

LABOR TURNOVER IN INDUSTRY



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LABOR TURNOVER IN INDUSTRY

A Statistical Analysis

BY

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TO
THE UNITED STATES BUREAU OF
LABOR STATISTICS

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PREFACE

THE figures which constitute the basis for the statistical analysis presented in these pages were collected for the United States Bureau of Labor Statistics by the authors and other members of the Bureau's staff. A large part of the material thus collected already has been utilized in various articles published in the Bureau's *Monthly Labor Review*. The Bureau of Labor Statistics, however, is responsible neither for the opinions herein expressed by the authors nor for the statistical treatment its original figures have received at their hands.

The authors desire to express their appreciation of the help they have received from Dr. Royal Meeker, formerly Commissioner of Labor Statistics and now editor of the *International Labour Review*, and from Mr. Lucian W. Chaney, of the staff of the Bureau of Labor Statistics. Mr. Ethelbert Stewart, now Commissioner of Labor Statistics, was in general charge of the field work of the Bureau's investigation of labor turnover. Working with the authors under his direction were Messrs. Boris Emmet, William F. Kirk, and Irving Winslow. To them and to Mr. Stewart the authors are very much indebted and they wish to take this opportunity to express their appreciation. Although they are too numerous to mention by name, the authors desire to express their deep sense of obligation to the hundreds of employment managers, factory superintendents, and business executives who cheerfully put themselves to great inconvenience in order to furnish the necessary information. The authors earnestly hope that this analysis of the figures they so kindly furnished may be of use to some of them.

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BASIC TABLES

TABLE
LABOR MOBILITY IN INDIVIDUAL
1913-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISH- MENT NUMBER* | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOU- SANDS) | ACCE- SSIONS |
|--|-------------------------------|--------------------------------------|------------------------------------|-----------------|
| | | | | |
| BOSTON | | | | |
| Auto accessories, mfg. | 1 | 960 | 2,880 | 2,460 |
| Railroad shops | 2 | 2,001 | 6,003 | 545 |
| Rubber wearing apparel, mfg. ¹ | 3 | 1,367 | 4,101 | 1,737 |
| Rubber footwear and auto tires | 4 | 2,856 | 8,568 | 3,284 |
| Shoes, mfg. | 5 | 3,825 | 11,475 | 4,749 |
| Shoe machinery, mfg. | 6 | 2,549 | 7,647 | 648 |
| Department Store ² | 7 | 1,839 | 5,517 | 824 |
| Steam gauges and valves, mfg. ¹ | 8 | 167 | 501 | 109 |
| Plumbing tools, mfg. ¹ | 9 | 212 | 636 | 490 |
| Brass valves and fittings, mfg. ¹ | 10 | 899 | 2,697 | 880 |
| Paper prod's and roofing material, mfg. | 11 | 864 | 2,592 | 477 |
| Paper boxes and shipping tags, etc. ¹ . | 12 | 1,749 | 5,247 | 1,285 |
| Color printing, etc. | 13 | 726 | 2,178 | 370 |
| Book mfg. | 14 | 449 | 1,347 | 99 |
| Public utilities: Street railways | 15 | 3,060 | 9,180 | 354 |
| Elevated railways | 16 | 8,858 | 26,574 | 1,145 |
| Telephone service ³ | 17 | 2,750 | 8,250 | 603 |
| Total | [17] | 35,131 | 105,393 | 20,059 |
| CHICAGO | | | | |
| Chewing gum, mfg. | 18 | 273 | 819 | 341 |
| Shoe bottoms, mfg. | 19 | 277 | 831 | 148 |
| Agricultural implements, mfg. | 20 (105) | 4,377 | 13,131 | 1,546 |
| Agricultural implements, mfg. | 21 (106) | 6,592 | 19,776 | 1,946 |
| Agricultural implements, mfg. | 22 | 1,904 | 5,712 | 289 |
| Agricultural implements, mfg. | 23 | 761 | 2,283 | 397 |
| Elevating machinery, mfg. ¹ | 24 | 503 | 1,509 | 562 |
| Car works ⁴ | 25 (102) | 9,661 | 28,983 | 13,513 |
| Structural steel fabricating | 26 (113) | 243 | 729 | 168 |
| Mail order house | 27 | 9,430 | 28,290 | 8,834 |
| Electrical supplies, mfg. | 28 (117) | 544 | 1,632 | 686 |
| Valves and fittings, mfg. | 29 | 4,306 | 12,918 | 517 |
| Iron wheels and castings, mfg. ⁵ | 30 (115) | 415 | 1,245 | 616 |
| Steel products, mfg. | 31 | 3,758 | 11,274 | 2,038 |
| Telephone apparatus, mfg. ¹ | 32 | 11,049 | 33,147 | 20,095 |
| Slaughtering and meat packing ⁴ . . . | 33 | 12,519 | 37,557 | 8,117 |
| Slaughtering and meat packing ¹ . . . | 34 (126) | 5,522 | 16,566 | 16,486 |
| Total | [17] | 72,134 | 216,402 | 76,299 |

** Notes to this table will

APPENDIX

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A**

ESTABLISHMENTS, 1913-14 AND 1917-18
14°

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------|---------|---------------------------|------------|------|--|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLUX | |
| BOSTON | | | | | |
| 1,391 | 3,851 | 2.55 | 1.44 | 3.99 | Auto accessories, mfg. |
| 648 | 1,193 | .27 | .33 | .60 | Railroad shops |
| 1,972 | 3,709 | 1.26 | 1.44 | 2.70 | Rubber wearing apparel, mfg. ¹ |
| 2,801 | 6,085 | 1.14 | .99 | 2.13 | Rubber footwear and auto tires |
| 5,046 | 9,795 | 1.23 | 1.32 | 2.55 | Shoes, mfg. |
| 1,425 | 2,073 | .24 | .57 | .81 | Shoe machinery, mfg. |
| 842 | 1,666 | .45 | .45 | .90 | Department Store ² |
| 130 | 239 | .60 | .78 | 1.38 | Steam gauges and valves, mfg. ¹ |
| 427 | 917 | 2.31 | 2.01 | 4.32 | Plumbing tools, mfg. ¹ |
| 951 | 1,831 | .99 | 1.05 | 2.04 | Brass valves & fittings, mfg. ¹ |
| 505 | 982 | .54 | .57 | 1.11 | Pap'r prod. & roof'g mat., mfg. |
| 1,009 | 2,294 | .72 | .57 | 1.29 | Pap'r box's & ship'g tags, etc. ¹ |
| 373 | 743 | .51 | .51 | 1.02 | Color printing, etc. |
| 150 | 249 | .21 | .33 | .54 | Book mfg. |
| 412 | 766 | .12 | .12 | .24 | Public utilities: Street railw's |
| 1,164 | 2,309 | .12 | .12 | .24 | Elev. railw's |
| 466 | 1,069 | .21 | .18 | .39 | Tel. service ² |
| 19,712 | 39,771 | .57 | .57 | 1.14 | Total |
| CHICAGO | | | | | |
| 329 | 670 | 1.26 | 1.20 | 2.46 | Chewing gum, mfg. |
| 206 | 354 | .54 | .75 | 1.29 | Shoe bottoms, mfg. |
| 2,808 | 4,354 | .36 | .63 | .99 | Agricultural implements, mfg. |
| 4,115 | 6,061 | .30 | .63 | .93 | Agricultural implements, mfg. |
| 992 | 1,281 | .15 | .51 | .66 | Agricultural implements, mfg. |
| 778 | 1,175 | .51 | 1.02 | 1.53 | Agricultural implements, mfg. |
| 483 | 1,045 | 1.11 | .96 | 2.07 | Elevating machinery, mfg. ¹ |
| 20,304 | 34,017 | 1.41 | 2.13 | 3.54 | Car works ⁴ |
| 212 | 380 | .69 | .87 | 1.56 | Structural steel fabricating |
| 8,627 | 17,461 | .93 | .90 | 1.83 | Mail order house |
| 700 | 1,386 | 1.26 | 1.29 | 2.55 | Electrical supplies, mfg. |
| 888 | 1,405 | .12 | .21 | .33 | Valves and fittings, mfg. |
| 606 | 1,222 | 1.47 | 1.47 | 2.94 | Iron wheels and castings, mfg. ⁵ |
| 3,055 | 5,093 | .54 | .81 | 1.35 | Steel products, mfg. |
| 16,163 | 36,258 | 1.83 | 1.47 | 3.30 | Telephone apparatus, mfg. ¹ |
| 8,096 | 16,213 | .65 | .65 | 1.30 | Slaughtering and meat pack'g ⁶ |
| 15,146 | 31,632 | 3.00 | 2.73 | 5.73 | Slaughtering and meat pack'g ¹ |
| 83,708 | 160,007 | 1.06 | 1.16 | 2.22 | Total |

be found on pages 188-189.

TABLE
LABOR MOBILITY IN INDIVIDUAL
1913-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER * | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOUSANDS) | ACCESSIONS |
|---|------------------------|-----------------------------|-------------------------|------------|
| | | | | |
| CINCINNATI | | | | |
| Machine tools, mfg. ¹ | 35 (144) | 476 | 1,428 | 671 |
| Machine tools, mfg. ² | 36 (141) | 624 | 1,872 | 1,282 |
| Engineering specialties, mfg. | 37 (146) | 656 | 1,968 | 221 |
| Total | [3] | 1,756 | 5,268 | 2,174 |
| CLEVELAND | | | | |
| Clothing mfg. | 38 | 1,020 | 3,060 | 320 |
| Clothing, men's, mfg. | 39 | 783 | 2,349 | 296 |
| Machine tools, mfg. | 40 (172) | 335 | 1,005 | 431 |
| Metal wire, etc., mfg. ³ | 41 { (178) (184) } | 1,247 | 3,741 | 1,181 |
| Machine tools, mfg. ⁴ | 42 (192) | 1,111 | 3,333 | 1,609 |
| Total | [5] | 4,496 | 13,488 | 3,837 |
| DETROIT | | | | |
| Aluminum and brass foundry | 43 | 397 | 1,191 | 2,389 |
| Motor car, mfg. ¹ | 44 | 2,146 | 6,438 | 4,724 |
| Motor car, gasoline, mfg. | 45 | 715 | 2,145 | 2,405 |
| Transmissions and gears, mfg. | 46 | 239 | 717 | 562 |
| Motor car, mfg. | 47 (205) | 3,110 | 9,330 | 8,695 |
| Motor car, mfg. | 48 (194) | 10,904 | 32,712 | 5,071 |
| Motor car, mfg. | 49 | 731 | 2,193 | 1,006 |
| Motor car, mfg. | 50 (198) | 897 | 2,691 | 1,365 |
| Motor car, mfg. | 51 (200) | 4,028 | 12,084 | 4,120 |
| Motor car, mfg. | 52 | 287 | 861 | 1,737 |
| Motor car, mfg. | 53 | 4,484 | 13,452 | 10,033 |
| Automobile parts, mfg. | 54 (207) | 1,004 | 3,012 | 1,827 |
| Adding machine, mfg. | 55 | 1,887 | 5,661 | 917 |
| Public utilities: Gas mfg. | 56 | 650 | 1,950 | 9 |
| Total | [14] | 31,479 | 94,437 | 44,917 |

APPENDIX

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A — Continued

ESTABLISHMENTS, 1913-14 AND 1917-18
14°

| LARGE CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------|--------|---------------------------|------------|-------|---|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLOX | |
| CINCINNATI | | | | | |
| 748 | 1,419 | 1.41 | 1.56 | 2.97 | Machine tools, mfg. ¹ Machine tools, mfg. ² Engineering specialties, mfg. |
| 970 | 2,252 | 2.04 | 1.56 | 3.60 | |
| 283 | 504 | .34 | .43 | .77 | |
| 2,001 | 4,175 | 1.23 | 1.14 | 2.37 | Total |
| CLEVELAND | | | | | |
| 454 | 774 | .30 | .45 | .75 | Clothing mfg. Clothing, men's, mfg. Machine tools, mfg. |
| 430 | 726 | .39 | .54 | .93 | |
| 270 | 701 | 1.29 | .81 | 2.10 | |
| 876 | 2,057 | .96 | .69 | 1.65 | Metal wire, etc., mfg. ⁶ |
| 1,825 | 3,434 | 1.44 | 1.65 | 3.09 | Machine tools, mfg. ⁶ |
| 3,855 | 7,692 | .84 | .87 | 1.71 | Total |
| DETROIT | | | | | |
| 2,145 | 4,534 | 6.03 | 5.40 | 11.43 | Aluminum and brass foundry |
| 5,255 | 9,979 | 2.19 | 2.46 | 4.65 | Motor car, mfg. ¹ |
| 1,709 | 4,114 | 3.36 | 2.40 | 5.76 | Motor car, gasoline, mfg. |
| 532 | 1,094 | 2.34 | 2.22 | 4.56 | Transmissions and gears, mfg. |
| 8,629 | 17,324 | 2.79 | 2.76 | 5.55 | Motor car, mfg. |
| 6,508 | 11,579 | .48 | .60 | 1.08 | Motor car, mfg. |
| 1,101 | 2,107 | 1.38 | 1.50 | 2.88 | Motor car, mfg. |
| 1,411 | 2,776 | 1.53 | 1.56 | 3.09 | Motor car, mfg. |
| 2,895 | 7,015 | 1.02 | .72 | 1.74 | Motor car, mfg. |
| 1,350 | 3,087 | 6.06 | 4.71 | 10.77 | Motor car, mfg. |
| 13,256 | 23,289 | 2.25 | 2.97 | 5.22 | Motor car, mfg. |
| 1,918 | 3,745 | 1.83 | 1.92 | 3.75 | Automobile parts, mfg. |
| 1,583 | 2,495 | .48 | .84 | 1.32 | Adding machine, mfg. |
| 202 | 293 | .15 | .30 | .45 | Public utilities: Gas mfg. |
| 48,494 | 93,431 | 1.44 | 1.53 | 2.97 | Total |

TABLE
LABOR MOBILITY IN
1913-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER ^a | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOUSANDS) | ACCESSIONS |
|--|-----------------------------------|-----------------------------|-------------------------|---------------|
| | | | | |
| MILWAUKEE | | | | |
| Excavating machinery, mfg. | 57 | 955 | 2,865 | 419 |
| Electrical appliances, mfg. | 58 (257) | 642 | 1,926 | 361 |
| Total | [2] | 1,597 | 4,791 | 780 |
| NEW YORK | | | | |
| Crackers and biscuits, baking | 59 | 1,111 | 3,333 | 2,032 |
| Cotton specialties, mfg. | 60 | 785 | 2,355 | 1,177 |
| Printing presses, mfg. | 61 | 1,438 | 4,314 | 1,479 |
| Mail order house | 62 | 624 | 1,872 | 1,071 |
| Life insurance ^b | 63 | 3,679 | 11,037 | 780 |
| Locks and hardware, mfg. ¹ | 64 | 3,596 | 10,788 | 3,943 |
| Paper products, mfg. | 65 | 1,778 | 5,334 | 1,620 |
| Public utilities: Street railways ^b . . . | 66 | 3,622 | 10,866 | 2,595 |
| Telephone service | 67 | 19,051 | 57,153 | 7,862 |
| Total | [9] | 35,684 | 107,052 | 22,659 |
| OTHER CITIES | | | | |
| Rubber goods, mfg. ⁷ . . . (Ohio) | 68 | 5,246 | 15,738 | 11,676 |
| Rubber tires, mfg. ⁸ . . . (Ohio) | 69 | 639 | 1,917 | 903 |
| Sheet-metal ware, mfg. ⁸ . . (N. Y.) | 70 | 564 | 1,692 | 1,149 |
| Elevating machine, mfg. . . (Ohio) | 71 | 1,632 | 4,896 | 968 |
| Lighting apparatus, mfg. . . (Ohio) | 72 | 1,087 | 3,261 | 1,120 |
| Cash registers, mfg. . . . (Ohio) | 73 | 5,034 | 15,102 | 1,749 |
| Silk, mfg. (Conn.) | 74 | 3,967 | 11,901 | 1,260 |
| Insurance (Conn.) | 75 | 971 | 2,913 | 394 |
| Typewriters, mfg. (Conn.) | 76 | 2,894 | 8,682 | 885 |
| Cotton and worsted, mfg. . . (N. H.) | 77 | 13,791 | 41,373 | 11,751 |
| Automobile mfg. (Mich.) | 78 | 477 | 1,431 | 3,625 |
| Agricultural implement mfg. ⁸ (Ill.) | 79 | 517 | 1,551 | 1,059 |
| Hat mfg. (Pa.) | 80 | 4,496 | 13,488 | 811 |
| Electrical apparatus, mfg. ¹ (Pa.) | 81 | 10,665 | 31,995 | 12,429 |
| Bleaching and dyeing . . . (R. I.) | 82 | 1,516 | 4,548 | 1,074 |
| Machine tool mfg. ⁸ . . . (R. I.) | 83 | 4,323 | 12,969 | 4,087 |
| Electrical apparatus, mfg. (N. Y.) | 84 | 13,064 | 39,192 | 1,323 |
| Total | [17] | 70,883 | 212,649 | 56,263 |

A—Continued

INDIVIDUAL ESTABLISHMENTS

14°

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS | |
|---------------|---------|---------------------------|------------|-------|--|--|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLUX | | |
| MILWAUKEE | | | | | | |
| 563 | 982 | .45 | .60 | 1.05 | Excavating machinery, mfg. Electrical appliances, mfg. | |
| 665 | 1,026 | .57 | 1.05 | 1.62 | | |
| 1,228 | 2,008 | .48 | .78 | 1.26 | Total | |
| NEW YORK | | | | | | |
| 1,395 | 3,427 | 1.83 | 1.26 | 3.09 | Crackers and biscuits, baking Cotton specialties, mfg. Printing presses, mfg. Mail order house Life insurance ⁶ Locks and hardware, mfg. ¹ Paper products, mfg. Public utilities: Street railroads ⁴ Tel. service | |
| 1,055 | 2,332 | 1.62 | 1.35 | 2.97 | | |
| 1,217 | 2,696 | 1.02 | .84 | 1.86 | | |
| 936 | 2,007 | 1.71 | 1.50 | 3.21 | | |
| 266 | 1,046 | .21 | .06 | .27 | | |
| 3,363 | 7,306 | 1.11 | .93 | 2.04 | | |
| 1,642 | 3,262 | .90 | .93 | 1.83 | | |
| 2,770 | 5,365 | .72 | .75 | 1.47 | | |
| 10,320 | 18,182 | .42 | .54 | .96 | | |
| 22,964 | 45,623 | .63 | .63 | 1.26 | | Total |
| OTHER CITIES | | | | | | |
| 8,070 | 19,746 | 2.22 | 1.53 | 3.75 | | Rubber goods, mfg. ⁷ (Ohio) |
| 1,028 | 1,931 | 1.41 | 1.62 | 3.03 | | Rubber tires, mfg. ⁸ (Ohio) |
| 1,072 | 2,221 | 2.04 | 1.89 | 3.93 | Sheet-metal ware, mfg. ⁴ (N. Y.) | |
| 919 | 1,887 | .60 | .57 | 1.17 | Elevating mach., mfg. (Ohio) | |
| 1,063 | 2,183 | 1.02 | .99 | 2.01 | Lighting appar., mfg. (Ohio) | |
| 3,451 | 5,200 | .36 | .69 | 1.05 | Cash registers, mfg. (Ohio) | |
| 1,152 | 2,412 | .33 | .30 | .63 | Silk, mfg. (Conn.) | |
| 293 | 687 | .42 | .30 | .72 | Insurance (Conn.) | |
| 948 | 1,833 | .30 | .33 | .63 | Typewriters, mfg. (Conn.) | |
| 12,300 | 24,051 | .84 | .90 | 1.74 | Cotton & worsted, mfg. (N. H.) | |
| 3,424 | 7,049 | 7.59 | 7.20 | 14.79 | Automobile mfg. (Mich.) | |
| 847 | 1,906 | 2.04 | 1.65 | 3.69 | Agricul. impl. mfg. ⁶ (Ill.) | |
| 1,101 | 1,912 | .18 | .24 | .42 | Hat mfg. (Pa.) | |
| 16,748 | 29,177 | 1.17 | 1.56 | 2.73 | Elec. apparatus, mfg. ¹ (Pa.) | |
| 1,300 | 2,374 | .72 | .87 | 1.59 | Bleaching and dyeing (R. I.) | |
| 3,275 | 7,362 | .96 | .75 | 1.71 | Machine tool mfg. ³ (R. I.) | |
| 4,754 | 6,077 | .09 | .36 | .45 | Elec. apparatus, mfg. (N. Y.) | |
| 61,745 | 118,008 | .78 | .87 | 1.65 | Total | |

TABLE
LABOR MOBILITY IN
1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER * | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOUSANDS) | ACCESSIONS |
|--|------------------------|-----------------------------|-------------------------|----------------|
| | | | | |
| CHICAGO* | | | | |
| Motors and railway supplies, mfg. ⁹ | 101 | 1,954 | 5,862 | 4,460 |
| Car works | 102 (25) | 7,287 | 21,861 | 18,837 |
| Clothing, men's, mfg. | 103 | 6,027 | 18,081 | 5,731 |
| Printing presses, mfg. | 104 | 764 | 2,292 | 510 |
| Agricultural implements, mfg. | 105 (20) | 4,211 | 12,633 | 2,865 |
| Agricultural implements, mfg. | 106 (21) | 5,759 | 17,277 | 5,486 |
| Machinery (coal mining), mfg. | 107 | 611 | 1,833 | 782 |
| Machinery (specialties), mfg. | 108 | 335 | 1,005 | 880 |
| Mail order house | 109 | 14,731 | 44,193 | 13,792 |
| Mail order house | 110 | 1,042 | 3,126 | 1,358 |
| Mail order house | 111 | 2,031 | 6,093 | 3,485 |
| Mail order house | 112 | 5,092 | 15,276 | 12,283 |
| Structural steel fabricating ¹⁰ | 113 (26) | 402 | 1,206 | 446 |
| Brass and metal specialties, mfg. | 114 | 283 | 849 | 590 |
| Iron wheels and castings, mfg. ¹⁰ | 115 (30) | 300 | 1,170 | 1,208 |
| Office appliances, mfg. ⁹ | 116 | 667 | 2,001 | 1,879 |
| Electrical supplies, mfg. | 117 (28) | 733 | 2,199 | 2,105 |
| Iron castings, mfg. | 118 | 950 | 2,850 | 2,867 |
| Screw machine products, mfg. ¹¹ | 119 | 520 | 1,560 | 1,703 |
| Steel forgings ¹² | 120 | 1,099 | 3,297 | 4,837 |
| Electrical supplies, mfg. | 121 | 258 | 774 | 944 |
| Public utilities: Electricity | 122 | 4,728 | 14,184 | 5,193 |
| Gas mfg. | 123 | 4,725 | 14,175 | 6,527 |
| Telephone service | 124 | 13,604 | 40,812 | 9,524 |
| Street railways ¹² | 125 | 3,900 | 11,727 | 3,201 |
| Slaughtering and meat packing | 126 (34) | 8,730 | 26,100 | 19,050 |
| Slaughtering and meat packing | 127 | 14,320 | 42,960 | 32,374 |
| Slaughtering and meat packing ¹⁰ | 128 | 5,219 | 15,657 | 20,014 |
| Total | [28] | 110,381 | 331,143 | 182,931 |
| CINCINNATI* | | | | |
| Soap, glycerine, etc. | 129 | 1,953 | 5,859 | 4,046 |
| Ink mfg. | 130 | 708 | 2,124 | 2,062 |
| Soap, glycerine, etc. | 131 | 400 | 1,200 | 1,024 |
| Clothing, women's, mfg. | 132 | 234 | 702 | 187 |
| Textiles (cotton), mfg. | 133 | 330 | 900 | 354 |
| Mill work (building material) | 134 | 275 | 825 | 675 |
| Leather goods, mfg. | 135 | 467 | 1,401 | 728 |
| Rubber goods, mfg. | 136 | 110 | 330 | 304 |

A—Continued

INDIVIDUAL ESTABLISHMENTS
18°

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------|---------|---------------------------|------------|------|--|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLUX | |
| CHICAGO* | | | | | |
| 3,906 | 8,456 | 2.28 | 2.04 | 4.32 | Motors and ry. supplies, mfg. ⁹ |
| 20,642 | 39,479 | 2.58 | 2.82 | 5.40 | Car works |
| 7,240 | 12,971 | .96 | 1.20 | 2.16 | Clothing, men's, mfg. |
| 471 | 981 | .66 | .63 | 1.29 | Printing presses, mfg. |
| 2,062 | 5,827 | .69 | .69 | 1.38 | Agricultural implements, mfg. |
| 4,729 | 10,215 | .96 | .81 | 1.77 | Agricultural implements, mfg. |
| 764 | 1,546 | 1.29 | 1.26 | 2.55 | Machinery (coal mining), mfg. |
| 967 | 1,847 | 2.64 | 2.88 | 5.52 | Machinery (specialties), mfg. |
| 15,784 | 29,576 | .93 | 1.08 | 2.01 | Mail order house |
| 1,332 | 2,690 | 1.29 | 1.29 | 2.58 | Mail order house |
| 3,332 | 6,817 | 1.71 | 1.65 | 3.36 | Mail order house |
| 12,333 | 24,616 | 2.40 | 2.43 | 4.83 | Mail order house |
| 370 | 816 | 1.11 | .93 | 2.04 | Structural steel fabricating ¹⁰ |
| 536 | 1,126 | 2.10 | 1.89 | 3.99 | Brass and metal spec'l's, mfg. |
| 858 | 2,066 | 3.09 | 2.19 | 5.28 | Iron wheels and castings, mfg. ¹⁰ |
| 1,712 | 3,591 | 2.82 | 2.58 | 5.40 | Office appliances, mfg. ⁹ |
| 1,965 | 4,070 | 2.88 | 2.67 | 5.55 | Electrical supplies, mfg. |
| 2,767 | 5,634 | 3.03 | 2.91 | 5.94 | Iron castings, mfg. |
| 1,681 | 3,384 | 3.27 | 3.24 | 6.51 | Screw machine products, mfg. ¹¹ |
| 2,734 | 7,571 | 4.41 | 2.49 | 6.90 | Steel forgings ¹² |
| 868 | 1,812 | 3.66 | 3.36 | 7.02 | Electrical supplies, mfg. |
| 6,234 | 11,427 | 1.11 | 1.32 | 2.43 | Public utilities: Electricity |
| 6,300 | 12,827 | 1.38 | 1.32 | 2.70 | Gas mfg. |
| 11,454 | 20,978 | .69 | .84 | 1.53 | Tel. service |
| 3,809 | 7,010 | .81 | .96 | 1.77 | Street rys. ¹² |
| 16,062 | 35,112 | 2.19 | 1.83 | 4.02 | Slaughtering & meat pack'g. |
| 27,890 | 60,264 | 2.25 | 1.95 | 4.20 | Slaughtering & meat pack'g. |
| 17,418 | 37,432 | 3.84 | 3.33 | 7.17 | Slaughtering & meat pack'g. ¹⁰ |
| 177,210 | 360,141 | 1.65 | 1.62 | 3.27 | Total |
| CINCINNATI* | | | | | |
| 3,270 | 7,316 | 2.07 | 1.68 | 3.75 | Soap, glycerine, etc. |
| 1,658 | 3,720 | 2.91 | 2.34 | 5.25 | Ink mfg. |
| 1,814 | 3,758 | 4.80 | 4.59 | 9.39 | Soap, glycerine, etc. |
| 180 | 367 | .81 | .78 | 1.59 | Clothing, women's, mfg. |
| 369 | 723 | 1.08 | 1.11 | 2.19 | Textiles (cotton), mfg. |
| 705 | 1,380 | 2.46 | 2.55 | 5.01 | Mill work (building material) |
| 886 | 1,614 | 1.56 | 1.89 | 3.45 | Rubber goods, mfg. |
| 300 | 604 | 2.76 | 2.73 | 5.49 | Leather goods, mfg. |

TABLE
 LABOR MOBILITY IN
 1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER * | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOUSANDS) | ACCESSIONS |
|---|------------------------|-----------------------------|-------------------------|------------|
| | | | | |
| CINCINNATI * — | | | | |
| Machine tools, mfg. | 137 | 127 | 381 | 103 |
| Machine tools, mfg. | 138 | 602 | 1,806 | 622 |
| Machinery (specialties), mfg. | 139 | 669 | 2,007 | 847 |
| Machinery mfg. | 140 | 407 | 1,221 | 502 |
| Machine tools, mfg. | 141 (36) | 883 | 2,649 | 1,363 |
| Machine tools, mfg. | 142 | 602 | 1,806 | 1,020 |
| Electrical machinery, mfg. | 143 | 1,443 | 4,329 | 2,444 |
| Machine tools, mfg. | 144 (35) | 1,194 | 3,582 | 2,146 |
| Machine tools, mfg. | 145 | 310 | 930 | 786 |
| Engineering specialties, mfg. | 146 (37) | 1,150 | 3,450 | 2,030 |
| Office appliances | 147 | 418 | 1,254 | 1,051 |
| Foundry (stoves and furnaces), mfg. | 148 | 440 | 1,320 | 1,138 |
| Tin can mfg. | 149 | 529 | 1,587 | 1,857 |
| Printing and publishing (books) | 150 | 244 | 732 | 82 |
| Printing and publishing (misc.) | 151 | 767 | 2,301 | 667 |
| Printing and publishing (etc.) | 152 | 617 | 1,851 | 2,212 |
| Public utilities: Gas and electric | 153 | 721 | 2,163 | 361 |
| Telephone service | 154 | 1,769 | 5,307 | 777 |
| Street railways ¹⁴ | 155 | 1,330 | 3,990 | 636 |
| Total | [27] | 18,699 | 56,097 | 30,917 |
| CLEVELAND * | | | | |
| Automobile and motor truck mfg. ¹⁵ | 156 ⁴ | 4,456 | 13,368 | 3,552 |
| Automobile and motor truck mfg. | 157 | 1,417 | 4,251 | 2,643 |
| Automobile and motor truck mfg. | 158 | 2,173 | 6,519 | 5,179 |
| Street railway cars, mfg. | 159 | 344 | 1,032 | 1,016 |
| Tractors, mfg. ¹⁶ | 160 | 384 | 1,152 | 1,746 |
| Auto. parts, mfg. ¹⁷ | 161 | 518 | 1,554 | 2,280 |
| Auto. frames, steel stampings, mfg. ¹⁸ | 162 | 770 | 2,310 | 4,484 |
| Paint and varnish mfg. | 163 | 267 | 801 | 568 |
| Storage batteries, mfg. | 164 | 1,987 | 5,961 | 6,075 |
| Paint and varnish mfg. | 165 | 105 | 315 | 324 |
| Storage batteries, carbon products, ¹¹ | 166 | 1,610 | 4,830 | 6,036 |
| Clothing, women's, mfg. | 167 ⁴ | 1,431 | 4,293 | 1,611 |
| Bags (paper and cloth), mfg. | 168 | 1,004 | 3,012 | 3,378 |
| Woodw'k, sewing machine cabinets ¹⁹ | 169 | 1,514 | 4,542 | 3,410 |
| Automatic screw machinery, mfg. | 170 | 2,430 | 7,290 | 3,510 |
| Machinery (heavy), mfg. | 171 | 984 | 2,952 | 1,575 |
| Machine tools, mfg. | 172 (40) | 1,263 | 3,789 | 3,520 |
| Machinery (heavy), mfg. | 173 | 940 | 2,820 | 2,601 |
| Molding machinery, mfg. ²⁰ | 174 | 98 | 294 | 280 |
| Motors, mfg. ²¹ | 175 | 870 | 2,610 | 3,548 |

A—Continued

INDIVIDUAL ESTABLISHMENTS
18⁹

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|------------------|--------|---------------------------|------------|-------|---|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLUX | |
| <i>Continued</i> | | | | | |
| 73 | 176 | .81 | .57 | 1.38 | Machine tools, mfg. |
| 592 | 1,214 | 1.02 | .99 | 2.01 | Machine tools, mfg. |
| 860 | 1,707 | 1.26 | 1.29 | 2.55 | Machinery (specialties), mfg. |
| 567 | 1,069 | 1.23 | 1.38 | 2.61 | Machinery mfg. |
| 1,166 | 2,519 | 1.53 | 1.32 | 2.85 | Machine tools, mfg. |
| 980 | 2,000 | 1.68 | 1.62 | 3.30 | Machine tools, mfg. |
| 2,396 | 4,840 | 1.68 | 1.65 | 3.33 | Electrical machinery, mfg. |
| 1,982 | 4,128 | 1.80 | 1.65 | 3.45 | Machine tools, mfg. |
| 815 | 1,601 | 2.55 | 2.64 | 5.19 | Machine tools, mfg. |
| 1,989 | 4,019 | 1.77 | 1.74 | 3.51 | Engineering specialties, mfg. |
| 903 | 1,954 | 2.52 | 2.16 | 4.68 | Office appliances |
| 1,109 | 2,247 | 2.58 | 2.52 | 5.10 | F'dry (stoves and furn's), mfg. |
| 1,969 | 3,819 | 3.51 | 3.72 | 6.23 | Tin can mfg. |
| 119 | 201 | .33 | .48 | .81 | Printing and publishing (books) |
| 811 | 1,478 | .87 | 1.05 | 1.92 | Printing and publishing (misc.) |
| 2,228 | 4,440 | 3.60 | 3.60 | 7.20 | Printing and publishing (etc.) |
| 382 | 743 | .51 | .54 | 1.05 | Public utilities: Gas and elec. |
| 714 | 1,491 | .45 | .39 | .84 | Tel. service |
| 847 | 1,483 | .48 | .63 | 1.11 | Street rys. ¹⁴ |
| 29,704 | 60,621 | 1.65 | 1.59 | 3.24 | Total |
| CLEVELAND* | | | | | |
| 2,878 | 6,430 | .81 | .63 | 1.44 | Auto. and motor truck mfg. ¹⁵ |
| 2,923 | 5,566 | 1.86 | 2.07 | 3.93 | Auto. and motor truck mfg. |
| 6,280 | 11,468 | 2.37 | 2.88 | 5.25 | Auto. and motor truck mfg. |
| 1,038 | 2,054 | 2.94 | 3.03 | 5.97 | Street railway cars, mfg. |
| 1,540 | 3,286 | 4.56 | 4.02 | 8.58 | Tractors, mfg. ¹⁶ |
| 2,332 | 4,612 | 4.41 | 4.50 | 8.91 | Auto. parts, mfg. ¹⁷ |
| 4,152 | 8,636 | 5.82 | 5.40 | 11.22 | Auto. frames, steel stampings ¹⁸ |
| 548 | 1,116 | 2.13 | 2.04 | 4.17 | Paint and varnish mfg. |
| 5,589 | 11,664 | 3.06 | 2.82 | 5.88 | Storage batteries, mfg. |
| 376 | 700 | 3.09 | 3.57 | 6.66 | Paint and varnish mfg. |
| 5,789 | 11,825 | 3.75 | 3.60 | 7.35 | Storage batteries, carbon ¹¹ |
| 1,120 | 2,740 | 1.14 | .78 | 1.92 | Clothing, women's, mfg. |
| 3,698 | 7,076 | 3.36 | 3.69 | 7.05 | Bags (paper and cloth), mfg. |
| 4,566 | 7,976 | 2.25 | 3.03 | 5.28 | Woodw'k, sewing cabinets ¹² |
| 3,937 | 6,547 | 1.44 | 1.26 | 2.70 | Automatic screw-mach'ry, mfg. |
| 1,338 | 2,913 | 1.59 | 1.35 | 2.94 | Machinery (heavy), mfg. |
| 2,556 | 6,076 | 2.70 | 2.61 | 4.80 | Machine tools, mfg. |
| 2,303 | 5,084 | 2.85 | 2.55 | 5.40 | Machinery (heavy), mfg. |
| 278 | 558 | 2.85 | 2.85 | 5.70 | Molding machinery, mfg. ¹³ |
| 3,234 | 6,782 | 4.08 | 3.72 | 7.80 | Motors, mfg. ¹⁴ |

TABLE
LABOR MOBILITY IN
1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER * | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOUSANDS) | ACCESSIONS |
|--|------------------------|-----------------------------|-------------------------|------------|
| | | | | |
| CLEVELAND * - | | | | |
| Metal wire, etc., mfg. | 176 | 917 | 2,751 | 1,286 |
| Steel works ²² | 177 | 3,124 | 9,372 | 5,004 |
| Metal wire, etc., mfg. | 178 (41) | 699 | 2,097 | 1,510 |
| Sewing machines, mfg. | 179 | 590 | 1,770 | 1,281 |
| Electrical appliances, mfg. | 180 | 393 | 1,179 | 941 |
| Steel works | 181 | 1,031 | 3,093 | 2,887 |
| Oil stoves, mfg. | 182 (42) | 1,649 | 4,947 | 5,118 |
| Malleable iron castings | 183 | 937 | 2,811 | 3,077 |
| Metal wire, etc., mfg. | 184 (41) | 709 | 2,127 | 2,392 |
| Forgings | 185 | 2,712 | 8,136 | 9,313 |
| Steel works ¹⁰ | 186 | 2,222 | 6,666 | 14,734 |
| Printing and publishing (book and job) | 187 | 163 | 489 | 225 |
| Printing and publishing (job) | 188 | 149 | 447 | 247 |
| Public utilities: Gas (clerical force) . | 189 | 304 | 912 | 219 |
| Gas mfg. | 190 | 753 | 2,259 | 674 |
| Tel. serv. (cler. force) | 191 | 102 | 306 | 132 |
| Tel. serv. (op. force) | 192 | 1,368 | 4,104 | 2,328 |
| Tel. serv. (pl'nt dept.) | 193 | 1,267 | 3,801 | 2,200 |
| Total | [38] | 43,654 | 130,962 | 110,994 |
| DETROIT | | | | |
| Automobile mfg. ²³ | 194 (48) | 31,950 | 95,850 | 14,924 |
| Automobile parts, mfg. | 195 | 783 | 2,349 | 1,629 |
| Automobile mfg. | 196 | 6,337 | 19,011 | 16,696 |
| Automobile parts, mfg. ²⁴ | 197 | 850 | 2,550 | 2,427 |
| Automobile mfg. | 198 (50) | 2,504 | 7,512 | 7,683 |
| Automobile parts, mfg. | 199 | 224 | 672 | 800 |
| Automobile mfg. | 200 (51) | 9,869 | 29,607 | 34,779 |
| Automobile parts, mfg. | 201 | 86 | 258 | 301 |
| Automobile mfg. | 202 | 1,944 | 5,832 | 7,332 |
| Automobile parts, mfg. | 203 | 114 | 342 | 433 |
| Automobile mfg. | 204 | 135 | 405 | 477 |
| Automobile mfg. ²⁵ | 205 (47) | 11,125 | 33,375 | 41,174 |
| Automobile parts, mfg. ²⁶ | 206 | 2,574 | 7,722 | 11,578 |
| Automobile parts, mfg. | 207 (54) | 3,370 | 10,137 | 15,296 |
| Automobile mfg. ¹⁴ | 208 | 416 | 1,248 | 1,614 |
| Automobile mfg. | 209 | 121 | 363 | 606 |
| Automobile parts, mfg. ¹⁸ | 210 | 314 | 942 | 1,574 |

A — Continued

INDIVIDUAL ESTABLISHMENTS
18°

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|------------------|---------|---------------------------|------------|-------|--------------------------------------|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLUX | |
| <i>Continued</i> | | | | | |
| 1,386 | 2,672 | 1.41 | 1.50 | 2.91 | Metal wire, etc., mfg. |
| 4,956 | 9,960 | 1.59 | 1.59 | 3.18 | Steel works ²² |
| 1,520 | 3,030 | 2.16 | 2.16 | 4.32 | Metal wire, etc., mfg. |
| 1,290 | 2,571 | 2.16 | 2.10 | 4.35 | Sewing machines, mfg. |
| 776 | 1,717 | 2.40 | 1.98 | 4.38 | Electrical appliances, mfg. |
| 2,841 | 5,728 | 2.79 | 2.76 | 5.55 | Steel works |
| 5,081 | 10,199 | 3.09 | 3.09 | 6.18 | Oil stoves, mfg. |
| 3,091 | 6,168 | 3.27 | 3.30 | 6.57 | Malleable iron castings |
| 2,334 | 4,726 | 3.36 | 3.30 | 6.66 | Metal wire, etc., mfg. |
| 9,030 | 18,943 | 3.42 | 3.54 | 6.96 | Forgings |
| 13,050 | 27,784 | 6.63 | 5.88 | 12.51 | Steel works ¹⁰ |
| 265 | 490 | 1.38 | 1.62 | 3.00 | Print'g & pub'sh'g (book & job) |
| 232 | 479 | 1.65 | 1.56 | 3.21 | Printing and publishing (job) |
| 158 | 377 | .72 | .51 | 1.23 | Pub. utilities: Gas (cler. force) |
| 573 | 1,247 | .90 | .75 | 1.65 | Gas mfg. |
| 140 | 272 | 1.29 | 1.38 | 2.67 | Tel.serv.(cl. f'rc) |
| 2,262 | 4,590 | 1.71 | 1.65 | 3.36 | Tel.serv.(op. f'e) |
| 2,889 | 5,089 | 1.74 | 2.28 | 4.02 | Tel.serv.(pl't d't) |
| 108,157 | 219,151 | 2.55 | 2.49 | 5.04 | Total |
| DETROIT | | | | | |
| 14,631 | 29,555 | .48 | .45 | .93 | Automobile mfg. ²³ |
| 2,123 | 3,752 | 2.07 | 2.70 | 4.77 | Automobile parts, mfg. |
| 17,048 | 33,744 | 2.64 | 2.70 | 5.34 | Automobile mfg. |
| 2,267 | 4,694 | 2.85 | 2.67 | 5.52 | Automobile parts, mfg. ²⁴ |
| 6,861 | 14,544 | 3.06 | 2.73 | 5.79 | Automobile mfg. |
| 670 | 1,470 | 3.57 | 3.00 | 6.57 | Automobile parts, mfg. |
| 30,191 | 64,970 | 3.51 | 3.06 | 6.57 | Automobile mfg. |
| 298 | 599 | 3.51 | 3.48 | 6.99 | Automobile parts, mfg. |
| 6,787 | 14,119 | 3.78 | 3.48 | 7.26 | Automobile mfg. |
| 423 | 856 | 3.81 | 3.72 | 7.53 | Automobile parts, mfg. |
| 537 | 1,014 | 3.54 | 3.99 | 7.53 | Automobile mfg. |
| 45,808 | 86,982 | 3.69 | 4.11 | 7.80 | Automobile mfg. ²⁵ |
| 9,120 | 20,698 | 4.50 | 3.54 | 8.04 | Automobile parts, mfg. ²⁶ |
| 15,130 | 30,426 | 4.53 | 4.47 | 9.00 | Automobile parts, mfg. |
| 1,744 | 3,358 | 3.87 | 4.20 | 8.07 | Automobile mfg. ²⁷ |
| 613 | 1,219 | 5.01 | 5.07 | 10.08 | Automobile mfg. |
| 1,680 | 3,254 | 5.01 | 5.34 | 10.35 | Automobile parts, mfg. ¹⁸ |

TABLE
LABOR MOBILITY IN
1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISH- MENT NUMBER * | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOU- SANDS) | ACCESSIONS |
|---|--------------------------------|--------------------------------------|------------------------------------|------------|
| | | | | |
| DETROIT— | | | | |
| Automobile parts, mfg. | 211 | 1,103 | 3,309 | 6,044 |
| Automobile parts, mfg. ¹⁰ | 212 | 814 | 2,442 | 6,798 |
| Coke and chemicals, mfg. ⁹ | 213 | 2,925 | 8,775 | 2,332 |
| Chemicals and drugs, mfg. ⁹ | 214 | 668 | 2,004 | 1,037 |
| Paints, mfg. ²⁰ | 215 | 434 | 1,302 | 821 |
| Clothing and overalls, mfg. | 216 | 480 | 1,440 | 686 |
| Furniture mfg. | 217 | 511 | 1,533 | 1,642 |
| Machine tools, mfg. | 218 | 630 | 1,890 | 1,773 |
| Machine tools, mfg. ²⁷ | 219 | 585 | 1,755 | 2,472 |
| Steam engine, etc., mfg. | 220 | 726 | 2,178 | 3,591 |
| Iron and steel (small parts), mfg. | 221 | 218 | 654 | 392 |
| Heating devices, mfg. | 222 | 497 | 1,491 | 834 |
| Iron and steel castings, mfg. | 223 | 675 | 2,025 | 1,437 |
| Electrical appliances, mfg. | 224 | 159 | 477 | 377 |
| Steel forgings | 225 | 316 | 948 | 910 |
| Heating devices, mfg. ⁹ | 226 | 637 | 1,911 | 1,781 |
| Steel castings | 227 | 390 | 1,170 | 1,296 |
| Structural steel, mfg. | 228 | 161 | 483 | 543 |
| Electrical appliances, mfg. | 229 | 213 | 630 | 744 |
| Steel forging | 230 | 241 | 723 | 968 |
| Screw-machine products, mfg. | 231 | 187 | 561 | 821 |
| Screw-machine products, mfg. | 232 | 438 | 1,314 | 1,967 |
| Machine appurtenances, mfg. ²⁸ | 233 | 540 | 1,620 | 2,832 |
| Machine appurtenances, mfg. ¹⁰ | 234 | 391 | 1,173 | 2,292 |
| Public utilities: | | | | |
| Gas mfg. | 235 | 1,933 | 5,799 | 1,585 |
| Telephone service (Comm. dept.) | 236 | 161 | 483 | 104 |
| Telephone service (Clerical force) | 237 | 138 | 414 | 167 |
| Telephone service (Installation) | 238 | 431 | 1,293 | 533 |
| Telephone service (Traffic dept.) | 239 | 2,167 | 6,501 | 3,347 |
| Telephone service (Construction) | 240 | 331 | 993 | 628 |
| Slaughtering and meat packing | 241 | 456 | 1,368 | 1,851 |
| Total | [48] | 92,281 | 276,843 | 211,928 |

A — Continued

INDIVIDUAL ESTABLISHMENTS
81°

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|------------------|---------|---------------------------|------------|-------|---|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLOX | |
| <i>Continued</i> | | | | | |
| 5,795 | 11,839 | 5.49 | 5.25 | 10.74 | Automobile parts, mfg. |
| 6,534 | 13,332 | 8.34 | 8.04 | 16.38 | Automobile parts, mfg. ¹⁰ |
| 2,527 | 4,859 | .81 | .87 | 1.68 | Coke and chemicals, mfg. ⁹ |
| 1,131 | 2,168 | 1.56 | 1.68 | 3.24 | Chemicals and drugs, mfg. ⁹ |
| 757 | 1,578 | 1.89 | 1.74 | 3.63 | Paints, mfg. ²⁰ |
| 978 | 1,664 | 1.44 | 2.04 | 3.48 | Clothing and overalls, mfg. |
| 1,765 | 3,407 | 3.21 | 3.45 | 6.66 | Furniture mfg. |
| 1,433 | 3,206 | 2.82 | 2.28 | 5.10 | Machine tools, mfg. |
| 2,418 | 4,890 | 4.23 | 4.14 | 8.37 | Machine tools, mfg. ²⁷ |
| 3,584 | 7,175 | 4.95 | 4.95 | 9.90 | Steam engine, etc., mfg. |
| 384 | 776 | 1.80 | 1.77 | 3.57 | Iron and steel (small p'ts), mfg. |
| 1,167 | 2,001 | 1.68 | 2.34 | 4.02 | Heating devices, mfg. |
| 1,642 | 3,079 | 2.13 | 2.43 | 4.56 | Iron and steel castings, mfg. |
| 391 | 762 | 2.37 | 2.46 | 4.83 | Electrical appliances, mfg. |
| 695 | 1,605 | 2.88 | 2.19 | 5.07 | Steel forgings |
| 1,714 | 3,495 | 2.79 | 2.70 | 5.49 | Heating devices, mfg. ⁹ |
| 1,066 | 2,362 | 3.33 | 2.73 | 6.06 | Steel castings |
| 567 | 1,110 | 3.36 | 3.51 | 6.87 | Structural steel, mfg. |
| 744 | 1,488 | 3.48 | 3.48 | 6.96 | Electrical appliances, mfg. |
| 899 | 1,867 | 4.02 | 3.72 | 7.74 | Steel forging |
| 710 | 1,531 | 4.38 | 3.81 | 8.19 | Screw-machine products, mfg. |
| 2,057 | 4,024 | 4.50 | 4.71 | 9.21 | Screw-machine products, mfg. |
| 2,712 | 5,544 | 5.25 | 5.01 | 10.26 | Machine appurtenances, mfg. ²⁸ |
| 2,208 | 4,500 | 5.85 | 5.64 | 11.49 | Machine appurtenances, mfg. ¹⁸ |
| | | | | | Public utilities: |
| 1,040 | 2,625 | .81 | .54 | 1.35 | Gas mfg. |
| 106 | 210 | .66 | .66 | 1.32 | Tel. serv. (Comm. dept.) |
| 141 | 308 | 1.20 | 1.02 | 2.22 | Tel. serv. (Clerical force) |
| 510 | 1,043 | 1.23 | 1.17 | 2.40 | Tel. serv. (Installation) |
| 3,015 | 6,362 | 1.56 | 1.38 | 2.94 | Tel. serv. (Traffic dept.) |
| 633 | 1,261 | 1.89 | 1.92 | 3.81 | Tel. serv. (Construction) |
| 1,874 | 3,725 | 4.05 | 4.11 | 8.16 | Slaughtering and meat packing |
| 207,128 | 419,056 | 2.31 | 2.25 | 4.56 | Total |

TABLE
 LABOR MOBILITY IN
 1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER * | NUMBER OF FULL-YEAR WORKERS | LABOR HOURS (THOUSANDS) | ACCESSIONS |
|--|------------------------|-----------------------------|-------------------------|------------|
| | | | | |
| MILWAUKEE/ | | | | |
| Motor vehicles and parts, mfg. | 242 | 1,665 | 4,995 | 2,435 |
| Automobile parts, mfg. | 243 | 1,246 | 3,738 | 4,157 |
| Chemicals, mfg. ¹⁰ | 244 | 346 | 1,038 | 470 |
| Chemicals, mfg. ¹⁰ | 245 | 876 | 2,628 | 5,660 |
| Textiles, mfg. ¹⁰ | 246 | 820 | 2,460 | 790 |
| Textiles, mfg. ¹¹ | 247 | 468 | 1,404 | 950 |
| Leather, mfg. | 248 | 3,168 | 9,504 | 6,228 |
| Rubber goods, mfg. | 249 | 1,275 | 3,825 | 4,859 |
| Machinery (heavy), mfg. | 250 | 638 | 1,914 | 931 |
| Machinery (heavy) mfg. | 251 | 4,732 | 14,196 | 6,374 |
| Machinery (heavy), mfg. | 252 | 524 | 1,572 | 794 |
| Machinery (heavy), mfg. ¹¹ | 253 | 998 | 2,994 | 2,093 |
| Machinery (heavy), mfg. | 254 | 1,300 | 3,900 | 2,634 |
| Heating devices, mfg. | 255 | 238 | 714 | 165 |
| Electrical appliances, mfg. | 256 | 464 | 1,392 | 574 |
| Electrical appliances, mfg. ¹⁹ | 257 (58) | 1,181 | 3,543 | 3,050 |
| Castings, mfg. ²⁰ | 258 | 542 | 1,626 | 1,406 |
| Household metal ware, mfg. ¹⁰ | 259 | 540 | 1,620 | 1,608 |
| Household metal ware, mfg. ²⁷ | 260 | 1,163 | 3,489 | 6,945 |
| Public utilities: Gas mfg. | 261 | 839 | 2,517 | 1,713 |
| Street railways, etc. ²⁰ | 262 | 3,643 | 10,929 | 3,058 |
| Total | [21] | 26,666 | 79,998 | 56,894 |
| SAN FRANCISCO | | | | |
| Oil refinery | 263 ^a | 421 | 1,263 | 1,141 |
| Sugar refinery ²¹ | 264 ^c | 1,259 | 3,777 | 3,566 |
| Explosives, mfg. ²² | 265 | 1,795 | 5,385 | 10,818 |
| Machinery, mfg. ¹¹ | 266 | 173 | 519 | 261 |
| Agricultural implements, mfg. ¹⁰ | 267 | 2,224 | 6,672 | 4,912 |
| Structural iron and steel, mfg. ²³ | 268 | 500 | 1,500 | 860 |
| Mercantile, establishment ¹¹ | 269 | 85 | 255 | 138 |
| Mercantile, establishment ²⁴ | 270 | 244 | 732 | 435 |
| Mercantile, establishment ²⁶ | 271 | 899 | 2,697 | 1,674 |
| Structural iron and steel, mfg. | 272 | 669 | 2,007 | 2,904 |
| Gas and electricity (Main office) | 273 | 308 | 924 | 174 |
| Gas and electricity (Metrop. Dis.) ²⁵ | 274 | 1,173 | 3,519 | 1,254 |
| Gas and elec. (Country Dists.) ²⁵ | 275 | 3,424 | 10,272 | 8,205 |
| Street railways, etc. | 276 | 1,046 | 3,138 | 1,167 |
| Total | [14] | 14,220 | 42,660 | 37,509 |

APPENDIX

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A — Continued

INDIVIDUAL ESTABLISHMENTS
18°

| LABOR CHANGES | | | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------|---------|---------------------------|------------|-------|---|
| NUMBER | | RATE PER FULL-YEAR WORKER | | | |
| SEPARATIONS | TOTAL | ACCESSION | SEPARATION | FLUX | |
| MILWAUKEE # | | | | | |
| 2,748 | 5,183 | 1.47 | 1.65 | 3.12 | Motor vehicles and parts, mfg. |
| 3,677 | 7,834 | 3.33 | 2.94 | 6.27 | Automobile parts, mfg. |
| 610 | 1,080 | 1.35 | 1.77 | 3.12 | Chemicals, mfg. ¹⁰ |
| 3,742 | 9,402 | 6.45 | 4.26 | 10.71 | Chemicals, mfg. ¹⁰ |
| 774 | 1,564 | .96 | .93 | 1.89 | Textiles, mfg. ¹⁰ |
| 859 | 1,809 | 2.04 | 1.83 | 3.87 | Textiles, mfg. ²¹ |
| 6,618 | 12,846 | 1.98 | 2.10 | 4.08 | Leather, mfg. |
| 4,589 | 9,448 | 3.81 | 3.60 | 7.41 | Rubber goods, mfg. |
| 803 | 1,734 | 1.47 | 1.26 | 2.73 | Machinery (heavy), mfg. |
| 6,609 | 13,073 | 1.35 | 1.41 | 2.76 | Machinery (heavy) mfg. |
| 780 | 1,484 | 1.35 | 1.50 | 2.85 | Machinery (heavy), mfg. |
| 2,100 | 4,193 | 2.10 | 2.10 | 4.20 | Machinery (heavy), mfg. ²¹ |
| 3,083 | 5,717 | 2.04 | 2.37 | 4.41 | Machinery (heavy), mfg. |
| 219 | 384 | .69 | .93 | 1.62 | Heating devices, mfg. |
| 450 | 1,024 | 1.23 | .96 | 2.19 | Electrical appliances, mfg. |
| 2,932 | 5,982 | 2.58 | 2.49 | 5.07 | Electrical appliances, mfg. ²⁰ |
| 1,470 | 2,966 | 2.76 | 2.70 | 5.46 | Castings, mfg. ²⁰ |
| 1,662 | 3,270 | 2.97 | 3.06 | 6.03 | Household metal ware, mfg. ¹⁰ |
| 7,026 | 13,971 | 5.97 | 6.03 | 12.00 | Household metal ware, mfg. ²⁷ |
| 1,561 | 3,274 | 2.04 | 1.86 | 3.90 | Public utilities: Gas mfg. |
| 3,728 | 6,786 | .84 | 1.02 | 1.86 | Str't rya., etc. ²⁰ |
| 56,130 | 113,024 | 2.13 | 2.10 | 4.23 | Total |
| DAY REGION # | | | | | |
| 980 | 2,121 | 2.70 | 2.34 | 5.04 | Oil refinery |
| 3,011 | 6,577 | 2.82 | 2.40 | 5.22 | Sugar refinery ²¹ |
| 7,800 | 18,618 | 6.03 | 4.35 | 10.38 | Explosives, mfg. ²² |
| 362 | 623 | 1.50 | 2.10 | 3.60 | Machinery, mfg. ²¹ |
| 5,338 | 10,250 | 2.22 | 2.40 | 4.62 | Agricul. implements, mfg. ¹⁰ |
| 1,022 | 1,882 | 1.71 | 2.04 | 3.75 | Structural iron and steel, mfg. ²⁰ |
| 121 | 259 | 1.62 | 1.41 | 3.03 | Mercantile, establishment ²¹ |
| 409 | 844 | 1.77 | 1.68 | 3.45 | Mercantile, establishment ²⁴ |
| 1,568 | 3,242 | 1.86 | 1.74 | 3.60 | Mercantile, establishment ²⁵ |
| 2,875 | 5,779 | 4.35 | 4.20 | 8.64 | Structural iron and steel, mfg. |
| 201 | 375 | .57 | .66 | 1.23 | Gas and electricity (Main ofc.) |
| 1,656 | 2,910 | 1.68 | 1.41 | 2.49 | Gas and elec. (Metr. Dis.) ²⁰ |
| 8,556 | 16,761 | 2.40 | 2.49 | 4.89 | Gas & el. (Coun'y Dist.) ²⁰ |
| 1,239 | 2,406 | 1.11 | 1.20 | 2.31 | Street railways, etc. |
| 35,138 | 72,647 | 2.64 | 2.46 | 5.10 | Total |

NOTES TO TABLE A

^o Unless it is otherwise specified, the figures for 1913-14 refer to the year ended June 30, 1914, and the figures for 1917-18 refer to the year ended May 31, 1918.

^{*} Figures in parentheses are the 1917-18 numbers of such concerns as were reported in 1917-18 as well as 1913-14.

[†] Each of the two mills which constitute this establishment was reported as a separate concern in 1917-18.

a. This group of plants reported in a special article, "Labor Turnover in Chicago," *9 Monthly Labor Review*, 652-667 (September, 1919).

b. This group of plants reported in a special article, "Labor Turnover in Cincinnati," *8 Monthly Labor Review*, 651-668 (March, 1919).

c. This group of plants, together with those in Detroit, reported in a special article, "Labor Turnover in Cleveland and Detroit," *8 Monthly Labor Review*, 11-30 (January, 1919).

d. This concern reported in detail in a special article, "Labor Turnover and Employment Policies of a Large Motor Vehicle Manufacturing Establishment," *7 Monthly Labor Review*, 837-855 (October, 1918).

e. The figures shown here are based upon the records of five individual establishments. They were secured in connection with another investigation carried on simultaneously in the cloak and suit industry of Cleveland. The results of this investigation were published in the *Monthly Labor Review* for August, 1918.

f. This group of plants reported in a special article, "Labor Turnover in Milwaukee," *8 Monthly Labor Review*, 990-1016 (April, 1919).

g. This group of plants reported in a special article, "Labor Turnover in the San Francisco Bay Region," *8 Monthly Labor Review*, 303-380 (February, 1919).

h. This concern reported, with another oil refinery, in detail in a special article, "Labor Policies and Labor Turnover in the California Oil Refining Industry," *8 Monthly Labor Review*, 969-998 (April, 1919).

i. This concern reported in detail in a special article, "Employment Policies and Labor Mobility in a California Sugar Refinery," *9 Monthly Labor Review*, 1802-1824 (December, 1919).

APPENDIX

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- ¹ Calendar year 1913.
- ² Not including special employees averaging 181 during the year.
- ³ Including student operators.
- ⁴ For nine months' period ended September 30, 1914.
- ⁵ Calendar year 1915.
- ⁶ Year ended November 30, 1914.
- ⁷ Year ended October 31, 1915.
- ⁸ Calendar year 1912.
- ⁹ Year ended June 30, 1918.
- ¹⁰ Six months' period ended June 30, 1918.
- ¹¹ Year ended April 30, 1918.
- ¹² Ten months' period ended June 30, 1918.
- ¹³ Eight months' period ended June 30, 1918.
- ¹⁴ Figures cover conductors and motormen only.
- ¹⁵ Year ended March 31, 1918.
- ¹⁶ Ten months' period ended May 31, 1918.
- ¹⁷ Eight months' period ended May 31, 1918.
- ¹⁸ Six months' period ended July 31, 1918.
- ¹⁹ Period from August 20, 1917, to July 7, 1918, inclusive.
- ²⁰ Six months' period ended May 31, 1918.
- ²¹ Seven months' period ended May 31, 1918.
- ²² Nine months' period ended May 31, 1918.
- ²³ Year ended July 31, 1918.
- ²⁴ Year ended January 31, 1918.
- ²⁵ For 9½ months ended August 12, 1918.
- ²⁶ For 8½ months ended August 15, 1918.
- ²⁷ Eight months' period ended August 31, 1918.
- ²⁸ For 7½ months ended August 15, 1918.
- ²⁹ Six months period ended August 31, 1918.
- ³⁰ Year ended August 31, 1918.
- ³¹ Not including employees hired in one department, which had about 125 employees.
- ³² Six months' period ended June 16, 1918.
- ³³ Year ended May 15, 1918.
- ³⁴ Year ended May 2, 1918.
- ³⁵ Year ended October 31, 1918.

TABLE
 TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
 1913-14 AND
 1913-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER | NUMBER OF WORKERS | NUMBER | |
|---|----------------------|-------------------|-------------------|---------------|
| | | | EMPLOYERS LEAVING | |
| | | | WERE DISCHARGED | WERE LAID OFF |
| BOSTON | | | | |
| Railroad shops | 3 | 2,001 | 73 | 39 |
| Rubber footwear and auto tires | 4 | 2,856 | 975 | — |
| Shoe machinery, mfg. | 6 | 2,549 | 694 | — |
| Department store | 7 | 1,839 | 114 | 307 |
| Steam gauges and valves, mfg. | 8 | 167 | 33 | 25 |
| Plumbing tools, mfg. | 9 | 212 | 117 | — |
| Brass valves and fittings, mfg. | 10 | 899 | 353 | 40 |
| Paper products and roofing material | 11 | 864 | 95 | 252 |
| Paper boxes and shipping tags, etc. | 12 | 1,749 | 132 | — |
| Color printing, etc. | 13 | 726 | 82 | 29 |
| Book mfg. | 14 | 449 | 23 | 80 |
| Public utilities: Street railways | 15 | 3,060 | 171 | — |
| Elevated railways | 16 | 8,858 | 582 | — |
| Telephone service | 17 | 2,750 | 131 | 14 |
| Total | [14] | 28,979 | 3,575 | 786 |
| CHICAGO | | | | |
| Chewing gum, mfg. | 18 | 273 | 12 | 82 |
| Shoe bottoms, mfg. | 19 | 277 | 9 | 21 |
| Agricultural implements, mfg. | 20 | 4,377 | 248 | 1,362 |
| Agricultural implements, mfg. | 21 | 6,592 | 261 | 2,265 |
| Agricultural implements, mfg. | 22 | 1,904 | 29 | 654 |
| Agricultural implements, mfg. | 23 | 761 | 45 | — |
| Structural steel | 26 | 243 | 58 | 69 |
| Electrical supplies, mfg. | 28 | 544 | 136 | 249 |
| Valves and fittings, mfg. | 29 | 4,306 | 280 | 27 |
| Iron wheels and castings, mfg. | 30 | 415 | 64 | 42 |
| Steel products, mfg. | 31 | 3,758 | 87 | — |
| Telephone apparatus, mfg. | 32 | 11,049 | 619 | 2,090 |
| Total | [12] | 34,499 | 1,848 | 6,861 |
| CINCINNATI | | | | |
| Engineering specialties, mfg. | 37 | 656 | 119 | — |

APPENDIX

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B
VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

14

| OF | | PER CENT | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------------|--------|---------------------------------------|---------------|------------------|----------------------------------|
| DURING THE YEAR WHO | | EMPLOYEES LEAVING DURING THE YEAR WHO | | | |
| LEFT VOLUNTARILY | TOTAL | WERE DISCHARGED | WERE LAID OFF | LEFT VOLUNTARILY | |
| BOSTON | | | | | |
| 536 | 648 | 11 | 6 | 83 | Railroad shops |
| 1,826 | 2,801 | 35 | — | 65 | Rubber footwear and auto tires |
| 731 | 1,425 | 49 | — | 51 | Shoe machinery, mfg. |
| 421 | 812 | 14 | 37 | 50 | Department store |
| 72 | 130 | 25 | 19 | 55 | Steam gauges and valves, mfg. |
| 310 | 427 | 37 | — | 73 | Plumbing tools, mfg. |
| 558 | 951 | 37 | 4 | 59 | Brass valves and fittings, mfg. |
| 158 | 505 | 19 | 50 | 31 | Paper products and roofing |
| 877 | 1,009 | 13 | — | 87 | Paper boxes and shipping tags |
| 262 | 373 | 22 | 8 | 70 | Color printing, etc. |
| 47 | 150 | 15 | 53 | 31 | Book mfg. |
| 241 | 412 | 42 | — | 59 | Public utilities: Street railw's |
| 582 | 1,164 | 50 | — | 50 | Elev. railw's |
| 321 | 466 | 28 | 3 | 69 | Teleph. serv. |
| 6,042 | 11,303 | 32 | 7 | 61 | Total |
| CHICAGO | | | | | |
| 235 | 320 | 4 | 25 | 71 | Chewing gum, mfg. |
| 176 | 266 | 4 | 10 | 86 | Shoe bottoms, mfg. |
| 1,198 | 2,808 | 9 | 48 | 42 | Agricultural implem's, mfg. |
| 1,589 | 4,115 | 6 | 55 | 39 | Agricultural implem's, mfg. |
| 309 | 902 | 3 | 66 | 31 | Agricultural implem's, mfg. |
| 733 | 778 | 6 | — | 94 | Agricultural implem's, mfg. |
| 85 | 212 | 27 | 33 | 40 | Structural steel |
| 315 | 700 | 19 | 36 | 45 | Electrical supplies, mfg. |
| 581 | 888 | 32 | 3 | 65 | Valves and fittings, mfg. |
| 500 | 606 | 11 | 7 | 83 | Iron wheels and castings, mfg. |
| 2,968 | 3,055 | 3 | — | 97 | Steel products, mfg. |
| 13,454 | 16,163 | 4 | 13 | 83 | Telephone apparatus, mfg. |
| 22,143 | 30,852 | 6 | 22 | 72 | Total |
| CINCINNATI | | | | | |
| 164 | 283 | 42 | — | 58 | Engineering specialties, mfg. |

TABLE

TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
1913-14 AND

1913-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER | NUMBER OF WORKERS | NUMBER | |
|---|----------------------|-------------------|-------------------|----------------|
| | | | EMPLOYEES LEAVING | |
| | | | WERE DISCHARGED | WERE LAYED OFF |
| CLEVELAND | | | | |
| Clothing, mfg. | 38 | 1,020 | 189 | — |
| Clothing, men's, mfg. | 39 | 783 | 100 | — |
| Machine tools, mfg. | 40 | 335 | 90 | — |
| Metal wire, etc., mfg. | 41 | 1,247 | 70 | 88 |
| Machine tools, mfg. | 42 | 1,111 | 216 | 990 |
| Total | [5] | 4,496 | 665 | 1,078 |
| DETROIT | | | | |
| Aluminum and brass foundry | 43 | 397 | 621 | 1,191 |
| Motor car, mfg. | 44 | 2,146 | 1,317 | 668 |
| Motor car, gasoline, mfg. | 45 | 715 | 829 | 550 |
| Transmissions and gears, mfg. | 46 | 239 | 209 | 69 |
| Motor car, mfg. | 47 | 3,110 | 1,460 | 3,883 |
| Motor car, mfg. | 48 | 10,904 | 926 | 383 |
| Motor car, mfg. | 49 | 731 | 364 | 126 |
| Motor car, mfg. | 50 | 897 | 551 | 435 |
| Motor car, mfg. | 51 | 4,028 | 740 | — |
| Motor car, mfg. | 52 | 287 | 409 | 298 |
| Motor car, mfg. | 53 | 4,484 | 2,279 | 9,325 |
| Automobile parts, mfg. | 54 | 1,004 | 1,051 | — |
| Adding machines, mfg. | 55 | 1,887 | 729 | 14 |
| Public utilities: gas mfg. | 56 | 650 | 42 | 27 |
| Total | [14] | 31,479 | 11,527 | 16,969 |
| NEW YORK | | | | |
| Crackers and biscuits, baking | 59 | 1,111 | 206 | 60 |
| Cotton specialties, mfg. | 60 | 785 | 158 | 58 |
| Printing presses, mfg. | 61 | 1,438 | 356 | 195 |
| Mail order house | 62 | 624 | 73 | 405 |
| Life insurance | 63 | 3,679 | 33 | — |
| Paper products, mfg. | 65 | 1,778 | 525 | 154 |
| Public utilities: Street railways | 66 | 3,622 | 1,796 | — |
| Telephone service | 67 | 19,051 | 1,582 | 3,910 |
| Total | [8] | 32,088 | 4,729 | 4,842 |

B—Continued

VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

14

| OF | | PER CENT | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------------|--------|---------------------------------------|---------------|------------------|---------------------------------|
| DURING THE YEAR WHO | | EMPLOYEES LEAVING DURING THE YEAR WHO | | | |
| LEFT VOLUNTARILY | TOTAL | WERE DIS-CHARGED | WERE LAID-OFF | LEFT VOLUNTARILY | |
| CLEVELAND | | | | | |
| 265 | 454 | 42 | — | 58 | Clothing, mfg. |
| 330 | 430 | 23 | — | 77 | Clothing, men's, mfg. |
| 180 | 270 | 33 | — | 67 | Machine tools, mfg. |
| 718 | 876 | 8 | 10 | 82 | Metal wire, etc., mfg. |
| 619 | 1,825 | 12 | 54 | 34 | Machine tools, mfg. |
| 2,112 | 3,855 | 17 | 28 | 55 | Total |
| DETROIT | | | | | |
| 333 | 2,145 | 29 | 56 | 16 | Aluminum and brass foundry |
| 3,270 | 5,255 | 25 | 13 | 62 | Motor car, mfg. |
| 330 | 1,709 | 49 | 32 | 19 | Motor car, gasoline, mfg. |
| 254 | 532 | 39 | 13 | 48 | Transmissions and gears, mfg. |
| 3,286 | 8,629 | 17 | 45 | 38 | Motor car, mfg. |
| 5,199 | 6,508 | 14 | 6 | 80 | Motor car, mfg. |
| 611 | 1,101 | 33 | 11 | 55 | Motor car, mfg. |
| 425 | 1,411 | 39 | 31 | 30 | Motor car, mfg. |
| 2,155 | 2,895 | 26 | — | 74 | Motor car, mfg. |
| 643 | 1,350 | 30 | 22 | 48 | Motor car, mfg. |
| 1,652 | 13,256 | 17 | 70 | 12 | Motor car, mfg. |
| 867 | 1,918 | 55 | — | 45 | Automobile parts, mfg. |
| 840 | 1,583 | 46 | 1 | 53 | Adding machines, mfg. |
| 133 | 202 | 21 | 13 | 66 | Public utilities: gas mfg. |
| 19,998 | 48,494 | 24 | 35 | 41 | Total |
| NEW YORK | | | | | |
| 129 | 1,395 | 15 | 4 | 81 | Crackers and biscuits, baking |
| 839 | 1,055 | 15 | 5 | 80 | Cotton specialties, mfg. |
| 666 | 1,217 | 29 | 16 | 55 | Printing presses, mfg. |
| 398 | 936 | 50 | 8 | 43 | Mail order house |
| 233 | 266 | 12 | — | 88 | Life insurance |
| 963 | 1,642 | 32 | 9 | 59 | Paper products, mfg. |
| 974 | 2,770 | 65 | — | 35 | Public utilities: Street rail's |
| 4,828 | 10,320 | 15 | 38 | 47 | Tel. service |
| 10,030 | 19,601 | 24 | 25 | 51 | Total |

LABOR TURNOVER IN INDUSTRY

TABLE
 TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
 1913-14 AND
 1913-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISH- MENT NUMBER | NUMBER OF WORKERS | NUMBER | |
|---------------------------------------|------------------------------|-------------------------|-------------------------|---------------------|
| | | | EMPLOYEES LEAVING | |
| | | | WERE DIS- CHARGED | WERE LAID OFF |
| | | | OTHER | |
| Rubber goods, mfg. | 68 | 5,346 | 901 | 806 |
| Rubber tires, mfg. | 69 | 639 | 181 | 95 |
| Sheet metal ware, mfg. | 70 | 564 | 94 | 452 |
| Lighting apparatus, mfg. | 72 | 1,087 | 177 | 765 |
| Cash registers, mfg. | 73 | 5,034 | 271 | 574 |
| Insurance | 75 | 971 | 23 | — |
| Typewriters, mfg. | 76 | 2,894 | 110 | 12 |
| Automobile, mfg. | 78 | 477 | 1,006 | 399 |
| Agricultural implements, mfg. | 79 | 517 | 33 | 458 |
| Electrical apparatus, mfg. | 81 | 10,665 | 4,504 ¹ | — |
| Bleaching and dyeing | 82 | 1,516 | 297 | 220 |
| Machine tool, mfg. | 83 | 4,323 | 850 | 103 |
| Total | [12] | 33,933 | 8,447 | 3,884 |

¹ Includes number

B — Continued

VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

14

| OF | | PER CENT | | | INDUSTRY OR NATURE OF BUSINESS |
|-----------------------|--------|---------------------------------------|------------------|-----------------------|--------------------------------|
| DURING THE YEAR WHO | | EMPLOYEES LEAVING DURING THE YEAR WHO | | | |
| LEFT VOLUN- TARILY | TOTAL | WERE DIS- CHARGED | WERE LAID OFF | LEFT VOLUN- TARILY | |
| CITIES | | | | | |
| 6,363 | 8,070 | 11 | 10 | 79 | Rubber goods, mfg. |
| 752 | 1,028 | 18 | 9 | 73 | Rubber tires, mfg. |
| 526 | 1,072 | 9 | 42 | 49 | Sheet metal ware, mfg. |
| 121 | 1,063 | 17 | 72 | 11 | Lighting apparatus, mfg. |
| 2,606 | 3,451 | 8 | 17 | 76 | Cash registers, mfg. |
| 270 | 293 | 8 | — | 92 | Insurance |
| 826 | 948 | 12 | 1 | 87 | Typewriters, mfg. |
| 2,019 | 3,424 | 29 | 12 | 59 | Automobile, mfg. |
| 356 | 847 | 4 | 54 | 42 | Agricul. implements, mfg. |
| 12,244 | 16,748 | 27 | — | 73 | Electrical apparatus, mfg. |
| 783 | 1,300 | 23 | 17 | 60 | Bleaching and dyeing |
| 2,322 | 3,275 | 26 | 3 | 71 | Machine tool, mfg. |
| 29,188 | 41,519 | 20 | 9 | 70 | Total |

hid off.

LABOR TURNOVER IN INDUSTRY

TABLE
 TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
 1913-14 AND
 1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER | NUMBER OF WORKERS | NUMBER | | |
|---|----------------------|-------------------|--------------------------|---------------|--------------------------|
| | | | EMPLOYEES LEAVING DURING | | |
| | | | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE |
| CHICAGO | | | | | |
| Printing presses, mfg. | 104 | 764 | 12 | 60 | 45 |
| Agricultural implem'ts, mfg. | 105 | 4,211 | 211 | 226 | 224 |
| Agricultural implem'ts, mfg. | 106 | 5,759 | 481 | 596 | 387 |
| Machinery (coal mining), mfg. | 107 | 611 | 13 | 199 | 61 |
| Mail order house | 110 | 1,042 | 151 | — | 162 |
| Mail order house | 112 | 5,092 | 558 | 3,441 | 322 |
| Structural steel, mfg. | 113 | 402 | 42 | — | 12 |
| Brass and metal specialties, mfg. | 114 | 283 | 12 | — | 34 |
| Iron wheels and castings, mfg. | 115 | 390 | 48 | 8 | 44 |
| Office appliances, mfg. | 116 | 667 | 431 | — | 84 |
| Electrical supplies, mfg. | 117 | 733 | 329 | 112 | 116 |
| Iron castings, mfg. | 118 | 950 | 353 | — | 108 |
| Screw machine products, mfg. | 119 | 520 | 83 | — | 94 |
| Steel forgings, mfg. | 120 | 1,090 | 340 | 48 | 250 |
| Electrical supplies, mfg. | 121 | 258 | 171 | 35 | 60 |
| Public utilities: Electricity | 122 | 4,728 | 500 | 358 | 1,064 |
| Telephone serv. | 124 | 13,604 | 2,191 | 1,718 | 903 |
| Street railways | 125 | 3,000 | 1,100 | — | 524 |
| Slaughtering and meat packing | 126 | 8,730 | 7,925 | 659 | 484 |
| Slaughtering and meat packing | 127 | 14,320 | 7,372 | 2,064 | 612 |
| Slaughtering and meat packing | 128 | 5,219 | 2,644 | 1,292 | 504 |
| Total | [21] | 73,291 | 24,976 | 10,816 | 6,094 |

APPENDIX

197

B—Continued

VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

18

| OF THE YEAR WHO | | PER CENT | | | | | INDUSTRY OR NATURE OF BUSINESS |
|--------------------------|---------|--|---------------------|--------------------------------|--------------------------|-------------------------------|-----------------------------------|
| | | EMPLOYEES LEAVING DURING THE YEAR WHO | | | | | |
| LEFT VOLUN- TARILY | TOTAL | WERE DIS- CHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE | LEFT VOLUN- TARILY | | |
| CHICAGO | | | | | | | |
| 354 | 471 | 2 | 13 | 10 | 75 | Printing presses, mfg. | |
| 2,301 | 2,962 | 7 | 7 | 8 | 78 | Agricul. implem'ts, mfg. | |
| 3,265 | 4,729 | 10 | 13 | 8 | 69 | Agricul. implem'ts, mfg. | |
| 491 | 764 | 2 | 26 | 8 | 64 | Mach'ry (coal min'g), mfg. | |
| 1,019 | 1,332 | 11 | — | 12 | 77 | Mail order house | |
| 8,012 | 12,333 | 4 | 29 | 3 | 64 | Mail order house | |
| 316 | 370 | 11 | — | 3 | 85 | Structural steel, mfg. | |
| 490 | 536 | 2 | — | 6 | 92 | Brass and metal spec's, mfg. | |
| 758 | 858 | 6 | 1 | 5 | 88 | Iron wheels & cast'gs, mfg. | |
| 1,197 | 1,712 | 25 | — | 5 | 70 | Office appliances, mfg. | |
| 1,408 | 1,965 | 17 | 6 | 6 | 71 | Electrical supplies, mfg. | |
| 2,306 | 2,767 | 13 | — | 4 | 83 | Iron castings, mfg. | |
| 1,504 | 1,681 | 5 | — | 6 | 89 | Screw mach. products, mfg. | |
| 2,006 | 2,734 | 12 | 2 | 9 | 77 | Steel forgings, mfg. | |
| 602 | 868 | 20 | 4 | 7 | 69 | Electrical supplies, mfg. | |
| 4,312 | 6,234 | 8 | 6 | 17 | 69 | Public utilities: Electricity | |
| 6,642 | 11,454 | 19 | 15 | 8 | 58 | Tel. serv. | |
| 2,176 | 3,809 | 29 | — | 14 | 57 | Street rys. | |
| 6,994 | 16,062 | 49 | 4 | 3 | 44 | Slaugh'g and meat packing | |
| 17,842 | 27,890 | 27 | 7 | 2 | 64 | Slaugh'g and meat packing | |
| 12,978 | 17,418 | 15 | 7 | 3 | 75 | Slaugh'g and meat packing | |
| 77,063 | 118,949 | 21 | 9 | 5 | 65 | Total | |

TABLE
TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
1913-14 AND
1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER | NUMBER OF WORKERS | NUMBER | | |
|---|----------------------|-------------------|--------------------------|---------------|--------------------------|
| | | | EMPLOYEES LEAVING DURING | | |
| | | | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE |
| CINCINNATI | | | | | |
| Textile (cotton) mfg. | 133 | 330 | 15 | — | 10 |
| Millwork (building material) | 134 | 275 | 26 | — | 30 |
| Machine tools, mfg. | 137 | 127 | 17 | — | 7 |
| Machine tools, mfg. | 138 | 602 | 76 | — | 110 |
| Machinery specialties, mfg. | 139 | 669 | 107 | — | 80 |
| Machinery mfg. | 140 | 407 | 85 | — | 21 |
| Machine tools, mfg. | 141 | 883 | 116 | 10 | 110 |
| Machine tools, mfg. | 142 | 602 | 103 | — | 64 |
| Machine tools, mfg. | 144 | 1,194 | 261 | — | 130 |
| Office appliances, mfg. | 147 | 418 | 228 | 11 | 76 |
| Foundry (stoves and furnaces) | 148 | 440 | 98 | 18 | 33 |
| Printing and publishing (books) | 150 | 244 | 2 | 1 | 18 |
| Printing and publishing (misc.) | 151 | 767 | 24 | — | 35 |
| Printing and publishing | 152 | 617 | 64 | — | 105 |
| Telephone service | 154 | 1,769 | 74 | 40 | 64 |
| Trainmen, street railways | 155 | 1,330 | 128 | — | 77 |
| Total | [16] | 10,674 | 1,514 | 80 | 970 |
| CLEVELAND | | | | | |
| Automobile and motor truck mfg. | 156 | 4,456 | 156 | 22 | 529 |
| Automobile and motor truck mfg. | 157 | 1,417 | 188 | 6 | 66 |
| Automobile and motor truck mfg. | 158 | 2,173 | 1,095 | 479 | 274 |
| Tractor mfg. | 160 | 384 | 200 | 664 | 158 |
| Paint and varnish mfg. | 163 | 267 | 50 | — | 20 |
| Storage batteries, mfg. | 164 | 1,987 | 429 | 406 | 315 |
| Storage batteries, carbon prod. | 166 | 1,610 | 763 | — | 57 |
| Machinery (heavy) mfg. | 173 | 940 | 58 | 15 | 166 |
| Motors, mfg. | 175 | 870 | 573 | 288 | 123 |
| Metal wire, etc., mfg. | 176 | 917 | 11 | 26 | 42 |
| Metal wire, etc., mfg. | 178 | 699 | 96 | 18 | 79 |
| Sewing machines, mfg. | 179 | 590 | 84 | — | 45 |
| Oil stoves, mfg. | 182 | 1,649 | 275 | 118 | 200 |
| Metal wire, etc., mfg. | 184 | 709 | 206 | 45 | 156 |
| Telephone service (Clerical) | 191 | 102 | 23 | — | 9 |
| Telephone service (Operation) | 192 | 1,368 | 353 | 1 | 2 |
| Telephone service (Plant) | 193 | 1,267 | 20 | 513 | 147 |
| Total | [17] | 21,405 | 4,580 | 2,592 | 2,388 |

¹ Less than 1/2

APPENDIX

199

B — Continued

VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

18

| OF | | PER CENT | | | | INDUSTRY OR NATURE OF BUSINESS |
|------------------|--------|---------------------------------------|---------------|--------------------------|------------------|--------------------------------|
| THE YEAR WHO | | EMPLOYEES LEAVING DURING THE YEAR WHO | | | | |
| LEFT VOLUNTARILY | TOTAL | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE | LEFT VOLUNTARILY | |
| CINCINNATI | | | | | | |
| 344 | 369 | 4 | — | 3 | 93 | Textile (cotton) mfg. |
| 649 | 705 | 4 | — | 4 | 93 | Millwork (building mat'l) |
| 49 | 73 | 23 | — | 10 | 67 | Machine tools, mfg. |
| 406 | 592 | 13 | — | 18 | 69 | Machine tools, mfg. |
| 673 | 860 | 12 | — | 9 | 79 | Machinery specialties, mfg. |
| 461 | 567 | 15 | — | 4 | 81 | Machinery mfg. |
| 930 | 1,166 | 10 | (1) | 9 | 80 | Machine tools, mfg. |
| 723 | 980 | 20 | — | 6 | 74 | Machine tools, mfg. |
| 1,591 | 1,982 | 13 | — | 7 | 80 | Machine tools, mfg. |
| 588 | 903 | 25 | 1 | 8 | 65 | Office appliances, mfg. |
| 960 | 1,109 | 9 | 2 | 3 | 86 | Foundry (stoves and furn's) |
| 98 | 110 | 2 | 1 | 15 | 82 | Prin'g and pub'g (books) |
| 752 | 811 | 3 | — | 4 | 93 | Prin'g and publish'g (misc.) |
| 2,059 | 2,228 | 3 | — | 5 | 92 | Printing and publishing |
| 536 | 714 | 10 | 6 | 9 | 75 | Telephone service |
| 642 | 847 | 15 | — | 9 | 76 | Trainmen, street railw's |
| 11,461 | 14,025 | 11 | 1 | 7 | 82 | Total |
| CLEVELAND | | | | | | |
| 2,171 | 2,878 | 5 | 1 | 18 | 75 | Auto. & motor truck mfg. |
| 2,663 | 2,923 | 6 | 1 | 2 | 91 | Auto. & motor truck mfg. |
| 4,450 | 6,289 | 17 | 7 | 4 | 71 | Auto. & motor truck mfg. |
| 518 | 1,540 | 13 | 43 | 10 | 34 | Tractor mfg. |
| 478 | 548 | 9 | — | 4 | 87 | Paint and varnish mfg. |
| 4,439 | 5,589 | 8 | 7 | 6 | 79 | Storage batteries, mfg. |
| 4,969 | 5,789 | 13 | — | 1 | 86 | Storage batteries, etc. |
| 2,154 | 2,393 | 2 | 1 | 7 | 90 | Machinery (heavy) mfg. |
| 2,250 | 3,234 | 18 | 9 | 4 | 70 | Motors, mfg. |
| 1,307 | 1,386 | 1 | 2 | 3 | 94 | Metal wire, etc., mfg. |
| 1,327 | 1,520 | 6 | 1 | 5 | 87 | Metal wire, etc., mfg. |
| 1,161 | 1,290 | 7 | — | 3 | 90 | Sewing machines, mfg |
| 4,488 | 5,081 | 5 | 2 | 4 | 88 | Oil stoves, mfg. |
| 1,927 | 2,334 | 9 | 2 | 7 | 83 | Metal wire, etc., mfg. |
| 108 | 140 | 16 | — | 6 | 77 | Tel. service (Clerical) |
| 1,906 | 2,262 | 16 | 1 | 1 | 84 | Tel. serv. (Operation) |
| 2,209 | 2,889 | 1 | 18 | 5 | 76 | Tel. s rv. (Plant) |
| 38,525 | 48,035 | 10 | 5 | 5 | 80 | Total |

of 1 per cent.

LABOR TURNOVER IN INDUSTRY

TABLE
 TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
 1913-14 AND
 1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER | NUMBER OF WORKERS | NUMBER | | |
|--|----------------------|-------------------|--------------------------|---------------|--------------------------|
| | | | EMPLOYERS LEAVING DURING | | |
| | | | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE |
| DETROIT | | | | | |
| Automobile mfg. | 194 | 31,950 | 169 | 110 | 3,122 |
| Automobile parts, mfg. | 195 | 783 | 116 | 306 | 63 |
| Automobile mfg. | 200 | 9,809 | 4,886 | 2,085 | 2,304 |
| Automobile parts, mfg. | 202 | 1,944 | 965 | 1,879 | 362 |
| Automobile parts, mfg. | 203 | 114 | 120 | — | 30 |
| Automobile mfg. | 204 | 135 | 52 | 260 | 42 |
| Automobile mfg. | 205 | 11,125 | 5,115 | 3,799 | 2,727 |
| Automobile mfg. | 209 | 121 | 148 | 32 | 64 |
| Automobile parts, mfg. | 210 | 314 | 88 | 52 | 28 |
| Automobile parts, mfg. | 211 | 1,103 | 747 | 242 | 317 |
| Chemicals and drug mfg. | 214 | 668 | 112 | — | 95 |
| Clothing and overalls, mfg. | 216 | 480 | 55 | — | 25 |
| Machine tools, mfg. | 218 | 630 | 113 | — | 130 |
| Iron and steel (small parts), mfg. | 221 | 218 | 18 | — | 22 |
| Steel forgings, mfg. | 225 | 316 | 102 | 250 | 53 |
| Steel castings, mfg. | 227 | 390 | 63 | 24 | 67 |
| Structural steel mfg. | 228 | 161 | 43 | 27 | 15 |
| Steel forgings, mfg. | 230 | 241 | 137 | — | 68 |
| Screw machine products, mfg. | 232 | 438 | 168 | — | 84 |
| Public utilities: | | | | | |
| Gas mfg. | 235 | 1,933 | 94 | — | 137 |
| Telephone serv. (Comm. dept.) | 236 | 161 | 15 | 3 | 20 |
| Telephone service (Clerical) | 237 | 138 | 13 | 20 | 13 |
| Telephone service (Installation) | 238 | 431 | 66 | 37 | 89 |
| Telephone service (Traffic) | 239 | 2,167 | 548 | 4 | — |
| Telephone serv. (Construction) | 240 | 331 | 51 | 26 | 106 |
| Slaughtering and meat packing | 241 | 456 | 305 | — | 45 |
| Total | [26] | 66,617 | 14,369 | 9,156 | 10,028 |

¹ Less than 1/2

APPENDIX

201

B — Continued

VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

18

| OF | | PER CENT | | | | INDUSTRY OR NATURE OF BUSINESS |
|------------------|---------|---------------------------------------|---------------|--------------------------|------------------|--------------------------------|
| THE YEAR WHO | | EMPLOYEES LEAVING DURING THE YEAR WHO | | | | |
| LEFT VOLUNTARILY | TOTAL | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE | LEFT VOLUNTARILY | |
| DETROIT | | | | | | |
| 11,230 | 14,631 | 1 | 1 | 21 | 77 | Automobile mfg. |
| 1,368 | 2,123 | 5 | 14 | 3 | 77 | Automobile parts, mfg |
| 20,916 | 30,191 | 16 | 7 | 8 | 69 | Automobile mfg. |
| 3,581 | 6,787 | 14 | 28 | 5 | 53 | Automobile parts, mfg. |
| 273 | 423 | 28 | — | 7 | 65 | Automobile parts, mfg. |
| 183 | 537 | 10 | 48 | 8 | 34 | Automobile mfg. |
| 34,167 | 45,808 | 11 | 8 | 6 | 75 | Automobile mfg. |
| 369 | 613 | 24 | 5 | 10 | 60 | Automobile mfg. |
| 1,512 | 1,680 | 5 | 3 | 2 | 90 | Automobile parts, mfg. |
| 4,489 | 5,795 | 13 | 4 | 5 | 77 | Automobile parts, mfg. |
| 924 | 1,131 | 10 | — | 8 | 82 | Chemicals and drug mfg. |
| 898 | 978 | 6 | — | 3 | 92 | Clothing & overalls, mfg. |
| 1,190 | 1,433 | 8 | — | 9 | 83 | Machine tools, mfg. |
| 344 | 384 | 5 | — | 6 | 90 | Iron & st'l(sm'l p'ts.), mfg. |
| 290 | 695 | 15 | 36 | 8 | 42 | Steel forgings, mfg. |
| 912 | 1,066 | 6 | 2 | 6 | 86 | Steel castings, mfg. |
| 482 | 567 | 8 | 5 | 3 | 85 | Structural steel mfg. |
| 694 | 899 | 15 | — | 8 | 77 | Steel forgings, mfg. |
| 1,805 | 2,057 | 8 | — | 4 | 88 | Screw mach. products, mfg. |
| | | | | | | Public utilities: |
| 809 | 1,040 | 9 | — | 13 | 78 | Gas mfg. |
| 68 | 106 | 14 | 3 | 19 | 64 | Tel. serv. (Comm. dept.) |
| 95 | 141 | 9 | 14 | 9 | 67 | Tel. serv. (Clerical) |
| 318 | 510 | 13 | 7 | 17 | 62 | Tel. serv. (Installation) |
| 2,463 | 3,015 | 18 | (?) | — | 82 | Tel. serv. (Traffic) |
| 453 | 633 | 8 | 4 | 17 | 71 | Tel. serv. (Construction) |
| 1,464 | 1,874 | 19 | — | 2 | 78 | Slaugh'g and m't pack ng |
| 91,564 | 125,117 | 21 | 7 | 8 | 73 | Total |

of 1 per cent.

LABOR TURNOVER IN INDUSTRY

TABLE
 TYPE OF SEPARATION (DISCHARGE, LAY-OFF, ENTRY INTO MILITARY SERVICE, OR
 1913-14 AND
 1917-

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISHMENT NUMBER | NUMBER OF WORKERS | NUMBER | | |
|---|----------------------|-------------------|--------------------------|---------------|--------------------------|
| | | | EMPLOYEES LEAVING DURING | | |
| | | | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE |
| MILWAUKEE | | | | | |
| Motor vehicles and parts, mfg. | 242 | 1,665 | 216 | 170 | 280 |
| Automobile parts, mfg. | 243 | 1,246 | 362 | 323 | 233 |
| Chemicals, mfg. | 244 | 346 | 14 | — | 52 |
| Chemicals, mfg. | 245 | 876 | 250 | 350 | 318 |
| Textiles, mfg. | 246 | 820 | 60 | 22 | — |
| Textiles, mfg. | 247 | 468 | 134 | — | 26 |
| Leather mfg. | 248 | 3,168 | 604 | 30 | 224 |
| Rubber goods, mfg. | 249 | 1,275 | 298 | 22 | 216 |
| Machinery (heavy) mfg. | 250 | 638 | 123 | 8 | 63 |
| Machinery (heavy) mfg. | 251 | 4,732 | 431 | — | 453 |
| Machinery (heavy) mfg. | 252 | 524 | 62 | — | 56 |
| Machinery (heavy) mfg. | 253 | 998 | 202 | — | 140 |
| Machinery (heavy) mfg. | 254 | 1,300 | 116 | 6 | 146 |
| Heating devices | 255 | 238 | — | — | 22 |
| Electrical appliances, mfg. | 256 | 464 | 105 | — | 13 |
| Electrical appliances, mfg. | 257 | 1,181 | 270 | 48 | 180 |
| Castings, mfg. | 258 | 542 | 120 | 28 | 10 |
| Household metal ware mfg. | 259 | 540 | 90 | 80 | 60 |
| Public utilities: Street rail'w's, etc. | 262 | 3,643 | 460 | 55 | 350 |
| Total | [19] | 24,664 | 3,917 | 1,142 | 2,842 |
| SAN FRANCISCO | | | | | |
| Explosives, mfg. | 265 | 1,795 | 812 | — | 318 |
| Agricultural implements, mfg. | 267 | 2,224 | 436 | — | 372 |
| Structural iron and steel, mfg. | 268 | 500 | 100 | 250 | 71 |
| Mercantile establishment | 269 | 85 | 24 | 14 | 20 |
| Mercantile establishment | 270 | 244 | 42 | 86 | 18 |
| Mercantile establishment | 271 | 899 | 62 | 431 | — |
| Public utilities: | | | | | |
| Gas and elec. (Main office) | 273 | 308 | 28 | 52 | 27 |
| Gas and elec. (Metro. district) | 274 | 1,173 | 26 | 1,350 | 128 |
| Gas and elec. (Country dist.) | 275 | 3,424 | 514 | 3,804 | 324 |
| Total | [9] | 10,652 | 2,044 | 6,047 | 1,278 |

¹ Less than 1/2

APPENDIX

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B—Concluded

VOLUNTARY QUITTING) IN INDIVIDUAL ESTABLISHMENTS AND SPECIFIED CITIES,
1917-18

18

| OF | | PER CENT | | | | INDUSTRY OR NATURE OF BUSINESS |
|------------------|--------|---------------------------------------|---------------|--------------------------|------------------|----------------------------------|
| THE YEAR WHO | | EMPLOYERS LEAVING DURING THE YEAR WHO | | | | |
| LEFT VOLUNTARILY | TOTAL | WERE DISCHARGED | WERE LAID OFF | ENTERED MILITARY SERVICE | LEFT VOLUNTARILY | |
| MILWAUKEE | | | | | | |
| 2,082 | 2,746 | 8 | 6 | 10 | 76 | Motor vehic's & p'ts, mfg. |
| 2,759 | 3,677 | 10 | 9 | 6 | 75 | Automobile parts, mfg. |
| 544 | 610 | 2 | — | 9 | 89 | Chemicals, mfg. |
| 2,824 | 3,742 | 7 | 9 | 8 | 75 | Chemicals, mfg. |
| 602 | 774 | 8 | 3 | — | 89 | Textiles, mfg. |
| 699 | 859 | 16 | — | 3 | 81 | Textiles, mfg. |
| 5,760 | 6,618 | 9 | (1) | 3 | 87 | Leather mfg. |
| 4,053 | 4,589 | 6 | (1) | 5 | 88 | Leather goods, mfg. |
| 609 | 803 | 15 | 1 | 8 | 76 | Machinery (heavy) mfg. |
| 5,815 | 6,699 | 6 | — | 7 | 87 | Machinery (heavy) mfg. |
| 662 | 780 | 8 | — | 7 | 85 | Machinery (heavy) mfg. |
| 1,758 | 2,100 | 10 | — | 7 | 85 | Machinery (heavy) mfg. |
| 2,815 | 3,083 | 4 | (1) | 5 | 91 | Machinery (heavy) mfg. |
| 197 | 219 | — | — | 10 | 90 | Heating devices |
| 332 | 450 | 23 | — | 3 | 74 | Electrical appliances, mfg. |
| 2,434 | 2,932 | 9 | 2 | 6 | 83 | Electrical appliances, mfg. |
| 1,312 | 1,470 | 8 | 2 | 1 | 90 | Castings, mfg. |
| 1,412 | 1,662 | 5 | 5 | 4 | 86 | Household metal ware mfg. |
| 2,863 | 3,728 | 12 | 1 | 9 | 77 | Pub. utilities: Str't rys., etc. |
| 39,642 | 47,543 | 8 | 2 | 6 | 83 | Total |
| RAY REGION | | | | | | |
| 6,670 | 7,800 | 10 | — | 4 | 86 | Explosives, mfg. |
| 4,530 | 5,338 | 8 | — | 7 | 85 | Agricul. implements, mfg. |
| 601 | 1,022 | 10 | 25 | 7 | 59 | Struc. iron and steel, mfg. |
| 63 | 121 | 20 | 12 | 16 | 52 | Mercantile establishment |
| 203 | 409 | 10 | 21 | 4 | 64 | Mercantile establishment |
| 1,075 | 1,568 | 4 | 27 | — | 69 | Mercantile establishment |
| 94 | 201 | 14 | 26 | 13 | 47 | Public utilities: |
| 152 | 1,656 | 2 | 22 | 2 | 9 | Gas & elec. (Main off.) |
| 3,854 | 8,556 | 6 | 45 | 4 | 45 | Gas & elec. (Metr. dis.) |
| 17,302 | 26,671 | 8 | 23 | 5 | 65 | Gas & elec. (C'n'y dis.) |
| | | | | | | Total |

of 1 per cent.

LABOR TURNOVER IN INDUSTRY

TABLE

NUMBER AND PER CENT OF EMPLOYEES IN THE UNSTABLE PART OF THE WORKING
ACCESSIONS, SEPARATIONS, AND FLUX, IN INDIVIDUAL

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISH- MENT NUMBER | TOTAL WORKING FORCE | NUMBER IN CON- TINUOUS SERVICE OVER ONE YEAR | UNSTABLE |
|---|------------------------------|---------------------------|---|----------|
| | | | | NUMBER |
| CHICAGO | | | | |
| Clothing, men's, mfg. | 103 | 6,027 | 3,871 | 2,156 |
| Printing presses, mfg. | 104 | 764 | 504 | 170 |
| Agricultural implements, mfg. | 105 | 4,211 | 3,596 | 615 |
| Agricultural implements, mfg. | 106 | 5,759 | 3,890 | 1,869 |
| Machinery (coal mining), mfg. | 107 | 611 | 356 | 255 |
| Mail order house | 110 | 1,042 | 665 | 367 |
| Brass and metal specialties, mfg. | 114 | 283 | 108 | 175 |
| Office appliances, mfg. | 116 | 667 | 239 | 428 |
| Public utilities: Telephone service | 124 | 13,604 | 10,905 | 2,699 |
| Total | [9] | 32,968 | 24,224 | 8,744 |
| MILWAUKEE | | | | |
| Motor vehicles and parts, mfg. | 242 | 1,665 | 819 | 846 |
| Machinery (heavy) mfg. | 250 | 638 | 392 | 246 |
| Public utilities: Street railways, etc. | 262 | 3,643 | 2,300 | 1,343 |
| Total | [3] | 5,946 | 3,511 | 2,435 |
| CLEVELAND | | | | |
| Automobile and motor truck mfg. | 156 | 4,456 | 2,795 | 1,661 |
| Automobile and motor truck mfg. | 158 | 2,173 | 298 | 1,875 |
| Street railway cars, mfg. | 159 | 344 | 123 | 221 |
| Storage batt's and carbon prod's mfg. | 166 | 1,610 | 757 | 853 |
| Woodwork, sewing mach. cabinets, etc. | 169 | 1,514 | 964 | 550 |
| Machine tools, mfg. | 172 | 1,263 | 592 | 671 |
| Machinery (heavy) mfg. | 173 | 940 | 448 | 492 |
| Metal wire, etc., mfg. | 176 | 917 | 605 | 312 |
| Sewing machines, mfg. | 179 | 590 | 376 | 214 |
| Electrical appliances, mfg. | 180 | 393 | 194 | 199 |
| Malleable iron castings, mfg. | 183 | 937 | 401 | 536 |
| Telephone service (Clerical force) | 191 | 102 | 44 | 58 |
| Telephone service (Oper. force) | 192 | 1,368 | 914 | 454 |
| Telephone service (Plant dept.) | 193 | 1,267 | 372 | 895 |
| Total | [14] | 17,874 | 8,883 | 8,991 |

C

FORCE, NUMBER IN CONTINUOUS SERVICE OVER ONE YEAR AND NUMBER OF ESTABLISHMENTS AND SPECIFIED CITIES, 1917-18

| FORCE PER CENT | LABOR CHANGES | | | INDUSTRY OR NATURE OF BUSINESS |
|-------------------|---------------|------------|--------------|---|
| | ACCESSION | SEPARATION | TOTAL (FLUX) | |
| CHICAGO | | | | |
| 36 | 5,731 | 7,240 | 12,971 | Clothing, men's, mfg. |
| 22 | 510 | 471 | 981 | Printing presses, mfg. |
| 15 | 2,865 | 2,962 | 5,827 | Agricultural implements, mfg. |
| 32 | 5,486 | 4,729 | 10,215 | Agricultural implements, mfg. |
| 42 | 782 | 764 | 1,546 | Machinery (coal mining), mfg. |
| 36 | 1,358 | 1,332 | 2,690 | Mail order house |
| 62 | 500 | 536 | 1,126 | Brass and metal specialties, mfg. |
| 64 | 1,879 | 1,712 | 3,591 | Office appliances, mfg. |
| 20 | 9,524 | 11,454 | 20,978 | Public utilities: Telephone service |
| 27 | 28,725 | 31,200 | 59,925 | Total |
| MILWAUKEE | | | | |
| 50 | 2,435 | 2,748 | 5,183 | Motor vehicles and parts, mfg. |
| 39 | 931 | 803 | 1,734 | Machinery (heavy) mfg. |
| 37 | 3,058 | 3,728 | 6,786 | Public utilities: Street railways, etc. |
| 41 | 6,424 | 7,279 | 13,703 | Total |
| CLEVELAND | | | | |
| 37 | 3,552 | 2,878 | 6,430 | Automobile and motor truck mfg. |
| 86 | 5,179 | 6,289 | 11,468 | Automobile and motor truck mfg. |
| 64 | 1,016 | 1,038 | 2,054 | Street railway cars, mfg. |
| 53 | 6,036 | 5,789 | 11,825 | Storage batt's and carbon prod's mfg. |
| 36 | 3,410 | 4,566 | 7,976 | Wood w'k, sewing mach. cabinets, etc. |
| 53 | 3,520 | 2,556 | 6,076 | Machine tools, mfg. |
| 52 | 2,691 | 2,393 | 5,084 | Machinery (heavy) mfg. |
| 34 | 1,286 | 1,386 | 2,672 | Metal wire, etc., mfg. |
| 36 | 1,281 | 1,200 | 2,571 | Sewing machines, mfg. |
| 51 | 941 | 776 | 1,717 | Electrical appliances, mfg. |
| 57 | 3,077 | 3,091 | 6,168 | Malleable iron castings, mfg. |
| 57 | 132 | 140 | 272 | Telephone service (Clerical force) |
| 33 | 2,328 | 2,262 | 4,590 | Telephone service (Oper. force) |
| 71 | 2,200 | 2,229 | 5,029 | Telephone service (Plant dept.) |
| 50 | 36,649 | 37,343 | 73,992 | Total |

TABLE

NUMBER AND PER CENT OF EMPLOYEES IN THE UNSTABLE PART OF THE WORKING
ACCESSIONS, SEPARATIONS, AND FLUX, IN INDIVIDUAL

| INDUSTRY OR NATURE OF BUSINESS | ESTABLISH- MENT NUMBER | TOTAL WORKING FORCE | NUMBER IN CON- TINUOUS SERVICE OVER ONE YEAR | UNSTABLE |
|---|------------------------------|---------------------------|---|--------------|
| | | | | NUMBER |
| DETROIT | | | | |
| Automobile mfg. | 204 | 135 | 51 | 84 |
| Clothing and overalls, mfg. | 216 | 480 | 248 | 232 |
| Iron and steel (small parts), mfg. | 221 | 218 | 163 | 55 |
| Heating devices, mfg. | 222 | 497 | 179 | 318 |
| Steel forgings, mfg. | 225 | 316 | 164 | 152 |
| Steel castings, mfg. | 227 | 390 | 156 | 234 |
| Structura' steel, mfg. | 228 | 161 | 82 | 79 |
| Electrical appliances, mfg. | 229 | 213 | 73 | 140 |
| Public utilities: Gas mfg. | 235 | 1,933 | 977 | 956 |
| Tel. serv. (Com. dept.) | 236 | 161 | 98 | 63 |
| Tel. serv. (Cler. force) | 237 | 138 | 76 | 62 |
| Tel. serv. (Installat'n) | 238 | 432 | 253 | 178 |
| Tel. serv. (Construc'n) | 240 | 331 | 149 | 182 |
| Total | [13] | 5,404 | 2,669 | 2,735 |
| CINCINNATI | | | | |
| Textiles (cotton), mfg. | 133 | 330 | 280 | 50 |
| Machine tools, mfg. | 137 | 127 | 85 | 42 |
| Machine tools, mfg. | 138 | 602 | 272 | 330 |
| Machinery (specialties), mfg. | 139 | 669 | 328 | 341 |
| Machinery mfg. | 140 | 407 | 274 | 133 |
| Machine tools, mfg. | 141 | 883 | 606 | 277 |
| Engineering specialties, mfg. | 146 | 1,150 | 670 | 480 |
| Printing and publishing (books) | 150 | 244 | 201 | 43 |
| Printing and publishing (miscel.) | 151 | 767 | 508 | 259 |
| Total | [9] | 5,179 | 3,224 | 1,955 |
| SAN FRANCISCO | | | | |
| Oil refinery | 263 | 421 | 158 | 263 |
| Sugar refinery | 264 | 1,259 | 420 | 839 |
| Machinery mfg. | 266 | 173 | 71 | 102 |
| Mercantile establishment | 269 | 85 | 42 | 43 |
| Mercantile establishment | 270 | 244 | 119 | 125 |
| Total | [5] | 2,182 | 810 | 1,372 |

APPENDIX

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C—Concluded

FORCE, NUMBER IN CONTINUOUS SERVICE OVER ONE YEAR, AND NUMBER OF ESTABLISHMENTS AND SPECIFIED CITIES, 1917-18

| FORCE | | LABOR CHANGES | | | INDUSTRY OR NATURE OF BUSINESS |
|---------------|------------|---------------|--------------|------------------------------------|--------------------------------|
| PER CENT | ACCESSIONS | SEPARATIONS | TOTAL (FLUX) | | |
| DETROIT | | | | | |
| 62 | 477 | 537 | 1,014 | Automobile mfg. | |
| 48 | 686 | 978 | 1,664 | Clothing and overalls, mfg. | |
| 25 | 392 | 384 | 776 | Iron and steel (small parts), mfg. | |
| 64 | 834 | 1,167 | 2,001 | Heating devices, mfg. | |
| 48 | 910 | 695 | 1,605 | Steel forgings, mfg. | |
| 60 | 1,296 | 1,066 | 2,362 | Steel castings, mfg. | |
| 49 | 543 | 567 | 1,110 | Structural steel, mfg. | |
| 66 | 744 | 744 | 1,488 | Electrical appliances, mfg. | |
| 49 | 1,585 | 1,040 | 2,625 | Public utilities: Gas mfg. | |
| 39 | 104 | 106 | 210 | Tel. serv. (Com. dept) | |
| 45 | 167 | 141 | 308 | Tel. serv. (Cler. force) | |
| 41 | 533 | 510 | 1,043 | Tel. serv. (Installat'n) | |
| 55 | 628 | 633 | 1,261 | Tel. serv. (Cons'n) | |
| 51 | 8,899 | 8,568 | 17,467 | Total | |
| CINCINNATI | | | | | |
| 15 | 354 | 369 | 723 | Textiles (cotton), mfg. | |
| 33 | 103 | 73 | 176 | Machine tools, mfg. | |
| 55 | 1,020 | 980 | 2,000 | Machine tools, mfg. | |
| 51 | 847 | 860 | 1,707 | Machinery (specialties), mfg. | |
| 33 | 502 | 567 | 1,069 | Machinery mfg. | |
| 31 | 1,363 | 1,166 | 2,529 | Machine tools, mfg. | |
| 42 | 2,030 | 1,989 | 4,019 | Engineering specialties, mfg. | |
| 18 | 82 | 119 | 201 | Printing and publishing (books) | |
| 34 | 667 | 811 | 1,478 | Printing and publishing (miscel.) | |
| 38 | 6,968 | 6,934 | 13,902 | Total | |
| SAN FRANCISCO | | | | | |
| 62 | 1,141 | 980 | 2,121 | Oil refinery | |
| 67 | 3,566 | 3,011 | 6,577 | Sugar refinery | |
| 59 | 261 | 362 | 623 | Machinery mfg. | |
| 51 | 138 | 121 | 259 | Mercantile establishment | |
| 51 | 435 | 409 | 844 | Mercantile establishment | |
| 63 | 5,541 | 4,883 | 10,424 | Total | |

LABOR TURNOVER IN INDUSTRY

TABLE D

LABOR MOBILITY BY MONTHS, FROM JANUARY, 1910, TO DECEMBER, 1919,
INCLUSIVE

| YEAR AND MONTH | NUMBER OF FULL-YEAR WORKERS ¹ | TOTAL LABOR HOURS (THOUSANDS) | LABOR CHANGES | | | | | |
|----------------|--|-------------------------------|---------------|-------------|-------|---------------------------|------------|--------------|
| | | | NUMBER | | | RATE PER FULL-TIME WORKER | | |
| | | | ACCESSIONS | SEPARATIONS | TOTAL | ACCESSION | SEPARATION | TOTAL (FLUX) |
| 1910 | | | | | | | | |
| January | 9,684 | 2,421 | 1,025 | 1,004 | 2,029 | 1.26 | 1.23 | 2.49 |
| February | 8,754 | 2,189 | 835 | 1,024 | 1,859 | 1.14 | 1.41 | 2.55 |
| March | 9,630 | 2,407 | 1,573 | 1,445 | 3,018 | 1.95 | 1.80 | 3.75 |
| April | 8,832 | 2,208 | 1,558 | 1,518 | 3,076 | 2.13 | 2.07 | 4.20 |
| May | 8,585 | 2,146 | 1,552 | 1,346 | 2,898 | 2.16 | 1.89 | 4.05 |
| June | 9,006 | 2,252 | 1,634 | 1,271 | 2,905 | 2.19 | 1.68 | 3.87 |
| July | 10,353 | 2,588 | 1,530 | 1,555 | 3,085 | 1.77 | 1.80 | 3.57 |
| August | 6,937 | 1,734 | 1,141 | 1,218 | 2,359 | 1.98 | 2.10 | 4.08 |
| September | 10,241 | 2,560 | 1,124 | 1,261 | 2,385 | 1.32 | 1.47 | 2.79 |
| October | 9,042 | 2,261 | 810 | 870 | 1,680 | 1.08 | 1.14 | 2.22 |
| November | 9,717 | 2,429 | 705 | 844 | 1,549 | .87 | 1.05 | 1.92 |
| December | 8,334 | 2,084 | 344 | 411 | 755 | .51 | .60 | 1.11 |
| 1911 | | | | | | | | |
| January | 13,727 | 3,432 | 699 | 839 | 1,538 | .60 | .72 | 1.32 |
| February | 14,806 | 3,701 | 954 | 840 | 1,794 | .78 | .69 | 1.47 |
| March | 13,770 | 3,442 | 1,136 | 888 | 2,024 | .99 | .78 | 1.77 |
| April | 13,836 | 3,459 | 1,090 | 992 | 2,082 | .96 | .87 | 1.83 |
| May | 15,150 | 3,788 | 1,429 | 1,259 | 2,688 | 1.14 | .99 | 2.13 |
| June | 13,923 | 3,481 | 1,313 | 1,286 | 2,599 | 1.14 | 1.11 | 2.25 |
| July | 14,013 | 3,593 | 1,070 | 1,222 | 2,292 | .93 | 1.05 | 1.98 |
| August | 12,786 | 3,196 | 1,190 | 1,081 | 2,271 | 1.11 | 1.02 | 2.13 |
| September | 14,015 | 3,504 | 709 | 932 | 1,641 | .60 | .81 | 1.41 |
| October | 13,840 | 3,460 | 652 | 942 | 1,594 | .57 | .81 | 1.38 |
| November | 14,651 | 3,663 | 556 | 1,026 | 1,582 | .45 | .84 | 1.29 |
| December | 13,049 | 3,262 | 344 | 878 | 1,222 | .33 | .81 | 1.14 |
| 1912 | | | | | | | | |
| January | 14,624 | 3,656 | 736 | 884 | 1,620 | .60 | .72 | 1.32 |
| February | 13,432 | 3,358 | 751 | 874 | 1,625 | .66 | .78 | 1.44 |
| March | 13,346 | 3,337 | 993 | 887 | 1,880 | .90 | .81 | 1.71 |
| April | 13,538 | 3,384 | 1,319 | 1,043 | 2,362 | 1.17 | .93 | 2.10 |
| May | 15,065 | 3,766 | 1,385 | 1,435 | 2,820 | 1.11 | 1.14 | 2.25 |
| June | 13,778 | 3,444 | 1,611 | 1,049 | 2,660 | 1.41 | .90 | 2.31 |
| July | 15,127 | 3,782 | 1,756 | 1,400 | 3,156 | 1.58 | 1.11 | 2.49 |
| August | 14,077 | 3,519 | 1,801 | 1,363 | 3,164 | 1.53 | 1.17 | 2.70 |
| September | 15,832 | 3,958 | 1,886 | 1,362 | 3,248 | 1.44 | 1.02 | 2.46 |
| October | 16,307 | 4,077 | 2,059 | 1,395 | 3,454 | 1.53 | 1.02 | 2.55 |
| November | 19,613 | 4,903 | 1,996 | 1,368 | 3,364 | 1.23 | .84 | 2.07 |
| December | 17,435 | 4,359 | 1,585 | 1,172 | 2,757 | 1.08 | .81 | 1.89 |

¹ See footnote on page 211.

APPENDIX

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TABLE D — Continued

LABOR MOBILITY BY MONTHS, FROM JANUARY, 1910, TO DECEMBER, 1919,
INCLUSIVE

| YEAR AND MONTH | NUMBER OF FULL-YEAR WORKERS ¹ | TOTAL LABOR HOURS (THOUSANDS) | LABOR CHANGES | | | | | |
|----------------|--|-------------------------------|---------------|-------------|--------|---------------------------|------------|--------------|
| | | | NUMBER | | | RATE PER FULL-TIME WORKER | | |
| | | | ACCESSIONS | SEPARATIONS | TOTAL | ACCESSION | SEPARATION | TOTAL (FLUX) |
| 1913 | | | | | | | | |
| January | 157,841 | 39,460 | 24,185 | 18,365 | 42,550 | 1.83 | 1.41 | 3.24 |
| February | 156,126 | 39,032 | 19,737 | 17,558 | 37,295 | 1.53 | 1.35 | 2.88 |
| March | 168,238 | 42,059 | 23,267 | 24,219 | 47,486 | 1.65 | 1.74 | 3.39 |
| April | 161,965 | 40,491 | 28,203 | 24,731 | 52,934 | 2.10 | 1.83 | 3.93 |
| May | 166,511 | 41,628 | 26,101 | 25,948 | 52,049 | 1.89 | 1.86 | 3.75 |
| June | 158,475 | 39,619 | 20,443 | 20,483 | 40,926 | 1.56 | 1.56 | 3.12 |
| July | 159,221 | 39,805 | 18,451 | 20,853 | 39,304 | 1.38 | 1.56 | 2.94 |
| August | 167,001 | 41,750 | 14,847 | 17,203 | 32,050 | 1.08 | 1.23 | 2.31 |
| September | 152,311 | 38,078 | 13,453 | 16,650 | 30,103 | 1.05 | 1.32 | 2.37 |
| October | 157,428 | 39,357 | 11,607 | 13,233 | 24,840 | .87 | 1.02 | 1.89 |
| November | 156,452 | 39,113 | 9,456 | 10,451 | 19,907 | .72 | .81 | 1.53 |
| December | 153,208 | 38,302 | 7,061 | 9,048 | 16,109 | .54 | .72 | 1.26 |
| 1914 | | | | | | | | |
| January | 43,125 | 10,781 | 2,513 | 2,126 | 4,639 | .69 | .60 | 1.29 |
| February | 43,342 | 10,835 | 2,716 | 1,886 | 4,602 | .75 | .51 | 1.26 |
| March | 42,771 | 10,693 | 2,994 | 2,460 | 5,454 | .84 | .69 | 1.53 |
| April | 45,014 | 11,253 | 2,552 | 2,358 | 5,405 | .69 | .75 | 1.44 |
| May | 39,793 | 9,948 | 2,423 | 4,108 | 6,531 | .72 | 1.23 | 1.95 |
| June | 40,867 | 10,217 | 3,239 | 4,168 | 7,407 | .96 | 1.23 | 2.19 |
| July | 39,487 | 9,872 | 2,931 | 1,975 | 4,906 | .90 | .60 | 1.50 |
| August | 42,512 | 10,628 | 3,371 | 3,097 | 6,468 | .96 | .87 | 1.83 |
| September | 44,116 | 11,029 | 4,364 | 2,323 | 6,687 | 1.20 | .63 | 1.83 |
| October | 56,668 | 14,167 | 3,565 | 3,279 | 6,844 | .75 | .69 | 1.44 |
| November | 58,192 | 14,548 | 3,001 | 2,269 | 5,270 | .63 | .48 | 1.11 |
| December | 57,636 | 14,409 | 3,189 | 2,759 | 5,948 | .66 | .57 | 1.23 |
| 1915 | | | | | | | | |
| January | 87,031 | 21,758 | 4,349 | 3,957 | 8,306 | .60 | .54 | 1.14 |
| February | 86,061 | 21,515 | 5,199 | 4,620 | 9,819 | .72 | .63 | 1.35 |
| March | 91,589 | 22,897 | 6,400 | 6,066 | 12,496 | .84 | .81 | 1.65 |
| April | 86,224 | 21,556 | 8,107 | 4,868 | 12,975 | 1.14 | .69 | 1.83 |
| May | 89,519 | 22,380 | 6,767 | 5,227 | 11,994 | .90 | .69 | 1.59 |
| June | 96,801 | 24,200 | 7,081 | 4,867 | 11,948 | .87 | .60 | 1.47 |
| July | 93,716 | 23,429 | 6,058 | 5,879 | 11,937 | .78 | .75 | 1.53 |
| August | 94,034 | 23,508 | 6,597 | 5,419 | 12,016 | .84 | .69 | 1.53 |
| September | 107,960 | 26,990 | 13,184 | 8,213 | 21,397 | 1.47 | .90 | 2.37 |
| October | 99,741 | 24,935 | 12,061 | 6,256 | 18,317 | 1.44 | .75 | 2.19 |
| November | 67,672 | 16,918 | 11,558 | 6,268 | 17,826 | 2.04 | 1.11 | 3.15 |
| December | 92,223 | 23,056 | 11,796 | 6,077 | 17,873 | 1.53 | .78 | 2.31 |

¹ See footnote on page 211.

LABOR TURNOVER IN INDUSTRY

TABLE D — Continued

LABOR MOBILITY BY MONTHS, FROM JANUARY, 1910, TO DECEMBER, 1915,
INCLUSIVE

| YEAR AND MONTH | NUMBER OF FULL-YEAR WORKERS ¹ | TOTAL LABOR HOURS (THOUSANDS) | LABOR CHANGES | | | | | |
|----------------|--|-------------------------------|---------------|-------------|--------|---------------------------|------------|--------------|
| | | | NUMBER | | | RATE PER FULL-TIME WORKER | | |
| | | | ACCESSIONS | SEPARATIONS | TOTAL | ACCESSION | SEPARATION | TOTAL (FLUX) |
| 1916 | | | | | | | | |
| January | 46,885 | 11,721 | 8,649 | 4,994 | 13,643 | 2.22 | 1.29 | 3.51 |
| February | 53,541 | 13,385 | 10,351 | 5,632 | 15,983 | 2.31 | 1.26 | 3.57 |
| March | 56,410 | 14,102 | 7,348 | 6,706 | 14,054 | 1.56 | 1.44 | 3.00 |
| April | 59,237 | 14,809 | 10,321 | 5,737 | 16,058 | 2.10 | 1.17 | 3.27 |
| May | 58,143 | 14,536 | 8,518 | 7,091 | 15,609 | 1.77 | 1.47 | 3.24 |
| June | 58,152 | 14,538 | 6,730 | 9,280 | 16,010 | 1.38 | 1.92 | 3.30 |
| July | 57,595 | 14,376 | 5,346 | 4,678 | 10,024 | 1.11 | .99 | 2.10 |
| August | 57,866 | 14,466 | 7,727 | 5,733 | 13,460 | 1.59 | 1.20 | 2.79 |
| September | 60,549 | 15,137 | 6,455 | 5,087 | 11,542 | 1.29 | 1.02 | 2.31 |
| October | 62,492 | 15,623 | 6,336 | 4,205 | 10,541 | 1.23 | .81 | 2.04 |
| November | 63,408 | 15,852 | 3,921 | 3,821 | 7,742 | .75 | .72 | 1.47 |
| December | 64,424 | 16,106 | 5,499 | 3,884 | 9,383 | 1.02 | .72 | 1.74 |
| 1917 | | | | | | | | |
| January | 33,675 | 8,410 | 3,568 | 4,439 | 8,007 | 1.26 | 1.59 | 2.85 |
| February | 32,260 | 8,065 | 2,948 | 3,368 | 6,316 | 1.11 | 1.26 | 2.37 |
| March | 21,211 | 5,303 | 2,057 | 2,099 | 4,156 | 1.17 | 1.20 | 2.37 |
| April | 21,667 | 5,417 | 2,416 | 2,652 | 5,068 | 1.35 | 1.47 | 2.82 |
| May | 28,487 | 7,122 | 4,871 | 4,700 | 9,571 | 2.04 | 1.98 | 4.02 |
| June | 32,572 | 8,143 | 5,449 | 4,921 | 10,370 | 2.01 | 1.80 | 3.81 |
| July | 35,637 | 8,909 | 5,265 | 5,074 | 10,339 | 1.77 | 1.71 | 3.48 |
| August | 37,398 | 9,350 | 6,661 | 6,137 | 12,798 | 2.13 | 1.98 | 4.11 |
| September | 37,723 | 9,431 | 6,288 | 6,022 | 12,310 | 2.01 | 1.92 | 3.93 |
| October | 38,583 | 9,646 | 6,746 | 5,127 | 11,873 | 2.10 | 1.59 | 3.69 |
| November | 47,401 | 11,850 | 7,209 | 6,076 | 13,285 | 1.83 | 1.53 | 3.36 |
| December | 39,994 | 9,998 | 5,307 | 6,488 | 11,795 | 1.59 | 1.95 | 3.54 |
| 1918 | | | | | | | | |
| January | 37,973 | 9,493 | 5,860 | 5,238 | 11,098 | 1.86 | 1.65 | 3.51 |
| February | 37,008 | 9,252 | 4,952 | 5,563 | 10,515 | 1.62 | 1.80 | 3.42 |
| March | 37,387 | 9,347 | 6,636 | 6,447 | 13,083 | 2.13 | 2.07 | 4.20 |
| April | 37,024 | 9,481 | 8,322 | 7,228 | 15,550 | 2.64 | 2.28 | 4.92 |
| May | 35,819 | 8,955 | 7,792 | 6,256 | 14,048 | 2.61 | 2.10 | 4.71 |
| June | 30,319 | 7,580 | 5,537 | 4,789 | 10,326 | 2.10 | 1.89 | 4.08 |
| July | 24,446 | 6,111 | 4,652 | 4,024 | 8,676 | 2.28 | 1.68 | 4.26 |
| August | 23,877 | 5,969 | 3,953 | 4,320 | 8,273 | 1.98 | 2.16 | 4.14 |
| September | 21,299 | 5,325 | 2,954 | 2,643 | 5,597 | 1.65 | 1.50 | 3.15 |
| October | 21,817 | 5,454 | 2,702 | 2,850 | 5,552 | 1.50 | 1.56 | 3.06 |
| November | 28,352 | 7,088 | 3,878 | 2,350 | 6,228 | 1.65 | .99 | 2.64 |
| December | 22,476 | 6,619 | 2,496 | 2,042 | 4,538 | 1.32 | 1.08 | 2.40 |

¹ See footnote on page 211.

APPENDIX

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TABLE D — *Concluded*LABOR MOBILITY BY MONTHS, FROM JANUARY, 1910, TO DECEMBER, 1919,
INCLUSIVE

| YEAR AND MONTH | NUMBER OF FULL-YEAR WORKERS ¹ | TOTAL LABOR HOURS (THOUSANDS) | LABOR CHANGES | | | | | |
|----------------|--|-------------------------------|---------------|-------------|-------|---------------------------|------------|--------------|
| | | | NUMBER | | | RATE PER FULL-TIME WORKER | | |
| | | | ACCESSIONS | SEPARATIONS | TOTAL | ACCESSION | SEPARATION | TOTAL (FLUX) |
| 1919 | | | | | | | | |
| January | 20,989 | 5,247 | 2,408 | 2,517 | 4,925 | 1.38 | 1.44 | 2.82 |
| February | 20,238 | 5,059 | 1,347 | 1,890 | 3,237 | .81 | 1.11 | 1.92 |
| March | 19,591 | 4,808 | 1,119 | 1,962 | 3,081 | .69 | 1.20 | 1.89 |
| April | 18,835 | 4,709 | 1,137 | 1,741 | 2,878 | .72 | 1.11 | 1.83 |
| May | 17,128 | 4,282 | 1,096 | 1,503 | 2,599 | .78 | 1.05 | 1.83 |
| June | 14,233 | 3,558 | 1,002 | 1,145 | 2,147 | .84 | .96 | 1.80 |
| July | 13,979 | 3,495 | 1,238 | 822 | 2,060 | 1.05 | .72 | 1.77 |
| August | 5,638 | 1,410 | 601 | 516 | 1,117 | 1.29 | 1.11 | 2.40 |
| September | 5,785 | 1,446 | 710 | 478 | 1,188 | 1.47 | .99 | 2.46 |
| October | 9,502 | 2,376 | 1,428 | 643 | 2,071 | 1.80 | .81 | 2.61 |
| November | 16,400 | 4,100 | 1,513 | 1,001 | 2,514 | 1.11 | .72 | 1.83 |
| December | 10,327 | 2,582 | 620 | 404 | 1,024 | .72 | .48 | 1.20 |

¹ Calculated as follows:

$$\frac{2,421,000}{\frac{3000}{12}}$$

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