# Work Injuries in the United States During 1946 

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UNITED STATES DEPARTMENT OF LABOR
L. B. Schwellenbach, Secretary

BUREAU OF LABOR STATISTICS
Ewan Clague, Commissioner


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## Letter of Transmittal

United States Department of Labor, Bureat of Labor Statistics, Washington, D. C., October 20, 1947.
The Secretary of Labor:I have the honor to transmit herewith a report on work injuries in the United Statesduring 1946. Over 53,000 establishments participated in the survey on which the reportis based.
This bulletin, a portion of which appeared in the October 1947 Monthly Labor Review, was prepared by Max D. Kossoris, Chief of the Bureau's Division of Industrial Hazards.

Ewan Clague, Commissioner.

Hon. L. B. Schwallenbach,
Secretary of Labor.
Contents
Injury estimates and rates in 1946
Page ..... 1
Estimates of disabling work injuries ..... 1
Injury-frequency rates: Manufacturing ..... 3
Nonmanufacturing ..... 3
Injury severity ..... 4
Appendix tables:
Table A.-Injury rates and injuries by extent of disability, 1946 ..... 6
Table B.-Changes in exposure, disabling injuries, and injury rates for 32,241 identical establishments, 1945 to 1946 ..... 10
Table C.-Estimates of disabilities, by extent, for manufacturing industries 1946 ..... 13
Table D.-Distribution of all reported injuries resulting in permanent partia disability, according to part of body affected, by industry, 1946 ..... 14
Table E.-Indexes of injury-frequency rates in manufacturing, 1926-46 k extent of disability ..... 15

# Work Injuries in the United States 

Injury Estimates and Rates in 1946

## Estimates of Disabling Work Injuries

For the sixth consecutive year, disabling work injuries in the United States exceeded 2 million in 1946. The estimated total of $2,056,000$ disabling injuries constituted an increase of slightly more than 1 percent above the revised 1945 figures $(2,020,300)$. Although the rise was slight, it marked a reversal of the downward trend from the peak in 1943. The 1946 total, nevertheless, was lower than that for any of the war years, 1941-44.

Actual time lost from work because of disabling injuries during 1946 was estimated at about $42 \%$ million days-a sufficient amount of time taken out of production or services to have provided full-time employment over an entire year for about 142,000 workers. In other words, the effect of disabling work injuries was to subtract that many workers from the country's labor force for all of 1946. Taking into consideration standard time charges for future economic losses occasioned by deaths and permanent impairments, the total time loss caused by the year's disabling work injuries was estimated to reach a total of nearly 230 million days, or enough to supply full-time annual employment for about 765,000 workers.

Estimated fatalities resulting from work injuries numbered 16,500-the same as the revised 1945 figure. Permanent total disabilities, which usually incapacitate workers entirely from future industrial employment, and which normally amount to 10 percent of fatalities, remained unchanged at 1,800 . Permanent partial impairments, however, increased to 92,400 -nearly 5,000 above the estimate for the preceding year. As in earlier years, about three-fourths of these impairments were of the hand or fingers. Most of these impairments
will not prevent the workers involved from continuing in industrial employment, but many may require retraining or changes in jobs. The greatest volume of the injuries- $1,945,300$-were temporary in nature and resulted in a time loss of 1 or more days for each disability. In manufacturing, the duration of temporary injuries averaged 17 days.


The major industry group with the largest number of disabling work injuries, in 1945, was manufacturing. Although the 541,500 injuries estimated for this group fell about 50,000 below the 1945 level, 2,500 injuries resulted in death and more than 28,000 , in permanent impairments (table 1).

The major industrial group with the largest number of fatalities-4,500-was agriculture. The data for this industry were extremely meager and have not improved during the last 10 years (1937-46), although more attention has been centered on farm safety in recent years. Work injuries were estimated at about 323,600 .

The injury experience for mining and quarrying during 1946 was only slightly worse than for 1945. The injury total for construction, contrary to the preliminary estimates, increased by only about 20,000 over the preceding year's level. The earlier estimates had indicated a much sharper increase. Fatalities, nevertheless, reached 2,200 in 1946, against 1,700 in 1945.

The services, government, and miscellaneous industries group was estimated to have had the second largest injury total-407,900-and 2,500 of these resulted in deaths. In sharp contrast with manufacturing, however, the number of permanent partial impairments was below 20,000 even though both groups were estimated to have had the same number of fatalities. An important

reason for this difference is the more prevalent use of power machinery in manufacturing. The injury total for this large miscellaneous group was somewhat higher than the 1945 estimate.

The 1946 estimates also indicated higher levels for the remaining major industry groups. For public utilities, the 1946 total of 25,500 was almost 25 percent higher than for 1945. The trade group, including both wholesale and retail, had a

12-percent greater injury volume in 1946 than in the previous year, with a total of 333,100 . Only 1,400 of these, however, were fatal.

Two groups, in addition to manufacturing, experienced decreases. For railroads, the 1946 injury total of 76,000 was about 18,000 below the 1945 figure. For miscellaneous transportation, with a 1946 total of 132,800 , the estimated decrease was about 5 percent below the 1945 level.

Table 1.-Estimated number of disabling injuries during 1946, by industry group [Difference between total number of injuries and injuries to employees represents injuries to self-employed workers]

| Industry group | All disabilities |  | Fatalities |  | Permanent total disabilities |  | Permanent partial disabilities |  | Temporary total disabilities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total | To em. ployees | Total | To employees | Total | To employees | Total | To employees | Total | To employees |
| All groups. | 2,056,000 | 1,614,700 | 16,500 | 11,700 | 1,800 | 1,400 | 92,400 | 72,900 | 1,945, 300 | 1,528,700 |
| Agriculture ${ }^{1}$ - | 323, 600 | 75, 100 | 4,500 | 1,100 | 400 | 100 | 16,200 | 3,700 | 302,500 | 70,200 |
| Mining and quarrying | 83,800 | 79,400 | 1,300 | 1,200 | 200 | 200 | 3,700 | 3,500 | 78,600 | 74,500 |
| Construction ${ }^{3}$ - | 131, 800 | 88, 300 | 2, 200 | 1,600 | 300 | 200 | 3,400 | 2,300 | 125,900 | 84, 200 |
| Manufacturing | 541, 500 | 532, 400 | 2, 500 | 2,400 | (8) 200 | (t) 200 | 28,200 | 27,700 | 510.600 | 502, 100 |
| Public utilities | 25,500 333,100 | 25,500 266,600 | 1.400 | - 400 | ${ }^{(5)}$ | ${ }^{(5)}$ | ${ }^{600}$ | ${ }_{6}^{600}$ | 24, 509 | 24,500 |
| Trade ${ }^{\text {a }}$-..- | 333,100 76,000 | 266,600 76,000 | 1,400 | 1,200 | 100 | 100 | 8,000 | 6,400 | 323,600 | 258, 000 |
|  | 76,000 132,800 | 76,000 114,000 | 800 900 | 800 700 | 300 100 | 300 100 | 5,300 7,600 | 5,300 6,500 | 69,600 124,200 | 69,600 106,700 |
| Services, government, and m industries ${ }^{3}$ | 432, 407,900 | 1357,400 | 2,500 | 2, 300 | 100 200 | 100 200 | 7,600 19,400 | 6,500 $\mathbf{1 6 , 9 0 0}$ | 124,200 385,800 | 106,700 338,000 |

1 Based on fragmentary data.
Based largely on Bureau of Mines data.

- Based on small sample studies.


## Injury-Frequency Rates

Manufacturing: For the entire group of manufacturing industries, the weighted frequency rate for 1946 was 19.9 , or about 7 percent above the 1945 rate (18.6). This increase was the result of frequency-rate increases in most of the individual manufacturing industries.

Of the major groups (each composed of a number of related industries), 5 had rates in 1946 which differed by less than a full frequency-rate point from their 1945 level; 9 had group rates which were from 1 to 5 points higher than in 1945. On the downward side, only 1 group was 5 points or more below its 1945 figure, and only 2 had rates from 1 to 5 frequency points lower.

Individual manufacturing industries had much the same experience. Of the 148 industries included in the survey, 36 showed changes of less than 1 frequency-rate point, up or down. But 76 had larger increases, 22 of these experiencing a rise of 5 full frequency-rate points or more. Only 36 industries showed decreases, 7 of which dropped 5 or more points. In general, the frequency rates in manufacturing industries went up.

Among the manufacturing industries for which frequency rates in 1946 were 5 points or more higher than in the previous year, were sawmills (with an increase from 56.6 to 64.1 ), combined saw and planing mills ( 52.6 to 60.3 ), boatbuilding (26.1 to 47.7), cut-stone and stone products (27.6 to 42.7 ), leather ( 28.4 to 34.9 ), and concrete, gypsum, and plaster products ( 27.0 to 32.7 ).

Industries in which frequency rates were 40 or more, that is, at least 40 disabling injuries per 500 workers per year, were cut-stone and stone

4 Based on comprehensive survey.
${ }^{5}$ Less than 50.

* Based on Interstate Commerce Commission data.
products (42.7), veneer mills (43.6), plywood mills (43.9), structural clay products (44.9), breweries (45.3), wooden containers (45.7), iron foundries (47.3), boatbuilding (47.7), combined saw and planing mills (60.3), sawmills (64.1), and logging (80.4). Although the logging rate was the highest in all manufacturing, it was about 12 points below the 1945 rate (92.0).
An important industry with a drop of more than 5 frequency-rate points was dairy products, the rate for which declined from 33.1 to 23.8 .

At the other end of the scale were 4 industries which experienced less than 5 disabling work injuries for each million employee-hours worked: Synthetic rubber (1.9), millinery (2.6), electric lamps-bulbs (3.9), and women's and children's clothing (4.2). The explosives industry, in which injuries in recent years have been greatly reduced, had a frequency rate of 5.7 . It is a significant tribute to accident prevention that injuries in an industry such às explosives, popularly regarded as extremely hazardous, occurred about half as frequently per million hours of exposure as in the tobacco industry, usually regarded as very safe. It also speaks eloquently for the needless toll of over 2 million disabling injuries in the country's industries, and the tremendous cost to both labor and management in terms of suffering, lost income, and output.

Nonmanufacturing: Because of the interest focused on mining accidents, the Bureau's data this year include frequency rates for mining. The rates were preliminary and were obtained from the United States Bureau of Mines. They indicated
that both anthracite and bituminous-coal mining were among the most hazardous of industries, exceeded by only a few others. The frequency rate for anthracite mining for 1946 was 84.2 , and for bituminous-coal mining, 61.4. The size of the bituminous rate placed it in the same category as sawmills-one of the most hazardous in the manufacturing group.

As in past years, the nonmanufacturing industry in the Bureau's own survey with the highest fre- . quency rate was stevedoring. The 1946 rate of 77.2 was substantially below that for 1945 (87.6).


The nature of the reporting sample, however, suggests that both of these rates probably understated the situation considerably. If a more comprehensive study made a few years ago is any indication of the actual injury experience in this hazardous industry, the actual frequency rate may well have been twice as high as that based on the reporting sample of 73 stevedoring contractors.

All 3 industries in the construction group had sizable increases in the frequency of disabling injuries in 1946 as compared with 1945. The least hazardous of these-building construction-had an increase in its rate from 30.9 to 35.4. In heavy
engineering construction, the frequency rate jumped from 28.1 to 46.7 , and the rate for highway construction advanced nearly as sharply-but to an even higher level-from 35.8 to 50.5 .

For 2 other industries in which frequency rates customarily are high, the 1946 rates showed very little change from those for 1945. In trucking and hauling, the rate decreased slightly, ( 37.5 to 35.6 ), and in warehousing and storage it increased fractionally ( 34.3 to 34.8 ).

The contrast between industries with very high and very low rates was as marked in nonmanufacturing as in manufacturing. Contrasted with rates in the 60 's, 70 's, and 80 's in the mining and stevedoring industries are rates as low as 2.4 in radio broadcasting, 2.9 in the telephone industry, 3.1 in insurance, and 3.8 in retailing of apparel and accessories.

## Injury Severity

Little emphasis has been placed on the severity rate in the Bureau's analysis of work-injury experiences of the last few years. The reason for this was the conviction that the severity rate does not actually measure injury severity, but is in effect a weighted frequency rate. ${ }^{1}$ Although the rate serves a useful purpose, it is obviously misnamed. As pointed out in earlier years, the disability distribution is a more accurate indicator of changes in the severity of injuries than the severity rate. If a single measure of injury severity is wanted, perhaps the simplest measure of all is the average time charge per disabling injury. For the injuries reported to the Bureau of Labor Statistics for 1946, this average time charge was nearly 82 days per injury. This, of course, includes, in addition to the actual time lost in temporary total disabilities, the standard time charges for deaths and permanent impairments.

The so-called severity rate, being a composite of injury frequency, time charges, and hours of exposure, may be more aptly designated as a "hazard rate," reflecting the days lost because of injuries per 1,000 hours of exposure. For the entire manufacturing group, this measure was 1.6 for 1946. The rate indicates that for every person employed a full year (i. e.; 2,000 hours), 3.2 days were lost because of work injuries. This, of course, includes all workers, regardless of whether

[^0]or not they were injured, and includes standard time charges for deaths and permanent impairments. For those who were injured, the story is quite different: Those who were only temporarily disabled, lost on an average of 17 days each. (In some industries this average was appreciably higher; in shipbuilding, for instance, it was 47 days.) As already indicated, if standard time charges are included, the average comes to 82 days.

Manufacturing industries with high severity rates ( 5 or over) were plastics (9.9), logging (9.5), plywood mills (7.7), breweries and cut stone, each (5.5), and steel barrels (5.1). Among nonmanufacturing industries were heavy engineering (5.7), highway construction (5.1), and, topping them all, stevedoring, with an unusually high rate (25.9).

The disability distribution, as already indicated, permits a better analysis of actual injury severity than does the severity rate. Of the injuries that actually occurred, 2.0 percent in petroleum refining were fatal. The same percentage applied to waterworks, and nearly the same percentage ( 1.8 percent) to construction not elsewhere classified, consisting largely of demolition work. In logging, the fatality percentage was 1.2 , putting that industry on about the same level as iron and steel, copper smelting, heavy engineering construction, and police departments. For all man-
ufacturing industries, deaths usually average about one-half of 1 percent of all disabilities.

Industries in which permanent partial impairments constituted 10 percent or more of the injuries incurred included-plastics (36.8), stevedoring (14.8), hardware and electrical appliances, each (14.4), stamped and pressed metal products (12.0), cold-finished steel (10.4), and communication equipment (10.1).

In the manufacturing group, 77 percent of permanent partial disabilities involved the hand or fingers. The percentages of such injuries to these members were particularly high in the following industries: 96 percent in metal furniture, in stamped metal products, and in commercial machinery; 92 percent in wooden containers and in leather; 90 percent in wood furniture and in hardware; 87 percent in electrical equipment; 86 percent in book and job printing; and 82 percent in paper and pulp.

Outstanding for high percentages of permanent impairments to an arm were highway construction, 17 percent; carpets, 11 percent; bakeries, 10 percent; and news and periodical printing, 10 percent.

Permanent injuries to eyes loomed large in the manufacture of tools and shipbuilding-10 percent in each industry.

## Appendix Tables

Injury-frequency rates for a large number of individual industries are shown in table A. The group frequency rates shown in this table were computed by weighting the rates for the individual industries by the total employment in the respective industry classifications.

For the first time frequency rates for mining have been included among those listed in table $A$. These rates were secured from the United States

Bureau of Mines and are included in this report to make it more comprehensive.

The other tables continue for 1946 the same types of data shown in the reports for previous years: changes in employment, exposure, and injuries; total injury estimates for individual industries; the distribution of permanent impairments according to the body parts affected; and the injury trend data in manufacturing industries.

Table A.-Injury rates and injuries by extent of disability, 1946
[All reporting establishments]


Table A.—Injury rates and injuries by extent of disability, 1946-Continued

| ndustry | Numberof entab-lishb$\underset{\substack{\text { lish- } \\ \text { ments }}}{ }$ ments | $\begin{aligned} & \text { Average } \\ & \text { nomber } \\ & \text { of omer } \end{aligned}$ |  | $\begin{aligned} & \text { Number } \\ & \text { Naflibe } \\ & \text { injuries } \\ & \text { injur } \end{aligned}$ | Percent of disabling in- <br> juries resulting in |  |  | A verage days lost per disability 1 - |  | Injury rates ${ }^{-}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | $\begin{array}{\|c\|c\|c\|c\|c\|c\|c\|c\|c\|} \substack{\text { tatardis. } \\ \text { ability }} \end{array}$ | $\begin{gathered} \text { Permat } \\ \text { Parnal } \\ \text { partial- } \\ \text { disisil- } \\ \text { ity } \end{gathered}$ |  | ${ }_{\substack{\text { Frency } \\ \text { quenc }}}$ | ${ }_{\substack{\text { Sever- } \\ \text { ity }}}^{\text {S }}$ |
| Manufacturing-Continued | 10518518414545219144341122052123323 |  |  | $\begin{aligned} & 1,5245 \\ & 1,120 \\ & \hline 221 \end{aligned}$ | 0.2 | $\begin{aligned} & 2.75 \\ & 5.5 \\ & 5.1 \end{aligned}$ | $\begin{aligned} & 99.5 \\ & 94.9 .9 \\ & 94.9 \end{aligned}$ | $\begin{gathered} 9709 \\ 670 \\ 670 \end{gathered}$ | 13192219 | $\begin{aligned} & 20.6 \\ & 20.6 \\ & 29.1 \end{aligned}$ |  |
| Iron and steel and their products-Con. Plumbers supplies |  |  |  |  |  |  |  |  |  |  |  |
| Screw-machine products <br> Sheet-metal work |  |  |  |  |  |  |  |  |  |  |  |
| Stamped and pressed metal products, not elsewhere clasilifod-------- |  | 94,428 <br> 38,688 <br> 388 |  |  | $\stackrel{.2}{2}$ | 12.0 <br>  <br> 2.9 <br> 5 | - 87.8 | - 1,080 | $\xrightarrow{12}$ | ${ }_{28.6}^{22.7}$ | 2.0 |
| Steem fititims and aparatu |  |  |  |  |  |  |  |  |  |  | 5.1 |
|  |  | ${ }_{\substack{12, 3,516 \\ \hline 18}}$ |  | 1,321 |  | 5. <br> 6.6 <br>  | ${ }_{93.2}^{94.5}$ | ${ }_{523}^{908}$ | 15 12 | ${ }_{\text {22, }}^{22.7}$ | 2 |
| Tin eman and other toinware |  |  |  | cin | (6) ${ }^{3}$ | ${ }_{\text {(0) }}{ }^{7.6}$ |  |  | 14 <br> 13 <br> 13 |  | . 2 |
| Vitreous enameleld produ |  | 5, 5 5, 316 | (103,221 | 2,447 |  | ${ }_{4}^{4.6}$ | ${ }_{95}{ }^{69}$ |  |  | 21.3 23.7 2.7 | 1.4 |
| Wrought pipes, weilded and h Note elsewhere classiled. |  | 6,528 26,366 | - | 1,248 | ${ }^{\text {. }} 2$ | ${ }_{5}{ }_{5.1}$ | ${ }_{94}$ | ${ }_{706}^{300}$ | 22 | 20.1 <br> 25.1 <br>  <br>  <br> 15 | ${ }^{8} 8$ |
| ther and le | ${ }_{119}^{179}$ | 171,522 <br> 188,94 | 336, |  | . 1 | 3.1 | ${ }_{\text {cose }}^{96.8}$ |  | 13 <br> 13 | $\begin{array}{r}615.2 \\ \hline 10.8 \\ 10.8 \\ \hline\end{array}$ | ${ }^{\text {. }} \mathbf{3}$ |
| ${ }_{\text {B }}^{\text {Leots }}$ |  |  |  | c. 2.291 | 1 |  | - | (1,343 | 14 10 10 |  | 1.7 |
| $t$ elsewhere classilied. |  |  |  |  |  |  |  |  |  |  |  |
| mer and tim |  |  |  |  | $\begin{array}{r}1.2 \\ .4 \\ \hline\end{array}$ | 3.3${ }_{3}^{3.0}$2.72.7 | $\underset{\substack{96.1 \\ 96.8 \\ 96.9}}{ }$ |  | 191616 | 60.2 <br> 80.4 <br> 6.4 |  |
| Logging |  |  |  |  |  |  |  |  |  |  |  |
| Sawmills and plani |  |  |  |  |  |  | ${ }_{\text {ck }}^{96.6}$ | - | 16 |  |  |
| ${ }_{\text {Plywood mills. }}$ |  |  |  |  | . 9 |  |  |  | 15 <br> 14 <br> 14 <br> 1 |  | ${ }_{3.3}^{7.8}$ |
| Veneer mills-aturil) |  |  |  |  | :8 | ¢ 8.7 8.7 |  |  |  |  |  |
| Machinery, except electric. Agricutural machinery and tractors Commercial and household machinery. Construction and mining machinery-Elevators, escalators, and conveyors Elevators, escalators,Engines and turbines Fabricated pipe and fittings. $\qquad$ | 3,674 | 993,79 | 1, 10854845 | 39,337 | ${ }^{2}$ | 4.8 <br> 4.4 <br> 3.8 | 95.0.9596.296.2 | 775 <br> 764 <br> 68 |  |  | 1.4 |
|  | ${ }_{55}^{216}$ |  | $\xrightarrow{215,455}$ | ¢ |  |  |  |  |  |  |  |
|  |  |  |  |  | ${ }^{3}$ |  |  | 1,715 | 18 <br> 13 <br> 13 | 13.3 <br> 27.5 <br> 2.5 | 2.0 |
|  |  |  |  | 2,007 |  |  |  |  | ${ }_{23}^{11}$ | - | +1.1. |
|  |  |  |  |  | (9) ${ }^{9}$ | (9) ${ }^{1.4}$ | (10.7 | ${ }_{651}^{65}$ |  |  |  |
|  | $\begin{array}{r}8 \\ 148 \\ \hline 8\end{array}$ | 224, 80106,528 | 56, ${ }_{5}^{1,684}$ | 1,299 |  |  | 93.993.6 | 898 | 13 | 25.0 | 1.5 |
| General industrial machinery, not elise- | 522 |  | 208, 901 | 4,830 | . 2 | 6.2 |  | 834 | 14 | 23.1 |  |
| $G_{\text {eneral }}^{\text {neal }}$ machine shops (jobibing and | 317 | ,384 | ${ }^{37,155}$ | 990 |  | 6.3 | 93.7 | 457 | 11 | 28.6 | 1.1 |
| Mechanical measuring and controling | 9 | 30,870 |  | $762$ |  | 8.8 | 1.2 | 989 | 15 | 13.5 | 1.3 |
| Mechanical por | $\left.\begin{aligned} & 967 \\ & 989 \\ & 129 \end{aligned} \right\rvert\,$ |  | 56,634 <br> 53,543 <br> 57 |  |  | 4, <br> 4.6 <br> 4.6 <br> 3.2 | 95.4 <br> 9654 <br> 96.4 <br> 96.4 | 418 <br> 701 <br> 306 <br> 56 |  |  |  |
| Ment extept ball and roller |  | 27,304170,5563,509 |  | ${ }_{\substack{5,511 \\ 1,878}}^{\text {c, }}$ | .3 |  |  |  | 14141414 | 15.825.9 | 1.3 |
| Pumps and compressors.-- |  |  |  |  | . 4 |  |  |  |  |  |  |
| sitiod | ${ }_{133}^{379}$ | 放, 67.146 |  | - | . 1 | ${ }_{2}^{4.7}$ | ${ }_{97}^{95}{ }^{9} 2$ | ${ }_{914}^{923}$ | 13 18 | 22.7 18.0 |  |
| Nonferrous metals and their products Aluminum and magnesium products Foundries, nonferrous. | $\begin{aligned} & 829 \\ & 389 \\ & 38 \end{aligned}$ |  |  |  |  | 5.27.14.8 | $\begin{gathered} 9.97 \\ 9651 \end{gathered}$ | $\begin{array}{r} 845 \\ \hline, 545 \\ \hline, 049 \end{array}$ |  | $\begin{gathered} 20.5 \\ \text { 24.8. } \\ 30.0 \end{gathered}$ | ${ }^{1.3}$ |
|  |  |  |  |  | 1 |  |  |  | 16 <br> $\begin{array}{l}16 \\ 15 \\ 15\end{array}$ |  | 81.32.22.2 |
|  |  |  |  |  |  | ${ }^{4.8}$ |  |  |  |  |  |
| Copper Leadisiver. | $\begin{aligned} & 8, \\ & 8 \\ & 8 \\ & 8 \\ & 8, \\ & 8 \end{aligned}$ | $\begin{gathered} 10.200 \\ 3,800 \\ 9.900 \\ 9020 \end{gathered}$ | 23, 270 | 165 |  |  |  | (8) | (8) | 22.0 |  |
| ${ }_{\text {Zincoreila }}$ |  |  |  | ${ }_{39}^{930}$ |  |  |  |  |  |  |  |
| Nonterrous basic shape | 39128221 |  |  |  |  | $\begin{gathered} (8.9 \\ 2.9 \\ 8.2 \\ 4.0 \end{gathered}$ | $\begin{gathered} 97.1 \\ 9.818 \\ 90.8 \end{gathered}$ |  | 13 |  |  |
| Not elsewhere classilied |  |  |  |  |  |  |  |  |  |  |  |
| nance and accessories - | ${ }^{61}$ | 43,732 | 89,519 | 612 | 1.6 | 16.7 | 81.7 | 905 | 50 | 6.8 | 1.4 |
| er and allied | 1,41461606521526216 |  |  |  |  |  |  |  |  |  | 81.9 |
| ${ }_{\text {Faper }}$ |  |  |  |  |  |  |  |  | 15 | 23, ${ }_{\text {23, }}$ |  |
| Paper and pulp ${ }^{\text {P10 }}$ - ${ }^{\text {Paild- }}$ |  |  |  |  | . 5 |  | ${ }_{\text {ck }}^{96.5}$ | 1, 784 | 析 | ${ }_{20}^{26.6}$ | 4 |
| tin |  | 199,158 |  |  | . 2 | 5.5 | 94.3 |  |  |  |  |
| Book and job printing | 1,625 |  |  |  |  |  |  |  |  |  |  |
| Bookbinding News and periodicail. | 818 | 96,779 | 196,545 | 1,744 | . 5 | 4.2 | ${ }_{85}{ }^{98}$ | 1,360 | 16 | 8.9 | ${ }_{9}$ |
|  |  |  |  |  | . 3 | 6.9 | 92.8 |  |  |  |  |
|  |  |  |  |  |  |  |  |  | ${ }^{24}$ | ${ }^{112.4}$ |  |
| Rubber tires and tubes | ${ }_{211}^{43}$ | - | - | $\xrightarrow{3,355}$ |  | ${ }_{8.6}^{4.1}$ |  | 1,33 |  | 22.0 | 3.1 |

See footnotes at end of table.

Table A.—Injury rates and injuries by extent of disability, 1946—Continued

|  |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

Table A.-Injury rates and injuries by extent of disability, 1946-Continued

| Industry | Number lishments | Average of employees |  | Numberof dis.abinginjuries | Percent of disabling injuries resulting in |  |  | A verage days lost per disability |  | Injury rates:- |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Death and per- manent totndis- ability 3 | Permanent pertis disability | Tempototaldis ability |  |  | $\begin{aligned} & \text { Fre- } \\ & \text { quency } \end{aligned}$ | Sever- ity |
| Nonmanufacturing-Continued |  |  |  |  |  |  |  |  |  |  |  |
| Business services | 2,637 | 174, 041 | 352, 482 | 1,980 | 0.2 | 2.5 | 97.3 | 1,473 | 12 | 5.6 | 0.3 |
| Banks and other financial agencies |  | 51,587 | 106, 818 | ${ }_{5} 312$ |  |  | 97.1 |  | ${ }_{8}^{11}$ |  | 2 |
| Insurance-- | 447 <br> 285 <br> 8 | 86,543 5886 58 | $\begin{array}{r}172.403 \\ { }^{12} .166 \\ \hline 1.1\end{array}$ | ${ }_{65}^{537}$ | (6) | (8) ${ }^{7}$ | ${ }_{\text {(6) }} 9$ | 2,425 | $\stackrel{8}{2}$ | 5.3 | ${ }_{4}$ |
| Miscellaneous business services | 355 | 20,778 | 40,807 | 447 | . 9 | 3.1 | 96.0 | 1,286 | 16 | 11.0 | 1.2 |
| Automobile repair shops and garages | 397 | 5,037 | 11, 412 | ${ }_{323}^{296}$ |  | 2.4 | 97.6 | 1,714 | 12 | 25.9 | 1.3 |
| Miscellaneous repair services........ | 257 | 4, 210 | 8,873 | 323 |  | 4.0 | 96.0 | 815 | 13 | 36.4 | 1.6 |
| Educational services.. | 197 | 95, 104 | 161,847 | 1,269 | . 2 | 2.0 | 97.8 | 1,131 | 12 | 7.8 | . 4 |
| Fire departments | 205 | 25, 040 | 90,019 | 2,119 | . 9 | . 8 | 98.3 | 1,278 | 18 | 23.5 | 1.9 |
| Police departments.. | 53 | 18,473 | 44,720 | 1,311 | 1.4 | . 4 | 98.2 | 2, 240 | 18 | 29.3 | 3.1 |
| Trade ${ }^{1}$. | 7,960 | 362, 318 | 716, 702 | 10,713 | 2 | 1.8 | 98.0 | 1,292 | 13 | 14.2 | 8.8 |
| Wholesale distributors-- | 2,443 | 84,544 112049 13 | 179, 150 | ${ }^{3,307}$ |  |  |  | ${ }^{1,172}$ | 11 | 18.5 |  |
| Retail, general merchandise | 473 755 | 112,049 33,751 | 190,623 <br> 71,032 | 1,077 1,315 | . 2 | 1.4 | $\stackrel{99.2}{98.7}$ | 2,225 <br> 2,400 <br> 1 | 14 14 14 | $\begin{array}{r}5.6 \\ 18.5 \\ \hline\end{array}$ |  |
| Wholesale and retail dairy products | 350 | 24, 991 | 58,502 | 1, 554 | . 1 | 2.0 | 97.9 | 1,645 | 14 | 26.6 | 1.3 |
| Retail automobiles. | 664 | 14, 994 | 33, 800 | ${ }^{610}$ |  | 1.8 | 98.2 | 1,564 | 13 | 18.0 |  |
| Filling stations. | 207 | 2,425 | 5,691 | 50 | (a) | ${ }^{(6)}$ |  | ${ }^{(9)}$ | 14 | 8.8 |  |
| Metail apparel and accessories | 1,496 , 496 | 34, 2120 | -72, 291 | 220 | .4 | 1.8 | ${ }_{97.7}^{98.2}$ | 1,390 | 14 | 10.8 |  |
| Wholesale and retail building supplies. | , 509 | 14,987 | 32,441 | 1,341 | .1 | 3.5 | 96.4 | ${ }_{666}$ | 12 | 41.3 | 6 |
| holesale and retail trade combined, not | 367 | 11,895 | 25, 529 | 455 | . 4 | 1.3 | 98.3 | 1,775 | 14 | 17.8 | 1.1 |
| Mining and quarrying: ${ }^{\text {l }}$ |  |  |  |  |  |  |  |  |  |  |  |
| Cituminous. |  | 380,000 |  |  | 121.8 |  |  |  |  | 61.4 |  |
| Anthracite | (8) | 77,500 | 154,000 | 12,974 | 121.3 | (8) | (8) | (8) | (9) | 84.2 | (6) |
| Metal mines: |  |  |  |  |  |  |  |  |  |  |  |
| Iron.... | ${ }^{(8)}$ | 24,500 13,600 | ${ }_{29,910}^{44,390}$ | - | 12 <br> 12 <br> 12.4 <br> 1.4 <br> 1 | (8) | (8) | (8) | (8) | ${ }_{53.1}^{27.6}$ |  |
| Lead-zine | (8) | 16, 200 | 33,780 | 2,859 | ${ }_{12}^{12} 11.0$ | (8) | (9) | (9) | (8) | 84.6 | (9) |
| Gold-silver- | (8) | $\begin{array}{r}4,500 \\ 3 \\ \hline\end{array}$ | 9, ${ }^{\text {, } 2500}$ | ${ }_{27}^{773}$ | 121.0 12 12 | (8) | ${ }^{(8)}$ |  | (8) | 83.6 |  |
| Gold placer----- | (8) | 3,700 3,000 | 7,260 6,420 | 226 610 | ${ }^{12} .4$ | (8) | (8) | (8) | (8) | 31.1 95.0 | (8) |
| Nonmetal mines.. | ${ }^{(8)}$ | 12,000 | 27, 480 | 1,414 | ${ }^{12} 1.7$ | ${ }^{(8)}$ | (8) | (8) | (\%) | 51.5 | ${ }^{(8)}$ |
| Quarries: |  |  |  |  |  |  |  |  |  |  |  |
| Cement (excluding mills) | (8) | 2,300 22,600 | $\begin{array}{r}\text { 5,581 } \\ \hline 43,270 \\ \hline 180\end{array}$ | 218 2,041 | 12 12.3 12.3 1.3 | (8) | (8) ${ }_{\text {(8) }}$ | (8) |  | 39.1 47.2 | (8) |
| Lime | (8) | 9,000 | 21,600 | 1,058 | ${ }^{12} .3$ | (9) | (8) | (8) | (8) | 49.0 | (8) |
| Marble | (8) | 2,700 | 5,940 | 180 |  | (8) | (8) | (8) | (8) | 30.3 | (8) |
| Granite | (8) | 5, 200 2,800 | +1,970 | 513 <br> 258 <br> 18 | -12.6 | (8) | (8) | (8) | (8) | ${ }_{46}$ | (8) |
| Traprock | (8) | 1,300 | 3,320 | 182 | ${ }^{12} 1.1$ | (8) | (8) | (8) | (8) | 54.8 | (8) |
| Sandstone..-.......... | (8) | 3,500 | 7,110 | 337 | ${ }^{12} .6$ | (8) | (8) | (8) | (9) | 47.4 | (8) |
| Ore dressing (mills and auxiliaries): |  |  |  |  |  |  |  |  |  |  |  |
| Copper-........-.-.....-------- | (8) | 5,700 3,100 | 12,600 5,060 | 386 66 | $\begin{array}{r}12.3 \\ 12 \\ 1.5 \\ \hline\end{array}$ | (8) |  | (8) | ${ }_{(8)}^{(8)}$ | $\begin{array}{r}30.6 \\ 13.0 \\ \\ \hline\end{array}$ |  |
| Gold-silver | (8) | 1,000 | 2,190 | 75 |  | (8) | (8) | (8) | (8) | 34.2 | (9) |
| Miscellaneous metals. | (8) | 1,400 | 2, 2,960 | 291 86 | $\begin{aligned} & 12 \\ & 12.1 \\ & 12.2 \\ & 1.2 \end{aligned}$ | (9) | (8) | (8) | (8) | 31.3 29.1 | (\%) |

${ }^{1}$ Based on reports which furnished details regarding the resulting disabilities, constituting approximately 60 percent of the total sample. 2 The frequency rate is the average number of disabling injuries for each million employee-hours worked. The severity rate is the average number of days lost for each thousand employee-hours worked. The standard timeloss ratings for fatalities and permanent disabilities are given in Method of Compiling Industrial Injury Rates, approved by the American Standards Association, 1945.
${ }_{3}$ Each death or permanent total disability is charged with a time loss of
6,000 days in the computation of severity rates. U. S. Department of the Interior.

5 Weighted according to estimates of total current employment in each industry.
${ }^{6}$ Disability distribution and average time charges not given because of small number of injuries for which details were reported
${ }_{7} 7$ Preliminary data compiled by the Bureau of Mines, U. S. Department of the Interior.
${ }^{8}$ Not available.

- Includes all ordnance classifications formerly shown separately.
${ }^{10}$ Includes Pulp, and Paper and Pulp integrated, formerly shown separately.
${ }_{12}$ Primarily reported by company instead of by establishment.
${ }_{2} 2$ Fatalities only.
${ }^{13}$ Less than 0.05.

Table B.-Changes in exposure, disabling injuries, and injury rates for 32,241 identical establishments, 1945 to 1946

|  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

See footnotes at end of table.

Table B.-Changes in exposure, disabling injuries, and injury rates for 32,241 identical establishments, 1945 to 1946-Con.

|  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |

[^1]Table B.-Changes in exposure, disabling injuries, and injury rates for 32,241 identical establishments, 1945 to 1946-Con.

|  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |

1 Weighted according to estimates of total current employment in each industry.
${ }_{2}$ Change was less than halt of 1 percent.
${ }^{3}$ Not available.
4 Totals include figures for industries not shown separalely.
${ }^{5}$ Includes all Ordnance classifications formerly shown separately.
${ }^{5}$ Includes Pulp, and Paper and Pulp, integrated; formerly shown ${ }^{-}$separately.
i Primarily reported by company instead of establishments.
$T_{\text {able }}$ C.-Estimates of disabilities, by extent, for manufacturing industries, 1946
[Excluding self-employed]

| Industry | All reporting establishments |  |  |  | Estimates for entire industry |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of establishments | Number of employees (thousands) | Employeehours worked (thousands) | Number of disabling injuries | All disabling injuries | Death and permanent total disability | Permanent par tial disability | Temporary total disability | Total days lost (thousands) |
| Apparel and other finished textile products....-..... | 2,029 | 218 | 406,648 | 3,023 | 16,000 | 15 | 220 | 15,765 | 513 |
| Chemicals and allied products ${ }^{1}$. | 2,153 | 539 | 1,115, 154 | 15,340 | 24,900 | 125 | 1,240 | 23,535 | 2,499 |
| Drugs, toiletries, and insecticides. | 302 | 60 | 120, 359 | 1,707 | 2,500 | 15 | 90 | 2,395 | 227 |
| Fertilizers-..-.........----.-.... | 444 | 21 | 44, 258 | 1,462 | 2,200 | 20 | 80 | 2,100 | 216 |
| Industrial chemicals, not elsewhere classified | 449 | 145 | 305,311 | 4,517 | 5,000 | 25 | 390 | 4,585 | 635 |
|  | 377 41 | 39 8 8 | 81, 304 | 1,515 | 1,900 |  | 60 20 | 1,840 | 72 52 |
|  | 28 | 65 | 127, 285 | 870 | 1,100 |  | 20 | 1,080 | 68 |
| Electrical machinery, equipment and supplies it....- | 1,152 | 646 | 1,251,236 | 12,374 | 12,900 | 25 | 1,080 | 11,795 | 1,182 |
| cept radio. | 51 | 79 | 166,945 | 1,162 | 1,600 | 10 | 160 | 1,430 | 170 |
| Electrical equipment for industrial use............ | 573 | 300 | 564,796 | 5,917 | 7,000 | 15 | 560 | 6, 425 | 616 |
| Electrical equipment, not elsewhere classified.... | 267 | 102 | 198, 728 | 2,936 | 3,000 | 5 | 270 | 2,725 | 226 |
| Food products ${ }^{1}$ | 4,065 | 504 | 1,021,007 | 30,087 | 89, 100 | 265 | 3,560 | 85, 275 | 6,963 |
| Breweries. | 299 | 56 | 120,634 | 5,465 | 7,000 | 15 | 570 50 5 | 6,415 $\mathbf{2}$ $\mathbf{2} 345$ | 867 147 |
| Confectionery feed and grain-mill products | 523 | 46 | 102, 649 | 2,726 | 5,000 | 15 | 120 | 4,865 | 308 |
| Slaughtering and meat packing...- | 847 | 133 | 261, 364 | 9,343 | 12,600 | 15 | 330 | 12, 255 | 492 |
| Sugar refining ..................... | 106 | 27 | 55, 120 | 1,854 | 2, 100 | 20 | 60 | 2,020 | 199 |
| Furniture and finished lumber products ${ }^{1}$ | 2,252 | 213 | 434,498 | 14, 254 | 31,400 | 65 | 1,880 | 29,455 | 2, 299 |
| Furniture, metal and wood. | 1,027 | 118 | 239, 516 | 6,567 | 10,600 | 10 | 780 50 | 9,810 | 820 43 |
| Mattresses and bedsprings. | ${ }_{107}^{212}$ | 15 7 | 30,041 13,671 | 1,040 | 1,700 |  | 50 30 | 1,650 770 | 43 |
| Iron and steel and their products 1 | 4,902 | 1,415 | 2,729,916 | 60,860 | 71,800 | 285 | 3,880 | 67,635 | 6,317 |
| Bolts, nuts, washers, and rive | , 83 | 18 | 33,929 | 638 | 800 |  | 50 | 750 | 40 |
| Cutlery and edge tools. | 133 | 25 | 55,479 | 1,278 | 1, 500 |  | 60 | 1,440 | 110 |
| Fabricated structural steel | 425 | 49 | 95, 860 | 2,810 | 3, 500 | 15 | 150 | 3,335 | 270 |
| Foundries, iron. | 823 | 136 54 | 273, 673 | 12,947 | 13,500 4,500 | 55 10 | 320 160 | 13, 4,330 | 819 274 |
| Heating equipment | 284 | ${ }_{507}^{54}$ | -939, 241 | 3,725 9,236 | $\stackrel{4}{4,500}$ | 115 | 900 | 8,485 | 1,903 |
| Screw-machine products | 185 | 25 | 53, 749 | 1,105 | 1,400 |  | 80 | 1,320 | 84 |
| Sheet-metal work | 134 | 12 | 24,786 | 721 | 1,700 |  | 90 | 1,610 | 92 |
| Steam fittings and spparatus | 191 | 39 | 78,404 | 2,239 | 3,100 | 5 | 90 | 3,005 | 168 |
| Tin cans and other tinware. | 112 | 39 | 77,027 | 1,321 | 1,600 | 5 | 100 | 1,495 | 89 |
| Wire and wire products.-.-....-.-.-.- | 233 17 | 53 6 | 103,221 12,214 | 2,447 | 3, 600 |  | 160 20 | 1,340 580 | $\begin{array}{r}17 \\ \hline 18\end{array}$ |
| Wrought pipes, welded and heavy-riveted | 17 | 6 |  |  |  |  |  |  |  |
| Leather and leather products ${ }^{1}$ | 744 | 171 | 336, 461 | 5,316 | 12, 200 | 10 | 380 | 11,810 | 546 |
| Boots and shoes. | 446 179 | 129 33 | 251,577 65,570 | 2, 718 2,291 | 4,900 3,300 | 5 5 | 170 70 | 4,725 3,225 | 181 |
| Leather. | 179 | 33 | 65, 570 | 2,291 | 3,300 |  | 70 | 3,225 | 158 |
| Lumber and timber basic products ${ }^{1}$ | 1,793 | 137 | 259, 251 | 13,852 | 61,200 | 365 | 2,020 | 58,815 | 5,422 |
| Planing and plywood mills..... | 888 | 59 | 122, 539 | 4,657 | 11, 500 | 45 | 770 | 10,685 | 1,145 |
| Machinery, except electric ${ }^{1}$ | 3,674 | 994 | 1,965, 434 | 39, 337 | 53,900 | 110 | 2,590 | 51, 200 | 3,420 |
| Commercial and household machinery. | 237 | 161 | 312, 397 | 4, 151 | 4,300 | 5 | 320 | 3,975 | 324 |
| General industrial machinery, not elsewhere classified | 1,972 | 415 | 827, 029 | 19, 278 | 36, 100 | 70 | 1,440 | 34,590 | 2, 095 |
| Pumps and compressors................ | 129 | 35 | 72, 552 | 1,878 | 3,800 | 15 | 120 | 3,665 | 184 |
| Textile machinery. | 133 | 25 | 56, 298 | 1,012 | 1,600 |  | 50 | 1,550 | 67 |
| Nonferrous metals and their products 1.-......-.....-. | 829 | 175 | 366, 921 | 7,657 | 18,000 | 20 | 940 | 17,040 | 1,169 |
| Nonferrous basic shapes and forms..-...........- | 39 | 31 | 68, 149 | 1,155 | 2,400 |  | 70 | 2,330 |  |
| Nonferrous metal products, not eisewhere classified | 747 | 102 | 206,059 | 3,986 | 9,900 | 10 | 490 | 9,400 | 604 |
| Paper and allied products ${ }^{1}$. | 1,414 | 303 | 646, 461 | 16,280 | 23,800 | 70 | 1,050 | 22,680 | 1,836 |
| Envelopes .............. | 71 606 | ${ }^{7}$ | 16, 1304 | 3, 225 | 5, 400 | 5 | 10 410 | 4,685 4 | 465 |
| Paper boxes and containers Paper and pulp.-.---... | 606 521 | 193 | 418, 856 | 11, 267 | 11,600 | 60 | 350 | 11, 190 | 997 |
|  | 2,498 | 199 | 412,019 | 3,673 | 12,000 | 25 | 660 | 11,315 | 983 |
| News and periodical. | 818 | 97 | 196,545 | 1,744 | 4, 400 | 20 | 190 | 4,190 | 446 |
| Rubber products ${ }^{1}$ | 287 | 227 | 474, 515 | 7,212 | 8,700 | 25 | 600 | 8,075 | 1,061 |
| Rubber tires and tubes.-......-.-.-.-.........-- | 43 | 119 | 238, 225 | 3,074 | 3,400 4,900 | 20 15 | 140 420 | 3,240 4,465 | 309 |
| Rubber products, not elsewhere classified......... | 211 | 83 | 167, 670 | 3,355 | 4,900 | 15 | 420 | 4,465 | 727 |
| Stone, clay, and glass products ${ }^{1}$. | 1,233 | 223 | 465,423 | 10,835 | 22, 400 | 110 | 540 | 21,750 | 1,595 |
| Glass......................... | 219 | 91 | 187, 388 | 3, 278 | 4,700 | 15 | 90 | 4, 595 | 266 |
| Pottery and related products | 141 | 33 | 64, 945 77,063 | 1,460 | 2,400 6,300 | 25 30 | 50 130 | 2,325 6,140 | 207 |
|  | 425 | 38 | 77,063 | 3,458 | 6, 300 | 30 | 130 | 6,140 | 417 |

See footnotes at end of table.

Table C.-Estimates of disabilities, by extent, for manufacturing industries, 1946-Continued

${ }^{1}$ Includes data for ind ustries not shown separately because of insufficient $\quad{ }^{2}$ Does not include United States navy yards. coverage upon which to base industry estimates.

Table D.-Distribution of all reported injuries resulting in permanent partial disability, according to part of body affected, by industry, 1946

| Industry | Total | Percent of permanent partial disability cases involving the loss, or loss of use of- |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | An arm | A hand or fingers | A leg | A foot or toes | An eye | One or both ears (hearing) | Other |
| Manufacturing |  | 3 | 77 | 3 | 7 | 4 | (1) | 6 |
| Total, manufacturing. | 100 |  |  |  |  |  |  |  |
| Apparel and other finished textile products.. | 100 | 4 | 79 | 0 | 4 | 4 | 0 | 9 |
| Chemicals and allied products.. | 100 | 5 | - 60 | 4 | 10 | 6 | (1) | 15 |
| Fertilizers --...- | 100 | 0 |  | 6 | 9 | 9 | ( 0 | 35 |
| Industrial chemicals.. | 100 | 3 | 58 | 4 | 15 | 8 | 0 | 12 |
| Plastic materials, except rubber.-....- | 100 | 8 | 55 | 3 | 11 | 0 | 0 | 23 |
| Electrical machinery, equipment, and supplie | 100 | 2 | 82 | 1 | 10 |  | 0 | 3 |
| Electrical appliances.-.-.-.-.-.-.... | 100 | 3 | 64 | 0 | 25 | 3 | 0 | 5 |
| Electrical equipment for industrial use. | 100 | 2 | 87 | 0 | 7 | 1 | 0 | 3 |
| Radios and phonographs. .-............- | 100 | 1 | 79 | 5 | 9 | 3 | 0 | 3 |
| Food products | 100 | 7 | 56 | 6 | 13 | 3 | (1) | 15 |
| Baking | 100 | 10 | 70 | 3 | 11 | 0 | (1) 0 | 6 |
| Breweries.--.--.-.-.-. | 100 | 8 | 44 | 5 5 | 14 | 3 3 3 | (1) 0 | 26 4 |
| Flour, feed, and grain-mill products. | 100 | 4 | 64 | $\stackrel{5}{9}$ | 11 | 3 5 | 0 | 7 |
| Slaughtering and meat packing..... | 100 | 0 | 82 | 5 | 8 | 1 | 0 | 4 |
| Sugar refliming. - | 100 | 2 | 61 | 2 | 33 | 0 | 0 | 2 |
| Furnitureand finished lumber products. | 100 | 1 | 91 |  | 1 | 3 | 0 | 3 |
| Furniture, metal .-.. | 100 | 0 | 96 | 1 | 1 | 1 | 0 | 1 |
| Furniture, except metal | 100 | 1 | 90 | 1 | 1 | 2 | 0 | 5 |
| Wooden containers | 100 | 1 | 92 | 2 | 2 | 2 | 0 | 1 |
| Not elsewhere classified. | 100 | 0 | 90 | 1 | 0 | 8 | 0 | 1 |
| Iron and steel and their products. | 100 | 2 | 82 | 3 | 6 |  | (1) |  |
| Forgings, iron and steel | 100 | 3 | 79 | 0 | 16 | 2 | 0 | 0 |
| Foundries, iron.. | 100 | 2 | 69 | 3 | 10 | 9 | 1 | 6 |
| Hardware --...... | 100 | 2 | 90 | 0 | 1 | 3 | 0 |  |
| Heating equipment | 100 | 3 | 84 | 5 | 5 | 3 | 0 | 0 |
| Iron and steel. -...- | 100 | 3 | 75 | 5 | 11 | 4 | 1 | , |
| Stamped and pressed metal products. | 100 | 1 | 96 | 1 | 0 | 1 | 0 | 1 |
| Tools, except edge tools. | 100 | 0 | 78 | 4 | 2 | 10 | 0 | 6 |
| Not elsewhere classified. | 100 | 0 | 98 | 0 | 0 | 2 | 0 | 0 |
| Leather and leather products. | 100 | 2 | 92 | 1 | 3 | 0 | 0 | 2 |
| Lumber and timber basic products. | 100 | 4 | 76 | 4 | 7 | 5 | (1) | 4 |
| Logging ..........-.-.-.-.-..... | 100 | 7 | 58 | 6 | 17 | 6 | ( | 4 |
| Sawmills.......- | 100 | 2 | 77 | 6 | 7 | 6 | 0 | 2 |
| Machinery, except electric.----.-.... | 100 | 1 | 82 | 2 | 8 | 4 | (1) | 3 |
| Agricultural machinery and tractors | 100 | 0 | 88 | 0 | 4 | 7 | 0 | 1 |
| Commercial and household machinery.. | 100 | 0 | 96 | 2 | 1 | 0 | 0 | 1 |
| Construction and mining machinery --- | 100 | 2 | 72 | 5 | 14 | 5 | 0 | 2 |
| fied | 100 | 2 | 72 | 4 | 18 | 2 | 0 | 2 |

${ }^{1}$ Less than half of 1 percent.

Table D.-Distribution of all reported injuries resulting in permanent partial disability, according to part of body affected, by industry, 1946-Continued

| Industry | Total | Percent of permanent partial disability cases involving the loss, or loss of use of- |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | An arm | A hand or fingers | A leg | A foot or toes | An eye | One or both ears (hearing) | Other |
| Nonmanufacturing-Continued |  |  |  |  |  |  |  |  |
| Machinery, except electric-Continued <br> Metalworking machinery <br> Special industry machinery, not elsewhere classified | 100 100 | 1 | 85 72 | 3 | 13 | 4 | 0 1 | 3 9 |
| Nonferrous metals and their products. | 100 | 3 | 85 | 0 | 1 | 5 | 0 | 6 |
| Paper and allied products $\qquad$ <br> Paper boxes and containers. | 100 100 | 3 3 3 | 82 79 | 3 3 3 | 4 | 4 | 0 0 | 4 6 |
|  | 100 | 4 | 82 | 3 3 | 4 | 4 | 0 | 1 |
| Not elsewhere classified. | 100 | 0 | 89 | 2 | 2 | 2 | 0 | 5 |
| Printing and publishing.-. | 100 | 5 | 80 | 2 | 8 | 1 | 0 | 4 |
| Book and job printing | 100 | 3 | 86 | 1 | 6 | 1 | 0 | 3 |
| News and periodical.- | 100 | 10 | 69 | 4 | 11 | 1 | 0 | 5 |
| Rubber products. - | 100 | 9 | 75 | 4 | 8 | 2 | 0 | 2 |
| Stone, clay, and glass products | 100 | 5 | 67 | 5 | 6 | 9 | 0 | 8 |
| Glass.-. | 100 | 9 | 64 | 2 | 7 | 9 | 0 | 9 |
| Structural clay products. | 100 | 3 | 73 | 8 | 5 | 5 | 0 | 6 |
| Textile and textile-mill products...... | 100 | 7 | 77 | 4 | 6 | 3 | 0 | 3 |
| Carpets, rugs, and other floor coverings | 100 | 11 | 64 | 3 | 15 | 5 | 0 | 2 |
| Cotton yarn and textiles | 100 | 6 | 84 | 3 | 2 | 3 | 0 | 2 |
| Dyeing and finishing textiles. | 100 | 7 | ${ }_{8}^{61}$ | 9 | 9 | 1 | 0 | 13 |
|  |  |  |  |  |  |  |  |  |
|  | 100 | 1 | 80 | 2 | 6 | 5 | 1 | 5 |
| Aircraft parts.------ | 100 | 2 | 90 | 2 | 0 | 2 | 0 | 4 |
| Motor vehicles --...- | 100 | 1 | 84 84 84 | 1 | 5 | $\stackrel{4}{3}$ | 0 | 5 |
| Railroad equipment. | 100 | 0 | 69 | 0 | 21 | 5 | 0 | 5 |
| Shipbuilding..... | 100 | 4 | 59 | 6 | 12 | 10 | 5 | 4 |
| Miscellaneous manufacturing. | 100 | 2 | 89 | 1 | 3 | 2 | 0 | 3 |
| Tobacco products----.-- | 100 | 2 | 88 | 2 | 6 | 2 | 0 | 0 |
| Nonmanufacturing |  |  |  |  |  |  |  |  |
|  | 100 | 8 | 56 59 | 7 | 12 | 8 | ${ }^{(1)} 0$ | ${ }_{11}^{9}$ |
| Heavy engineering | 100 | 4 | 67 | 7 | 11 | 7 | 0 | 4 |
| Highway construction. | 100 | 17 | 35 | 11 | 17 | 9 | 0 | 11 |
| Transportation. | 100 | 5 | 37 | 16 | 27 | 1 | 1 | 13 |
| Stevedoring. | 100 | 5 | 32 | 18 | 31 | ${ }^{(1)}$ | 1 | 13 |
| Bus--......- | 100 | ${ }^{0}$ | 62 | 10 | 10 | 4 | 0 | 14 |
| Streetcar and bus | 100 | 7 | 51 | 14 | 11 | 6 | 0 | 11 |
| Heat, light, and power. - | 100 | 6 | 55 | 9 | 10 | 6 | 1 | 13 |
| Electric light and power | 100 | 8 | 54 | 8 | 10 | 5 | 2 | 13 |
| Gas.---.-......-......... | 100 | 3 | 49 | 14 | 12 | 8 | 0 | 14 |
| Personal services. | 100 | $\theta$ | 69 | 6 | 5 | 3 | 0 | 8 |
| Business services. | 100 | 6 | 62 | 8 | 14 | 8 | 0 | 2 |
| Trade | 100 | 4 | 65 | 9 | 9 | 7 | 0 |  |
|  | 100 100 | 5 0 | 57 90 | 8 | 15 2 | 7 4 | 0 | 8 |

${ }^{1}$ Less than half of 1 percent.
Table E.-Indexes of injury-frequency rates in manufacturing, 1926-46, by extent of disability ${ }^{1}$ $[1926=100]$

| Year | Allinjuries | Death and permanent total | Permanent partial | $\underset{\text { total }}{\text { Temporary }}$ | Year | Allinjuries | Death and permanent total | $\underset{\text { partial }}{\text { Permanent }}$ | Temporary total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1926 | 100.0 | 100.0 | 100.0 | 100.0 | 1937 | 85.8 | $85.7{ }^{\circ}$ | 122.0 | 83.7 |
| 1927 | 93.6 | 107.1 | 96.3 | 93.3 | 1938 | 71.7 | 71.4 | 78.9 | 68.1 |
| 1928 | 93.2 | 107.1 | 104.6 | 92.5 | 1939 | 73.4 | 71.4 | 80.7 | 73.9 |
| 1929. | 99.2 | 92.9 | 109.2 | 98.7 | 1940.. | 75.3 | 71.4 | 84.8 | 75.6 |
| 1930 | 95.5 | 107.1 | 111.0 | 94.6 | 1941 | 85.8 | 80.3 | 93.7 | 86.2 |
| 1931 | 78.0 | 92.9 | 102.8 | 76.5 | 1942 | 93.5 | 70.7 | 83.4 | 94.1 |
| 1932 | 80.9 | 107.1 | 113.8 | 78.9 | 1943 | 94.4 | 70.7 | 83.4 | 95.0 |
| 1933 | 91.8 | 85.7 | 110.1 | 90.8 | 1944. | 88.3 | 62.8 | 75.4 | 89.7 |
| 1934. | 93.6 | 107.1 | 128.4 | 91.6 | 1945 | 81.9 | 62.8 | 72.3 | 83.0 |
| 1935 | 88.1 | 92.9 | 121.1 | 86.2 | 1946. | 84.3 | 60.1 | 77.9 | 85.3 |
| 1936. | 85.7 | 85.7 | 114.7 | 84.1 |  |  |  |  |  |

[^2]
## Recent Bureau of Labor Statistics Reports on Industrial Hazards and Working Conditions*

Injuries and accident causes in the longshore industry, 1942.
Bulletin No. 764. (Out of print.)
A detailed analysis of the hazards involved in loading and unloading ships. Includes sample safety codes and accident prevention suggestions.
Injuries and accident causes in the foundry industry, 1942.
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[^3]
[^0]:    1 The severity rate is the average number of days lost, because of disabling work injuries, per 1,000 employee-hours worked.

[^1]:    See footnotes at end of table.

[^2]:    ${ }^{1}$ Beginning with 1937, the indexes are based on the percent of change of the frequency rates of identical establishments in each pair of successive years.

[^3]:    *For sale by Superintendent of Documents at prices indicated. How to order publicalions: Address your order to the Superintendent of Documents, Government Printing Office, Washington 25, D. C., with remittance in check or money order. Currency is sent at sender's risk. Postage stamps not acceptable.

