.6				3.6		3.6		1.8		87.5	
Fracture	100.0	100.0	3.0	2.0	1.4	1.4	12.8	8.2	39.3	60.4	42.8	28.0	.7	
Freezing	100.0		1.6		1.6		1.6		70.3		23.4		1.6	
Infection (septic)	100.0	100.0	4.5	1.6	1.1	.6	1.1	.9	75.7	87.0	17.2	9.9	.4	
Inflammation	100.0	( <sup>2</sup> )	51.5		1.6		7.4		22.5		14.6		2.5	
Puncture	100.0	100.0	5.8	1.5	.6		3.8		38.3	81.5	51.5	16.9		
Sickness (general)	100.0	( <sup>2</sup> )	.4				7.8		.4		.7		90.7	
Sprain or strain (including hernia)	100.0	100.0			.3	.9	57.7	22.5	15.4	22.5	26.5	53.2	.1	.9
Not otherwise classified	100.0	( <sup>2</sup> )	15.0		4.3		32.1		19.7		23.5		5.6	

<sup>1</sup> Compensable cases occurring.

<sup>2</sup> Not computed; base less than 50.

<sup>3</sup> Less than 0.05 percent.

TABLE 6.—*Nature and location of injuries to male and female employees, Indiana, 1930 and 1931*

[For sources of information, see appendix]

Nature of injury	Location of injury													
	Total reported		Head		Face and neck		Trunk		Upper extremities		Lower extremities		Not otherwise classified	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>1</sup> IN 1930														
Total.....	29,999	1,815	2,951	106	783	25	5,059	152	11,738	1,090	8,849	399	619	43
Not reported.....	612	43											612	43
Total reported.....	29,387	1,772	2,951	106	783	25	5,059	152	11,738	1,090	8,849	399	7	
Amputation.....	521	15							478	14	43	1		
Burn and scald.....	1,599	127	233	5	249	11	84	3	609	79	422	29	2	
Concussion.....	20	3	20	3										
Contusions.....	6,275	322	163	10	74	2	642	35	2,494	175	2,901	100	1	
Crushing.....	381	14	7		1		40		220	13	113	1		
Cuts and lacerations.....	5,770	486	629	28	250	7	43	1	4,069	407	779	43		
Dislocations, sprains, strains (including hernia).....	<sup>2</sup> 4,875	<sup>2</sup> 217			32	1	<sup>2</sup> 2,713	<sup>2</sup> 44	860	77	1,270	95		
Fracture.....	3,322	87	68		72		550	15	1,246	48	1,386	24		
Not otherwise classified.....	<sup>3</sup> 6,624	<sup>3</sup> 501	1,831	60	105	4	<sup>3</sup> 987	<sup>3</sup> 54	1,762	277	1,935	106	4	

PERCENT DISTRIBUTION<sup>1</sup> BY NATURE OF INJURY IN 1930

Total reported.....	100.0	100.0	100.0	100.0	100.0	(4)	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)
Amputation.....	1.8	.8							4.1	1.3	.5	.3		
Burn and scald.....	5.4	7.2	7.9	4.7	31.8		1.7	2.0	5.2	7.2	4.8	7.3		
Concussion.....	.1	.2	.7	2.8										
Contusions.....	21.4	18.2	5.5	9.4	9.5		12.7	23.0	21.3	16.1	32.8	25.1		
Crushing.....	1.3	.8	.2		1		.8		1.9	1.2	1.3	.3		
Cuts and lacerations.....	19.6	27.4	21.3	26.4	31.9		.8	.7	34.7	37.3	8.8	10.8		
Dislocations, sprains, strains (including hernia).....	<sup>2</sup> 16.6	<sup>2</sup> 12.2			4.1		<sup>2</sup> 53.6	<sup>2</sup> 28.9	7.3	7.1	14.4	23.8		
Fracture.....	11.3	4.9	2.3		9.2		10.9	9.9	10.6	4.4	15.7	6.0		
Not otherwise classified.....	<sup>3</sup> 22.5	<sup>3</sup> 28.3	62.0	56.6	13.4		<sup>3</sup> 19.5	<sup>3</sup> 35.5	15.0	25.4	21.9	26.6		

PERCENT DISTRIBUTION<sup>1</sup> BY LOCATION OF INJURY IN 1930

Total reported.....	100.0	100.0	10.0	6.0	2.7	1.4	17.2	8.6	39.9	61.5	30.1	22.5	(5)	-----
Amputation.....	100.0	(4)							91.7		8.3			
Burn and scald.....	100.0	100.0	14.6	3.9	15.6	8.7	5.3	2.4	38.1	62.2	26.4	22.8	0.1	
Concussion.....	(4)	(4)												
Contusions.....	100.0	100.0	2.6	3.1	1.2	.6	10.2	10.9	39.7	54.3	46.2	31.1	(5)	
Crushing.....	100.0	(4)	1.8		.3		10.5		57.7		29.7			
Cuts and lacerations.....	100.0	100.0	10.9	5.8	4.3	1.4	.7	.2	70.5	83.7	13.5	8.8		
Dislocations, sprains, strains (including hernia).....	<sup>2</sup> 100.0	<sup>2</sup> 100.0			.7	.5	<sup>2</sup> 55.7	<sup>2</sup> 20.3	17.6	35.5	26.1	43.8		
Fracture.....	100.0	100.0	2.0		2.2		16.6	17.2	37.5	55.2	41.7	27.6		
Not otherwise classified.....	<sup>3</sup> 100.0	<sup>3</sup> 100.0	27.6	12.0	1.6	.8	<sup>3</sup> 14.9	<sup>3</sup> 10.8	26.6	55.3	29.2	21.2	.1	

See footnotes at end of table.

TABLE 6.—*Nature and location of injuries to male and female employees, Indiana, 1930 and 1931—Continued*

Nature of injury	Location of injury													
	Total reported		Head		Face and neck		Trunk		Upper extremities		Lower extremities		Not otherwise classified	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>1</sup> IN 1931														
Total.....	21,264	1,579	1,936	96	542	25	3,960	144	8,348	919	5,975	348	503	47
Not reported.....	491	44												
Total reported.....	20,773	1,535	1,936	96	542	25	3,960	144	8,348	919	5,975	348	491	44
Amputation.....	388	14							362	14	26			
Burn and scald.....	1,039	106	141	8	160	9	54	4	415	63	266	21	3	1
Concussion.....	15	1	15	1										
Contusions.....	4,295	285	132	10	38	2	500	39	1,741	141	1,881	92	3	1
Crushing.....	290	8	4		2		34		171	7	79	1		
Cuts and lacerations.....	4,124	439	430	24	188	4	23		2,963	371	520	40		
Dislocations, sprains, strains, (including hernia).....	3,812	198			24	1	2,233	47	602	54	953	96		
Fracture.....	2,253	85	48	4	57	2	381	13	812	45	951	21	4	
Not otherwise classified.....	4,557	399	1,166	49	73	7	735	41	1,282	224	1,299	77	2	1

PERCENT DISTRIBUTION<sup>1</sup> BY NATURE OF INJURY IN 1931

Total reported.....	100.0	100.0	100.0	100.0	100.0	(4)	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)
Amputation.....	1.9	.9							4.3	1.5	.4			
Burn and scald.....	5.0	6.9	7.3	8.3	29.5		1.4	2.8	5.0	6.9	4.5	6.0		
Concussion.....	.1	.1	.8	1.0										
Contusions.....	20.7	18.6	6.8	10.4	7.0									
Crushing.....	1.4	.5	.2		.4		12.6	27.1	20.9	15.3	31.5	26.4		
Cuts and lacerations.....	19.9	28.6	22.2	25.0	34.7		.9		2.0	.8	1.3	.3		
Dislocations, sprains, strains (including hernia).....	18.4	12.9			4.4		.6		35.5	40.4	8.7	11.5		
Fracture.....	10.8	5.5	2.5	4.2	10.5		56.4	32.6	7.2	5.9	15.9	27.6		
Not otherwise classified.....	6 21.9	6 26.0	60.2	51.0	13.5		6 18.6	6 28.5	15.4	24.4	21.7	22.1		

PERCENT DISTRIBUTION<sup>1</sup> BY LOCATION OF INJURY IN 1931

Total reported.....	100.0	100.0	9.3	6.3	2.6	1.6	19.1	9.4	40.2	59.9	28.8	22.7	0.1	0.2
Amputation.....	100.0	(4)							93.3		6.7			
Burn and scald.....	100.0	100.0	13.6	7.5	15.4	8.5	5.2	3.8	39.9	59.4	25.6	19.8	.3	.9
Concussion.....	(4)	(4)												
Contusions.....	100.0	100.0	3.1	3.5	.9	.7	11.6	13.7	40.5	49.5	43.8	32.3	.1	.4
Crushing.....	100.0	(4)	1.4		.7		11.7		59.0		27.2			
Cuts and lacerations.....	100.0	100.0	10.4	5.5	4.6	.9	.6		71.8	84.5	12.6	9.1		
Dislocations, sprains, strains (including hernia).....	100.0	100.0			.6	.5	58.6	23.7	15.8	27.3	25.0	48.5		
Fracture.....	100.0	100.0	2.1	4.7	2.5	2.4	16.9	15.3	36.0	52.9	42.2	24.7		
Not otherwise classified.....	6 100.0	6 100.0	25.6	12.3	1.6	1.8	6 16.1	6 10.3	28.1	56.1	28.5	19.3	(4)	.3

<sup>1</sup> For period covered and injuries tabulated, see chart II facing p. 9.

<sup>2</sup> Includes 645 male and 7 female "hernias."

<sup>3</sup> Includes 60 male and 7 female internal injuries and 3 male drownings.

<sup>4</sup> Not computed; base less than 50.

<sup>5</sup> Less than 0.05 percent.

<sup>6</sup> Includes 37 male and 2 female internal injuries.

Considered by principal type of injury, it will be noted that over three-fourths of cuts and lacerations suffered by women in Illinois, over four-fifths in Indiana, and about two-thirds of those by men in each State, were to the upper extremities. The largest proportion of bruises, contusions, or abrasions affected the lower extremities, except for women in Indiana, where upper extremities ranked first. Upper extremities received high proportions for both men and women in other cases, too. Of infections among women in Illinois, not far from nine-tenths were of injuries to the hands, arms, or fingers.

Though complete data as to nature or location of injury have not been available for New York State, a special analysis of back injuries among women was made for 1930.<sup>10</sup> During the 12 months ended June 30, 1930, there were 7,683 persons compensated for back injuries in this State. Of these, 428 were to women, 5.6 percent of all women's compensated injuries. These do not include fractures and dislocated vertebrae resulting from very serious accidents. Most of them were strains, bruises, or lacerations. None of the women died or were permanently disabled. Notwithstanding the fact that they were the common back injuries, the average length of disability for women was 8.4 weeks.

About 70 percent of these women were injured by falls—on stairs and steps, from elevations such as chairs, boxes, and ladders, or on level surfaces. Many falls on stairs were attributed to shoe heels catching on stair treads. Though the reports were not complete on this point, a number of restaurant workers gave slipping on wet floors as the cause of injury.

About one-sixth of the 428 women suffered strains from handling heavy objects. In 8 of the 72 cases disability lasted from 7 to 13 weeks. Nine other workers were even more seriously injured. In two instances the combined total disability amounted to 235½ weeks. The analysis concluded that women should be warned against the strain of lifting something not ordinarily handled by them.

Over half of these back injuries were to employees in clerical and personal service. Hotels and clubs had the largest number of injured. Most of these were waitresses, maids, cooks, cleaners, and helpers. Those employed in the care of apartments and offices were the next largest group. Almost all these were janitresses, cleaners, and maids. Clerical service—principally telephone operators and clerks—had 42 back injuries, the most frequent cause being falls on stairs.

Over one-fourth of women's back injuries occurred in manufacturing, the largest number in any single industry being in the manufacture of clothing. The group of industries making metal products and machinery ranked second, a considerable number of injuries being caused by lifting heavy material.

Commercial industries reported 70 back injuries. Saleswomen were the principal group affected.

These back injuries occurred to a somewhat older group than did compensated injuries in New York in general. The largest number of back injuries were to persons of 25 to 29 years, whereas total injuries were most numerous to those of 20 to 24.

<sup>10</sup> New York. Department of Labor. Industrial Bulletin, April 1931, pp. 222 and 224.

**DATA AS TO INJURED PERSONS****Age**

In 1930 and 1931, as in earlier years, the most striking difference between men's and women's injuries is the age of the victims. In each of the 6 States reporting this in 1930 and the 7 in 1931 (shown in table 7), the largest group of women were 16 to 20 years old. In no State were the men of such ages a large proportion. Though a larger proportion of all employed women than of all employed men are in this age group, there is evidence to show that youth and its characteristic inexperience are factors in accident frequency.

TABLE 7.—Distribution of injuries to male and female employees by age of injured, 1930 and 1931

[For sources of information, see appendix]

Age	Illinois <sup>1</sup>		Indiana		Maryland		Massachusetts		New Jersey		New York		Rhode Island		Wisconsin	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>2</sup> IN 1930																
Total.....	44,038	1,883	30,003	1,815	12,517	889	55,906	5,835	25,525	2,058	97,733	9,579	3,281	467	19,143	927
Total reported.....	43,490	1,855	29,540	1,774	12,213	856	55,906	5,835	25,525	2,058	90,197	8,654	3,218	464	18,784	903
Under 16 years.....	69	3			40	26	413	85	89	32	207	60	15	5	<sup>3</sup> 238	<sup>3</sup> 34
16 to 20 years.....	3,237	440	<sup>4</sup> 1,885	<sup>4</sup> 350	1,396	261	6,168	1,344	2,199	458	7,767	1,954	459	145	<sup>3</sup> 2,728	<sup>3</sup> 258
21 to 25 years.....	<sup>5</sup> 4,878	<sup>5</sup> 290			2,126	142	9,084	1,149	<sup>6</sup> 23,237	<sup>6</sup> 1,568	13,809	1,556	454	89	<sup>3</sup> 2,838	<sup>3</sup> 143
26 to 30 years.....	<sup>5</sup> 6,065	<sup>5</sup> 239	<sup>4</sup> 9,765	<sup>4</sup> 674	1,979	112	7,924	712			13,882	1,194	426	45	<sup>3</sup> 2,426	<sup>3</sup> 75
31 to 35 years.....	<sup>5</sup> 6,000	<sup>5</sup> 209			1,565	94	7,183	668			12,515	940	412	47	<sup>3</sup> 2,200	<sup>3</sup> 86
36 to 40 years.....	<sup>5</sup> 6,183	<sup>5</sup> 234	<sup>4</sup> 7,617	<sup>4</sup> 363	1,497	69	7,189	591			12,717	982	372	40	<sup>3</sup> 2,233	<sup>3</sup> 94
41 to 45 years.....	<sup>5</sup> 5,525	<sup>5</sup> 175			1,156	67	5,272	481			9,697	672	319	30	<sup>3</sup> 1,821	<sup>3</sup> 66
46 to 50 years.....	<sup>5</sup> 4,478	<sup>5</sup> 105	<sup>4</sup> 5,668	<sup>4</sup> 237	939	36	4,529	373			7,802	591	254	28	<sup>3</sup> 1,511	<sup>3</sup> 52
51 years and over.....	<sup>5</sup> 7,055	<sup>5</sup> 160	<sup>4</sup> 4,605	<sup>4</sup> 150	1,515	49	8,144	432			11,801	705	507	35	<sup>3</sup> 2,789	<sup>3</sup> 95
PERCENT <sup>3</sup> IN 1930																
Total reported.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 16 years.....	.2	.2			.3	3.0	.7	1.5	.3	1.6	.2	.7	.5	1.1	<sup>3</sup> 1.3	<sup>3</sup> 3.8
16 to 20 years.....	7.4	23.7	<sup>4</sup> 6.4	<sup>4</sup> 19.7	11.4	30.5	11.0	23.0	8.6	22.3	8.6	22.6	14.3	31.2	<sup>3</sup> 14.5	<sup>3</sup> 28.6
21 to 25 years.....	<sup>5</sup> 11.2	<sup>5</sup> 15.6			17.4	16.6	16.2	19.7	<sup>6</sup> 91.0	<sup>6</sup> 76.2	15.3	18.0	14.1	19.2	<sup>3</sup> 15.1	<sup>3</sup> 15.8
26 to 30 years.....	<sup>5</sup> 13.9	<sup>5</sup> 12.9	<sup>4</sup> 33.1	<sup>4</sup> 38.0	16.2	13.1	14.2	12.2			15.4	13.8	13.2	9.7	<sup>3</sup> 12.9	<sup>3</sup> 8.3
31 to 35 years.....	<sup>5</sup> 13.8	<sup>5</sup> 11.3			12.8	11.0	12.8	11.4			13.9	10.9	12.8	10.1	<sup>3</sup> 11.7	<sup>3</sup> 9.5
36 to 40 years.....	<sup>5</sup> 14.2	<sup>5</sup> 12.6	<sup>4</sup> 25.8	<sup>4</sup> 20.5	12.3	8.1	12.9	10.1			14.1	11.3	11.6	8.6	<sup>3</sup> 11.9	<sup>3</sup> 10.4
41 to 45 years.....	<sup>5</sup> 12.7	<sup>5</sup> 9.4			9.5	7.8	9.4	8.2			10.8	7.8	9.9	6.5	<sup>3</sup> 9.7	<sup>3</sup> 7.3
46 to 50 years.....	<sup>5</sup> 10.3	<sup>5</sup> 5.7	<sup>4</sup> 19.2	<sup>4</sup> 13.4	7.7	4.2	8.1	6.4			8.6	6.8	7.9	6.0	<sup>3</sup> 8.0	<sup>3</sup> 5.8
51 years and over.....	<sup>5</sup> 16.2	<sup>5</sup> 8.6	<sup>4</sup> 15.6	<sup>4</sup> 8.5	12.4	5.7	14.6	7.4			13.1	8.1	15.8	7.5	<sup>3</sup> 14.8	<sup>3</sup> 10.5

NUMBER 2 IN 1931

Age	Illinois <sup>1</sup>		Indiana		Maryland		Massachusetts		Minnesota		New Jersey		New York		Rhode Island		Wisconsin	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total .....	31,300	2,087	21,264	1,579	9,705	696	45,180	4,826	7 27,189	7 2,636	21,229	1,979	89,033	9,391	2,440	354	16,067	876
Total reported .....	31,074	2,069	21,022	1,552	9,466	671	45,180	4,826	24,718	2,308	19,040	1,781	82,053	8,426	2,356	343	15,745	854
Under 16 years .....	45	3			29	12	176	35	44	1	59	7	115	29	6	2	3 149	3 25
16 to 20 years .....	1,827	475	4 1,011	4 266	940	186	4,352	1,160	2,199	574	1,661	475	6,367	1,718	273	98	3 2,014	3 242
21 to 25 years .....	3,302	301			1,640	124	7,127	996	4,402	567	2,154	279	12,485	1,603	331	69	3 2,443	3 136
26 to 30 years .....	4,243	292	4 6,760	4 585	1,498	80	6,726	606	4,082	324	2,666	195	12,859	1,113	296	46	3 2,166	3 95
31 to 35 years .....	4,328	242			1,313	64	5,926	498	3,472	227	2,758	178	11,736	877	304	40	3 1,991	3 85
36 to 40 years .....	4,727	267	4 5,561	4 338	1,191	72	5,831	551	3,283	215	2,762	183	11,790	968	294	37	3 1,950	3 87
41 to 45 years .....	4,078	182			890	44	4,676	350	2,444	155	2,330	136	9,004	712	247	20	3 1,597	3 75
46 to 50 years .....	3,293	125	4 4,321	4 224	724	36	3,773	285	1,839	115	1,784	132	7,189	632	219	11	3 1,317	3 46
51 years and over .....	5,231	182	4 3,369	4 139	1,241	53	6,593	345	2,953	130	2,866	196	10,508	774	386	20	3 2,118	3 63

PERCENT 2 IN 1931

Total reported .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	7 100.0	7 100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 16 years .....	.1	.1			.3	1.8	.4	.7	.2	(3)	.3	.4	.1	.3	.3	.6	3 9	3 2.9
16 to 20 years .....	5.9	23.0	4 4.8	4 17.1	9.9	27.7	9.6	24.0	8.9	24.9	8.7	26.7	7.8	20.4	11.6	28.6	3 12.8	3 28.3
21 to 25 years .....	10.6	14.5			17.3	18.5	15.8	20.6	17.8	24.6	11.3	15.7	15.2	19.0	14.0	20.1	3 15.5	3 15.9
26 to 30 years .....	13.7	14.1	4 32.2	4 37.7	15.8	11.9	14.9	12.6	16.5	14.0	14.0	10.9	15.7	13.2	12.6	13.4	3 13.8	3 11.1
31 to 35 years .....	13.9	11.7			13.9	9.5	13.1	10.3	14.0	9.8	14.5	10.0	14.3	10.4	12.9	11.7	3 12.6	3 10.0
36 to 40 years .....	15.2	12.9	4 26.5	4 21.8	12.6	10.7	12.9	11.4	13.3	9.3	14.5	10.3	14.4	11.5	12.5	10.8	3 12.4	3 10.2
41 to 45 years .....	13.1	8.8			9.4	6.6	10.3	7.3	9.9	6.7	12.2	7.6	11.0	8.5	10.5	5.8	3 10.1	3 8.8
46 to 50 years .....	10.6	6.0	4 20.6	4 14.4	7.6	5.4	8.4	5.9	7.4	5.0	9.4	7.4	8.8	7.5	9.3	3.2	3 8.4	3 5.4
51 years and over .....	16.8	8.8	4 16.0	4 9.0	13.1	7.9	14.6	7.1	11.9	5.6	15.1	11.0	12.8	9.2	16.4	5.8	3 13.5	3 7.4

<sup>1</sup> Closed compensable cases.

<sup>2</sup> For period covered and injuries tabulated see chart II, facing p. 9.

<sup>3</sup> Age groups are 17 and under, 18 and under 23, 23 and under 28, and in 5-year groups to 53 and over.

<sup>4</sup> Age groupings are under 20, 20 and under 30, and in 10-year groups to 50 and over.

<sup>5</sup> Age groupings are 21 to 24, 25 to 29, and in 5-year groups.

<sup>6</sup> 21 and over.

<sup>7</sup> The numbers reported for a 2-year period have been divided by 2.

<sup>8</sup> Less than 0.05 percent.

For this period comparison is possible with data from the census of 1930, similar to that made with census data of 1920 in the first bulletin in this series on accidents. The following tabulation lists the 9 States with the proportion of women injured who were 16 and under 21 years of age and the proportion women 16 and under 20 formed of all gainfully employed women. Though the census data do not include the age 20, the proportion injured is so much higher in every case that youth undoubtedly is a factor in the incidence of accidents to women. Too much attention cannot be given to the hazards of employment surrounding young persons, especially girls.

TABLE 8.—*Accident frequency among girls and older women, by State*

State	Percent of injured women 16 and under 21 years old <sup>1</sup>		Percent of all gainfully occupied women 16 and under 20 years old <sup>2</sup>	Percent of injured women 46 or more years old <sup>1</sup>		Percent of all gainfully occupied women 45 or more years old <sup>2</sup>
	1930	1931		1930	1931	
Illinois.....	23.7	23.0	14.9	<sup>3</sup> 14.3	<sup>3</sup> 14.8	17.5
Indiana.....	<sup>4</sup> 19.7	<sup>4</sup> 17.1	<sup>4</sup> 12.8	<sup>5</sup> 21.8	<sup>5</sup> 23.4	<sup>5</sup> 31.8
Maryland.....	30.5	27.7	13.9	9.9	13.3	22.0
Massachusetts.....	23.0	24.0	12.7	13.8	13.1	22.5
Minnesota.....	-----	24.9	12.7	-----	10.6	18.7
New Jersey.....	22.3	26.7	18.7	-----	<sup>7</sup> 18.4	16.7
New York.....	22.6	20.4	15.0	15.0	16.7	17.9
Rhode Island.....	31.2	28.6	17.5	13.6	9.0	19.6
Wisconsin.....	<sup>6</sup> 28.6	<sup>6</sup> 28.3	<sup>7</sup> 36.2	<sup>8</sup> 16.3	<sup>8</sup> 12.8	19.2

<sup>1</sup> From table 7.

<sup>2</sup> U. S. Bureau of the Census. Fifteenth Census: 1930, vol. IV, Population, Occupations, table 8.

<sup>3</sup> Includes all 45 or more.

<sup>4</sup> Includes all under 20.

<sup>5</sup> Includes all 40 or more.

<sup>6</sup> 18 and under 23.

<sup>7</sup> 18 and under 25.

<sup>8</sup> Includes all 43 or more.

This conclusion is supported by the fact that women 46 years of age and over had considerably fewer accidents than their number among the gainfully employed would indicate. Census figures shown are for women of 45 and more, and figures available for the injured women were in most cases for women of 46 and more. But even in 2 States where the age grouping was the same and in 2 where the grouping of the injured was more inclusive, the percent of women injured remained smaller than the percent women of these ages formed of all gainfully employed women. This was true in Indiana also, where the group 40 years and older is considerably smaller than the comparable group reported by the census as gainfully occupied. This is true in spite of the fact, generally conceded, that older persons recover from injuries more slowly than do girls and boys, and so more of their accidents would be reportable to compensation authorities. Differences in exposure undoubtedly are a partial explanation of the small proportion of injuries to older women, but the steadying influences of age and experience also are factors of importance. This is especially important to bear in mind at a time when industries are refusing employment on the basis of age at 40 years or even younger.

**Age and extent of disability**

While it is established that young women have a disproportionate number of injuries, the evidence presented in table 9 with regard to seriousness of injury by age is not so definite. Leaving for the moment the two worst classes of injury, analysis of permanent partial cases in 1930 seems to show younger women at least as liable as older women to such disabilities. In every State but New York in 1930 the younger women had a higher proportion of such injuries than had the older women, more injuries to older women than to the younger ones being temporary. The evidence is not clear in 1931, the proportion that permanent partial injuries formed of all injuries being less in the case of women under 21 than of the older women in 4 of the 6 States reporting.

TABLE 9.—Distribution of injuries to male and female employees by extent of disability and age group, 1930 and 1931

[For sources of information, see appendix]

State and age group	Number <sup>1</sup>										Percent <sup>1</sup>									
	Male					Female					Male					Female				
	Total	Fatal	Per- man- ent total	Per- man- ent par- tial	Tem- po- rary	Total	Fatal	Per- man- ent total	Per- man- ent par- tial	Tem- po- rary	Total	Fatal	Per- man- ent total	Per- man- ent par- tial	Tem- po- rary	Total	Fatal	Per- man- ent total	Per- man- ent par- tial	Tem- po- rary
1930																				
Illinois: <sup>2</sup>																				
Under 21 years....	3,306	32	1	<sup>3</sup> 921	<sup>4</sup> 2,352	443	-----	-----	<sup>3</sup> 114	<sup>3</sup> 329	100.0	1.0	( <sup>6</sup> )	<sup>3</sup> 27.9	<sup>4</sup> 71.1	100.0	-----	-----	<sup>3</sup> 25.7	<sup>5</sup> 74.3
21 years and over..	40,151	601	30	<sup>3</sup> 11,733	<sup>7</sup> 27,787	1,411	2	-----	<sup>3</sup> 261	<sup>3</sup> 1,148	100.0	1.5	0.1	<sup>3</sup> 29.2	<sup>7</sup> 69.2	100.0	0.1	-----	<sup>3</sup> 18.5	<sup>8</sup> 81.4
Maryland:																				
Under 21 years....	1,436	6	-----	57	1,373	287	-----	-----	17	270	100.0	.4	-----	4.0	95.6	100.0	-----	-----	5.9	94.1
21 years and over..	10,777	91	1	509	10,176	569	2	-----	15	552	100.0	.8	( <sup>6</sup> )	4.7	94.4	100.0	.4	-----	2.6	97.0
Massachusetts:																				
Under 21 years....	6,581	13	-----	119	6,449	1,429	-----	-----	41	1,388	100.0	.4	-----	4.0	95.6	100.0	-----	-----	5.9	94.1
21 years and over..	49,325	327	7	953	48,038	4,406	4	-----	66	4,336	100.0	.8	( <sup>6</sup> )	4.7	94.4	100.0	.4	-----	2.6	97.0
New Jersey:																				
Under 21 years....	2,288	25	1	( <sup>9</sup> )	( <sup>9</sup> )	490	-----	-----	( <sup>9</sup> )	( <sup>9</sup> )	100.0	1.1	( <sup>9</sup> )	( <sup>9</sup> )	( <sup>9</sup> )	100.0	-----	-----	( <sup>9</sup> )	( <sup>9</sup> )
21 years and over..	23,237	314	11	( <sup>9</sup> )	( <sup>9</sup> )	1,568	5	1	( <sup>9</sup> )	( <sup>9</sup> )	100.0	1.4	( <sup>9</sup> )	( <sup>9</sup> )	( <sup>9</sup> )	100.0	.3	0.1	( <sup>9</sup> )	( <sup>9</sup> )
New York:																				
Under 21 years....	7,974	71	-----	1,344	6,559	2,014	5	-----	250	1,759	100.0	.9	-----	16.9	82.3	100.0	.2	-----	12.4	87.3
21 years and over..	82,223	1,202	48	18,808	62,165	6,640	21	-----	1,286	5,333	100.0	1.5	.1	22.9	75.6	100.0	.3	-----	19.4	80.3
Wisconsin:																				
Under 21 years....	<sup>10</sup> 2,966	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 300	( <sup>9</sup> )	<sup>10</sup> 292	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 39	( <sup>9</sup> )	<sup>10</sup> 100.0	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 10.1	( <sup>9</sup> )	<sup>10</sup> 100.0	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 13.4	( <sup>9</sup> )
21 years and over..	<sup>10</sup> 15,818	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 1,843	( <sup>9</sup> )	<sup>10</sup> 611	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 61	( <sup>9</sup> )	<sup>10</sup> 100.0	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 11.7	( <sup>9</sup> )	<sup>10</sup> 100.0	( <sup>9</sup> )	( <sup>9</sup> )	<sup>10</sup> 10.0	( <sup>9</sup> )



Of the 87 fatal and permanent total cases to women in the 2 years, 10 occurred to women under 21. This is somewhat higher than their proportion among the gainfully employed, but the figures are too small for the drawing of conclusions.

### **Age and cause of injury**

In each year New Jersey has reported statistics on the cause of disability by age groups that have considerable importance in planning a prevention program. The data for 1930 and 1931, shown in table 10, corroborate further the conclusions made in the bulletin covering the years 1928 and 1929. These are restated briefly here, omitting the discussion.

There are very decided differences in the cause of disability between younger and older women and between men and women of each age class. In each year considerably over one-third of the injuries to women under 21 were caused by machinery. A similar proportion of the injuries to women 21 years and over were caused by falls. Twice as high a percentage of young women as of women 21 and over had accidents with machinery, and the older women had more than twice the percentage shown by younger women of injuries caused by falls. While younger men had a higher share of injuries from machinery and older men from falls, the differences in proportion were not great. Both classes of men suffered most disabilities from the handling of objects and hand tools, which also ranked high as a cause of women's injuries. By age, the difference in proportions of injuries from this cause was comparatively slight for either men or women. A considerable part of male injuries were by vehicles, and an appreciably larger part of accidents to boys under 21 than to older men were so caused.

TABLE 10.—*Distribution of injuries to male and female employees by cause and age group, New Jersey*

[For sources of information, see appendix]

Cause of injury	1930				1931			
	Male		Female		Male		Female	
	Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over
NUMBER <sup>1</sup>								
Total.....	2, 288	23, 237	490	1, 568	1, 720	219, 509	482	<sup>2</sup> 1, 497
Machinery.....	469	2, 465	187	308	312	1, 924	182	284
Falls of persons.....	247	3, 955	92	583	189	3, 486	69	522
Handling of objects and hand tools.....	800	8, 280	112	282	582	7, 131	130	311
Stepping on or striking against objects.....	163	1, 513	33	127	127	1, 149	47	102
Explosions, electricity, heat, etc.....	107	1, 111	19	81	78	899	19	77
Falling objects.....	75	1, 617	7	45	56	1, 135	6	44
Vehicles.....	275	2, 253	6	30	232	1, 944	7	38
Harmful substances and occupational disease.....	33	646	6	20	40	603	1	16
Miscellaneous and indefinite.....	119	1, 397	28	92	104	1, 238	21	103
PERCENT <sup>1</sup>								
Total.....	100. 0	100. 0	100. 0	100. 0	100. 0	<sup>2</sup> 100. 0	100. 0	<sup>3</sup> 100. 0
Machinery.....	20. 5	10. 6	38. 2	19. 6	18. 1	9. 9	37. 8	19. 0
Falls of persons.....	10. 8	17. 0	18. 8	37. 2	11. 0	17. 9	14. 3	34. 9
Handling of objects and hand tools.....	35. 0	35. 6	22. 9	18. 0	33. 8	36. 6	27. 0	20. 8
Stepping on or striking against objects.....	7. 1	6. 5	6. 7	8. 1	7. 4	5. 9	9. 8	6. 8
Explosions, electricity, heat, etc.....	4. 7	4. 8	3. 9	5. 2	4. 5	4. 6	3. 9	5. 1
Falling objects.....	3. 3	7. 0	1. 4	2. 9	3. 3	5. 8	1. 2	2. 9
Vehicles.....	12. 0	9. 7	1. 2	1. 9	13. 5	10. 0	1. 5	2. 5
Harmful substances and occupational disease.....	1. 4	2. 8	1. 2	1. 3	2. 3	3. 1	. 2	1. 1
Miscellaneous and indefinite.....	5. 2	6. 0	5. 7	5. 9	6. 0	6. 3	4. 4	6. 9

<sup>1</sup> For period covered and injuries tabulated see chart II, facing p. 9.

<sup>2</sup> Includes 2,189 cases for which age was not stated.

<sup>3</sup> Includes 198 cases for which age was not stated.

The influence of youth in the causation of accidents seems fairly well established, and certainly from this standpoint the demand for young girls rather than older women as machine operators is unfortunate. Study of individual industries probably would point to the necessity for prohibiting the work of young girls and boys on certain machines and for further safeguarding their employment on others.

### Age and wage

The serious aspect of injuries to youths lies not only in their frequency and severity but in the low compensation received, due to the lower wage of young persons. The only statistics available to show this are those for permanent partial disability cases in Wisconsin, 1930 and 1931 (see table 11). In 1931 the average weekly wage for all injured women was \$19.22, but of the 14 girls under 21 who were injured, 13 averaged \$14.62 a week and 1 earned \$9. In both years women reached the peak of their earning capacity at 36 to 40 years. It is especially unfortunate that young girls living on a wage that allows little or no saving for emergencies, and who must receive even a lower compensation because of the low wage, should be faced with some disability permanently impairing their earning power.

TABLE 11.—*Distribution of permanent partial disability cases in Wisconsin, 1930 and 1931, by age, sex, and wage*

[For sources of information, see appendix]

Age	1930						1931					
	Male			Female			Male			Female		
	Number	Per cent distribution	Average weekly wage	Number	Per cent distribution	Average weekly wage	Number	Per cent distribution	Average weekly wage	Number	Per cent distribution	Average weekly wage
Total.....	2, 164	-----	\$30. 68	100	-----	\$17. 83	1, 601	-----	\$29. 51	78	-----	\$19. 22
Not reported.....	21	-----	-----	-----	-----	-----	17	-----	-----	2	-----	-----
Total reported.....	2, 143	100. 0	-----	100	100. 0	-----	1, 584	100. 0	-----	76	100. 0	-----
14 to 15 years.....	1	( <sup>1</sup> )	27. 00	1	1. 0	17. 00	1	0. 1	22. 00	1	1. 3	9. 00
16 to 20 years.....	171	8. 0	21. 69	30	30. 0	16. 53	104	6. 6	19. 54	13	17. 1	14. 62
21 to 25 years.....	324	15. 1	28. 46	13	13. 0	16. 00	194	12. 2	26. 73	13	17. 1	16. 69
26 to 30 years.....	308	14. 4	31. 73	14	14. 0	18. 50	206	13. 0	30. 42	8	10. 5	17. 50
31 to 35 years.....	270	12. 6	33. 88	13	13. 0	19. 38	210	13. 3	32. 73	9	11. 8	22. 22
36 to 40 years.....	275	12. 8	33. 81	8	8. 0	21. 50	203	12. 8	32. 61	6	7. 9	28. 33
41 to 45 years.....	195	9. 1	32. 88	7	7. 0	18. 86	172	10. 9	30. 02	10	13. 2	17. 80
46 to 50 years.....	207	9. 7	31. 15	4	4. 0	14. 75	148	9. 3	30. 68	4	5. 3	19. 75
51 to 55 years.....	132	6. 2	30. 27	5	5. 0	18. 80	116	7. 3	30. 55	5	6. 6	24. 60
56 to 60 years.....	113	5. 3	31. 04	-----	-----	-----	101	6. 4	27. 89	2	2. 6	26. 00
61 to 65 years.....	81	3. 8	29. 36	3	3. 0	20. 00	75	4. 7	31. 05	3	3. 9	23. 67
66 to 70 years.....	48	2. 2	28. 33	1	1. 0	19. 00	31	2. 0	25. 23	2	2. 6	15. 50
71 to 75 years.....	18	. 8	27. 17	1	1. 0	15. 00	19	1. 2	25. 47	-----	-----	-----
76 to 80 years.....	-----	-----	-----	-----	-----	-----	4	. 3	32. 25	-----	-----	-----

<sup>1</sup> Less than 0.05 percent.

### Marital status and number of dependents

There are few data as to marital status of injured persons and the only States compiling such data by sex are Illinois and North Carolina (see tables 12 and 13). It is strikingly apparent in Illinois that married women are exposed to greater hazards than are single women. While married women are little over one-fourth (26.7 percent) of all gainfully occupied women in this State, they sustained over two-fifths of all injuries to women in 1930, nearly as many as single women, who constitute not far from three-fifths of the gainfully employed women. These data were available also for 1929 and the relative proportions were very similar. This is even more remarkable considered in relation to age data. In Illinois as in other States the largest proportion of injured women were 16 to 20 years of age, a group including, without doubt, a greater proportion of single women than the older groups.

The explanation of this preponderance of married women among the injured is to be found in differences of occupation. Table 14 lists the largest proportions of accidents to women in Illinois in the following industrial groups: Manufacturing, under which the main groups reporting injury were food, beverages, and tobacco; metals and metal goods, including machinery and vehicles; textiles, including clothing; and clerical, professional, and personal service, under which hotel and restaurant employees were the largest group of injured. Correspondingly, the census reports a larger proportion of married women in each of these industries than the married women were of all gainfully occupied. Of all women in manufacturing, 30.8 percent were married; of laborers in food and allied products, 37.3 percent; of slaughtering and meat packing employees, 40.7 percent; of iron, and

steel, machinery and vehicle employees, 31 percent; in the suit, coat, and overall industry, 37.7 percent; in knit goods, 30.4 percent; of all domestic and personal service employees, 33.9 percent; and of the waitress group, 37.6 percent.

TABLE 12.—*Marital status of injured women and number of their children under 16, by average weekly wage, Illinois, 1930*<sup>1</sup>

[For source of information, see appendix]

Marital status and number of children under 16	Number of women injured	Number with wage not reported	Total with wage reported		Women whose average weekly wage was—			
					Less than \$15		\$40 and over	
			Number	Percent	Number	Percent	Number	Percent
Total .....	2,408	7	2,401	100.0	655	27.3	85	3.5
Marital status not reported <sup>2</sup> .....	31	1	30		4		1	
Total with marital status reported .....	2,377	6	2,371	100.0	651	27.5	84	3.5
Single .....	1,105	3	1,102	100.0	293	26.6	50	4.5
Married .....	977	1	976	100.0	296	30.3	21	2.2
No children .....	517		517	100.0	135	26.1	16	3.1
1 or 2 children .....	341	1	340	100.0	116	34.1	3	.9
3 or more children .....	111		111	100.0	42	37.8	2	1.8
Number of children not reported .....	8		8		3			
Widowed or divorced .....	295	2	293	100.0	62	21.2	13	4.4
No children .....	187	2	185	100.0	38	20.5	10	5.4
1 or 2 children .....	86		86	100.0	21	24.4	3	3.5
3 or more children .....	13		13		2			
Number of children not reported .....	9		9		1			

<sup>1</sup> Compensable cases occurring. Percents not computed where base less than 50.

<sup>2</sup> Some of these had children under 16.

On the other hand, single women were between 70 and 80 percent of all telephone operators, clerical employees, and professional persons, and were practically half (49.7 percent) of all saleswomen. Over a third (34.7 percent) of the gainfully employed single women were in clerical occupations and just over 17 percent (17.1) were in professional work. These occupational differences explain the greater accident frequency of married women, and they add proof that married women are working through necessity and not choice or they would not be so largely in the less attractive and more hazardous industries.

The situation in North Carolina, as shown in table 13, is somewhat different. Both single and married women have a larger proportion of injuries, and the widowed and divorced have a smaller proportion, than their distribution among the gainfully occupied would indicate. Again the explanation lies in difference of occupation. Almost 75 percent of all the gainfully employed widows in North Carolina were in agriculture and domestic service, two industries where reporting of accidents is not required. Just over 21 percent of the widows, as compared to about 14 percent of the single women and 17 percent of those married, were servants. This concentration where accidents are not compensable probably is the explanation for the low proportion of injuries occurring to the widowed. On the other hand, over 30 percent of married women and just over 25 percent of single women

were in manufacturing, where the hazards of machinery are greatest and reporting is likely to be most complete.

TABLE 13.—*Marital status of injured women, North Carolina, 1930*

[For source of information see appendix]

Marital status	Number	Percent	Marital status of all gainfully occupied women <sup>1</sup>
Total.....	2, 297	100. 0	100. 0
Single.....	1, 173	51. 1	47. 2
Married.....	917	39. 9	35. 5
Widowed and divorced.....	207	9. 0	17. 2

<sup>1</sup>U. S. Bureau of the Census. Fifteenth Census: 1930, vol. IV, Population, Occupations, p. 75. Census includes "status unknown" with single women in computing percents.

Several other facts presented in table 12 are of interest in a study of the costs to society of industrial injury. The first of these is the number of married women who had children at least partially dependent upon their earnings. This is not, by any means, a complete picture of family responsibility, as many single women have dependents and many a married woman has other relatives besides her children dependent on her earnings.

Of the married women 46.6 percent had children, 11.5 percent having 3 or more. Of the widowed and divorced women, 34.6 percent had children.

Whatever the cause—age or occupation or both—the figures show clearly a lower wage status for women with children under 16 than for those who had no children. For example, 34.1 percent of the married women with 1 or 2 children and 37.8 percent of those with 3 or more had weekly wages of less than \$15, in contrast to 26.1 percent of the married women who had no children under 16. Of the widowed or divorced women who had children, 23.2 percent had earnings of less than \$15, in contrast to 20.5 percent of those without children. At the opposite extreme as regards wages—\$40 or more a week—were 3.1 percent of the married women and 5.4 percent of the widowed or divorced women without children, but only 1.1 percent of the married women and 3 percent of the widowed and divorced who had children. Thus the mothers of children had less compensation than had childless women, instead of more, during the disability caused by industrial injury. The inequities of the much lower wages of women than of men are another story and one that need not be repeated here. (See pages 54–56.)

## INDUSTRIES IN WHICH INJURIES OCCURRED

Five States reported injury by industry and by sex in 1930 and 1931. While these data are not complete for each State, they furnish valuable information on the source of injury. (See table 14 and plate III.)

Naturally there is considerable difference between the industries showing a high proportion of men's accidents and those showing a high proportion of women's accidents. Manufacturing was the principal

source of injury both to men and to women in all States but Pennsylvania, where injuries to men in mining and related industries outranked all other groups. In 3 States in 1930 the proportion of women's injuries that were in manufacturing exceeded 50 percent of all women's injuries. Domestic and personal service generally ranked second for women, hotels and restaurants figuring most largely in this.

Only 3 States in 1930, 2 in 1931, reported subgroups under manufacturing. Food, beverages, and tobacco ranked first in number of injuries to women in Indiana and Wisconsin in both years, metals, metal goods, machinery and vehicles in Illinois in 1930. Food, beverages, and tobacco ranked second in Illinois; clothing had the second largest number in Indiana; metals, metal goods, and machinery in Wisconsin. In each of these States the manufacturing of metals and metal goods (machinery included in Wisconsin and machinery and vehicles in Illinois) accounted for the largest group of men injured. Wood and wood products manufacture ranked second for men in each State except Illinois in 1930, where the food group was the second largest.

Of the other main industry groups, the clerical, professional, and personal-service groups ranked second in proportion of women's injuries except in Pennsylvania, where the tabulating of domestic and personal service in the residual group "other" changes the rank. Clerical, professional, and personal service is relatively unimportant in the total of men's injuries, which are caused instead by construction, metallurgy, quarrying, and transportation, with comparatively few injuries to women. Trade accounts for a larger part of women's than of men's accidents in all States and both years, excepting only New Jersey in 1931, where the figures are alike.

The importance of knowing the industry in which the accident occurred, as an aid in formulating prevention policies, cannot be overestimated. Yet only 9 of the 24 States reporting by sex the number of accidents report also the industries in which they occurred. (See chart I.) The usefulness of this information would be increased considerably by knowledge of the man hours of exposure involved, but even without this it is apparent that certain industries need special attention. Of all gainfully occupied women in these 5 States from 17.5 percent to 26.5 percent were in manufacturing, but manufacturing was the source of about half of all women's injuries. Two percent or less of all employed women were in the food, beverages, and tobacco group, but they suffered 11 to 14 percent of women's injuries in the 3 States reporting. Only 5.2 percent of all employed women in Indiana were in the manufacture of clothing, but twice as high a proportion were injured. In each of the 3 States reporting, considerably more women were injured in metal and metal goods manufacture than their proportion of all women employed would indicate. The information available shows what industries are the most hazardous woman employers in these States.

TABLE 14.—Industrial distribution of injuries to male and female employees, 1930 and 1931

[For sources of information, see appendix]

Industry	1930										1931									
	Illinois <sup>1</sup>		Indiana <sup>1</sup>		New Jersey		Pennsylvania		Wisconsin <sup>1</sup>		Illinois		Indiana <sup>1</sup>		New Jersey		Pennsylvania		Wisconsin <sup>1</sup>	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>2</sup>																				
Total reported.....	3 43,934	4 1,878	30,003	1,815	25,525	2,058	138,423	6,256	5 19,137	927	6 31,259	7 2,086	21,264	1,579	21,229	1,979	105,928	5,530	16,063	876
Manufacturing.....	18,543	941	16,051	1,172	10,530	1,055	42,376	2,814	9,705	440	11,817	902	10,721	984	7,885	985	29,185	2,457	7,141	371
Food, beverages, and tobacco.....	3,536	225	2,013	257	-----	-----	-----	-----	1,212	107	-----	-----	1,665	219	-----	-----	-----	-----	1,249	100
Clothing.....	( <sup>9</sup> )	( <sup>9</sup> )	96	189	-----	-----	-----	-----	( <sup>9</sup> )	-----	-----	-----	66	180	-----	-----	-----	-----	( <sup>9</sup> )	( <sup>9</sup> )
Textiles.....	<sup>10</sup> 9,345	<sup>10</sup> 138	110	58	-----	-----	-----	-----	<sup>10</sup> 112	<sup>10</sup> 61	-----	-----	85	33	-----	-----	-----	-----	101	55
Metals and metal goods.....	<sup>11</sup> 9,788	<sup>11</sup> 244	4,347	125	-----	-----	-----	-----	<sup>12</sup> 3,676	<sup>12</sup> 101	-----	-----	2,666	94	-----	-----	-----	-----	<sup>12</sup> 2,310	<sup>12</sup> 66
Machinery and vehicles.....	( <sup>13</sup> )	( <sup>13</sup> )	2,474	56	-----	-----	-----	-----	<sup>14</sup> 579	<sup>14</sup> 3	-----	-----	1,740	46	-----	-----	-----	-----	<sup>14</sup> 413	( <sup>14</sup> )
Laundries and cleaning and dyeing.....	382	96	166	73	-----	-----	-----	-----	( <sup>15</sup> )	( <sup>15</sup> )	-----	-----	80	57	-----	-----	-----	-----	( <sup>15</sup> )	( <sup>15</sup> )
Leather, rubber and composition.....	363	34	339	82	-----	-----	-----	-----	296	43	-----	-----	254	47	-----	-----	-----	-----	260	40
Paper, pulp, and paper goods.....	545	42	295	24	-----	-----	-----	-----	687	43	-----	-----	213	14	-----	-----	-----	-----	582	31
Printing.....	746	55	211	37	-----	-----	-----	-----	( <sup>15</sup> )	( <sup>15</sup> )	-----	-----	160	24	-----	-----	-----	-----	( <sup>15</sup> )	( <sup>15</sup> )
Wood and wood products.....	1,373	46	2,528	108	-----	-----	-----	-----	2,632	33	-----	-----	1,684	100	-----	-----	-----	-----	1,755	25
Stone, clay, and glass products.....	694	13	1,549	41	-----	-----	-----	-----	223	-----	-----	-----	674	44	-----	-----	-----	-----	206	3
Chemicals.....	389	24	1,102	20	-----	-----	-----	-----	75	1	-----	-----	793	28	-----	-----	-----	-----	89	5
Other manufacturing.....	382	24	821	102	-----	-----	-----	-----	213	48	-----	-----	641	98	-----	-----	-----	-----	176	46
Clerical, professional, and personal service.....	2,684	516	706	330	<sup>16</sup> 836	<sup>16</sup> 293	<sup>17</sup> 4,743	<sup>17</sup> 240	868	341	<sup>18</sup> 3,578	<sup>18</sup> 749	544	305	<sup>16</sup> 884	<sup>16</sup> 298	<sup>17</sup> 5,359	<sup>17</sup> 255	936	337
Clerical and professional.....	1,460	209	204	66	-----	-----	-----	-----	-----	-----	<sup>19</sup> 309	<sup>19</sup> 108	173	77	-----	-----	-----	-----	-----	-----
Hotels and restaurants.....	756	268	241	197	-----	-----	-----	-----	-----	-----	-----	-----	221	172	-----	-----	-----	-----	-----	-----
Care and custody of buildings.....	281	33	138	55	-----	-----	-----	-----	-----	-----	-----	-----	126	40	-----	-----	-----	-----	-----	-----
Miscellaneous, including domestic service.....	187	6	23	12	-----	-----	-----	-----	-----	-----	<sup>20</sup> 2,594	<sup>20</sup> 637	24	16	-----	-----	-----	-----	-----	-----
Trade.....	4,329	319	1,872	265	<sup>21</sup> 2,140	<sup>21</sup> 188	8,074	1,161	1,925	107	<sup>22</sup> 3,423	<sup>22</sup> 348	1,679	259	<sup>21</sup> 2,035	<sup>21</sup> 189	7,516	934	1,925	124
Transportation and public utilities.....	4,297	94	2,732	37	3,546	48	7,231	112	2,016	14	<sup>23</sup> 2,285	<sup>23</sup> 78	2,217	24	3,267	43	4,786	92	2,019	12
Construction.....	6,911	5	4,882	7	5,822	8	20,667	42	3,823	-----	5,085	1	2,882	1	4,597	7	13,244	27	3,388	5
Agriculture.....	199	3	283	2	461	5	-----	-----	492	25	196	8	246	2	556	10	-----	-----	442	27
Mining, metallurgy, and quarrying.....	6,971	-----	3,336	-----	653	7	48,469	6	308	-----	4,875	-----	2,792	440	-----	-----	39,545	3	212	-----
Other industries.....	-----	-----	141	2	<sup>16</sup> 1,537	<sup>16</sup> 454	6,863	1,872	-----	-----	-----	-----	183	4	<sup>16</sup> 1,565	<sup>16</sup> 447	6,293	1,762	-----	-----

PERCENT 2

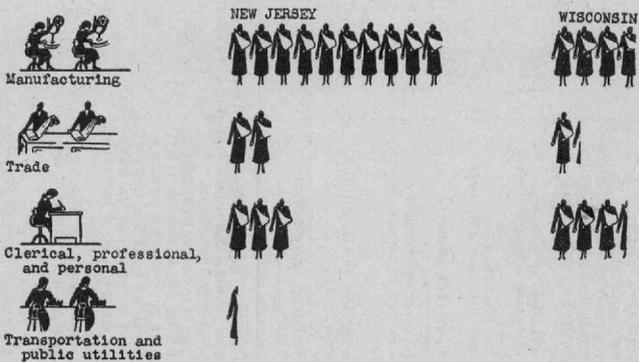
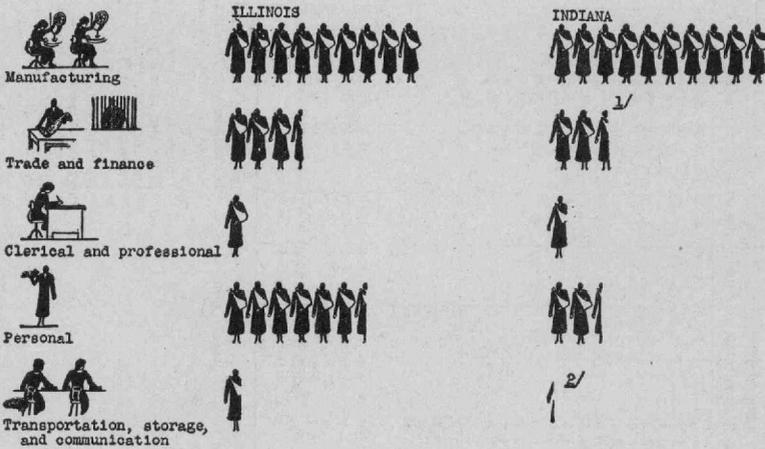
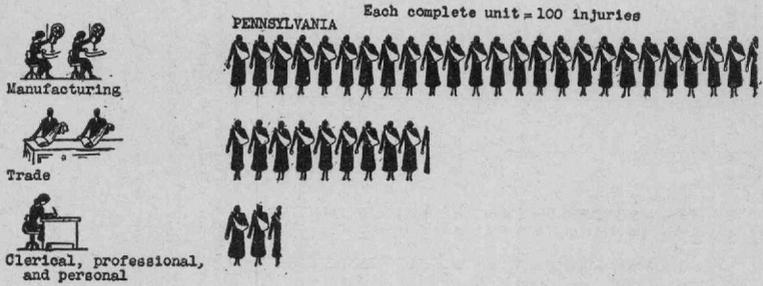
Total reported.....	3 100.0	4 100.0	100.0	100.0	100.0	100.0	100.0	100.0	5 100.0	100.0	6 100.0	7 100.0	100.0	100.0	100.0	100.0	100.0	8 100.0	100.0	
Manufacturing.....	42.2	50.1	53.5	64.6	41.3	51.3	30.6	45.0	50.7	47.5	37.8	43.2	50.4	62.3	37.1	49.8	27.6	44.4	44.5	42.4
Food, beverages, and tobacco.....	8.0	12.0	6.7	14.2	-----	-----	-----	-----	6.3	11.5	-----	-----	7.8	13.9	-----	-----	-----	7.8	11.4	
Clothing.....	(9)	(9)	.3	10.4	-----	-----	-----	-----	(9)	(9)	-----	-----	.3	11.4	-----	-----	-----	(9)	(9)	
Textiles.....	10.8	10 7.3	.4	3.2	-----	-----	-----	-----	10.6	10 6.6	-----	-----	.4	2.1	-----	-----	-----	.6	6.3	
Metals and metal goods.....	11 22.3	11 13.0	14.5	6.9	-----	-----	-----	-----	12 19.2	12 10.9	-----	-----	12.5	6.0	-----	-----	-----	12 14.4	12 7.5	
Machinery and vehicles.....	(13)	(13)	8.2	3.1	-----	-----	-----	-----	14 3.0	14 3	-----	-----	8.2	2.9	-----	-----	-----	14 2.6	(14)	
Laundries and cleaning and dyeing.....	.9	5.1	.6	4.0	-----	-----	-----	-----	(15)	(15)	-----	-----	.4	3.6	-----	-----	-----	(15)	(15)	
Leather, rubber and composition.....	.8	1.8	1.1	4.5	-----	-----	-----	-----	1.5	4.6	-----	-----	1.2	3.0	-----	-----	-----	1.6	4.6	
Paper, pulp, and paper goods.....	1.2	2.2	1.0	1.3	-----	-----	-----	-----	3.6	4.6	-----	-----	1.0	.9	-----	-----	-----	3.6	3.5	
Printing.....	1.7	2.9	.7	2.0	-----	-----	-----	-----	(15)	(15)	-----	-----	.8	1.5	-----	-----	-----	(15)	(15)	
Wood and wood products.....	3.1	2.4	8.4	6.0	-----	-----	-----	-----	13.8	3.6	-----	-----	7.9	6.3	-----	-----	-----	10.9	2.9	
Stone, clay, and glass products.....	1.6	.7	5.2	2.3	-----	-----	-----	-----	1.2	-----	-----	-----	3.2	2.8	-----	-----	-----	1.3	.3	
Chemicals.....	.9	1.3	3.7	1.1	-----	-----	-----	-----	.4	1	-----	-----	3.7	1.8	-----	-----	-----	.6	.6	
Other manufacturing.....	.9	1.3	2.7	5.6	-----	-----	-----	-----	1.1	5.2	-----	-----	3.0	6.2	-----	-----	-----	1.1	5.3	
Clerical, professional, and personal service.....	6.1	27.5	2.4	18.2	10 3.3	10 14.2	17 3.4	17 4.0	4.5	36.8	18 11.4	18 35.9	2.6	19.3	16 4.2	16 15.1	17 5.1	17 4.6	5.8	38.5
Clerical and professional.....	3.3	11.1	.7	3.6	-----	-----	-----	-----	-----	-----	19 1.0	19 5.2	.8	4.9	-----	-----	-----	-----	-----	
Hotels and restaurants.....	1.7	14.3	.8	10.9	-----	-----	-----	-----	-----	-----	-----	-----	1.0	10.9	-----	-----	-----	-----	-----	
Care and custody of buildings.....	.6	1.8	.5	3.0	-----	-----	-----	-----	-----	-----	-----	-----	.6	2.5	-----	-----	-----	-----	-----	
Miscellaneous, including domestic service.....	.4	.3	.1	.7	-----	-----	-----	-----	-----	-----	20 8.3	20 30.5	.1	1.0	-----	-----	-----	-----	-----	
Trade.....	9.9	17.0	6.2	14.6	21 8.4	21 9.1	5.8	18.6	10.1	11.5	22 11.0	22 16.7	7.9	16.4	21 9.6	21 9.6	7.1	16.9	12.0	14.2
Transportation and public utilities.....	9.8	5.0	9.1	2.0	13.9	2.3	5.2	1.8	10.5	1.5	23 7.3	23 3.7	10.4	1.5	15.4	2.2	4.5	1.7	12.6	1.4
Construction.....	15.7	.3	16.3	.4	22.8	.4	14.9	.7	20.0	-----	16.3	(24)	13.6	1	21.7	.4	12.5	.5	21.1	.6
Agriculture.....	.5	.2	.9	.1	1.8	.2	-----	-----	2.6	2.7	.6	(24)	1.2	.1	2.6	.5	-----	-----	2.8	3.1
Mining, metallurgy, and quarrying.....	15.9	-----	11.1	-----	2.6	.3	35.0	.1	1.6	-----	15.6	.4	13.1	-----	2.1	-----	37.3	.1	1.3	
Other industries.....	-----	-----	.5	.1	10 6.0	10 22.1	5.0	29.9	-----	-----	-----	-----	.9	.3	16 7.4	16 22.6	5.9	31.9	-----	

1 Some classifying done by Women's Bureau.  
 2 For period covered and injuries tabulated see chart II, facing p. 9. Closed comparable cases shown for Illinois.  
 3 Excludes 104 not reporting industry.  
 4 Excludes 5 not reporting industry.  
 5 Excludes 6 not reporting industry.  
 6 Excludes 41 not reporting industry.  
 7 Excludes 1 not reporting industry.  
 8 Excludes 4 not reporting industry.  
 9 Is classified with textiles.  
 10 Includes clothing.  
 11 Includes machinery and vehicles.  
 12 Includes machinery.

13 Is classified with metals and metal goods.  
 14 Is vehicles only. Machinery is classified with metal and metal goods.  
 15 Not obtainable. Laundries, cleaning and dyeing, and printing are combined in "other manufacturing."  
 16 Domestic and personal service is included in "other industries."  
 17 State and municipal government.  
 18 Includes "governmental", 675 males and 4 females.  
 19 Professional only.  
 20 Services not otherwise classified.  
 21 Includes garages.  
 22 Trade and finance.  
 23 Transportation, storage, and communication.  
 24 Less than 0.05 percent.

PLATE III. INDUSTRIAL DISTRIBUTION OF INJURIES TO WOMEN IN 5 STATES, 1931

(Industries in which over 5 per cent of all injuries reported in the State were to women. For period covered and injuries tabulated see chart II)



<sup>1/</sup>Trade  
<sup>2/</sup>Transportation and public utilities

TABLE 15.—Distribution of injuries to male and female employees, by industry and age group, 1930 and 1931

[For sources of information, see appendix]

Industry	Illinois—1930				New Jersey—1930				New Jersey—1931			
	Male		Female		Male		Female		Male		Female	
	Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over	Under 21 years	21 years and over
NUMBER <sup>1</sup>												
Total.....	2,683	36,738	549	1,808	2,288	23,237	490	1,568	1,720	<sup>2</sup> 19,509	482	<sup>3</sup> 1,497
Manufacturing.....	1,388	14,351	348	681	1,164	9,366	347	708	781	7,104	346	639
Service.....	<sup>4</sup> 266	<sup>4</sup> 3,911	<sup>4</sup> 78	<sup>4</sup> 724	<sup>5</sup> 79	<sup>5</sup> 757	<sup>5</sup> 25	<sup>5</sup> 268	<sup>5</sup> 67	<sup>5</sup> 817	<sup>5</sup> 23	<sup>5</sup> 275
Trade.....	<sup>6</sup> 359	<sup>6</sup> 3,672	<sup>6</sup> 92	<sup>6</sup> 319	<sup>7</sup> 311	<sup>7</sup> 1,829	<sup>7</sup> 51	<sup>7</sup> 137	<sup>7</sup> 264	<sup>7</sup> 1,771	<sup>7</sup> 50	<sup>7</sup> 139
Transportation and public utilities.....	121	2,676	27	75	245	3,301	21	27	232	3,035	14	29
Construction.....	279	6,036	1	3	289	5,533	-----	8	189	4,408	-----	7
Agriculture.....	17	175	3	6	59	402	1	4	63	493	-----	10
Mining, metallurgy, quarrying.....	253	5,917	-----	-----	24	629	3	4	19	421	-----	-----
Other industries.....	-----	-----	-----	-----	<sup>8</sup> 117	<sup>8</sup> 1,420	<sup>8</sup> 42	<sup>8</sup> 412	<sup>8</sup> 105	<sup>8</sup> 1,460	<sup>8</sup> 49	<sup>8</sup> 398
PERCENT <sup>1</sup>												
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	<sup>2</sup> 100.0	100.0	<sup>3</sup> 100.0
Manufacturing.....	51.7	39.1	63.4	37.7	50.9	40.3	70.8	45.2	45.4	36.4	71.8	42.7
Service.....	<sup>4</sup> 9.9	<sup>4</sup> 10.6	<sup>4</sup> 14.2	<sup>4</sup> 40.0	<sup>5</sup> 3.5	<sup>5</sup> 3.3	<sup>5</sup> 5.1	<sup>5</sup> 17.1	<sup>5</sup> 3.9	<sup>5</sup> 4.2	<sup>5</sup> 4.8	<sup>5</sup> 18.4
Trade.....	<sup>6</sup> 13.4	<sup>6</sup> 10.0	<sup>6</sup> 16.8	<sup>6</sup> 17.6	<sup>7</sup> 13.6	<sup>7</sup> 7.9	<sup>7</sup> 10.4	<sup>7</sup> 8.7	<sup>7</sup> 15.3	<sup>7</sup> 9.1	<sup>7</sup> 10.4	<sup>7</sup> 9.3
Transportation.....	4.5	7.3	4.9	4.1	10.7	14.2	4.3	1.7	13.5	15.6	2.9	1.9
Construction.....	10.4	16.4	.2	.2	12.6	23.8	-----	.5	11.0	22.6	-----	.5
Agriculture.....	.6	.5	.5	.3	2.6	1.7	.2	.3	3.7	2.5	-----	.7
Mining, metallurgy, quarrying.....	9.4	16.1	-----	-----	1.0	2.7	.6	.3	1.1	2.2	-----	-----
Other industries.....	-----	-----	-----	-----	<sup>8</sup> 5.1	<sup>8</sup> 6.1	<sup>8</sup> 8.6	<sup>8</sup> 26.3	<sup>8</sup> 6.1	<sup>8</sup> 7.5	<sup>8</sup> 10.2	<sup>8</sup> 26.6

<sup>1</sup> For period covered and injuries tabulated see chart II, facing p. 9. Compensable cases occurring are shown for Illinois.

<sup>2</sup> Includes 2,189 cases for which age was not stated.

<sup>3</sup> Includes 198 cases for which age was not stated.

<sup>4</sup> Service not otherwise classified, professional service, and governmental service.

<sup>5</sup> Includes clerical and professional service.

<sup>6</sup> Includes finance.

<sup>7</sup> Includes garages.

<sup>8</sup> Includes domestic and personal service.

### Industry and age of the injured

New Jersey and Illinois correlate industry and age for the chief industrial groups. (See table 15.) This information further corroborates conclusions drawn from statistics as to cause of injury. In Illinois almost two-thirds and in New Jersey over two-thirds of the younger women's injuries were incurred in manufacturing, while less than half the older women injured were in manufacturing. On the other hand, women 21 and over in New Jersey had a higher proportion of injuries in clerical and professional than had the younger women. This is true also of the corresponding group in Illinois, which includes professional service, governmental service, and service not otherwise classified. Since a large part of the older group were injured by falls probably many of them were janitresses and cleaners.

More of the young men injured than of the older men were in manufacturing, but the difference was not so great as between the two groups of women. A much higher proportion of the older men injured than of those younger were in construction.

### CAUSE OF INJURY

Some consideration already has been given to the causes of accidents in connection with age for one State. This and three other States have data as to cause by sex. These are listed in table 16.

As might be expected from the analysis of industry, a large part of women's accidents are caused by falls or by machinery. In the two large industrial States here reported, New Jersey and Illinois, these caused higher proportions of women's injuries than in Indiana and Iowa. In each State falls caused the largest number of women's injuries. In most cases the proportion from falls was not appreciably greater than that from machinery, but in Iowa in 1931 falls caused more than twice as many as did machinery, and here accidents caused by hand tools were greater than those caused by machinery. The difference in hazard according to occupation is attested further by the very small proportion of injuries in Iowa resulting from handling of objects, an important cause in large industrial States. Since Iowa gives no data by industry the figures do not of themselves explain the high proportion of accidents to women from hand tools, but the slaughtering and meat-packing industry, an important one in this State, is known to have a disproportionate number of knife injuries, which may account for these figures. The State has a correspondingly high rate of injuries with infections.

Stepping on or striking against objects resulted in about 10 percent of women's injuries in Illinois and almost 20 percent in Indiana. In the latter State this cause ranked higher in 1931 than did machinery.

In Iowa, in both years, men as well as women suffered most disabilities from falls, the wet floors in the slaughtering industry undoubtedly contributing largely to this. In the other States handling of objects caused most accidents to men. Falls ranked second in Illinois and New Jersey. In Indiana both stepping on or striking against objects, and falling objects, caused more injuries to men than did falls. The importance of construction and mining industries in frequency of injury to men is reflected in the much greater proportion of injuries to men than to women caused by falling objects.

TABLE 16.—Distribution of injuries to male and female employees by cause, 1930 and 1931

[For sources of information, see appendix]

Cause of injury	1930								1931							
	Illinois <sup>1</sup>		Indiana <sup>1</sup>		Iowa <sup>1</sup>		New Jersey		Illinois		Indiana <sup>1</sup>		Iowa <sup>1</sup>		New Jersey	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>2</sup>																
Total.....	<sup>3</sup> 43,122	<sup>4</sup> 1,851	30,003	1,815	<sup>5</sup> 6,880	<sup>5</sup> 315	25,525	2,058	<sup>6</sup> 30,793	<sup>7</sup> 2,056	21,264	1,579	<sup>5</sup> 5,045	<sup>5</sup> 270	21,229	1,979
Machinery.....	6,443	443	2,851	390	1,048	52	2,934	495	4,127	458	1,931	282	681	25	2,236	466
Falls of persons.....	6,761	556	4,389	423	1,137	61	4,202	675	4,873	611	3,076	360	936	61	3,675	591
Handling of objects.....	9,472	285	4,734	161	465	6	<sup>8</sup> 9,080	<sup>8</sup> 394	6,959	339	3,657	179	490	9	<sup>8</sup> 7,713	<sup>8</sup> 441
Stepping on or striking against objects.....	4,408	197	4,585	335	382	8	1,676	160	2,222	199	3,284	309	307	7	1,276	149
Hand tools.....	2,654	59	1,224	121	755	46	( <sup>9</sup> )	( <sup>9</sup> )	1,827	74	897	98	536	42	( <sup>9</sup> )	( <sup>9</sup> )
Explosions, electricity, heat, etc.....	1,970	90	1,582	108	130	3	1,218	100	1,408	125	1,030	90	116	3	977	96
Falling objects.....	4,240	67	4,482	66	1,069	13	1,692	52	3,087	60	3,069	82	683	14	1,191	50
Vehicles.....	4,852	47	2,122	32	90	1	2,528	36	3,764	44	1,501	22	33	-----	2,176	45
Harmful substances.....	718	39	346	21	55	5	<sup>9</sup> 679	<sup>9</sup> 26	341	16	260	31	-----	-----	<sup>9</sup> 643	<sup>9</sup> 17
Animals.....	316	2	180	3	12	-----	( <sup>10</sup> )	( <sup>10</sup> )	247	4	143	3	-----	-----	( <sup>10</sup> )	( <sup>10</sup> )
Miscellaneous and indefinite.....	1,288	66	3,508	155	1,737	120	1,516	120	1,938	126	2,386	123	1,263	109	1,342	124
PERCENT <sup>2</sup>																
Total.....	<sup>3</sup> 100.0	<sup>4</sup> 100.0	100.0	100.0	<sup>5</sup> 100.0	<sup>5</sup> 100.0	100.0	100.0	<sup>6</sup> 100.0	<sup>7</sup> 100.0	100.0	100.0	<sup>5</sup> 100.0	<sup>5</sup> 100.0	100.0	100.0
Machinery.....	14.9	23.9	9.5	21.5	15.2	16.5	11.5	24.1	13.4	22.3	9.1	17.9	13.5	9.3	10.5	23.5
Falls of persons.....	15.7	30.0	14.6	23.3	16.5	19.4	16.5	32.8	15.8	29.7	14.5	22.8	18.6	22.6	17.3	29.9
Handling of objects.....	22.0	15.4	15.8	8.9	6.8	1.9	<sup>8</sup> 35.6	<sup>8</sup> 19.1	22.6	16.5	17.2	11.3	9.7	3.3	<sup>8</sup> 36.3	<sup>8</sup> 22.3
Stepping on or striking against objects.....	10.2	10.6	15.3	18.5	5.6	2.5	6.6	7.8	7.2	9.7	15.4	19.6	6.1	2.6	6.0	7.5
Hand tools.....	6.2	3.2	4.1	6.7	11.0	14.6	( <sup>9</sup> )	( <sup>9</sup> )	5.9	3.6	4.2	6.2	10.6	15.6	( <sup>9</sup> )	( <sup>9</sup> )
Explosions, electricity, heat, etc.....	4.6	4.9	5.3	6.0	1.9	1.0	4.8	4.9	4.6	6.1	4.8	5.7	2.3	1.1	4.6	4.9
Falling objects.....	9.8	3.6	14.9	3.6	15.5	4.1	6.6	2.5	10.0	2.9	14.6	5.2	13.5	5.2	5.6	2.5
Vehicles.....	11.3	2.5	7.1	1.8	1.3	.3	9.9	1.7	12.2	2.1	7.1	1.4	.7	-----	10.3	2.3
Harmful substances.....	1.7	2.1	1.2	1.2	.8	1.6	<sup>9</sup> 2.7	<sup>9</sup> 1.3	1.1	.8	1.2	2.0	-----	-----	<sup>9</sup> 3.0	<sup>9</sup> .9
Animals.....	.7	.1	.6	.2	.2	-----	( <sup>10</sup> )	( <sup>10</sup> )	.8	.2	.7	.2	-----	-----	( <sup>10</sup> )	( <sup>10</sup> )
Miscellaneous and indefinite.....	3.0	3.6	11.7	8.5	25.2	38.1	5.9	5.8	6.3	6.1	11.2	7.8	25.0	40.4	6.3	6.3

<sup>1</sup> Some classifying done by Women's Bureau.

<sup>2</sup> For period covered and injuries tabulated see chart II, facing p. 9. Closed compensable cases shown for Illinois.

<sup>3</sup> Excludes 916 not reporting cause.

<sup>4</sup> Excludes 32 not reporting cause.

<sup>5</sup> The numbers reported for a 2-year period have been divided by 2.

<sup>6</sup> Excludes 507 not reporting cause.

<sup>7</sup> Excludes 31 not reporting cause.

<sup>8</sup> Hand tools are included in handling of objects.

<sup>9</sup> Includes occupational disease.

<sup>10</sup> Included in miscellaneous and indefinite.

TABLE 17.—Cause of injuries to male and female employees, Illinois, 1930, by industry group

[For source of information, see appendix]

Cause	Industry group																			
	Total reported		Agriculture and extractive industries		Manufacturing		Construction		Transportation		Communication		Trade and finance		Professional service		Governmental service		Services not otherwise classified	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>1</sup>																				
Total.....	239,010	2,359	6,343	9	15,515	1,024	6,222	5	2,608	10	192	90	3,991	402	371	137	712	8	3,056	674
Machinery.....	5,238	556	469	1	3,558	426	475	-----	130	1	3	2	310	29	31	10	18	1	244	86
Falls of persons.....	6,150	727	431	2	2,021	174	1,580	3	356	1	58	49	706	166	132	68	160	6	706	258
Handling objects.....	8,734	361	989	2	3,882	166	1,278	-----	741	3	19	3	1,048	85	69	16	102	-----	606	86
Stepping on or striking against objects.....	3,067	209	374	-----	1,272	90	623	-----	159	-----	19	7	324	33	26	10	49	-----	221	69
Hand tools.....	2,370	78	471	-----	811	43	415	1	143	-----	15	4	273	8	16	4	36	-----	190	18
Explosions, electricity, heat, etc.....	1,800	109	157	1	970	20	172	-----	52	-----	9	1	109	10	14	10	26	-----	291	67
Falling objects.....	3,952	84	1,729	-----	1,017	31	682	-----	122	-----	5	3	172	21	16	3	95	-----	114	26
Vehicles.....	4,553	59	1,282	3	898	10	424	-----	677	1	41	10	709	19	37	2	156	1	329	13
Occupational disease and industrial poisoning.....	310	30	3	-----	212	8	61	-----	3	1	-----	1	14	6	3	1	-----	-----	14	13
Poisonous and corrosive substances.....	376	16	12	-----	147	7	144	-----	8	-----	2	-----	15	-----	4	3	10	-----	34	6
Animals.....	299	4	87	-----	67	1	28	-----	29	-----	1	-----	37	1	4	-----	8	-----	38	2
Miscellaneous.....	2,161	126	339	-----	660	48	340	1	188	3	20	10	274	24	19	10	52	-----	269	30

PERCENT DISTRIBUTION BY CAUSE OF INJURY

Total.....	100.0	100.0	100.0	(2)	100.0	100.0	100.0	(3)	100.0	(3)	100.0	100.0	100.0	100.0	100.0	100.0	(3)	100.0	100.0	
Machinery.....	13.4	23.6	7.4	-----	22.9	41.6	7.6	-----	5.0	-----	1.6	2.2	7.8	7.2	8.4	7.3	2.5	-----	8.0	12.8
Falls of persons.....	15.8	30.8	6.8	-----	13.0	17.0	25.4	-----	13.7	-----	30.2	54.4	17.7	41.3	35.6	49.6	22.5	-----	23.1	38.3
Handling objects.....	22.4	15.3	15.6	-----	25.0	16.2	20.5	-----	28.4	-----	9.9	3.3	26.3	21.1	18.6	11.7	14.3	-----	19.8	12.8
Stepping on or striking against objects.....	7.9	8.9	5.9	-----	8.2	8.8	10.0	-----	6.1	-----	9.9	7.8	8.1	8.2	7.0	7.3	6.9	-----	7.2	10.2
Hand tools.....	6.1	3.3	7.4	-----	5.2	4.2	6.7	-----	5.5	-----	7.8	4.4	6.8	2.0	4.3	2.9	5.1	-----	6.2	2.7
Explosions, electricity, heat, etc.....	4.6	4.6	2.5	-----	6.3	2.0	2.8	-----	2.0	-----	4.7	1.1	2.7	2.5	3.8	7.3	3.7	-----	9.5	9.9
Falling objects.....	10.1	3.6	27.3	-----	6.6	3.0	11.0	-----	4.7	-----	2.6	3.3	4.3	5.2	4.3	2.2	13.3	-----	3.7	3.9
Vehicles.....	11.7	2.5	20.2	-----	5.8	1.0	6.8	-----	26.0	-----	21.4	11.1	17.8	4.7	10.0	1.5	21.9	-----	10.8	1.9
Occupational disease and industrial poisoning.....	.8	1.3	(4)	-----	1.4	.8	1.0	-----	.1	-----	-----	1.1	.4	1.5	.8	.7	-----	-----	.5	1.9
Poisonous and corrosive substances.....	1.0	.7	.2	-----	.9	.7	2.3	-----	.3	-----	1.0	-----	.4	-----	1.1	2.2	1.4	-----	1.1	.9
Animals.....	.8	.2	1.4	-----	.4	.1	.5	-----	1.1	-----	.5	-----	.9	.2	1.1	-----	1.1	-----	1.2	.3
Miscellaneous.....	5.5	5.3	5.3	-----	4.3	4.7	5.5	-----	7.2	-----	10.4	11.1	6.9	6.0	5.1	7.3	7.3	-----	8.8	4.5

PERCENT DISTRIBUTION BY INDUSTRY

Total.....	100.0	100.0	16.3	0.4	39.8	43.4	15.9	0.2	6.7	0.4	0.5	3.8	10.2	17.0	1.0	5.8	1.8	0.3	7.8	28.6
Machinery.....	100.0	100.0	9.0	.2	67.9	76.6	9.1	-----	2.5	.2	.1	.4	5.9	5.2	.6	1.8	.3	.2	4.7	15.5
Falls of persons.....	100.0	100.0	7.0	.3	32.9	23.9	25.7	.4	5.8	.1	.9	6.7	11.5	22.8	2.1	9.4	2.6	.8	11.5	35.5
Handling objects.....	100.0	100.0	11.3	.6	44.4	46.0	14.6	-----	8.5	.8	.2	.8	12.0	23.5	.8	4.4	1.2	-----	6.9	23.8
Stepping on or striking against objects.....	100.0	100.0	12.2	-----	41.5	43.1	20.3	-----	5.2	-----	.6	3.3	10.6	15.8	.8	4.8	1.6	-----	7.2	33.0
Hand tools.....	100.0	100.0	19.9	-----	34.2	55.1	17.5	1.3	6.0	-----	.6	5.1	11.5	10.3	.7	5.1	1.5	-----	8.0	23.1
Explosions, electricity, heat, etc.....	100.0	100.0	8.7	1.0	53.9	18.3	9.6	-----	2.9	-----	.5	1.0	6.1	9.2	.8	9.2	1.4	-----	16.2	61.5
Falling objects.....	100.0	100.0	43.7	-----	25.7	36.9	17.3	-----	3.1	-----	.1	3.6	4.4	25.0	.4	3.6	2.4	-----	2.9	31.0
Vehicles.....	100.0	100.0	28.2	5.0	19.7	16.9	9.3	-----	14.9	1.7	.9	16.9	15.6	32.2	.8	3.4	3.4	1.7	7.2	22.0
Occupational disease and industrial poisoning.....	100.0	(3)	1.0	-----	68.4	-----	19.7	-----	1.0	-----	-----	-----	4.5	-----	1.0	-----	-----	-----	4.5	-----
Poisonous and corrosive substances.....	100.0	(3)	3.2	-----	39.1	-----	38.3	-----	2.1	-----	.5	-----	4.0	-----	1.1	-----	2.7	-----	9.0	-----
Animals.....	100.0	(3)	29.1	-----	22.4	-----	9.4	-----	9.7	-----	.3	-----	12.4	-----	1.3	-----	2.7	-----	12.7	-----
Miscellaneous.....	100.0	100.0	15.7	-----	30.5	38.1	15.7	.8	8.7	2.4	.9	7.9	12.7	19.0	.9	7.9	2.4	-----	12.4	23.8

<sup>1</sup> Compensable cases occurring.

<sup>2</sup> Excludes 918 injuries to males and 49 to females for which one or both of these factors was not reported.

<sup>3</sup> Not computed; base less than 50.

<sup>4</sup> Less than 0.05 percent.

### Cause according to industry

Table 17 makes possible a further analysis within each industry of the immediate causes of injury in Illinois. Falls, causing the largest number of women's injuries and the second largest number of men's, were principally in manufacturing for men and in services for women. Over one-third of women's falls occurred in services; about one-fourth were in manufacturing and almost as many in trade and finance.

Machinery caused almost one-fourth of women's injuries as compared to slightly more than one-eighth of men's. This difference is due in part to the larger proportion of women's injuries than of men's that are in manufacturing and in part to the heavier work done by men. Handling objects caused more injuries to men in manufacturing than did machinery. Manufacturing accounted for over three-fourths of the disabilities to women from machinery, about two-thirds of those to men.

Handling objects, chief in importance to men, ranked third with women. The greatest number of all injuries from this cause was in manufacturing, though almost a fourth to women were in trade and finance and about another fourth were in services. A considerable number (more than one-tenth) of men's accidents from this cause were in construction and in trade and finance.

Vehicles and falling objects, each causing over 10 percent of men's injuries, were of principal importance in the extractive industries.

### WAGES AND COMPENSATION

Table 18 and plates IV and V show how much less adequate are women's wages than men's to meet an emergency caused by incapacity for work for any length of time. Compensation is based in each State on a certain percentage of the weekly wage received by the injured, with minimum and maximum limits. In Illinois in 1930, 65 percent of the women injured earned less than \$20 a week, while only 11 percent of the men earned so little; in New York 60 percent of the women but only 20 percent of the men received \$20 a week or less. In Wisconsin almost three-fourths of the women in contrast to one-sixth of the men earned under \$20.

PLATE IV. WEEKLY EARNINGS OF INJURED WOMEN BEFORE INJURY, 1931

(Compensation is a certain proportion of earnings before injury)

Each complete figure = 5 percent of total number of women injured

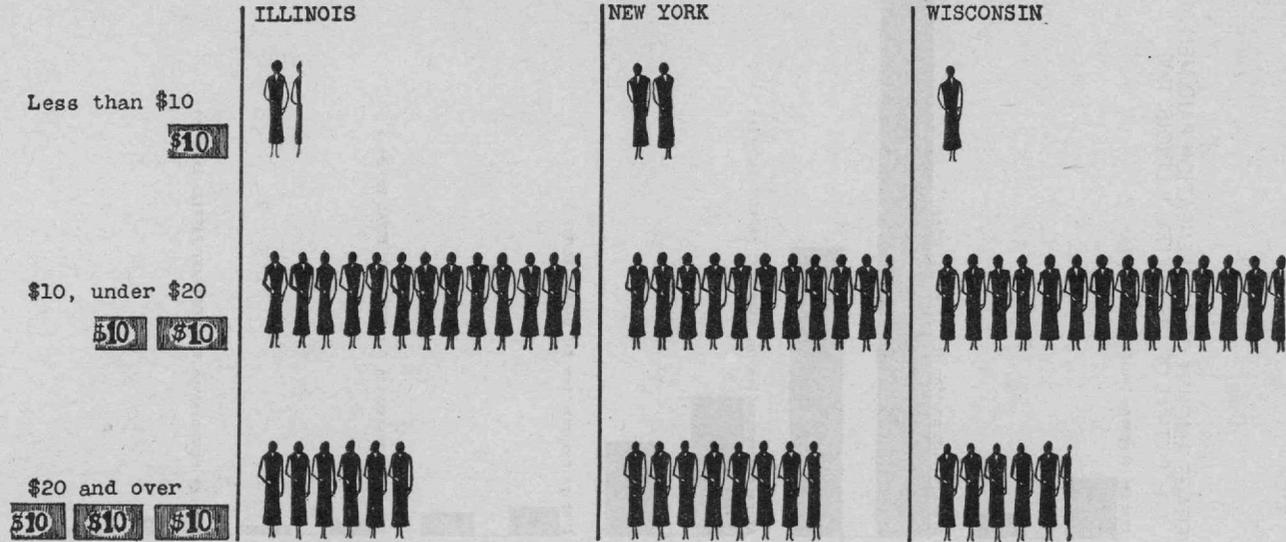


PLATE V. AVERAGE AMOUNT OF COMPENSATION PAID MEN AND WOMEN, BY EXTENT OF DISABILITY, ILLINOIS, 1930

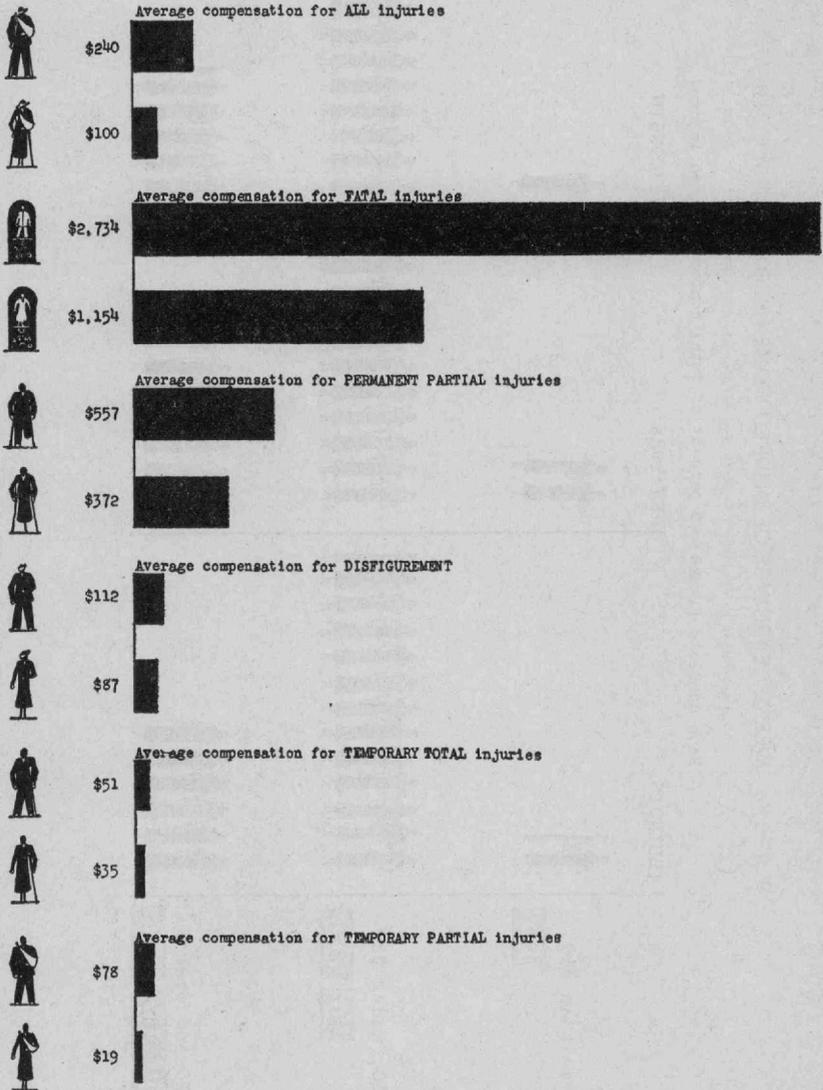


TABLE 18.—Distribution of injuries to male and female employees by weekly wages, 1930 and 1931

[For sources of information, see appendix]

Weekly wage	1930 <sup>1</sup>						1931 <sup>1</sup>					
	Illinois		New York		Wisconsin		Illinois		New York		Wisconsin	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
NUMBER <sup>2</sup>												
Total.....	39,928	2,408	97,733	9,579	19,143	927	30,926	2,241	89,033	9,391	16,067	876
Wages not reported.....	<sup>3</sup> 151	7	2,760	334	13	-----	82	4	2,185	316	8	-----
Total reported.....	39,777	2,401	94,973	9,245	19,130	927	30,844	2,237	86,848	9,075	16,059	876
Less than \$10.....	225	106	<sup>4</sup> 520	<sup>4</sup> 661	77	38	369	163	797	834	105	43
\$10 and less than \$15.....	949	549	<sup>4</sup> 2,733	<sup>4</sup> 2,734	469	318	1,370	683	4,059	2,786	975	330
\$15 and less than \$20.....	3,211	908	<sup>4</sup> 7,385	<sup>4</sup> 2,139	2,525	326	3,397	718	8,941	1,941	2,562	270
\$20 and less than \$25.....	7,539	366	<sup>4</sup> 16,885	<sup>4</sup> 1,511	4,715	139	6,486	331	15,890	1,458	3,957	120
\$25 and less than \$30.....	6,771	212	<sup>4</sup> 20,335	<sup>4</sup> 934	3,311	50	4,718	156	16,594	901	2,754	45
\$30 and less than \$35.....	7,211	118	<sup>4</sup> 14,817	<sup>4</sup> 549	3,607	31	4,676	97	11,766	556	2,700	28
\$35 and less than \$40.....	4,256	57	<sup>4</sup> 9,953	<sup>4</sup> 331	1,945	14	3,042	43	9,818	286	1,386	19
\$40 and less than \$45.....	3,702	25	<sup>4</sup> 6,129	<sup>4</sup> 149	1,088	6	2,540	14	4,527	114	686	9
\$45 and less than \$50.....	1,680	15	<sup>4</sup> 5,725	<sup>4</sup> 130	546	<sup>5</sup> 5	1,186	10	5,339	118	363	<sup>5</sup> 12
\$50 and less than \$55.....	1,395	17	<sup>4</sup> 2,564	<sup>4</sup> 29	382	-----	1,068	12	2,093	22	267	-----
\$55 and less than \$60.....	657	3	<sup>4</sup> 2,282	<sup>4</sup> 38	182	-----	404	3	1,908	24	100	-----
\$60 and over.....	2,181	25	<sup>4</sup> 5,645	<sup>4</sup> 40	283	-----	1,588	7	5,316	35	204	-----
PERCENT <sup>2</sup>												
Total reported.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than \$10.....	.6	4.4	<sup>4</sup> 5	<sup>4</sup> 7.1	.4	4.1	1.2	7.3	.9	9.2	.7	4.9
\$10 and less than \$15.....	2.4	22.9	<sup>4</sup> 2.9	<sup>4</sup> 29.6	2.5	34.3	4.4	30.5	4.7	30.7	6.1	37.7
\$15 and less than \$20.....	8.1	37.8	<sup>4</sup> 7.8	<sup>4</sup> 23.1	13.2	35.2	11.0	32.1	10.3	21.4	16.0	30.8
\$20 and less than \$25.....	19.0	15.2	<sup>4</sup> 17.8	<sup>4</sup> 16.3	24.6	15.0	21.0	14.8	18.1	16.1	24.6	13.7
\$25 and less than \$30.....	17.0	8.8	<sup>4</sup> 21.4	<sup>4</sup> 10.1	17.3	5.4	15.3	7.0	19.1	9.9	17.1	5.1
\$30 and less than \$35.....	18.1	4.9	<sup>4</sup> 15.6	<sup>4</sup> 5.9	18.9	3.3	15.2	4.3	13.5	6.1	16.8	3.2
\$35 and less than \$40.....	10.7	2.4	<sup>4</sup> 10.5	<sup>4</sup> 3.6	10.2	1.5	9.9	1.9	11.3	3.2	8.6	2.2
\$40 and less than \$45.....	9.3	1.0	<sup>4</sup> 6.5	<sup>4</sup> 1.6	5.7	.6	8.2	.6	5.2	1.3	4.3	1.0
\$45 and less than \$50.....	4.2	.6	<sup>4</sup> 6.0	<sup>4</sup> 1.4	2.9	<sup>4</sup> 5	3.8	.4	6.1	1.3	2.3	<sup>5</sup> 1.4
\$50 and less than \$55.....	3.5	.7	<sup>4</sup> 2.7	<sup>4</sup> .3	2.0	-----	3.5	.5	2.4	.2	1.7	-----
\$55 and less than \$60.....	1.7	.1	<sup>4</sup> 2.4	<sup>4</sup> .4	1.0	-----	1.3	.1	2.2	.3	.6	-----
\$60 and over.....	5.5	1.0	<sup>4</sup> 5.9	<sup>4</sup> .4	1.5	-----	5.1	.3	6.1	.4	1.3	-----

<sup>1</sup> In addition Indiana reported the average weekly wage for females as \$13.90 in 1930 and \$13.27 in 1931.

<sup>2</sup> For Illinois, compensable cases occurring, calendar year; New York and Wisconsin, closed compensable cases, calendar year.

<sup>3</sup> Includes 1 receiving no wage. <sup>4</sup> Wage groups are \$10 and under, over \$10 and including \$15, over \$15 and including \$20, and in \$5 groups to over \$60. <sup>5</sup> \$45 and over.

In 1930, from about 1 percent to 4 percent of the women, in contrast to from 13 to 25 percent of the men, made as much as \$40 a week. The relative proportions in 1931 are quite similar.

In the table following is the amount of compensation received by men and women in Illinois for injuries of specified seriousness. The last column shows the percent by which average compensation for women was lower than that for men. The lower compensation to women indicates the lower wages on which compensation is based. Even in fatal cases the compensation to dependents of women averaged less than half as much as the compensation to dependents of men. Though the loss in income to the family usually is not so great when a woman is injured, the real loss may be even greater than when a man is injured. An extraordinary proportion of injured women are married and have children. Injury to a woman often means loss of the home maker as well as loss of earnings, and compensation should take this into account.

TABLE 19.—Total and average amount of compensation paid in Illinois<sup>1</sup> in 1930, by sex and extent of disability

[For source of information, see appendix]

Sex and extent of disability	Number of accidents	Amount of compensation paid		Percent by which average for females is lower than that for males
		Total	Average per accident	
All accidents.....	45,921	\$10,774,609	\$234	-----
Males.....	44,038	10,556,923	240	-----
Females.....	1,883	187,686	100	58.3
Fatal.....	685	1,869,651	2,729	-----
Males.....	683	1,867,344	2,734	-----
Females.....	2	2,307	1,154	57.8
Permanent total.....	38	165,381	4,352	-----
Males.....	38	165,381	4,352	-----
Females.....				-----
Permanent partial.....	11,853	6,540,026	552	-----
Males.....	11,519	6,415,719	557	-----
Females.....	334	124,307	372	33.2
Disfigurement.....	1,370	152,395	111	-----
Males.....	1,321	148,122	112	-----
Females.....	49	4,273	87	22.3
Temporary total.....	31,203	1,574,834	50	-----
Males.....	29,739	1,524,218	51	-----
Females.....	1,464	50,616	35	31.4
Temporary partial.....	182	13,235	73	-----
Males.....	166	12,930	78	-----
Females.....	16	305	19	75.6
Not otherwise classified.....	551	418,051	759	-----
Males.....	534	412,173	772	-----
Females.....	17	5,878	346	55.2
Extent of disability not reported.....	39	11,036	283	-----
Males.....	38	11,036	290	-----
Females.....	1			-----

<sup>1</sup> Closed compensable cases.

APPENDIX

Page references in State reports classifying accident statistics by sex, 1927 to 1931, used in tables 1 to 19

State	Source	Page references for table—																		
		1	2	3	4	5	6	7	8 <sup>1</sup>	9	10	11	12	13	14	15	16	17	18	19
Colorado	Biennial reports of Industrial Commission, periods ended Nov. 30, 1928, 1930, 1932. (Tenth, eleventh, and twelfth reports.) Facing—	22, 10, 8																		
Idaho	Biennial reports of industrial Accident Board, period ended Oct. 31:																			
	1928 (sixth report)	139																		
	1930 (seventh report)	121	121																	
	1932 (eighth report)	87	87																	
Illinois	Annual reports of Department of Labor, years ended June 30:																			
	1928 (eleventh report)	84																		
	1929 (twelfth report)	74																		
	1930 (thirteenth report)	148																		
	Unpublished data for 1930 <sup>2</sup>	(2)	(2)	(2)	(2)	(2)		(2)		(2)		(2)		(2)	(2)	(2)	(2)	(2)	(2)	(2)
	Unpublished data for 1931 <sup>2</sup>	(2)	(2)	(2)				(2)						(2)		(2)		(2)	(2)	(2)
Indiana	Annual reports of Industrial Board, years ended Sept. 30:																			
	1927	2, 3																		
	1928	28, 63																		
	1929	26, 61																		
	1930	4, 50				19, 57		28, 62						8, 50				14, 54		
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