

# CANADA DIPARTMENT OF TRADE AND COMMERCE 

DOMINION BUREAU OF STATLSTICS CENSUS OF INDUSTRY

## REPORT

on the
RUBBER INDUSTRY

1n

CANADA

1929

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Dominion Statistician：R．E．Coats，S．A．，E．S．S．（Hon．），F．A．S．C．
Onief，Cenmas of Industry：

## FEE RUBBFR INJUSTRY IN CATADA， 1929.

Ot fawa，November，1930．－A report or tie Fubber Industry in Canada is herewith presented for the calendar year 1929 classified under two heads：（1）Rubber tires and other rubber soads，（2）Rubber footwear．A resume of the princinal statistics is given below：－

## ESTABLISENETMS

The number of establishments reporting in 1929 was 44 ，of which 33 were located in tize province of Ontario， 9 in Quebec and 2 in Eritish Columbia．Listed according to products the number of factories manufacturing tires only was 4 ，tires and footwear 2 ， and tires and other rubber products 6 ．The number making iootwear only was 8 ，fontwear and other ruboer products 2 ，whilst those makins rubber products other than tires and footwear were 22 in number．

## CAPITAE

The amount of capital investec in the mober industry in 1929 was $\$ 73,577,478$ to willch tile rubber tires and other ruboer goods section contributed $\$ 55,697,543$ and the footwear section $\$ 17,179,935$ ．Fixed capital in the indistry as a wole amourted to $\$ 42,774,839$ and working capital to $\$ 31,102,639$ ．

## EMPLOYEES

The number of persons emrloyed in the industry in 1929，exclusive of outside piece workers，was 17,796 of whom 2,259 were salaried employees and 15,537 were wage－earners． of those employed 13,156 were males and 4,630 were females．In the muber goods section tine total employees numbered 9,771 of whom 8,118 were males and 1,653 were females，whilst in the footwear section the total numer emloyed was 8,025 of whom 5,048 were males and 2,977 were females．

## SALARIES ALD TAGES

The total amount of salaries and wases paid in 1029 was $\$ 20,134,501$ of wrich $\$ 4,156,958$ was ror salaries and $\$ 15,977,533$ for wages．Total payments in the rubber coods section amounted to $\$ 12,906,180$ oi which $\$ 2,846,660$ remresented the cost of salaries and $\$ 10,059,520$ the cost of wages．In the rubber footwear section the total payments were $\$ 7,228,321$ of which $\$ 1,310,308$ represented the cost of salarles and $\$ 5,218,013$ the cost of wases．

## THEL CONSUMPTION

The total cost of fuel consumed br the industry in 1929 was $\$ 719,529$ of which the maber goods section accounted for $\$ 553,602$ and the rubber footwear section for $\$ 165,927$ ． Bituminous coal was the principal fuel of which 91,030 tons worth $\$ 513,476$ were reported whilst its value represented 92.75 per cent of the tctal cost of all fuel．

## MATERIALS USED

The total cost of all materials used in the industry was $\$ 42,340,747$ of which the mbber goods section contributed $\$ 33,408,648$ and the ruboer footwear section $\$ 9,532,099$ ． Raw ruboer was the chief material with a total value of $\$ 16,361,908$ being over 38.1 per cent of the total cost of materials．The second largest item of materials was tire duck with a total cost of $\$ 9,702,844$ or more than 22.6 per cent．

## VALUE OT RRODUCIION

The gross value of producion for the entire industry amounted to $\$ 96,934,650$ in 1929 being a decrease of $\$ 274,053$ or .28 per cent over 1928．Of tre three main classes of products，mbber tires and tubes accounted for $\$ 51,386,140$ or 53 per cent of the tatal， rubber footwear for $\$ 23,720,901$ or 30.7 per cent and other rubber boods for $\$ 15,827,520$ or 10.3 per cent．Automobile tire production increased in value over tiae precedin a vear by $\$ 1,677,002$ or 3.38 per cent，whilst mbber footwear decreased by $\$ 2,501,620$ or 8.3 rer cent，and other rubber foods increased by $\$ 739,905$ or 4.3 ver cent．

The net value of production，found by deductine the cost gf materials from the gross value of products，advanced $二 \operatorname{rom} \$ 52,000,143$ in 1028 to $\$ 53,933.913$ in 1929 or 3.65 per cent．

## Size of Establishments

In view of the tendency towards concentration in industrial enterprises, a series of tables has been preparea presenting in a threcfold way tho size of establishmonts in tho rubber industry, measured by (a) capital investment, (b) gross value of production and (c) the number of persons employed, all within certain specifiled grouns or limitations for the calendar jears 1028 and 1929. The tables furtier indicato tiwe movement of capital, oroduction and employment rithin tie industry.

In 1528 the number of establishments roporting was 45 witi a total capital investment of $\$ 70,459,066$, a cross value of production of $\$ 7,208,713$ and a total omployment of 27,095. Seventeen factories ada capital investment of $\$ 65,843,040$ or 93.4 per cent of the total capital investment with an average investment of $\$ 3,873,120$ ner factory.

Frenty estajisiments had a total production $0: \$ 93,007,504$ or 96.5 ner cent of the total output witi an averace production of $\$ 4,695,375$ por establishment. In emmloment 20 establishments had 16,121 persons on the payroll or 94.3 per cent of the total employment witin an averace umployment of 806 per factory.

In 1929 tho number of establisiments roporting was 44 with a total capital investmont of $\$ 73,877,478$, a gross value of production of $\$ 95,934,660$ and a total employment of 17.795. Nineteen establismments Lad a capital investment of $\$ 70,377,862$ or 05.2 per cent of tice total cavitalization with an arerace investment per factory of $\$ 3,701,008$. Iventy-two establisiments and a cross valuc of nroduction of \$ $\$ 4,24,5,506$ or 97.2 or cont of the total outyut and an averase of $\$ 4,284,023$ per establisiment. In emolomont 18 establishments 16,52 persons or 92.8 per cent or that total ompoyme with an averace of 918 per establis.ment.

| Capital |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 928 |  |  | 1929 |  |
| Groups of Values | Istab- <br> 1ish- <br> ments <br> iio. | Total Canital \$ | Average <br> Capital <br> : per estab <br> Iisiment <br> \$ | Istab- <br> lish- <br> ments <br> $\because 0$. | Eotal Capital | Averase Capital our ostablisiment \$ |
| Under \$50,000 | 13 | 308, 551 | 23.743 | 12 | 234.783 | 19,565 |
| \$50,000 to \$100,000 | 2 | 153,136 | 79,568 | 3 | 170,072 | 56,591 |
| \$100,000 to \$ $\$ 200,000$ | 5 | 834,965 | 166,993 | 5 | 769,028 | 153,806 |
| \$200,000 to \$500,000 | 8 | 3,313,254 | 414,158 | 5 | 2,325,733 | 455,147 |
| \$500,000 to \$1,000,000 | 2 | 1,488,431 | -744,216 | 4 | 2,575,437 | 543,859 |
| \$1,000,000 to \$5,000,000 | 10 | 23,310,540 | 2,331,054 | 9 | 19,385,169 | 2,153,908 |
| \$5,000,000 and over | 5 | 41,044,069 | 8,203,814 | 6 | 48,417,256 | 3,069,543 |
| COMAL | 45 | 70, 59.066 | 1,565,757 | 44 | 73.877 .478 | 1,679,034 |


imployees


A comparison of the principal statistics of tiee rubber industry in Canada is afforded in mable 1 (a) for the calendar years $1925,1927,1928$ and 1729 . Tine number of plants reporting in 1929 decreased by2. 22 ner cent from 1928 , whilst capital investment . 9 oer cent, mioyees by 3.9 per cent, salar ard wase pajments s. 4 por cent and the cost of fue? by 4.5 per cent. The cost of materials decreased by 4.8 - per cent and the gross value of products by .28 per cent.
-

- 1 -1.29

Principal Statistics
Capital investment
Employees on salaries Sclaries paid
Employees on wates
Tages paid
Cost of fuel
Cost of materials
Gross value of produets
Met value $0^{\circ}$ products

$62,061,702$
1,786
$3,096,334$
11,801
11,611,689
641,551
$40,902,189$
86,508,137 36,505,94.8
$66,265,064 \quad 70,459,066$ $1,000 \quad 2,145$ $73,877,478$ 2,145 2,259 $3,243,988 \quad 3,502,753 \quad 4,156,958$ 13.169 14,950 15,537 $13,377.752$ 649,892 $15,340,077 \quad 15,977,533$ 688,565 719.529 $45,113,570 \quad 42,940,747$ $\begin{array}{ll}97,208,713 & 96,934,560 \\ 52,000,143 & 53,093,013\end{array}$

## Automocile Tire and Tube Production, Compared, 1917-1929.

A comparative summary of automobile tire production (casings and inner tubes) from 1917 to 1929 is prescated in the folloving table. Fneumatic tires and solid tires are eacil shown by number and value.

Table $1(b)$. Automojle Tire and Iube Production, Compared, $1917-1923$.


| Year | $\begin{gathered} \text { Casines } \\ \text { No. } \end{gathered}$ | Value | Inner Trubes No. | Value \$ | number | Talue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1917 | $1 /$ | 11 | $1!$ | $11$ | 111,211 | 225.450 (2) |
| 1018 | 1/ | $1 /$ | $1 /$ | $1 /$ | $60,783$ | 125,859 (2) |
| 1919 | 1,293,010 | 23,298,573 | 1,117,913 | 2,572,487 | 14,170 | $451,190^{\circ}$ |
| 1920 | 1,531,274 | 35,175,801 | 1,427,546 | 4,271,461 | 21,444 | 729.857 |
| 1921 | 857,316 | 15,520,810 | 989.589 | 2,037,180 | 2,472 | 343,171 |
| 1922 | 1,482,795 | 19,519,208 | 1,504,837 | 2,618,584 | 15.572 | 476,735 |
| 1923 | 2,150,758 | 23,504,489 | 2,256,604 | 3,555,109 | 22,546 | 658,090 |
| 1924 | 2,139,234 | 22,355,905 | 2,454,292 | 4,319,022 | 20.935 | 531,189 |
| $1325$ | 2,369,632 | 33,586,958 | 3,462,380 | 6,922,413 | 20,918 | 721,039 |
| 1926 | 2,960,088 | 38,159,495 | 3,511,897 | 7,934,096 | 18,051 | 798,049 |
| 1927 | 3,855,315 | 40,707,749 | 4,275,753 | 8,302,944 | 21,471 | $859,552$ |
| $1928$ | $4,338,578$ | $11,075.594$ | 4,638,429 | $7,358,560$ | 17,377 | $592,036$ |
| 1929 | $4,305,185$ | $43,515,214$ | 4,681,550 | $6,571,483$ | 10,305 | 387,? 27 |

1/ Separate figures for casings and inner tioes are not available for 1917 and 1318 beins combined in a single total. In 1917 tine number of tires was stated at 2,304, 737 and the value at $\$ 15,286,995$ and in 1918 at $2,242,046$ tires valued at $\$ 14,449,957$. (2) Solid tires included carriage tires in 1917 and 1918.

## 31cycle and Motorcycle Tires and Tubes, Compared for 1219-1929.

The quantity and value oi motorcycle tires and tubes and of bicrcle tires and tubes are compared in the followin sumary table for tine calendar yeais 1919-1929.

Table $1(c)$. Itcre and Yotorcycle Itres and muos, Commared, 1019-1020.

|  | 3iojele |  |  |  | Yotorcycle |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vear | Mires No. | Value | mubes : 70. | Talue | Gres $\because 0$ 。 | Vallie \$ | Tubes : 20. | Talue |
| 1919 | 185,613 | 244.521 | 234,579 | 277,656 | 8,586 | 74,131 | 8,717 | 12,396 |
| 1920 | 241,300 | 428,979 | 322,025 | 237,267 | 15,172 | 154,556 | 12,674 | 18,849 |
| 1921 | 91,496 | 151,151 | 95,851 | 83.953 | +,540 | 41,019 | 5.757 | 7.795 |
| 1922 | 171,441 | 220,05 | 182,861 | 115,008 | 22,682 | 151,470 | 25.887 | 15,032 |
| 1923 | 211,493 | 24, 859 | 217,082 | 128,885 | 39,838 | 187,074 | 35.334 | 30,9+6 |
| 1924 | 182,593 | 249,255 | 183,982 | 107,133 | 48,181 | 329,831 | 37,513 | 42.532 |
| 1925 | 197,699 | 243,96 | 208,210 | 95:018 | 53,477 | 355,258 | 48,231 | 65,020 |
| 1325 | 175,980 | 232,510 | 213,696 | 131,775 | 91,359 | 530,352 | 64,287 | 85,102 |
| 1527 | 150,705 | 175,512 | 150,149 | 81,408 | 37,558 | 251,41 | 20,154 | 31,155 |
| 1928 | 186,523 | 181,103 | 207.747 | 91,010 | 30,467 | 223,764 | 22,304 | 23,533 |
| 1329 | 221,035 | 219,505 | 239,043 | 127.770 | 27,097 | 168,149 | 18,212 | 20,290 |

## FAODJCIION S.ATISIIOS

(a) D:3ber mi:es and Trabes.

The production of ruboer tires and tubos according to size is meesented in Tale' ' Lior the calendar year 1029. The total selling value of all tires and tuives produced

- Curinz the year was \$51,386,140 comprisine pneumatic sires and man tubes to tie value of $\$ 24,110,280$, balloon tires and inner tubes to the vaiue of $\$ 25,179,477$. solici tires to the value of $\$ 337,227$ and carriage, motorcycle and bicrole tires to the value of
- \$709,216. The value oi procuction which in 1928 amountea to $\$ 43,708,538$ increased by $\$ 1,677,602$ or 3.4 per cent during the year under reviev.
* Table 2. - Production of (a) Pneumatic (b) 3alloon ana (c) Soliz Zires, by sizes, 1929.
(a) Pnountic ilres

| Sasings and Inner | Caciris |  | Inner muas |  |
| :---: | :---: | :---: | :---: | :---: |
| Tubes by sizes | Number | Valus | Tumber | Tallue \$ |
| Sizes - $30 \times 3 \frac{1}{2}$ | 580,98 | 2,766,719 | 840,729 | 141,500 |
|  | 303 | 2,21: | 558 | 626 |
|  | 29,128 | 252,072 | 73,304 | 93,660 |
|  | 35,371 | 337,965 | 45,612 | 55,891 |
|  | 20,635 | 495,805 | 23.732 | 35,529 |
|  | 2.142 | 27,409 | 3.792 | 0.667 |
|  | 18,679 | 24\%,794 | 25,248 | 45,514 |
|  | 17,893 | 231,165 | 18,905 | 33,896 |
|  | 7,505 | 107,627 | 20.249 | 19,216 |
|  | 113 | 2,048 | 456 | 837 |
|  | 47 | 049 | 12 | 20 |
|  | 307,406 | $4,567,876$ | 327,836 | 574,088 |
|  | 15,215 | 276,694 | 21,0,48 | 46,5c9 |
|  | 4,509 | 89,935 | 5,111 | 11,310 |
|  | 4,410 | 86, 823 | 5,035 | 11, 7-2 |
|  | 455 | 24,087 | 114 | 408 |
|  | 275.18\% | 6,824,650 | 285.323 | 535,559 |
|  | 17.939 | 595,472 | 15,733 | 57,914 |
|  | 40,595 | 1,662,638 | 39,515 | $=79,499$ |
|  | 812 | 50,55? | 1,418 | 11,190 |
|  | 9,412 | 395,719 | 7.559 | 32,311 |
|  | 8.444 | 1127,664 | 8,481 | 40,073 |
|  | 4,242 | 255:826 | 14.076 | 25.730 |
|  | 23.165 | 258,021 | 28.836 | 43, 21 |
|  | 114,306 | $12=10,561$ | 50, 234 | 72,461 |
| Total Preumatic Iires | $1.539,111$ | 21,111,280 | 1, $8+5,75$ ? | 2,999,000 |
|  |  | (b) 3alloo | Tires |  |
| Stzes - $29 \times 4.40$ | 423,170 | 2,540,01] | 431,808 | 552,713 |
|  | 41,333 | 352,063 | 31,280 | 42,439 |
| $30 \times 4.75$ | 27,450 | 165,876 | 15,579 | 13,005 |
| $29 \times 4.95$ | 7,616 | 31.308 | 5,783 | 11,790 |
| $30 \times 4.35$ | 2,365 | 34.920 | 2,170 | 4,5?6 |
| $31 \times 4.95$ | 935 | 12,214 | 651 | 1,374 |
| $32 \times 4.95$ | 4,405 | 59,050 | 2,236 | 3.976 |
| $33 \times 4.95$ | 6,250 | 86,566 | 2,605 | 5,258 |
| $34 \times 4.95$ | 1,533 | 23,177 | 1,095 | 2. 380 |
| $30 \times 5.25$ | 75,547 | 750,614 | 71,570 | 127.901 |
| $31 \times 5.25$ | 113,295 | 1,120,431 | 86. 502 | 148,900 |
| $30 \times 5.77$ | 444 | 8,902 | 169 | 549 |
| $32 \times 5.77$ | 74 | 1.598 | 6.720 | $8,-45$ |
| $33 \times 5.77$ | 972 | 18.597 | $\therefore, 536$ | 4,905 |
| $34 \times 5.77$ | 1,451 | 25,206 | 1,831 | 4,030 |
| $35 \times 5.77$ | 172 | 3,729 | 694 | 942 |
| $33 \times 5.00$ | 55,101 | 685.862 | 38,204 | 84,730 |
| $32 \times 6.20$ | 4,217 | 05,671 | 10,753 | 30,38\% |
| $33 \times 6.20$ | 214 | 4.571 | 728 | 2. 455 |
| $33 \times 6.75$ | 9, 110 | 148,051 | 6.576 | 25,529 |
| $35 \times 6.75$ | 187 | $4,1 \mathrm{cl}$ | 1,332 | 3,215 |
| $34 \times 7.30$ | 239 | 6,267 | 1,232 | 3.35 |
| Misce? laneous sizes | $2,195,134$ | 15,250,053 | 2:112. 213 | $2.39+570$ |
| Totai Balloon Tires | 2,967.074 | 22,505, 922. | ?,835,108 | 3.675 .483 |

Table 2. - Production of (a) Pneumatic (b) Balloon ank (c) Solid Tires, by sizes 1029 (continued)

| -(c) Solid Tires by sizes | Sumber | $\begin{gathered} \text { Value } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: |
| . Sizes - $32 \times 3$ \% | 71 | 958 |
| $34 \times 3 \frac{1}{2}$ | - | - |
| $36 \times 3 \frac{1}{2}$ $32 \times 4$ | 241 | 4, 355 |
| $34 \times 4$ | 300 | 5,635 |
| $36 \times 4$ | 1,324 | 26,330 |
| $38 \times 4$ |  | - |
| $32 \times 5$ | 197 | 3,835 |
| $34 \times 5$ | 269 | 5,376 |
| $36 \times 5$ | 1,155 | 30,294 |
| $40 \times 5$ | 5 | 173 |
| $34 \times 6$ | 175 | 5.242 |
| $35 \times 6$ | 305 | 29,040 |
| $40 \times 6$ |  | - |
| $34 \times 7$ | 246 | 0.149 |
| $36 \times 7$ | 391 | 15,725 |
| $34 \times 8$ | 391 | 17,977 |
| $36 \times 8$ | 480 | 22,527 |
| $36 \times 10$ | 698 | 42,023 |
| $40 \times 10$ | 165 | 11,091 |
| $36 \times 12$ | 365 | 25,658 |
| $40 \times 12$ | 289 | 22,115 |
| $36 \times 14$ | 141 | 11,602 |
| $40 \times 14$ | 496 | 47,203 |
| Miscellaneous sizes | 2,502 | 49,299 |
| Total Solid Iires | 10,906 | 387,227 |

Otaer tires and tubes not included in the foregoine table are shown by kina, quantity and value in rable 3 and is $\hat{i}$ 1929.

Table 3. - Otier Iires and Tubes, Solid or Pneumatic.

| "ind | Finit of Seasure | Quantity | $\qquad$ <br> Selling <br> Value at the Torks \$ |
| :---: | :---: | :---: | :---: |
| Carriase rubcer tires, solid | Eb. | 435,046 | 70,076 |
| All otier rubber tires, solid | 11 | 409,245 | $103.426$ |
| Yotorcycle tires, casings | \% 10 | 27.897 | 168,149 |
| .otorcycle tires, inner tubes | 11 | 18,112 | 20,290 |
| Sicycle tires, casings | " | 221,035 | 219,505 |
| Jicycle tires, inner tubes | " | 239,048 | 127,770 |
| TOTAL VAEJE |  | - | 709.216 |


| Yind |  | 1928 |  | 1929 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Unit } \\ & \text { of } \\ & \text { Yeasure } \end{aligned}$ | quantity | Selling <br> Value at <br> the Torks <br> \$ | Quantity | $\begin{aligned} & \text { Seling } \\ & \text { Val ac at } \\ & \text { the Torles } \end{aligned}$ |
| Preumatic tires - casinss <br> " " - inner tubes | No. | $1,717,130$ $2,250,712$ | $\begin{array}{r} 19,302,592 \\ 3,725,434 \end{array}$ | $1,539,111$ $1,845,752$ | $21,111,280$ $2,093,000$ |
| Ealloon tires - casings | " | 2,321,448 | 21,706,002 | 2,367,074 | 22,50,,934 |
| " " - inmer tuives | " | 2,307,717: | 3,533,125 | 2,535,798 | 3,672, +63 |
| Solid tires | " | 17,377. | 592,636 | 10,906 | 387,227 |
| Carriace ruboer tires, solia | Lb. | 542,210 | 170,675 | 486,046 | 70,076 |
| Qtier rabber tires, solid |  | 35,102 | 11,473 | 409, 245 | 103,426 |
| Yotorcycle tires- casings | \%io. | 35, 167 | 203, 704 | 27.897 | 150,149 |
| " " - imner tubas |  | 22,304 | 23,633 | 18,112 | 20,290 |
| Bicycletires - casings | " | 160, 023 | 181,103 | 221,035 | 219,505 |
| - in rer tujes | " | 207.747 | 91,010 | 239,048 | 127,770 |
| COTAL SELUING VALUE |  | - | 49,708,538 | - | 51,306,140 |

## 3. Pootwear.

The roduction of rubber footwear is shown by classes, sizes, number and value in Table 4 for the calendar year l9z. Compared with 1928 tinere was an increase of

- $1,689,406$ ir the number of pairs or all classes manufactured but a decrease of $\$ 2,691,620$ in value of prodiction.

Table 4. - Rubber footwear Production bj Classes and Sizes, 1929.


A comparison of rubber footwear production by classes, rumber of pairs and selling value is given in the sumary table following, for the calenday years 1028 and 1029. The classes of footwear showing the ereatest quantity of production as compared with 1928 were (a) canvas rubber soled footwear (balmorals) and (b) canvas rubber soled fontwear (oxfords), tine inst named siowing an increase of 348,394 pairs and the next $2,808,098$ pairs. All the remainin classes show decreased production varfing from 56,207 pairs in rubber boots, knee and hip to 928,172 pairs in overshoes, not including Jersey storms.

Comparative Surmary of Ruober Footwear by Classes, 1928 and 1929.

|  | 1928 |  | 1929 |  |
| :---: | :---: | :---: | :---: | :---: |
| Classes of footwear | $\begin{aligned} & \text { Quantity } \\ & \text { Pairs } \end{aligned}$ | $\begin{aligned} & \text { Value } \\ & \$ \end{aligned}$ | Quantity Pairs | $\begin{gathered} \mathrm{V} \text { Value } \\ \$ \$ \end{gathered}$ |
| Rubber boots, knee and inip | 2,048,836 | 5,701,563 | 1,392,629 | 4,051,739 |
| Rubber boots, lumbermen's Overssoes, not including jol | 1,893,799 | 4,496,425 | 1,596,368 | 3.543,961 |
| Storms | 3,54, 25.25 | 8,153,385 | 2,719,086 | 5,703,018 |
| Wicht rubbers, including Jersey Storns | 6,179,130 | 5,080,574 | 5,893,854 | 4,208,586 |
| Canvas rubber-soled footwear, balmorals | 1,158,039 | 1,275,629 | 1,506,433 | 1,567,776 |
| Canvas rubber-soled footwear, oxfords | 9,014,102 | 7,705,035 | 11,822,200 | 9,645,811 |
| TOTALS | 23,941,164 | 32,412,611 | 25,630,570 | 29,720,991 |

## OMJE ATUEACIUESS OE RUSBER

The production of rubjer goods other than tires and footwear is given in rable 5

- for the calendar years 1928 and 1929. An increase in the total value of production as compared with 1928 amounting to $\$ 739,965$ is tire outstanding feature. In quantity of production there appears ancrease in nearly all or the principal items or the table, the more important being ribber soles and heels, battery containers, rubber hose and rubber mats and matting. The list of articles manufactured was extended ir 1926 to include such items as friction tape, rubber tiling and sheet flooring, battery containers, wringer rolls, roll covering other tian wringer, fruit jar rings, hospital sheeting and hard rubber. A further extension of the list of products was made in 1930 whiciz will include auto toping, dipped rubber goods, moulded rubber goods, golit balls, hot water bottles, plumbin supplies, stationery goous, toys, tiro patches and tire repair kits.

Mable 5. - Otiler llarufactures of Rubber Goods, 1928 and 1929.

| Articles Manufactured |  | 1928 |  | 1929 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Quantity | Selling Value \$ | Quantity | Selling Value \$ |
|  | No. | $\begin{aligned} & 90,300 \\ & 18,575 \end{aligned}$ | $\begin{array}{r} 339,576 \\ 15,881 \end{array}$ | $\begin{aligned} & 83,159 \\ & 20,334 \end{aligned}$ | $\begin{array}{r} 305,725 \\ 19,083 \end{array}$ |
|  | \$ |  | 218,920 |  | 205,473 |
|  | Prs. | 3,534, 885 | 896, 363 | 6,453,291 | 1,503,084 |
|  | " | 493,163 | 130,128 | 81, 105 | 185,561 |
|  | " | 20,500,402 | 1,611,319 | 21,193,003 | 1,433,043 |
| Tire repair sums and fabrics Friction tape and splicing compound | Li. | 1,810,505 | 864, 347 | 1,555,126 | 582,173 |
|  |  | 685,400 | 232,064 | 852,909 | 315,108 |
| Rubber cement | Gal. | 225,552 | 227.919 | 172,079 | 166,596 |
| Rubber mats and matting | Lb. | 2,255,465 | 425,016 | 2,718,038 | 525,934 |
| Rubber tiling and sineet flooring | " | 746,257 | 170,444 | 970,546 | 223,519 |
| Sheet packing | 1 | 399,346 | 91,710 | 414,361 | 89,406 |
| 3attery containers | No. | 1,702 | 3,269 | 444,177 | 249,614 |
| Rruber belting | Lb. | 6,066,377 | 3,033,531 | 5,585,380 | 2,654,533 |
| Rubber hose |  | 5,109,685 | 2,096,549 | 5,816,080 | 2,196,194 |
| Eospital sheeting | va. | 185,825 | 84,842 | 105,751 | 90,337 |
| Wringer rolls | Lb. | - | 27.093 | - | 31,405 |
| Roll coverine, all othe: than wrincer | L. | - | 222,726 |  | 257.096 |
| Fruit jar ring rubbers |  | 388,099 | 113,411 | 451,370 | 130,513 |
| Drag sundries (value only) | - | 388.09 | 751,144 | -1.370 | 719.476 |
| Hard rubber | - | - | 271,657 | - | 325,504 |
| All other rubber goods specified (value only) | \$ | - | 3,136,451 | - | 3,132,655 |
| All other rubber goods not specified (value only) | \$ | - | 122,104 | - | 182. 227 |
| TOTALS |  | - | 15,087,564 | - | 15,827.529 |

## Capital Investment

The amount of canital sovestec in eaci section of tise mbber industry is classified under two heads -- fized canital wicin includes land, buildings, maciinemy and tools and working capital including materials and supilies on hand, stoclis in process of manifacture, finished products on hand and cash, trading and operating accounts, etc. Table 5 resents these statistics for each section or the industioy by provinces. The total canital investment increased over 1928 by $\$ 3,418,412$, of winch $\$ 2,742,202$ a pears in the itam of fixed capital, there being also an increase in workine canital of $\$ 676,210$. The ribber goods section which includes tires accounted for $\$ 56,697,543$ or 76.75 per cent of the investment and the rubber footwear section for $\$ 17.179 .935$ or 23.25 per cent. Apportioned brovinces, ontario furnisined 83.8 per cent of the total invostment, Quevec 15.4 nei cent and 3ritish Columbia. $\delta$ per cent. Fixed capital represented 57.9 per cent and worling capital 42.1 per cont oít total cepital invested in tae industry.

| Provinces | Fixed Capital | Forking Capital |  | Total Capital |
| :---: | :---: | :---: | :---: | :---: |
|  | Land, buildings, machinery and tools | Naterials and supplies on hand, stocks in! process, etc. \$ | Cash, trading and operating accounts, etc. \$ |  |
| (a)The Rubber Goods Section - |  |  |  |  |
| Ontario and Br. Columbia Quebec | $\begin{array}{r} 31,394,359 \\ 419,587 \\ \hline \end{array}$ | $\begin{array}{r} 13,803,437 \\ 358,836 \\ \hline \end{array}$ | $\begin{array}{r} 10,343,026 \\ 378,278 \\ \hline \end{array}$ | $\begin{array}{r} 55,540,822 \\ 1,156,721 \\ \hline \end{array}$ |
| TOTALS | 31,813, 946 | 14,162,273 | 10,721.324 | 6,607,543 |
| (b)The Ruboer Footwear Section- |  |  |  |  |
| Ontario | 4,082,915 | 1,958,904 | 881,395 | 5,923,214 |
| Quebec | $6,877,978$ | 1,994,949 | 1,383.794 | 10,256,721 |
| TOmALS | 10,350,893 | $3.953,853$ | 2,265,189 | 17.179 .935 |
| Total capital invested in the Subber Industry | $42,774,839$ | 18,116,126 | $12,986.513$ | 73,877,478 |
|  | 57.9 | 24.5 | 17.6 | 100.0 |

## Mmployment Statistics

Employment in the Fubber Industry in Canada durine the calendar year 1923 is shown in the following series of tables:

> Table 7. Implorees by classes, sex and remuncration, lg29. Table 8. Fmolo, Table $9 .(a),(b)$, (c). Torking time of plants and employees, 1929.

The number of persons employed in each section of the industry is shown by classes, sox, remuneration and provirces in Table 7. The net number of employees incieased during the year by 725 , of whom 748 were males whilst females decreased by 23 . The province of Ontario accounted ior $12,30 \%$ of the total employed or 59.6 per cent and quebec for 5,333 emoloyees or 29.9 per cent. The total payments for salaries and waces rose from $\$ 18,943,730$ in 1928 to $\$ 20,137,498$ in 1929 , an increase of $\$ 1,193,768$ or 6.3 por cont. The average salary, irrespective of sex, rose from $\$ 1079.60$ in 1928 to $\$ 1840.18$ in 1929 , or 9.6 per cent, whilst the average wage rose from $\$ 1026.15$ in 1928 to $\$ 1028.35$ in 1929 or a little over one-fifth $0 z^{*}$ one per cent.

Table 7. - Inployees by classes, sex and remuneration, 1929.

| Classes of omployees | Employees |  | Total Salaries and Taces |
| :---: | :---: | :---: | :---: |
|  | Male | Temale |  |
|  | Vo. | \$0. | \$ |
| In the rubber goods section - |  |  |  |
| Salarted employees <br> Tage-earners | $\begin{aligned} & 1,119 \\ & 6,909 \end{aligned}$ | $\begin{array}{r} 303 \\ 1,350 \\ \hline \end{array}$ | $\begin{array}{r} 2,846,560 \\ 10,059,520 \end{array}$ |
| TOTASS | 8,118 | 1,653 | 12,905,180 |
| In the rubber footwear section - 632 |  |  |  |
|  | $632$ |  |  |
| Tage-earners | $4.415$ | 2,772 | $5,918,013$ |
| Plece-worters | - | 24 | 2.997 |
| TOLALS | 5,048 | 3,001 | 7.031,318 |
| In both sections of the industry - |  |  |  |
| Snlariod employeos | 1,751 | , 508 | 4,156,968 |
| Wage-sarmers | 11,415 | 4,122 | 15,977,533 |
| Pioce-workers | - | 24 | 2,997 |
| COmaLS | 13,166 | 4,654 | 20,137,498 |

Imployees by Provinces, 1929.

| Classes of employees |  | Ontario | Quebec | 3ritish Columbia | Canada |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Salaried employces, male " " Temale Total Salaries | $\begin{aligned} & \because 0 . \\ & \$ 0 . \\ & \$ \end{aligned}$ | $\begin{array}{r} 1,278 \\ 3.214,733 \end{array}$ | $\begin{array}{r} 458 \\ 142 \\ 905,685 \end{array}$ | $\begin{array}{r} 15 \\ 5 \\ 36,490 \end{array}$ | $\begin{array}{r} 1,751 \\ 4,150,968 \end{array}$ |
| Tage-earners, male <br> "  <br>  Iemale | $\begin{aligned} & \text { Yo. } \\ & \text { Yo. } \end{aligned}$ | $\begin{array}{r} 8,540 \\ 2,195 \\ 12,178,170 \end{array}$ | $\begin{array}{r} 2,810 \\ 1,923 \\ 3,726,767 \end{array}$ |  | $\begin{array}{r} 11,415 \\ 4,122 \\ 15,977,533 \end{array}$ |
| Ouiside Piece-workers-female Total Dayments | $\because 0 .$ | $\begin{array}{r} 24 \\ 2.957 \\ \hline \end{array}$ | $=$ | - | $\begin{array}{r}24 \\ 2.027 \\ \hline\end{array}$ |
| Total Braloyces <br> -otal Salaries, Taces, Ztc. | io. | $\begin{array}{r} 12,398 \\ 15,325,250 \\ \hline \end{array}$ | $\begin{array}{r} 5,333 \\ 4,632,452 \\ \hline \end{array}$ | $\begin{array}{r} 89 \\ 102,086 \\ \hline \end{array}$ | $\begin{array}{r} 17,820 \\ 20,137,408 \\ \hline \end{array}$ |

Tables $8(a)$ and $B(b)$ present statistics of wage-earning employees by number and sex for eachmontil of the rear and İO: each section of tine industry. Emuloyment in tie rubber goods section was at its hisest in tie montis of Yarcin to June and at the lowest from September to December, whlst in the footwear section it was hiviest in july to Sctober and lowest in Januam to April. According to sex, emplorment in tine rubber zoods section was in the anroximate ratio of 5 males to 1 female and in the footwear section 5 :nales to 3 females. The averase of employment in each section was high and well maintained tirougiout tiae vear.

Table $3(a)$. - Tage-earners by montias and sex in Ruober Goods Section, 182.

=able $8(b)$. - Tage-anne:s by montas and sex in the Nubber Eootweas section, 123.

|  | Tace-eamers |  |  | Tage-earrers |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Onotis | $\begin{aligned} & \text { Males } \\ & \because 0 . \end{aligned}$ | Semales No. | Yontsis | tales $\therefore 0$. | $\begin{gathered} \text { Fomales } \\ =0 . \end{gathered}$ |
| January | 4.187 | 2,744 | July | 4.657 | 2,954 |
| sebruary | 4.154 | 2,500 | August | 4.659 | $3.039$ |
| Aarch | 4,152 | 2,539 | Sentemoer | 4,482 | $2,968$ |
| April | 4,014 | 2,351 | October | 4,606 | $3,014$ |
| ?eay | 4.322 | $2,508$ | Yovernber | 4,521 | $2,980$ |
| June | 4,408 | 2,657 | Jecember | 4,555 | 2,651 |
|  | Potal number at emisloynent during tre yearAverase montinly emploment |  |  | $\begin{array}{r} 52,797 \\ 4,416 \end{array}$ | $\begin{array}{r} 33,065 \\ 2,772 \end{array}$ |

Torinin time of plants and emoloyees. - The worine time of plants ank enmloyees is siown in Tavles $9(a), ~ g(b)$ anz $9(c)$ for the calendar jear 1929 for eaci of the orovinces and for each section of the industry. Jull tine operations in the muber eoods section for the Dominion were 85.08 per cent of the total possible onerating time which io Census purposes is reckonod at 304 days, nart-time overitions 5.26 per cent and inle time 9.66 yer cent, millst in tise footwear scetion full time operations were 81.91 per cent, part-time 2.53 per cent aind idle time 15.56 rer cent.

Table $3(a)$. Toriang time of nlants by provinces, 1929. (1) The Fuboer Goods Section.

|  | To. of | Days in operation |  |  | Average days worl-ed per olant |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Provinces | Flants | $\begin{gathered} \text { Cn Full } \\ \text { time } \end{gathered}$ | On Part time | İle | $\begin{gathered} \text { On Full } \\ \text { time } \end{gathered}$ | On Part time | Idle |
| C.Liviza | 34 | 3,794 | 543 | 999 | 258.65 | 15.39 | 29.38 |
| Quebec | 5 | 1,508 | - | 12 | 301.60 | - | 2.40 |
| Cotario and |  |  |  |  |  |  |  |
| 3r. Columoia | 29 | 7,286 | 543 | 9,87 | 251.24 | 18.72 | 34.04 |

(2) The Jubver Footwear Scction.

| Cinina | 10 | 2,490 | 77 | 473 | 249.00 | 7.70 | 47.30 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grejec | 4 | 1,033 | - | 133 | 258.25 | - | 45.75 |
| Ontriso | 6 | 1,457 | 77 | 290 | 242.33 | 12.83 | 48.34 |

## ㅍmployment Statistics (continued).

The number and percentare of vage-earners in the montin of highest employment working specified hours is show in Fable $9(b)$ Ior each section and for Canada and the provinces. Wallst no representative working cay appestrs in tise ribiee goods section, that of the 9 hour haj seems fairly defined in the footrear section. It will be furtiner noted that there is a consicerable variation in the worling hours as between provinces in each of the sections, the 9 and 10 hour day prevailing in Quebec and the 8 and 9 hour day in Ontario and 3ritisin columbia.

Table $3(b)$. - Eours worked by wace-earners in month of highest employment, 1929.
(1) In the Subber foods Section.

|  | Tage-eamers in month of hignest employment working per day of |  |  |  | Percentage of wage-earners worling |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Provinces | 8 hours or less | 9 hours | 10 hours | over 10 hours | 8 hours or less: | 9 hours | 10 hours | Over 10 hours |
| CATATA | 3.797 | 3.355 | 1,643 | 910 | 38.96 | 34.84 | 16.86 | 0.34 |
| Que bec | - | 78 | 262 | 55 | - | 19.75 | 65.33 | 13.92 |
| 3r. Columbia | 3,797 | 3.317 | 1,381 | 855 | 40.61 | 35.48 | 14.77 | 9.14 |
| (2) In Rubber Footwear Section. |  |  |  |  |  |  |  |  |
| CAJTA A | 261 | 5,506 | 1,961 | 655 | 3.11 | 65.68 | 23.40 | 7.81 |
| Quebec | 217 | 2,716 | 1,535 | 409 | 4.45 | 55.69 | 31.47 | 8.39 |
| Ontario | 44 | 2,790 | 426 | 246 | 1.26 | 79.58 | 12.15 | 7.01 |

In Table $9(c)$ tine jours worked in month of hifiest employment and the standard weekly working hours are shown by provinces for each section. It should be noted that the statistics relatine to hours of labour in columns 1, 2 and 3 are compled from figures based on monti of highest employment, while those in colums 4 and 5 represent the standard week: hours 02 labour for the establishments reporting and therefore, no comparison between daily and weekly hours of labour should be made. The averace daily Rours of labour in mointh of highest employment in the Dominion was 8.92 in the mabber $g o o d s$ section and 9.32 in tine footwear section, whilst the provinces show considerable variation in tiae average daily hours in botn sections. The averace standard weekly hours of labour in the Dorainion were 48.97 in tae rubber goods section and 50.70 in tiae footwear secion witi similar variations as between provinces.

Table 9(c). - Fours or Labour per day and per week, 1929.
(1) In Rubber Goods Section.

| Provinces | Total nours worted and number of wase earners in montin of highest employment |  |  | Standard working hours por week per establishment |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total hours | Total wase- earners | Average hours per wage-earner | Total | Averases |
| Caidaj | 85,916 | 9,745 | 8.92 | 1,665 | 48.97 |
| Quebec | 3,859 | 305 | 3.87 | 254 | 52.80 |
| Ointario and $3 r$. Columbia | 83,017 | 9,350 | 8.88 | 1,401 | 48.31 |

(2) In Fubber Footwear Section.

| CATADA | 78,129 | 8,383 | 9.32 | 507 |
| :---: | :---: | :---: | :---: | :--- |
| Quebec | 45,824 | 4,877 | 9.39 | 203 |
| Ontario | 32,305 | 3,506 | 9.21 | 304 |

## Fuel Consumytion

The quantity and cost value delivered at the factory or works of the various classes of fuel consumed by the industry in 1929 is shown separately for eacin section in Tajle 10. The total cost of fuel in the entire industry exclusive of electricity amounted to $\$ 719,529$, to which the rubber E0ods section contributed $\$ 553,602$ and the Sootvear section $\$ 165,927$. Situminous coal was the principal fuel, forming 70 por cont of the total cost of all fuel. The cost of electricity purchased in 1929 was $\$ 737,046$ as compared with an expenditure of $\$ 62,783$ in 1228 , an increase of over 5 per cent. There was a deciease as compared with 1928 in the cost of bituminous coal, amourtine to $\$ 41,112$, viailst the cost of electricity purchased shoved an increase of $\$ 42,763$.

Tajle 10. - Fuel Consumption by Classes, quantity and Value, 1929.

| Classes of Truel | Unit or Neasure | In Tubber Goods Section |  | In Rubber Footwear Section |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Quantity | Value | Quantity | value |
|  |  |  | \$ |  | \$ |
| Bituminous coal, imported |  |  |  |  |  |
| " " Canadian | $"$ | $31,335$ | $179,502$ | $9,921$ | $60,526$ |
| A tirracite coal, all Erades | " " | 11.552 | 58,972 | - | - |
| Lienite coal, imported | " | 20 | 180 | - |  |
| Coice | " 1 | 357 | 1,876 | - | - |
| Tasoline | Imp. Gal. | 144.582 | 28,951 | 45.389 | 8,674 |
| Krorosene or coal oil | " " | 619 | 133 | - | - |
| Euel oils | " " | 183.772 | 10,655 | - | - |
| Gas, manufactured | y cu. fit. | 12,488 | 11,206 | - | - |
| Gas, natural | " | 1,442 | 1,226 | - | - |
| All other fuel | - | 1 | 84, 180 | - | - |
| Zlectricity | - | - | 597,561 | - | 130,485 |
| TOTAL cost | - | - | 1,151,163 | - | 305.412 |

## Power Installed

The porer installed in the industry is shown in Table ll for each section of the industry by classes, numbor of units in each class and the horsepower according to manufacturers' rating. The total manufacturing horsepower installed in both sections in 1929 was 61,115 as against 57,158 in 1928. Steam power increased by $150 \mathrm{~h} . \mathrm{p}$. , and water and other power decreased by $110 \mathrm{~h} . \mathrm{p}$. Electric pomer increased by 3,907 \%.p., thus inaicating a net increase in horsepower installation of 3, 947.

The number of boilers installed for any purpose in 1929 was 81 with a boiler Larsepower capacity of $13,0,0$.

Zable 11. - Power Installation by Sections, 1929.

| Classes oi power | Rubber | Goods Section | Rubier | Footwear section |
| :---: | :---: | :---: | :---: | :---: |
|  | Units | Zorsepower according to manufacturers ${ }^{\prime}$ rating | Units | Zorsepower according to manufacturers' rating |
|  | Vo. |  | Yo. |  |
| Steam engines and turoines | 12 | 1,125 | 3 | 435 |
| Gasoline engines | - | , | - |  |
| Wrdraulic turbines or water wheels | - | - | 5 | 2,050 |
| Total primary power | 12 | 1,125 | 8 | 2,485 |
| Electric motors - |  |  |  |  |
| Operated by purcizased power | 2,211 | 43.975 | 498 | 13.530 |
| Operated by power senerated by the establisiment | 2 | 60 | 85 | 896 |
| Total electric motors | 2,213 | 44,035 | 583 | 14.426 |
| Eotal power used in manfacturing | 2,223 | 45,100 | 506 | 16,015 |

## Yaterials Used

The quanisty and the cost value at the factory of tho materials used in onch section oì the industry is presented in Fable l2. Compared with $132 \delta$ there was a decrease in the cost on materials used in tie whole industry, the total for that year being $\$ 45.113 .570$, whereas in 1929 such cost had fallen to a total of $\$ 42,940,747$, renresentine a decrease of 4.82 per cent. Zaw rubber was the rincipal item boine nearly 37.7 per cent of thice total cost of materials in 1029 as compared witio almost 44 per cont in 1928, the decreased vercentage being due to a marred decline in the average price of the commodity from 41 cents ner 10 . in 1927 to 29.3 cents in 1928 and to 21.2 cents in 1929. The quantity of reclaimed rubber used in the industry in 1028 was $26,451,017$ pounds valued at $51,350,560$ or an averace cost of 7.4 cents per 1 b , as compared \#itin a total of $2,146,289$ nounds worth $\$ 1,736,040$ or an averace orice of $6 . ?$ cents per 1b. in 1929. The second largest item of materials was tire duck of winch $19,608,09710 \mathrm{~s}$, valued at $\$ 0,702,844$ were consumed in 1929 as against $18,042,361$ nounds wo:th $\$ 8,804,342$ in 1928. The averace price of all ducks was slightly higher in 1929 than in 1928, whilst stocinette sheeting was lower as the ollowing table indicates.

Average price 1928.

| Rubber, raw |
| :---: |
| Zubjer, reclaimed |
| Tire duck |
| \#ose and beltirs ducz |
| Stoe auck |
| tockinette she |

.293 cents
.074 cents
.483 "
.395 "
.531 "
$.630 \quad 1$

Average price 1929.
. 212 cents
$.069 \quad 1$
.49211
.40211
.531 "
.607 "

The remainins items of materials saow an increase in total cost value over $132 \%$ amountins to $\$ 719,532$.

Table 12. - Materials used by quantity and cost value, 1929.



Fable 13 shows the quantity and value, when available, of all riboer and manufactures of rubber entering Canada fo: consumption during the culendar year 1929. Raw and partly manufactured materials aggregated in value $\$ 19,100.153$, whilst the wholly manufactured totalled $\$ 3,823,219$. Of the total value of imports, goods to the valuc of $\$ 21,278,787$ entered Canada from the Jnited States, $\$ 599,680$ from the United Kingdom and $\$ 950,905$ from other countries.

Table 13. - Rubber and Nanufactures of Rubber Imported for Consumotion, Ig29.

| Articles Imported by Principal Countries | quaitity | Value \$ | $\begin{aligned} & \text { Articles Impozted } \\ & \text { (Cont:d.) } \end{aligned}$ | Value $0 \mathrm{O} / 3$ |
| :---: | :---: | :---: | :---: | :---: |
| Raw and Partly Manufactured |  |  | Rubber, Munufactured |  |
| 3alata, crude Ib. |  |  | 3 loing mubber |  |
| United Kingdom | 2,512 | 1.678 | United Kingrom | 15,298 |
| United States | 3,147 | 1,003 | United States | 182,126 |
| Otier countries |  |  | otier countries | 1,334 |
| Total | 5,663 | 2,585 | Total | 129,758 |
| Fubber and Cutta Percha, 10.CrudeUnited KingdomUnited StatesStraits SettlemontsCeylonDutch Iast IndiesOtier Countries |  |  | Cement, rubjer |  |
|  | 177,440 | 33,501 | Tnited Yir dom | 576 |
|  | 75,618,892 | 16,361,978 | United States | 63.596 |
|  | 3,425,290 | 672,149 | Other Countries | 3.031 |
|  | 187.952 | 42,818 | Total | 67,203 |
|  | 37,857 | 18,757 | Clothing or mabber |  |
|  | $4.388$ | $824$ | United Yinecom |  |
|  | $79,511,819$ | 17,130,037 | United States | $383,368$ |
|  |  |  | Germany | 39,210 |
| Nuboer, ward, in sneets 1 lbUnited KingdomUnited StatesOtIer Countries | 268 | 90 | Otiser Countries | $\begin{array}{r} 7,747 \\ 621,420 \end{array}$ |
|  | 85,096 | 42,416 | Ilastic webbing |  |
|  |  |  | Jnited Kingeom | 73,893 |
|  | 85,462 | 42,572 | Mived States | 306,81+ |
| zubber, hard in tubes United States Total |  |  | Otrier Sountries | 11,294 |
|  |  | 18.035 | Total | 392,001 |
|  | - | 18,035 | Gloves, rubber |  |
|  |  |  | United Kingdom | 389 |
| Rubber, powderedUnited Kingdom |  |  | United States | 19,002 |
|  | 350 | 6,520 | Other Countries | 1,454 |
| Urited States | 66,595 | 246,772 | Totel | 21,445 |
| Other Countries |  |  | Hose, rubber |  |
|  | 56.045 | 253,392 | United Zingdom | 11,042 |
|  |  |  | Whited States | 261,131 |
| Rubber, recovered |  |  | cticer Countries | 588 |
| United Kingdom | - |  | Total | 272,861 |
| United States | 173.045 | 1,187.473 | Hot water bottles |  |
| Total | 173.9 ${ }^{4} 5$ | 1,187,473 | Urited Kinglom | 13,105 |
| Rubber, substitute |  |  | United States | 35,358 |
| United Zingdom | 1,917 | 17,301 | Oticer Countries | 321 |
| United States | 15,977 | 172,516 | Total | 48,70,4 |
| Other Countries | 421 | 13,849 | Nats and metting, |  |
|  | 18,315 | 203,666 | rubber |  |
|  |  |  | Onited Zincdom | 1,347 |
| Zubber tiread, not |  |  | United States | 115,775 |
| United Ringdom |  |  | Cuslets | , |
| Other Countries |  |  | United States | 5,108 |
| Total | 275,100 | 252,293 | Forway | 14,312 |
|  |  |  | Iotal | 19.420 |

Imports of Rubber and Zubber Goods (Concluded)

Table 13. - Kubber and Kanufactures of Rubber Imported for Consumption, 1929.
(Calendar Year)


 principal articles exported were pneumatic tires (casings) w16,305,869, canvas shoes with rubber soles ph, 190,707 , boots and shoes of rubber


 and dependencies.

Principal Dounurics
Table 14. - Jxports of Janadian Produce by Jlasses and Jountries, for the calendar year 1529.
to yhien Exportod

United Kingdom
Australia
British 3outh Africa
British. India

| daste zubber | Belting of rubber |
| :---: | :---: |
| suantity value vantity value |  |

Barbaios.
Jeylon
1 b.
344,153
30,122
54,509
57,141

Other Mritish Nest Indies
TJewfoundland
Nivew Zealand
Othar British Dominions
TOTAL BIITISH SIPIIZ
Acgentina
3elyium
3razil
Thina

| 2wt. | i |
| :---: | :---: | :---: |
| 1,542 | 3,202 |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| 1,542 | - |
| -106 | - |
| -630 |  |
| -62 | - |
| - | - |

Jzecho-Slovakia
Denmark
Denmark
Germany
Italy
Netherlands
Dutch Iast Indies
Spain
sweden
United States
cther Countries


$$
\begin{array}{c:c}
- & - \\
- & - \\
1,711 & 9,269 \\
838 & 4,118 \\
- & - \\
\hline-625 & 4,407 \\
- & - \\
- & - \\
- & - \\
157,150 & 257,731 \\
\therefore 160,492 & 1275,280
\end{array}
$$

| 344,153 | 115,782 | $1,506,021$ |
| ---: | ---: | ---: |
| 30,122 | 10,703 | 57,477 |
| 54,509 | 22,310 | 690,483 |
| 57,141 | 20,978 | 667,878 |
| 468 | 370 | 50,681 |
| 212 | 73 | 3,811 |
| 3,064 | 1,393 | 258,717 |
| 1,940 | 1,639 | 267,172 |
| 20,716 | 11,023 | 781 |
| 142,628 | 75,640 | 381,111 |
| 77,477 | 33,004 | 206,771 |
| 741,310 | 301,415 | $4,670,903$ |
| 320,006 | 109,542 | $3,041,887$ |
| 30,460 | 8,461 | 38,399 |
| 73,396 | 28,323 | 11,514 |
| - | - | 36,138 |
| 32,336 | 16,164 | 210,666 |
| - | - | - |
| 135,306 | 46,903 | 124,192 |
| 380 | 136 | 115,100 |
| - | - | 76,327 |
| 7,292 | 2,636 | 16,037 |
| 12,863 | 4,961 |  |
| 28,115 | 12,142 | 11,749 |
| 27,438 | 11,034 | 55,565 |
| 31,952 | 11,464 | 7,430 |
| 10,168 | 3,288 | 632 |
| 120,503 | 7,41 | 2,475 |
| 730,341 | 263,194 | $1,613,407$ |
| 1993 |  |  |


| $1,1 u \theta$ |
| ---: |
| $1,12,457$ |
| 56,574 |
| 42,518 |
| 42,557 |
| 30,474 |
| 3,189 |
| 217,532 |
| 235,785 |
| 574 |
| 650,239 |
| 166,875 |
| $3,205,774$ |
| $1,798,714$ |
| 30,352 |
| 6,893 |
| 23,994 |
| 144,006 |
| - |
| 80,836 |
| 88,138 |
| 49,587 |
| 10,860 |
| 304 |
| 9,946 |
| 45,385 |
| 5,979 |
| 454 |
| 2,278 |
| 607,207 |
| 904,933 |



Hxports of lubber and zubber Goods. - soncluded.

Principal jountries
to which ixported
United Kingdom
Australia
British South Africa
British India
Earbados
Jeylon
Jamaica
Other British fest Indies
Newf oundland
New Zealand
Other British Dominions TOTAL BRITISH EMPIRE
Argentina
Belgium
Brazil
Shina
こhili
Jzecho-Slovakia
Denmark
Prance
Germany
Italy
Jajan
Netherlands
Dutch Rast Indies
Spain
Sweden
United States
Other Sountries
TOTAL FOZEIGN YOUNTRIES


| Tires for Vehicles Solid Kubber |  |
| :---: | :---: |
| quantity | Value |
| No. | ¢ |
| - | - |
| - | - |
| 42 | 1,051 |
| 742 | 18,412 |
| 8 | 270 |
| 164 | 2,983 |
| 308 | 5,668 |
| 62 | 1,584 |
| 8 | 159 |
| 564 | 22,647 |
| 158 | 3,322 |
| 2,056 | 56,096 |
| 1,677 | 44,723 |
| - | - |
| 200 | 5,448 |
| 167 | 3,530 |
| 134 | 5,415 |
| - | - |
| - | - |
| 2 | 39 |
| - | - |
| - | - |
| 1,014 | 30,340 |
| 28 | 1,042 |
| 348 | 6,206 |
| - | - |
| - | - |
| 78 | 1,539 |
| 462 | 12,090 |
| 4,110 | 110,372 |

The following table shors the world production (net ports) of botin plantation and wild rubber from 1905 vo i92g by guantity and per cent.

| Tears | Toむa! <br> Flan- <br> さation <br> tors | Totel Miid, Tropical America and A.rica - tons | Torle Production |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | mota! | Plantation ner cent | $\begin{aligned} & \text { Tild } \\ & \text { ser cent } \end{aligned}$ |
| 1905 | 174 | 59.320 | 59.49 | 3.3 | 99.7 |
| 1906 | 577 | 52.004 | 62, 58? | 0.8 | 99.3 |
| 1907 | 1,157 | 66,013 | 67,170 | 2. | 98.3 |
| 1908 | I.795 | 64,770 | St,556 | 2.7 | 97. |
| 1009 | 3.386 | 70. 570 | 13,750 | 4.5 | 95.4 |
| 1910 | 7,269 | 73,477 | 30, ${ }^{1}+6$ | 9.0 | -. 0 |
| 1911 | 14.383 | 68, 246 | 82.829 | 17.4 | 3 c .6 |
| 1912 | 30,113 | 73,834 | 103, $9+9$ | 29.0 | 71.0 |
| 1913 | 51,721 | 63,230 | 115.001 | 45.0 | 55.0 |
| 1314 | 73,253 | 48,052 | 121,205 | 60.4 | 39.5 |
| 1315 | 124,277 | 54, 740 | 169,017 | 67.6 | 32.4 |
| 1.916 | 158,993 | 51,036 | 210,079 | 75.7 | 24.3 |
| 1917 | 221.187 | 5,6,731 | 277,938 | 79.6 | 20.4 |
| 1918 | 180,300 | 36,711 | 21.7.511 | 83.1 | 16.9 |
| 1919 | 348,574 | 50,424 | 308,958 | 87.4 | 12.6 |
| 1920 | 304, 671 | 35,454 | 341,135 | 89.3 | 10.7 |
| 1921 | 276,746 | 23,903 | 300,649 | 92.0 | 8.0 |
| 1922 | 378,232 | 27,878 | 406,110 | 93.1 | 5.9 |
| 1923 | 379,738 | 26,585 | 406,423 | 93.4 | 6.6 |
| 1924 | 385,703 | 28,000 | 414,703 | 93.2 | 6.8 |
| 1925 | 473.900 | 38,000 | 515,900 | 92.6 | 7.4 |
| 1926 | 585,100 | 33,000 | 518.100 | 04.6 | 5.4 |
| 1927 | 567,300 | 38,000 | 605,300 | 93.7 | 6.2 |
| 1928 | 621,000 | 27,000 | 548,000 | 95.8 | 4.2 |
| 2929 | 835,000 | 25,000 | 350,000 | 97.1 | 2.9 |

From the above table, the gromine importance of plantation raber over wild rubber wiil be noted. Tho peait of wild rubber prod ction mas reachec in 1912 when aporoximatey 74,000 tons were erported or 71 per cent of the total world production for the year. In 1914 plantation rubber for the first time exceeded that of wild constituthne bo per cent of the total net exports whicn in that vea* aggrasated 121,205 ons. Tron betwean 1909 and 1910 up till 1026 the figures of percentece of wild and plantation rubber hav been practically reversed.

The potential output on plantation rubber from present areas is estimated to reacin 584,000 tons in 1926, 602,000 tons in 1927, 61j,000 tons in $3928,617,000$ tons in 10,9 arć 621,000 tons in 1930 wiön restrictions removed and an myle suonly of laboun available. Wild rubber production is estimeted at 20,000 tors per year.

In view of the rawid iccrease in tine woric consumption 0 : rubber, an estimate of future requirements was undertaken by the Ruboe: Association ancrica which issued the followine table:-


crude zubber.
Flantation and ild

| Years | Istimated Torld Production Tons | Istinated Torl. Corsumption Tons |
| :---: | :---: | :---: |
| $\begin{aligned} & 1926 \\ & 1027 \\ & 1928 \\ & 1929 \\ & 1930 \end{aligned}$ | $\begin{aligned} & 606,000 \\ & 623,000 \\ & 535,000 \\ & 537,000 \\ & 541,000 \end{aligned}$ | $\begin{array}{r} 575,000 \\ 808,000 \\ 41,100 \\ 672,000 \\ 703,000 \end{array}$ |

Appendix 3．－Manufacturarsof Rubber Goods operatian in Canada，1029．
Name
American Tringer Co．of Canaia，Lta，
The Granby Elastic Meb Ltd．
Thiner Rubber Co．Ltd．
Iominion Rubber Co．Ltd．
Regenerating Co．of Canada，Lid．）

The Columbus Subber Co．of Nontreal， Ttd．
Fall Nall Specialtios
Dominion Rubber Co．Ltd． Punther Rubber jo．Ltd．
IIIagara Rubber Goods Ltd．， Coodyear Tire \＆הubber CO．of Canada， Lid．
Festern Zubber Co．（Ired．N．Stubos）
Dorninion Rubber Co．Ltã．
The Canadiar．Goneral Ruboer Co．Ltd．
The Northern Rubber Co．Ltd．
Sterling Rubber Co．Itd．
Bores Toftt＂Seal Fest＂Co．Lid．
Firestone Sire \＆Zubber Co．of Camada， Lta．
Canadian Goodrich Co．Ltd．

Dominion Rubber Co．Lta．
Dominion Rubber Co．Itd．
The Kaufman Iubber Co．Ltd．
Goodyear Iire \＆Rubber Co．of Caneda， こtる。
Dominion Rubber Co．Ita．
Verner T．Smith Co．Ltd．
G．L．Griffitin \＆Sons Ltd．
The Canadian I．I．S．Zubber OJ．Itd．
Dunlop Tire \＆Rubber Goods Cn．Etd．
Gutta Percha \＆Rubber Ltd．，

Hannon－Knight Limited
Jannon Zire and Fuboer Co．Itr．．
Z．\＆S．Rubber Co．Ltd．，and Seiberling Zubber Co．ô̂ Canada，Itd．

Zelton Zubber Co．
I．3．Rleinert aubber Co．
TTationel Ruboer Co．Ita．
S．C．Williams
Tocletite Patca Co．
Josepin Stokes Kubber Co．Utd．
Canadian Satiery Container Conp．Ita．
Je Tilbiss Kanufacturing Co．Ito．
Location
Yarnham，Quebec
Granby，Quebec
Granby，Quebec
1655 IVotre Dame St．I．
Nontreal，Quebec． Liontreal，Quebec．

1665 Yotre Dame St．E．， Yontreal，Quebec． 2451 Deriontigny St．E．， Vontreal，Quebec． 360 Recollet St．， Vontreal，quebec．
St．Jerome，Quebec． Sherbrooke，Quebec． Bearasville，Ontario．

Sormanville，Ontario
Calecion，Ontario．
Flmira，ontario．
Galt，Ontario．
Guelph，Ontario． Guelph，Ontario．
103 John St．No， Eamilton，Oiaterio

Beach Roač，Zamilton，Ont． Ritchener，Ont．

Kitchener，Ontario． Kitchener，Ontario

Kitciener，Ontario
New Toronto，Ontario
Port Dalhousie，Ontario
Rockwood，ontario
315 Front St．，
Stratfori，Ontario．
14－32 Alpine Avenue， Zoronto，Ontario． 87 Queen St．ㅍ．， Toronito，Ontario． OMara Ave．，Toronts，Ont．Pubicer tires，foot－

121 Prescott Avenue． Toronto，Ontario
1379 310or St．T．． Toronto，Ontario

99 Paton Road， Toronto，Ortario 225 Jarvis St．，Toronto． stuellineton St． $\bar{W}$ ．， Tozonto，Ontario 370 queen St．E． Torointo，Ontario 450 Pacific Ave．， Toronto，Cntario $36 \frac{1}{2}$ Devonsinire Road， Tallerville，ontario． Thellaid，Ontario 1255 ：Vourgall Ave．， Tinisor，Ontario
237 Tellington Avenue， Windsor，Ontario．
ouner rubber हoods wear and ot：er rubber goods．
Products Made
Zubber Goods
Rubber Goods
Zubber Pootwear and otiner rubber goods．
Rubber Footwear and other rubber goods．

## Subber Foods

Rubber Footivear
Rubber coods
Rubber Footwear
Pubter Goods
Rubber tubes
Rubber tires and
otiner rubber goods
Zubber Goods
Rubber Footwear
Rubber Goods
Rubber Footrear
Ruober Goods
Rubber Goods
Rubber tires and
otiner rubber goods
Zubber Fontwear， tires and otwer rubber goods
nubber Footwear
Rubber tires and other rubber goods
Zubber Footwear
Rubber tires and other mibber gools
Fubber zootwear
nubber Goods
Subber Goods
Tubber roods
Rubber tires and other rubber goods

Zubber Goods
Zuboer tires
Rubber tires and
oti：er rubber eoods
nubber Goods
Rubuer Goods
Ruible Goods
Rubber Goods
Fuober Goods
nuober Goods
Zubber Goods
Zuiber Goods

Aypondix 3. - Vanufacturersof Subber Goods operating in Canada, 1929 - Concluded.
Name
Location
Products Vade

The Fingham aubber Co. Itd. The Toodstock Zubber CO. Ita. Bregory Tire \& Eubber 1026 Utd. Jurable Hat Co. (Canada) Ita.

Wingham, Ontailo
Woodstock, Ontario
Port Coquitlam, 3. C.
146 superior Street,
Victoria, 3. C.

Rubber Tira:
Zubber Zootwoar
zubber Fires
Furber Coods

13/11/30. 2 EB .

