

CHAPTER VII.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

NOTE.—Owing to the general disorganization of shipping during the war, the figures relating to the war period given in the following tables are of little comparative significance.

So far as oversea vessels are concerned the system of record treats Australia as a unit, and counts, therefore, only one entry and one clearance for each voyage, without regard to the number of States visited.

On arrival of every vessel at a port in Australia, whether from an oversea country or from another port in Australia, the master must deliver to the Customs officer a form giving all particulars necessary for statistical purposes in regard to the ship, passengers, and cargo. Similarly, on departure from a port, a form containing corresponding information must be lodged. These forms, which provide a complete record of the movements of every vessel in Australian waters, are at the end of each month forwarded by the Customs officer at each port to the Commonwealth Bureau of Census and Statistics, and furnish the material for the compilation of the Shipping and Migration Returns.

Under the system previously in force it was found that the estimates of population, in so far as they were based on seaward movement, were unsatisfactory, and it is believed that the method referred to above gives decidedly better results.

From the 1st July, 1914, the statistical year for the record of Trade and Shipping of Australia was altered from the calendar year to the fiscal year ending 30th June.

In all instances the tonnage quoted is net tonnage.

§ 2. Oversea Shipping.

1. Total Movement.—In previous issues of the Year Book particulars were given of the number and tonnage of vessels entered and cleared each year since 1822. In this and future issues particulars for the last five years only will be shown. The following table gives the number and tonnage of steam and sailing vessels entering Australian ports from oversea during the years 1918–19 to 1922–23:—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA, 1918-19 TO 1922-23.

| Year. | Steam. | | Sailing. | | Total. | |
|---------------|----------|-----------|----------|---------|----------|-----------|
| | Vessels. | Tons. | Vessels. | Tons. | Vessels. | Tons. |
| 1918-19 | 1,053 | 2,907,572 | 297 | 331,488 | 1,350 | 3,239,060 |
| 1919-20 | 1,265 | 3,842,735 | 211 | 198,809 | 1,476 | 4,041,544 |
| 1920-21 | 1,526 | 4,422,880 | 304 | 336,036 | 1,830 | 4,758,916 |
| 1921-22 | 1,429 | 4,466,655 | 138 | 93,726 | 1,567 | 4,560,381 |
| 1922-23 | 1,341 | 4,599,021 | 148 | 138,833 | 1,489 | 4,737,854 |

The average tonnage of vessels entered has risen from 2,399 tons per vessel in 1918–19 to 3,182 tons in 1922–23.

2. **Comparison with other Countries.**—The place of Australia among various countries in regard to oversea shipping is indicated in the following table, both absolutely and in respect of tonnage per head of population.

OVERSEA SHIPPING.—VARIOUS COUNTRIES.

| Country. | Calendar Year. | Tonnage Entered and Cleared. | |
|-------------------------------|----------------|------------------------------|--------------------|
| | | Total. 000 omitted. | Per Inhabitant. |
| Australia | 1923(a) | 9,240 | 1.62 |
| Belgium | 1922 | 34,428(b) | 4.60 |
| Brazil | 1922 | 44,904 | 1.47 |
| Canada | 1921 | 24,917 | 2.84 |
| France | 1922 | 62,208(b) | 1.59 |
| Germany | 1922 | 44,820 | 0.75 |
| Great Britain | 1922 | 103,008(b) | 2.18 |
| India | 1922 | 14,110(b) | 0.04 |
| Japan | 1921 | 55,872 | 0.73 |
| Netherlands | 1922 | 26,424(b) | 3.79 |
| New Zealand | 1922 | 3,573 | 2.69 |
| Norway | 1922 | 7,464(b) | 2.82 |
| Spain | 1921 | 36,012 | 1.69 |
| Sweden | 1922 | 21,324 | 3.58 |
| Union of South Africa | 1922 | 8,904 | 1.29 |
| United States | 1922 | 130,032(c) | 1.23 |

(a) To 30th June. (b) With cargoes only. (c) Exclusive of vessels trading on lakes and rivers between Canada and the United States.

3. **Shipping Communication with various Countries.**—In previous issues of the Year Book, tables were published giving the number and tonnage of ships recorded as arriving from and departing to particular countries. It was pointed out, however, that such records were of no significance, for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia for several countries. For instance, a mail steamer on a voyage from Europe to Australia, through the Suez Canal, may call at Antwerp, Bremerhaven, London, Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to one of these ports, to the exclusion of all the others from the records. Also, a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to or from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, it has been decided to discontinue the publication of the figures purporting to show the shipping communication with particular countries, and to restrict the statistics relating to the direction of the shipping to and from Australia to the following tables in which countries situated on the main trade routes are grouped together.

4. **General Direction of Shipping.**—A grouping of countries into larger geographical divisions, as in the following tables, shows more readily the general direction of Australian shipping, and, to some extent, avoids the limitations of the records in relation to particular countries, by covering more closely the main trade routes. The figures relating to Africa, however, are still subject to the limitations referred to in the previous sub-section.

OVERSEA SHIPPING, AUSTRALIA.—DIRECTION, 1918-19 TO 1922-23.

| Countries. | Cargo and Ballast. | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|--|--------------------|-----------|-----------|-----------|-----------|-----------|
| TONNAGE ENTERED. | | | | | | |
| United Kingdom and European Countries | Cargo | 607,680 | 982,237 | 1,102,994 | 1,333,469 | 1,026,907 |
| | Ballast | 348,719 | 477,183 | 269,351 | 204,680 | 72,819 |
| New Zealand | Cargo | 393,927 | 411,819 | 518,789 | 421,365 | 392,526 |
| | Ballast | 98,691 | 173,601 | 350,370 | 213,347 | 167,187 |
| Asiatic Countries and Islands in the Pacific | Cargo | 619,174 | 682,592 | 837,195 | 686,886 | 821,036 |
| | Ballast | 296,264 | 538,630 | 631,004 | 794,175 | 279,043 |
| Africa | Cargo | 107,607 | 50,982 | 21,298 | 36,170 | 32,025 |
| | Ballast | 254,878 | 254,527 | 236,320 | 215,841 | 122,660 |
| North and Central America | Cargo | 490,592 | 454,830 | 747,599 | 629,688 | 911,026 |
| | Ballast | 14,895 | 3,642 | 8,747 | 15,940 | 2,944 |
| South America | Cargo | 1,179 | 11,501 | 8,236 | 1,179 | 5,470 |
| | Ballast | 5,454 | .. | 27,013 | 7,641 | 4,211 |
| | Cargo | 2,220,159 | 2,593,961 | 3,236,111 | 3,108,757 | 4,088,990 |
| | Ballast | 1,018,901 | 1,447,583 | 1,522,805 | 1,451,624 | 648,864 |
| Total | | 3,239,060 | 4,041,544 | 4,758,916 | 4,560,381 | 4,737,854 |

| | | | | | | |
|--|---------|-----------|-----------|-----------|-----------|-----------|
| TONNAGE CLEARED. | | | | | | |
| United Kingdom and European Countries | Cargo | 1,122,890 | 1,925,711 | 1,864,330 | 1,819,444 | 2,193,528 |
| | Ballast | 33,446 | 12,547 | 15,421 | 13,951 | 11,776 |
| New Zealand | Cargo | 373,058 | 596,367 | 789,094 | 542,865 | 518,972 |
| | Ballast | 25,230 | 23,157 | 24,254 | 43,140 | 49,097 |
| Asiatic Countries and Islands in the Pacific | Cargo | 672,306 | 844,879 | 1,123,141 | 1,116,430 | 922,243 |
| | Ballast | 43,618 | 30,129 | 32,374 | 27,644 | 100,832 |
| Africa | Cargo | 387,550 | 320,721 | 387,649 | 581,359 | 121,175 |
| | Ballast | 7,270 | 4,789 | 7,506 | .. | .. |
| North and Central America | Cargo | 235,228 | 224,368 | 294,145 | 345,817 | 436,800 |
| | Ballast | 5,791 | 17,068 | 22,673 | 3,488 | 35,011 |
| South America | Cargo | 33,709 | 45,237 | 162,974 | 26,759 | 89,816 |
| | Ballast | 1,330 | .. | 541 | .. | 23,675 |
| | Cargo | 2,824,741 | 3,957,273 | 4,621,333 | 4,432,674 | 4,282,534 |
| | Ballast | 116,685 | 87,690 | 122,769 | 88,223 | 220,391 |
| Total | | 2,941,426 | 4,044,963 | 4,744,102 | 4,520,897 | 4,502,925 |

5. *Nationality of Oversea Shipping.*—(i) *General.* The greater part of the shipping visiting Australia is of British nationality, though the proportion of British tonnage in 1920-21 was very much lower than in the immediately preceding years. This was largely due to the dislocation of the coal-mining industry in the United Kingdom. The exports of coal from Australia were, in consequence, largely increased, and the unusual practice of shipping coal from Australia to European countries was adopted, while the demand for Australian coal was the principal cause of the increased tonnage of foreign ships which were sent to carry the coal to their home countries. In 1922-23 approximately 77 per cent. of the shipping entering Australian ports was British as compared with 80 per cent. in 1921-22.

Particulars of the nationality of oversea shipping for the last five years are given in the following table:—

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF VESSELS ENTERED,
1918-19 TO 1922-23.

| Nationality. | Tonnage. | | | | |
|--------------------------|-----------|-----------|-----------|-----------|-----------|
| | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
| BRITISH— | | | | | |
| Australian | 448,610 | 395,865 | 551,100 | 589,175 | 645,867 |
| United Kingdom | 1,969,441 | 2,553,850 | 2,541,310 | 2,802,487 | 2,754,316 |
| Canadian | (a) | (a) | 38,569 | 88,526 | 110,095 |
| New Zealand | 129,463 | 147,585 | 149,650 | 103,471 | 66,521 |
| Other British | 18,639 | 46,375 | 35,623 | 54,464 | 72,438 |
| Cargo | 1,679,659 | 2,096,754 | 2,529,089 | 2,568,236 | 3,226,702 |
| Ballast | 886,494 | 1,046,921 | 787,163 | 1,069,887 | 422,535 |
| Total British | 2,566,153 | 3,143,675 | 3,316,252 | 3,638,123 | 3,649,237 |
| Per cent. on total | 79.23 | 77.78 | 69.69 | 79.78 | 77.02 |
| FOREIGN— | | | | | |
| Danish | 8,394 | 9,716 | 24,542 | 28,416 | 39,394 |
| Dutch | 69,280 | 70,966 | 133,613 | 134,662 | 141,264 |
| French | 74,585 | 181,899 | 107,990 | 69,033 | 114,102 |
| German .. .. | .. .. | .. .. | .. .. | .. .. | 44,666 |
| Italian | 15,229 | 63,733 | 128,466 | 105,159 | 50,608 |
| Japanese | 164,724 | 307,896 | 505,989 | 218,564 | 243,935 |
| Norwegian | 93,890 | 39,760 | 132,647 | 123,218 | 148,873 |
| Russian | 21,916 | .. .. | .. .. | .. .. | .. .. |
| Swedish | 33,086 | 20,741 | 85,405 | 65,971 | 82,230 |
| United States | 174,999 | 192,805 | 273,989 | 139,686 | 194,180 |
| Other Foreign | 16,804 | 10,353 | 50,023 | 37,549 | 29,365 |
| Cargo | 540,500 | 497,207 | 707,022 | 540,521 | 862,288 |
| Ballast | 132,407 | 400,662 | 735,642 | 381,737 | 226,329 |
| Total Foreign | 672,907 | 897,869 | 1,442,664 | 922,258 | 1,088,617 |
| Per cent. on total | 20.77 | 22.22 | 30.31 | 20.22 | 22.98 |
| Cargo | 2,220,159 | 2,593,961 | 3,236,111 | 3,108,757 | 4,088,990 |
| Per cent. on total | 68.54 | 64.18 | 68.00 | 68.17 | 86.30 |
| Ballast | 1,018,901 | 1,447,583 | 1,522,805 | 1,451,624 | 648,864 |
| Per cent. on total | 31.46 | 35.82 | 32.00 | 31.83 | 13.70 |
| Grand Total | 3,239,060 | 4,041,544 | 4,758,916 | 4,560,381 | 4,737,854 |

(a) Not available; included with other British.

The Australian tonnage which entered Australia from overseas during the year 1922-23 represented 13.63 per cent. of the total tonnage entered. This figure was in excess of the average for the quinquennium, which was 12.30 per cent.

(ii) *Proportion of British and Foreign with Cargo.* The relative proportions of British and foreign tonnage which entered Australia with cargo during the last five years is given below. These figures may be considered to indicate more closely the proportion of the actual carrying trade done than does the total tonnage. The proportion of foreign tonnage declined materially in the earlier years of the war owing to the complete withdrawal of ships under the German and Austrian flags, and to the greatly reduced tonnage of French and Norwegian ships which were precluded from following their usual employment.

**OVERSEA SHIPPING, AUSTRALIA.—PERCENTAGE BRITISH AND FOREIGN
ENTERED WITH CARGO, 1918-19 TO 1922-23.**

| Nationality. | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|-----------------|----------|----------|----------|----------|----------|
| British | 75.65 | 80.83 | 78.15 | 82.61 | 78.91 |
| Foreign | 24.35 | 19.17 | 21.85 | 17.39 | 21.09 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

During the period under review the average annual tonnage of foreign vessels entering with cargo was 20.64 per cent.

(iii) *Principal Foreign Countries Engaged.* The following table shows the direction of the activities of the principal foreign countries engaged in the oversea carrying trade of Australia :—

OVERSEA SHIPPING, AUSTRALIA.—FOREIGN TONNAGE, 1922-23.

| Countries. | Nationality. | | | | | | | |
|-----------------------------|--------------|----------|----------|----------|----------------|----------|----------|----------|
| | Japanese. | | French. | | United States. | | Dutch. | |
| | Entered. | Cleared. | Entered. | Cleared. | Entered. | Cleared. | Entered. | Cleared. |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| EUROPEAN COUNTRIES— | | | | | | | | |
| United Kingdom .. | .. | 26,614 | .. | .. | .. | .. | 4,800 | .. |
| France | .. | .. | 40,389 | 27,802 | .. | .. | .. | .. |
| Other European Countries .. | .. | 6,681 | 1,307 | 27,017 | .. | 7,109 | 56,740 | 69,362 |
| ASIATIC COUNTRIES AND IS- | | | | | | | | |
| LANDS IN THE PACIFIC— | | | | | | | | |
| Dutch East Indies .. | 6,338 | 4,293 | .. | .. | .. | .. | 42,036 | 19,538 |
| Japan | 176,168 | 165,861 | .. | .. | .. | .. | .. | .. |
| New Caledonia .. | .. | .. | 58,254 | 58,195 | .. | .. | .. | .. |
| Other Pacific Islands .. | 7,637 | 2,744 | 5,205 | 5,671 | 497 | 2,404 | 8 | .. |
| Straits Settlements .. | .. | 5,696 | .. | .. | .. | .. | 32,886 | 40,645 |
| Other Asiatic Countries .. | 24,855 | 11,563 | 4,410 | .. | 14,521 | 24,219 | 1,830 | 5,025 |
| AFRICAN COUNTRIES .. | .. | 7,663 | 4,537 | .. | .. | .. | .. | 1,830 |
| NORTH AMERICAN COUN- | | | | | | | | |
| TRIES— | | | | | | | | |
| United States .. | 28,937 | .. | .. | .. | 175,800 | 134,325 | .. | .. |
| Canada | .. | .. | .. | .. | 3,362 | 3,400 | 2,964 | .. |
| SOUTH AMERICAN COUN- | | | | | | | | |
| TRIES— | | | | | | | | |
| Chile | .. | .. | .. | .. | .. | 18,816 | .. | .. |
| With Cargo .. | 171,074 | 224,078 | 100,139 | 118,685 | 181,332 | 165,934 | 110,258 | 131,637 |
| In Ballast .. | 72,861 | 7,037 | 13,963 | .. | 12,848 | 24,339 | 31,006 | 4,763 |
| Total | 243,935 | 231,115 | 114,102 | 118,685 | 194,180 | 190,273 | 141,264 | 136,400 |

Most of the foreign tonnage entered is employed between its home ports or the colonies of its own country and Australia, e.g., French shipping is engaged chiefly between Australia, France and New Caledonia, while Dutch ships are employed almost entirely between Australia and the Netherlands, the Netherlands East Indies, or Straits Settlements. Norwegian shipping is always an exception to this rule. The greater portion of Norwegian tonnage engaged in trade with Australia is composed of vessels operating under charters. Of the 148,873 tons of Norwegian shipping which entered Australia during 1922-23, 46,191 tons (31.03 per cent.) were in ballast.

During the year Japanese tonnage was engaged principally between Australia and Japan, though some tonnage entered from the United States of America and from the Philippine Islands.

(iv) *Nationality of Steam and Sailing Tonnage.* A further analysis is appended, distinguishing between steam and sailing vessels of British and foreign nationality which entered Australia during the years 1918-19 to 1922-23.

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF STEAM AND SAILING VESSELS ENTERED, 1918-19 TO 1922-23.

| Description and Nationality of Vessels. | 1918-19. | | 1919-20. | | 1920-21. | | 1921-22. | | 1922-23. | |
|---|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| | Ton-nage. | Per-centage. | Ton-nage. | Per-centage. | Ton-nage. | Per-centage. | Ton-nage. | Per-centage. | Ton-nage. | Per-centage. |
| Steam— | | | | | | | | | | |
| British .. | 2,487,868 | 86 | 3,102,345 | 81 | 3,232,463 | 73 | 3,597,388 | 81 | 3,634,411 | 79 |
| Foreign .. | 419,704 | 14 | 740,390 | 19 | 1,190,417 | 27 | 869,267 | 19 | 964,610 | 21 |
| Total Steam | 2,907,572 | 100 (90) | 3,842,735 | 100 (95) | 4,422,880 | 100 (93) | 4,466,655 | 100 (98) | 4,599,021 | 100 (97) |
| Sailing— | | | | | | | | | | |
| British .. | 78,285 | 24 | 41,330 | 21 | 83,789 | 25 | 40,735 | 43 | 14,826 | 11 |
| Foreign .. | 253,203 | 76 | 157,479 | 79 | 252,247 | 75 | 52,991 | 57 | 124,007 | 89 |
| Total Sailing | 331,488 | 100 (10) | 198,809 | 100 (5) | 336,036 | 100 (7) | 93,726 | 100 (2) | 138,833 | 100 (3) |
| Steam and Sailing— | | | | | | | | | | |
| British .. | 2,566,153 | 79 | 3,143,675 | 78 | 3,316,252 | 70 | 3,633,123 | 80 | 3,649,237 | 77 |
| Foreign .. | 672,907 | 21 | 897,869 | 22 | 1,442,664 | 30 | 922,258 | 20 | 1,088,617 | 23 |
| Total | 3,239,060 | 100 | 4,041,544 | 100 | 4,758,916 | 100 | 4,560,381 | 100 | 4,737,854 | 100 |

6. *Tonnage in Ballast.*—(i) *Total and Percentage by Nationality.* The following table shows the tonnage according to nationality of oversea vessels which entered and cleared Australia in ballast during the years 1918-19 to 1922-23 :—

OVERSEA SHIPPING, AUSTRALIA.—TONNAGE IN BALLAST, 1918-19 TO 1922-23.

| Year. | Entered. | | | Cleared. | | |
|-------|----------|----------|--------|----------|----------|--------|
| | British. | Foreign. | Total. | British. | Foreign. | Total. |

TOTAL TONNAGE.

| | | | | | | |
|------------|-----------|---------|-----------|---------|--------|---------|
| 1918-19 .. | 886,494 | 132,407 | 1,018,901 | 93,671 | 23,014 | 116,685 |
| 1919-20 .. | 1,046,921 | 400,662 | 1,447,583 | 60,021 | 27,669 | 87,690 |
| 1920-21 .. | 787,163 | 735,642 | 1,522,805 | 75,356 | 47,413 | 122,769 |
| 1921-22 .. | 1,069,887 | 381,737 | 1,451,624 | 79,377 | 8,846 | 88,223 |
| 1922-23 .. | 422,535 | 226,329 | 648,864 | 155,605 | 64,786 | 220,391 |

PERCENTAGE.

| | | | | | | |
|------------|-------|-------|-------|------|------|------|
| 1918-19 .. | 34.55 | 19.68 | 31.46 | 4.05 | 3.65 | 3.97 |
| 1919-20 .. | 33.30 | 44.62 | 35.82 | 1.90 | 3.12 | 2.17 |
| 1920-21 .. | 23.74 | 50.99 | 32.00 | 2.27 | 3.32 | 2.59 |
| 1921-22 .. | 29.41 | 41.39 | 31.83 | 2.22 | 0.93 | 1.95 |
| 1922-23 .. | 11.58 | 20.79 | 13.70 | 4.49 | 6.23 | 4.89 |

(ii) *Tonnage entered in Ballast—States.* The tonnage which entered each State in ballast during 1922–23 was as follows :—

OVERSEA TONNAGE IN BALLAST ENTERING STATES, 1922-23.

| State. | N.S.W. | Vic. | Q'land. | S. Aust. | W. Aust. | Tas. | N. Ter. | Total. |
|------------------------|---------|--------|---------|----------|----------|--------|---------|---------|
| Tonnage .. | 346,115 | 39,484 | 2,147 | 45,049 | 192,404 | 17,174 | 6,491 | 648,864 |
| Percentage on total .. | 53.34 | 6.09 | 0.33 | 6.94 | 29.65 | 2.65 | 1.00 | 100.00 |

In normal times the large exports of coal from New South Wales afford special inducements to vessels in search of freights. The tonnage in ballast into New South Wales is mainly for coal cargo, into Victoria for wheat, into South Australia for wheat and ore, and into Western Australia for timber and wheat.

§ 3. Shipping of Ports.

1. *Tonnage Entered.*—Appended is an abstract of the total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1922–23, together with similar information in regard to some of the ports of New Zealand for the year 1922 and of Great Britain for the year 1921 :—

SHIPPING OF PORTS, AUSTRALIA, NEW ZEALAND, AND THE UNITED KINGDOM.

| Port. | Tonnage Entered. | Port. | Tonnage Entered. |
|-----------------------|------------------|-----------------------------|------------------|
| AUSTRALIA— | | ENGLAND AND WALES— | |
| Sydney | 8,813,432 | London | 17,369,115 |
| Melbourne | 7,015,030 | Liverpool (inc. Birkenhead) | 12,287,191 |
| Newcastle | 4,662,155 | Cardiff | 6,950,523 |
| Adelaide | 4,065,796 | Tyne Ports | 6,870,203 |
| Brisbane | 3,121,839 | Southampton | 5,542,771 |
| Fremantle | 2,664,643 | Hull | 4,040,352 |
| Townsville | 1,172,515 | Plymouth | 3,450,128 |
| Mackay | 787,750 | Bristol | 2,545,683 |
| Albany | 720,007 | Manchester (inc. Runcorn) | 2,184,924 |
| Pirie | 646,288 | Newport | 2,049,925 |
| Hobart | 589,248 | Swansea | 2,005,349 |
| Cairns | 570,703 | Middlesbrough | 1,880,782 |
| Geelong | 553,689 | Sunderland | 1,753,499 |
| Rockhampton | 497,388 | Beaumaris (inc. Holyhead) | 1,678,858 |
| Bowen | 487,454 | Dover | 1,638,270 |
| Burnie | 461,697 | Falmouth | 1,535,751 |
| Launceston | 382,315 | Grimsby (inc. Immingham) | 1,344,429 |
| Devonport | 359,317 | Cowes | 1,210,041 |
| Thursday Island | 309,436 | Blyth | 1,190,024 |
| Bunbury | 306,891 | SCOTLAND— | |
| Walleroo | 233,046 | Glasgow | 4,202,711 |
| NEW ZEALAND— | | Leith | 1,509,693 |
| Wellington | 2,707,993 | IRELAND— | |
| Auckland | 1,802,308 | Belfast | 2,779,967 |
| Lyttleton | 1,622,697 | Dublin | 2,718,484 |
| Otago | 751,587 | Cork (inc. Queenstown) .. | 1,690,961 |

§ 4. Vessels Built and Registered.

1. **Vessels Built.**—The following tables show the number and tonnage of vessels built in Australia during each of the calendar years 1919 to 1923, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners. As the Shipping Registers are the source of information, it follows that the figures given below will be subject to additions in the future, inasmuch as vessels already built may be added to the register at some future date.

VESSELS BUILT IN AUSTRALIA, 1919 TO 1923.

NUMBER.

| Year. | Steamers built of— | | | | | Oil Motor Vessels. | Sailing. | Pontoons, Dredges, etc. | Total. |
|---------|--------------------|-------|--------|-------------|--------|--------------------|----------|-------------------------|--------|
| | Wood. | Iron. | Steel. | Com-posite. | Total. | | | | |
| 1919 .. | 2 | .. | 6 | .. | 8 | 4 | 9 | .. | 21 |
| 1920 .. | 6 | .. | 8 | 1 | 15 | 4 | 11 | .. | 30 |
| 1921 .. | 2 | .. | 5 | .. | 7 | 6 | 3 | .. | 16 |
| 1922 .. | 4 | .. | 5 | .. | 9 | 7 | 8 | .. | 24 |
| 1923 .. | .. | .. | 3 | .. | 3 | 3 | 1 | 2 | 9 |

TONNAGE.

| Year. | Steamers. | | Oil Motor Vessels. | | Sailing. | | Pontoons, Dredges, etc. | | Total. | |
|---------|-----------|--------|--------------------|------|----------|------|-------------------------|------|--------|--------|
| | Gross. | Net. | Gross. | Net. | Gross. | Net. | Gross. | Net. | Gross. | Net. |
| 1919 .. | 11,497 | 6,858 | 64 | 55 | 1,022 | 876 | .. | .. | 12,583 | 7,789 |
| 1920 .. | 30,851 | 17,834 | 65 | 57 | 571 | 438 | .. | .. | 31,487 | 18,329 |
| 1921 .. | 14,129 | 8,044 | 69 | 57 | 27 | 23 | .. | .. | 14,225 | 8,124 |
| 1922 .. | 9,239 | 5,093 | 191 | 148 | 304 | 251 | .. | .. | 9,734 | 5,492 |
| 1923 .. | 7,043 | 3,996 | 73 | 47 | 100 | 80 | 414 | 386 | 7,630 | 4,509 |

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing, and other vessels on the registers of the States and of the Northern Territory on the 31st December, 1923 :—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1923.

| State. | Steam. | | | | Sailing. | | | | Barges, Hulks, Dredges, etc., not Self-propelled. | | Total. | |
|-----------------------|-------------------|-----------|--------|-----------|------------------------------|-----------|--------|-----------|---|-----------|--------|-----------|
| | Dredges and Tugs. | | Other. | | Fitted with Auxiliary Power. | | Other. | | | | | |
| | No. | Net Tons. | No. | Net Tons. | No. | Net Tons. | No. | Net Tons. | No. | Net Tons. | No. | Net Tons. |
| New South Wales .. | 49 | 1,389 | 565 | 144,495 | 118 | 1,902 | 247 | 15,853 | 45 | 9,915 | 1,024 | 173,554 |
| Victoria .. | 24 | 2,815 | 158 | 137,561 | 31 | 1,165 | 65 | 3,201 | 68 | 27,785 | 346 | 172,527 |
| Queensland .. | 19 | 2,799 | 07 | 22,893 | 27 | 317 | 122 | 2,166 | 30 | 4,109 | 265 | 32,284 |
| South Australia .. | 13 | 608 | 87 | 43,400 | 28 | 1,554 | 57 | 1,847 | 52 | 8,896 | 237 | 56,305 |
| Western Australia .. | 10 | 191 | 29 | 18,393 | 12 | 205 | 329 | 4,856 | 23 | 7,567 | 403 | 31,212 |
| Tasmania .. | 6 | 493 | 59 | 14,481 | 48 | 1,205 | 74 | 3,425 | 2 | 563 | 189 | 20,172 |
| Northern Territory .. | .. | .. | .. | .. | 1 | 17 | 24 | 310 | .. | .. | 25 | 327 |
| Total .. | 121 | 8,300 | 965 | 381,223 | 265 | 6,365 | 918 | 31,658 | 220 | 58,835 | 2,489 | 486,381 |

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements, viz.:—(a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.)

No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the overseas vessels (b) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in the Commonwealth Bureau of Census and Statistics) shall show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an overseas country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom, *via* States, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is in the third State again recorded for the statistics of the State concerned as *from* United Kingdom *via* other States. As, however, this inward voyage will terminate at an Australian port it follows that the *clearance* from the second State to the third State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* the States of South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

ITINERARY OF AN OVERSEA VESSEL ON AUSTRALIAN COAST.

| Particulars. | Recorded as— | |
|--|----------------------------------|---------------------------------|
| | For the State and for Australia. | For the States. |
| Inward Voyage— | | |
| Enters Fremantle from United Kingdom | Oversea direct | Interstate direct |
| Clears Fremantle for Adelaide .. .. | .. .. | .. .. Oversea <i>via</i> States |
| Enters Adelaide from United Kingdom <i>via</i> Fremantle .. .. | .. .. | Interstate direct |
| Clears Adelaide for Melbourne .. .. | .. .. | .. .. Oversea <i>via</i> States |
| Enters Melbourne from United Kingdom <i>via</i> Adelaide .. .. | .. .. | Interstate direct |
| Clears Melbourne for Sydney .. .. | .. .. | .. .. Oversea <i>via</i> States |
| Enters Sydney from United Kingdom <i>via</i> Melbourne .. .. | .. .. | Interstate direct |
| Outward Voyage— | | |
| Clears Sydney for United Kingdom <i>via</i> Melbourne .. .. | .. .. | Interstate direct |
| Enters Melbourne from Sydney .. .. | .. .. | .. .. Oversea <i>via</i> States |
| Clears Melbourne for United Kingdom <i>via</i> Adelaide .. .. | .. .. | Interstate direct |
| Enters Adelaide from Melbourne .. .. | .. .. | .. .. Oversea <i>via</i> States |
| Clears Adelaide for Fremantle .. .. | .. .. | Interstate direct |
| Enters Fremantle from Adelaide .. .. | .. .. | .. .. Oversea <i>via</i> States |
| Clears Fremantle for United Kingdom .. | Oversea direct | Interstate direct |

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows:—(a) The aggregate of all ships recorded for each State

as "Oversea direct" gives the overseas shipping for Australia as a whole. (b) The aggregate for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total *oversea shipping* for that State. (c) From the example given in the table it may be noticed that for every entry "Oversea via States" there is a corresponding clearance "Interstate," so that according to the purpose for which the figures are required, the movements of "oversea ships via States" can be added to the recorded interstate shipping, and thus furnish figures showing the total interstate *movement* of shipping, or a similar deduction may be made from the recorded interstate shipping to give the total movement of shipping engaged solely in interstate trade.

2. **Vessels and Tonnage Entered.**—The following table gives the number and tonnage of vessels recorded as having entered each State from any other State during each of the years 1918–19 to 1922–23. The shipping on the Murray River, between the States of New South Wales, Victoria, and South Australia is not included.

**INTERSTATE SHIPPING.—NUMBER AND TONNAGE OF VESSELS ENTERED,
1918–19 TO 1922–23.**

| State. | 1918–19. | 1919–20. | 1920–21. | 1921–22. | 1922–23. |
|-----------------------|----------|----------|----------|----------|----------|
| NUMBER. | | | | | |
| New South Wales .. | 1,461 | 1,226 | 1,650 | 1,748 | 1,848 |
| Victoria .. | 1,239 | 1,269 | 1,614 | 1,797 | 1,886 |
| Queensland .. | 529 | 406 | 469 | 459 | 548 |
| South Australia .. | 445 | 456 | 603 | 724 | 822 |
| Western Australia .. | 309 | 367 | 431 | 484 | 364 |
| Tasmania .. | 727 | 787 | 987 | 1,072 | 1,169 |
| Northern Territory .. | 28 | 21 | 18 | 19 | 18 |
| Total .. | 4,738 | 4,532 | 5,772 | 6,303 | 6,655 |

TONNAGE.

| | | | | | |
|-----------------------|-----------|-----------|------------|------------|------------|
| New South Wales .. | 2,291,462 | 2,451,644 | 3,297,358 | 3,614,744 | 4,278,072 |
| Victoria .. | 1,393,549 | 2,017,798 | 2,434,778 | 3,091,313 | 3,581,571 |
| Queensland .. | 700,617 | 635,809 | 770,233 | 857,715 | 1,123,192 |
| South Australia .. | 707,248 | 1,215,970 | 1,554,649 | 1,949,071 | 2,453,776 |
| Western Australia .. | 944,088 | 1,364,866 | 1,600,142 | 1,817,361 | 1,630,730 |
| Tasmania .. | 442,457 | 441,660 | 592,852 | 937,296 | 1,023,645 |
| Northern Territory .. | 53,607 | 34,251 | 36,269 | 52,814 | 52,107 |
| Total .. | 6,533,028 | 8,161,998 | 10,286,281 | 12,320,314 | 14,143,093 |

3. **Oversea Vessels Moving Interstate.**—From the above it will be seen that while certain movements of the vessels referred to are included in the interstate shipping, other movements of the same vessels, between the same ports, are not so included.

To ascertain the aggregate movement of shipping between the States during the year 1922–23, including the total interstate movements of overseas vessels, the figures in

the following table, which give the number and tonnage of vessels entered from or cleared for overseas countries *via* other Australian States, must be added to those in the table preceding :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES, 1922-23.

| State. | Entered. | | Cleared. | | Total. | |
|-----------------------|----------|-----------|----------|-----------|----------|------------|
| | Vessels. | Tonnage. | Vessels. | Tonnage. | Vessels. | Tonnage. |
| New South Wales .. | 610 | 2,642,610 | 472 | 2,104,112 | 1,082 | 4,746,722 |
| Victoria .. | 536 | 2,337,488 | 429 | 1,917,767 | 965 | 4,255,255 |
| Queensland .. | 193 | 1,071,003 | 203 | 1,132,146 | 396 | 2,203,149 |
| South Australia .. | 294 | 1,359,819 | 256 | 1,186,395 | 550 | 2,546,214 |
| Western Australia .. | 9 | 27,657 | 11 | 21,752 | 20 | 49,409 |
| Tasmania .. | 36 | 139,454 | 52 | 271,683 | 88 | 411,137 |
| Northern Territory .. | .. | .. | 2 | 2,914 | 2 | 2,914 |
| Total .. | 1,678 | 7,578,031 | 1,425 | 6,636,769 | 3,103 | 14,214,800 |

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia but are merely proceeding to the several States in continuation of their overseas voyage.

4. *Vessels engaged Solely in Interstate Trade.*—Reverting to the explanation given in the first paragraph it may be assumed that vessels *entered* in the several States as from “Oversea countries *via* other States” have really been *cleared* from other States as “Interstate,” and further, that the vessels *cleared* to “Oversea countries *via* other States” have likewise been *entered* as “Interstate”. If, on this assumption, all such vessels are excluded, the remainder will represent vessels engaged in the interstate trade only. Applying this suggestion, and so eliminating all interstate movements of overseas vessels, the number and tonnage movement of vessels engaged solely in the interstate trade for Australia as a whole during the years 1918-19 to 1922-23 were as follows :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE, 1918-19 TO 1922-23.

| Year. | Entered. | | Cleared. | |
|-----------------|----------|-----------|----------|-----------|
| | No. | Tons. | No. | Tons. |
| 1918-19 | 4,093 | 4,357,115 | 4,074 | 4,377,666 |
| 1919-20 | 3,482 | 3,939,055 | 3,510 | 3,986,345 |
| 1920-21 | 4,539 | 5,406,967 | 4,566 | 5,433,856 |
| 1921-22 | 4,897 | 6,464,999 | 4,885 | 6,335,396 |
| 1922-23 | 5,230 | 7,506,324 | 5,264 | 7,624,311 |

5. *Total Interstate Movement of Shipping.*—(i) *Australia.* The appended table shows the total inward interstate movement of shipping for each of the years 1918-19 to 1922-23 :—

TOTAL INWARD INTERSTATE MOVEMENT OF SHIPPING, 1918-19 TO 1922-23.

| Vessels. | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|---|-----------|------------|------------|------------|------------|
| | Tons. | Tons. | Tons. | Tons. | Tons. |
| Oversea vessels moving interstate | 5,219,515 | 8,741,260 | 10,001,668 | 11,579,340 | 14,214,800 |
| Vessels solely interstate .. | 4,357,115 | 3,939,055 | 5,406,967 | 6,464,999 | 7,506,324 |
| Total | 9,576,630 | 12,680,315 | 15,408,635 | 18,044,339 | 21,721,124 |

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State during 1922-23, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1922-23.

| State. | Entered. | | Cleared. | |
|--------------------------|----------|------------|----------|------------|
| | Vessels. | Tonnage. | Vessels. | Tonnage. |
| New South Wales | 2,458 | 6,920,682 | 2,367 | 6,606,289 |
| Victoria | 2,422 | 5,919,059 | 2,534 | 6,293,492 |
| Queensland | 741 | 2,194,195 | 773 | 2,400,045 |
| South Australia | 1,116 | 3,813,595 | 1,115 | 3,781,993 |
| Western Australia | 373 | 1,658,387 | 344 | 1,532,798 |
| Tasmania | 1,205 | 1,163,099 | 1,214 | 1,171,211 |
| Northern Territory | 18 | 52,107 | 20 | 53,283 |
| Total Australia | 8,333 | 21,721,124 | 8,367 | 21,839,111 |

6. *Interstate and Coastal Services.*—The subjoined table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1919 to 1923 :—

AUSTRALIAN INTERSTATE AND COASTAL STEAMSHIP SERVICES, 1919 TO 1923.

| Particulars. | 1919. | 1920. | 1921. | 1922. | 1923. |
|---|---------|---------|---------|---------|---------|
| Number of companies making returns | 23 | 23 | (a)39 | 32 | 35 |
| Number of steamships | 143 | 154 | 183 | 195 | 205 |
| Tonnage .. { Gross | 250,610 | 280,609 | 317,019 | 357,652 | 384,650 |
| Net | 143,143 | 159,293 | 179,393 | 204,219 | 220,042 |
| Horse-power (Nominal) .. | 27,341 | 29,557 | 32,801 | 34,886 | 36,934 |
| Number of 1st class passengers for which licensed | 5,229 | 5,250 | 4,226 | 4,647 | 9,184 |
| 2nd class and steerage | 5,524 | 5,632 | 4,642 | 5,016 | 4,756 |
| Complement { Masters and officers | 493 | 537 | 571 | 667 | 704 |
| Engineers | 409 | 464 | 551 | 607 | 645 |
| Crew | 3,671 | 4,502 | 4,613 | 5,175 | 5,614 |

(a) In this year a number of small organizations were included for the first time.

§ 6. Tonnage of Cargo.

The following table shows the aggregate tonnage of oversea cargo discharged and shipped in Australian ports, and the tonnage of interstate cargo shipped in all ports for the years 1918-19 to 1922-23:—

AUSTRALIAN SHIPPING—CARGO MOVEMENT, 1918-19 TO 1922-23.

| Year. | Oversea Cargo. | | Interstate Cargo. |
|-----------------|----------------|-----------|-------------------|
| | Discharged. | Shipped. | Shipped. |
| | Tons. | Tons. | Tons. |
| 1918-19 | 2,312,288 | 3,813,651 | 4,495,258 |
| 1919-20 | 2,238,298 | 4,984,946 | 4,415,909 |
| 1920-21 | 3,201,215 | 5,925,133 | 4,993,678 |
| 1921-22 | 2,419,977 | 5,816,174 | 5,533,716 |
| 1922-23 | 3,718,795 | 4,064,196 | 5,137,501 |

In the foregoing table cargo which was recorded in cubic feet has been converted to weight on the basis of 40 cubic feet to the ton.

§ 7. Commonwealth Government Shipping Activities.

1. **Local Building Programme.**—The original Commonwealth Government programme of ship construction in Australia provided for 48 vessels, 24 of which were to be wooden sailing vessels, and the remainder steel cargo ships. Owing to certain variations, the programme resulted in the building of 21 steel cargo vessels and 2 five-masted schooners with auxiliary power.

Particulars of the vessels built in Australia to 31st December, 1922, were included in the *previous issue of this book* (see *Year Book* No. 16, p. 273). Two vessels have since been completed, the *Elouera* and the *Euroa*, of 1,916 and 1,922 tons net respectively.

It is anticipated that the *Ferndale* will be launched some time in 1924, and with this vessel the shipbuilding programme will be complete.

2. **Vessels Built in the United Kingdom.**—In addition to the vessels previously referred to five steamers each approximately 8,450 tons net were constructed in yards in the United Kingdom.

These vessels have an approximate length of 520 feet by 68 feet beam, and a capacity of 900,000 cubic feet of which 370,000 cubic feet are insulated.

3. **Australian Commonwealth Line of Steamers.**—(i) *Foundation of Line.* The Commonwealth Shipping Act 1923 provided for the establishment of the Australian Commonwealth Line of Steamers under the control of a Board of Directors consisting of not less than three nor more than five members. The date at which the Act was to come into force was fixed by proclamation as 1st September, 1923.

The whole of the right, title, and interest of the Commonwealth in and to the 50 vessels (155,302 tons net) of the Commonwealth Government Line of Steamers, and appurtenances used for the purposes of such vessels, were vested in the Board, also four other vessels (15,442 tons net) which were under construction at the time of transfer. The valuation of the vessels, tackle, apparel, gear, furniture, stores and equipment was fixed at £4,718,150 and the office furniture and fittings at £7,500, making a total of £4,725,650.

(ii) *Disposal of Vessels.* Since the advent of the Board of Directors, 18 vessels have been disposed of, 9 of which passed to Japanese owners.

(iii) *Particulars of Operations.* Particulars as to the operations of the Board are not yet available, but a balance-sheet will be issued annually. Information in regard to the Board's activities will be published in subsequent issues of this work.

§ 8. World's Shipping Tonnage.

The table hereunder shows the number and gross tonnage of steam and motor, and sailing vessels owned by several of the most important maritime countries, together with the proportion of the grand total owned by each country:—

WORLD'S SHIPPING TONNAGE, 1923-24.

| Nationality. | Steam and Motor. | | Sailing. | | Total. | | Percentage on Total. | |
|------------------------------------|------------------|-------------------|--------------|------------------|---------------|-------------------|----------------------|----------------|
| | No. | Gross Tonnage. | No. | Gross Tonnage. | No. | Gross Tonnage. | No. | Gross Tonnage. |
| United Kingdom | 8,299 | 19,115,178 | 395 | 166,371 | 8,694 | 19,281,549 | 26.43 | 30.78 |
| Australia and New Zealand | 615 | 757,085 | 26 | 12,504 | 641 | 769,589 | 1.95 | 1.23 |
| Canada (a) .. | 531 | 841,867 | 296 | 118,358 | 827 | 960,225 | 2.51 | 1.53 |
| Other British .. | 617 | 740,744 | 254 | 65,805 | 871 | 806,549 | 2.65 | 1.29 |
| Total, British Empire .. | 10,062 | 21,454,874 | 971 | 363,038 | 11,033 | 21,817,912 | 33.54 | 34.83 |
| Belgium .. | 264 | 605,050 | 6 | 11,620 | 270 | 616,670 | 0.82 | 0.99 |
| Denmark .. | 614 | 937,743 | 166 | 59,119 | 780 | 996,862 | 2.37 | 1.59 |
| France .. | 1,650 | 3,452,940 | 362 | 284,304 | 2,021 | 3,737,244 | 6.15 | 5.97 |
| Germany .. | 1,745 | 2,509,768 | 98 | 80,305 | 1,843 | 2,590,073 | 5.60 | 4.14 |
| Greece .. | 391 | 747,474 | 14 | 7,967 | 405 | 755,441 | 1.23 | 1.21 |
| Holland .. | 1,051 | 2,607,210 | 63 | 18,531 | 1,114 | 2,625,741 | 3.39 | 4.19 |
| Italy .. | 1,043 | 2,880,776 | 372 | 152,966 | 1,415 | 3,033,742 | 4.30 | 4.84 |
| Japan .. | 2,003 | 3,604,147 | .. | .. | 2,003 | 3,604,147 | 6.09 | 5.75 |
| Norway .. | 1,669 | 2,375,970 | 131 | 175,942 | 1,800 | 2,551,912 | 5.47 | 4.07 |
| Spain .. | 779 | 1,198,716 | 170 | 61,490 | 949 | 1,260,206 | 2.89 | 2.01 |
| Sweden .. | 1,164 | 1,135,612 | 221 | 72,115 | 1,385 | 1,207,727 | 4.21 | 1.93 |
| United States of America (b) .. | 3,819 | 13,487,779 | 1,084 | 1,170,965 | 4,903 | 14,658,744 | 14.91 | 23.40 |
| Other Foreign Countries .. | 2,393 | 2,900,106 | 578 | 282,892 | 2,971 | 3,182,998 | 9.03 | 5.08 |
| Total, Foreign Countries .. | 18,594 | 38,443,291 | 3,265 | 2,378,216 | 21,859 | 40,821,507 | 66.46 | 65.17 |
| Grand Total.. | 28,656 | 59,898,165 | 4,236 | 2,741,254 | 32,892 | 62,639,419 | 100.00 | 100.00 |

(a) Sea-going. (b) Includes Philippine Islands.

It should be mentioned that the foregoing figures have been compiled from Lloyd's Register of Shipping, and vessels of 100 tons or upwards only have been included.

§ 9. Ferries.

1. General.—In previous issues of the Year Book particulars of ferries were included in the sub-section dealing with tramways, as the ferries are mainly a supplementary means of transport to the suburban railway and tramway systems.

2. New South Wales.—The ferry services in Port Jackson are under the control of two companies which, during the year 1923 had 65 vessels in commission, 63 of which were double-ended screw steamers, the remaining two being motor driven. It is claimed for the steamers that they are superior in size and equipment to boats employed on similar service in any other part of the world.

3. Victoria.—The Williamstown City Council owns one steamer which is engaged in the transport of passengers between Port Melbourne and Williamstown. There are several other steamers which are engaged during the summer season in the carriage of passengers and goods to the several seaside resorts. Particulars of these services, however, are not included in the table in sub-par. 7 following.

4. **Queensland.**—The Brisbane City Council and the Balmoral Shire Council control the ferry services in the Metropolitan area. During the year 1923, 13 vessels were employed, 4 of which were steam-propelled.

5. **Western Australia.**—The ferries plying on the Swan River during 1923 were operated by a private company, and consisted of 8 petrol-driven vessels. At South Perth the Western Australian Government employed 4 vessels, 2 of which were steamers.

6. **Tasmania.**—In and around Hobart there were in 1923, 3 ferry services, 2 being controlled by a private company which had 5 steamers in commission, and 1 by the Public Works Department, with 2 motor-propelled vessels.

7. **Particulars of Working.**—The subjoined table shows for the year 1923 so far as returns are available the most important items in connexion with the operation of the ferry services in the several States :—

FERRIES.—PARTICULARS OF WORKING, 1923.

| Particulars. | | New South Wales. | Victoria. | Queensland. | Western Australia. | Tasmania. | Total. |
|---|-------|------------------|-----------|-------------|--------------------|-----------|------------|
| Boats in Service— | | | | | | | |
| Steam .. | No. | 63 | 1 | 4 | 2 | 5 | 75 |
| Other .. | No. | 2 | .. | 9 | 10 | 2 | 23 |
| Total .. | No. | 65 | 1 | 13 | 12 | 7 | 98 |
| Number of passengers which boats are licensed to carry .. | No. | 45,576 | 280 | 751 | 1,757 | 1,419 | 49,783 |
| Revenue .. | £ | 662,711 | 6,607 | 11,034 | 15,053 | 17,839 | 713,244 |
| Working Expenses .. | £ | 595,013 | 8,156 | 23,571 | 14,626 | 15,941 | 657,307 |
| Passengers carried (b) .. | No. | 39,942,429 | 132,140 | 3,392,400 | 1,060,433 | 945,536 | 45,502,938 |
| Mileage of Boats .. | miles | (a)193,423 | (b)19,000 | (a)35,000 | 83,442 | 57,306 | (a)388,171 |
| Accidents— | | | | | | | |
| Killed .. | No. | .. | .. | .. | .. | .. | .. |
| Injured .. | No. | 96 | .. | .. | .. | .. | 96 |
| Employees— | | | | | | | |
| Salaried Staff .. | No. | 35 | 1 | 2 | 2 | 7 | 47 |
| Wages Staff .. | No. | 1,057 | 4 | 35 | 23 | 33 | 1,152 |

(a) Incomplete.

(b) Approximate.

8. **Other Services.**—In addition to the foregoing there are throughout the several States a number of row-boat ferry services, and on many of the principal inland rivers punts are in operation.

§ 10. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No. 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power, and visibility of each light so far as particulars are available.

2. **Distances by Sea.**—A statement giving the distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia has also been included in the Transport and Communication Bulletin No. 14.

3. **Shipping Freight Rates.**—The Quarterly Summary of Australian Statistics gives a list of the ruling freight rates for general merchandise both in respect of overseas and interstate shipments. The latest figures available, which give the rates current at 31st March, 1924, show that the rate for general merchandise from Australia to United Kingdom and Continent was 70s. per ton weight or measurement, as compared with 55s. per ton in 1915.

4. **Depth of Water at Main Ports.**—A table compiled from information supplied by the Navigation Branch of the Department of Trade and Customs, showing the depth of water at the main ports of Australia at 1st January, 1924, has been included in the Transport and Communication Bulletin No. 15, published by this Bureau.

5. **Marine Casualties.**—Particulars of shipping casualties reported on or near the coast during the year 1922-23 are shown in the Transport and Communication Bulletin No. 15. This information has also been furnished by the Navigation Branch.

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—In the issues of the Official Year Book, Nos. 1 to 7, the statistics of all Government railway systems were treated under the head of *Government Railways*. In subsequent issues, including the present volume, the greater part of the statistics relating to State-owned lines is dealt with separately from those under the control of the Commonwealth Government. The State railways are referred to throughout as "State" and the Commonwealth railways as "Federal" railways. A summary in regard to Federal and State railways will, however, be found in § 4 of this section.

In all tables relating to Government Railways, the particulars quoted, except where otherwise stated, are for the financial years.

2. **Improvement of Railway Statistics.**—Some of the earlier issues of the Year Book contain a condensation of the report issued in 1909 by the Commonwealth Statistician to the Minister for Home Affairs on the subject of *The Desirability of Improved Statistics of Government Railways in Australia* (see Year Book No. 7, page 598).

In accordance with the decision of the Conference of Railways Commissioners, held in Sydney on the 17th May, 1921, in regard to the desirability of attaining uniformity in the methods of accounting in the several Railways Departments of Australia, representative officials from the accountancy staffs met in conference in Melbourne on the 31st May, 1921, and formulated a scheme for the uniform classification of earnings and working expenses, and the mode of presentation of financial and certain other tables in the Commissioners' Annual Reports. Great improvement, both as regards the volume of information and the mode of presentation thereof in the statistical tables appearing in the reports of the several Railways Commissioners, has been made during the past few years.

The Australian Bureau of Railway Statistics was established in Sydney almost entirely at the expense of the New South Wales and Victorian Railways, but each of the other States has undertaken to supply all available information, and bulletins giving details of revenue, operating costs, etc., are published quarterly.

3. **Railway Communication in Australia.**—(i) *General.* An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Year Book No. 6, p. 681. In the eastern, south-eastern, and southern parts of Australia there is now a network of railway lines converging from the various agricultural, pastoral, and mining districts towards the principal ports, which are themselves connected by systems of lines running approximately parallel to the coast. In the east, lines radiating from Cairns, Townsville, Rockhampton, Brisbane, and Sydney extend inland in various directions for distances ranging up to over 600 miles; in the south-east there are numerous lines, those in Victoria converging towards Melbourne, while others in New South Wales have their terminus in Sydney; in the south there are four main lines, with numerous branches, running from Melbourne; while from Adelaide one main line, with several branches to the coastal towns, runs inland in a northerly direction for a distance of nearly 700 miles, and another line runs in a south-easterly direction to various ports, meeting the main line from Melbourne on the border of South Australia and Victoria near Serviceton. The South Australian and Victorian railway systems also meet on the border at two other points, one near Pinnaroo, and the other at Rennick, near Mount Gambier.

In Western Australia there is a connected system of main or trunk lines between the ports of the State and the agricultural, pastoral, and mining districts, and two short lines, one on the north-west, the other on the south coast, which are unconnected with the main system. In the northern portion of Queensland and in the Northern Territory there are also several disconnected lines running inland from the more important ports. The North Coast line when completed will give an uninterrupted service as far north as Cairns. At present there are two gaps in the line—between Parapi and Proserpine, and between Ingham and El Arish. In Tasmania the principal towns are connected by a system of lines, and there are also, more especially in the western districts, several lines which have been constructed for the purpose of opening up mining districts.

By the opening, in 1917, of the Trans-Australian railway from Port Augusta to Kalgoorlie, through communication by rail was established between the eastern States and the Western Australian railway system.

(ii) *The Main Interstate Lines.* The main interstate lines, which permit of direct communication between the five capital cities—Brisbane, Sydney, Melbourne, Adelaide, and Perth—cover a distance from end to end of 3,474.80 miles or 3,479.82 miles via Newcastle. The scheduled time for the journey from Brisbane to Perth is six days one hour forty-two minutes, and from Perth to Brisbane five days twenty-one hours forty minutes, the time in each case being taken over all.

The longest railway journey which can be undertaken in Australia on one continuous line of railway is from Yaraka in Queensland to Meekatharra in Western Australia, a total distance of 4,809.14 miles.

4. *Non-conformity of Gauge.*—(i) *General.* With but few exceptions, all the railway lines in Australia open for general traffic are now owned and managed by the respective States in whose territory they run, or by the Commonwealth Government; but, unfortunately for the purpose of interstate traffic, the construction of the various systems in different parts of Australia has proceeded without uniformity of gauge. A statement giving the reasons for the adoption of the various gauges in the several States appeared in Year Book No. 15, p. 534, but considerations of space preclude its repetition in the present issue.

(ii) *Interstate Junctions.* Connexions at border stations were established as follows:—Victoria and New South Wales, at Albury, 14th June, 1883; Victoria and South Australia, at Serviceton, 19th January, 1887; and New South Wales and Queensland, at Wallangarra, 16th January, 1888. Through trains were unable to run on this latter section until the completion of the Hawkesbury River Bridge on 1st May, 1889. On the 22nd October, 1917, through communication from east to west was made possible by the opening of the Trans-Australian line.

(iii) *Proposals for Unification.* The question of the unification of gauges in the several States has been under consideration for several years, and numerous conferences on the subject have been held from time to time between the several Railways Commissioners and between the Premiers of the States concerned. Reference to these conferences has been made in previous issues of the Year Book.

(iv) *Estimated Cost of Unification of Gauges.* The scheme advocated by the Royal Commission of 8th February, 1921, and adopted by the Prime Minister and Premiers of the several States in conference during November of the same year, as the first step will provide a standard 4-ft. 8½-in. gauge railway between Brisbane and Fremantle, and the conversion of the whole of the broad-gauge lines of Victoria and South Australia, at an estimated cost of £21,600,000, spread over a period of approximately eight years. The details of the estimate of £21,600,000, which provides for a main trunk line between Fremantle and Brisbane, and the conversion of the 5-ft. 3-in. gauge lines in Victoria and South Australia, together with the quota from each State and the Commonwealth Government in terms of the allocation of cost agreed upon, were given in the previous issue (see Year Book No. 16, p. 278.)

The estimated cost of converting the whole of the lines in the States concerned is approximately £57,200,000.

5. Rolling Stock Gauges.—Allied to the question of the gauges of the railways of Australia is that of the rolling stock gauges in use, the rolling stock gauge being the maximum transverse dimensions to which the rolling stock may be constructed. The following table gives particulars of the present rolling stock gauges, together with the maximum lengths and weights of vehicles :—

RAILWAYS, STATE AND FEDERAL.—ROLLING STOCK GAUGES, 1922-23.

PASSENGER ROLLING STOCK.

| Railway. | Gauge of Track. | Maximum Rolling Stock Gauge. | | Length over all. | Maximum— | | |
|-----------------------|-----------------|------------------------------|--------------------------|------------------|----------|--------------------|--|
| | | Width. | Height above Rail Level. | | Tare. | Carrying Capacity. | |
| | ft. in. | ft. in. | ft. in. | ft. in. | t. c. q. | persons. | |
| New South Wales .. | 4 8½ | 10 6 | 14 0 | 74 4½ | 44 2 1 | 90 | |
| Victoria .. | 5 3 | 10 0 | 14 0 | 74 1½ | 47 16 0 | 94 | |
| " .. | 2 6 | 7 0½ | 10 4½ | 31 8 | 8 11 0 | 40 | |
| Queensland .. | 3 6 | 9 4 | 12 9 | 55 5 | 27 10 0 | 90 | |
| " .. | 2 0 | 6 3½ | 10 0 | 22 0 | 4 0 0 | 24 | |
| South Australia .. | 5 3 | 10 4½ | 14 1½ | 74 1½ | 40 11 0 | 76 | |
| " .. | 3 6 | 9 4½ | 12 1 | 62 6 | 24 18 0 | 60 | |
| Western Australia .. | 3 6 | 8 10 | 12 7 | 61 9 | 31 10 0 | 90 | |
| Tasmania .. | 3 6 | 9 6 | 12 5 | 64 0 | 30 0 0 | 110 | |
| " .. | 2 0 | 6 6 | 10 0 | 30 2 | 5 10 1 | 24 | |
| Federal— | | | | | | | |
| Trans-Australian .. | 4 8½ | 10 6 | 14 6 | 78 11½ | 48 0 0 | 34 (a) | |
| Northern Territory .. | 3 6 | 9 4 | 12 9 | 39 0 | 12 0 0 | 36 | |
| Oodnadatta .. | 3 6 | 9 4½ | 12 1 | 62 6 | 24 18 0 | 60 | |

(a) Sleeping berths.

GOODS ROLLING STOCK.

| Railway. | Gauge of Track. | Maximum Rolling Stock Gauge. | | Length over all. | Maximum— | | |
|-----------------------|-----------------|------------------------------|--------------------------|------------------|----------|--------------------|--|
| | | Width. | Height above Rail Level. | | Tare. | Carrying Capacity. | |
| | ft. in. | ft. in. | ft. in. | ft. in. | t. c. q. | t. c. q. | |
| New South Wales .. | 4 8½ | 9 8 | 13 6 | 60 11 | 23 3 0 | 45 0 0 | |
| Victoria .. | 5 3 | 9 7½ | 13 7½ | 55 4½ | 20 14 2 | 30 0 0 | |
| " .. | 2 6 | 6 5½ | 9 7½ | 27 3½ | 7 12 2½ | 10 0 0 | |
| Queensland .. | 3 6 | 8 9 | 12 0 | 45 5 | 15 0 0 | 21 8 0 | |
| " .. | 2 0 | 6 6 | 9 0 | 22 0 | 5 0 0 | 16 0 0 | |
| South Australia .. | 5 3 | 10 0½ | 12 10½ | 52 1 | 23 10 0 | 30 0 0 | |
| " .. | 3 6 | 8 6 | 12 5½ | 52 9 | 22 0 0 | 25 0 0 | |
| Western Australia .. | 3 6 | 8 8 | 12 6 | 44 9 | 17 10 0 | 27 0 0 | |
| Tasmania .. | 3 6 | 8 6 | 11 0 | 40 10 | 12 5 0 | 30 0 0 | |
| " .. | 2 0 | 6 0 | 6 6 | 27 0 | 5 15 2 | 20 0 0 | |
| Federal— | | | | | | | |
| Trans-Australian .. | 4 8½ | 10 6 | 14 6 | 47 6½ | 15 0 0 | 40 0 0 | |
| Northern Territory .. | 3 6 | 9 4 | 12 9 | 34 6 | 9 10 0 | 12 0 0 | |
| Oodnadatta .. | 3 6 | 8 6 | 12 5½ | 52 9 | 22 0 0 | 25 0 0 | |

In the above tables the transverse dimensions given are the greatest employed on any vehicle.

It will be observed that the dimensions adopted by the Federal Government for the Trans-Australian Railway are in excess of those at present in use on the 5-ft. 3-in. gauge lines of Victoria and South Australia, and the 4-ft. 8½-in. gauge lines of New South Wales. It is, however, the intention of the latter State to adopt the Federal standard as soon as possible, and with that end in view a commencement has been made in the Sydney suburban area with the enlargement of bridges, tunnels, buildings and platforms to enable the larger rolling stock to be employed. The question of standard couplings on the New South Wales lines is also receiving attention.

6. **Mileage Open for Traffic, all Lines.**—(i) *General.* In all the States the principle that the control, construction, and maintenance of the railways should be in the hands of the Government has long been adhered to, excepting in cases presenting unusual circumstances. In various parts of Australia, lines have been constructed and managed by private companies, but at the present time nearly the whole of the railway traffic is in the hands of the State or Commonwealth Governments. A large proportion of the private lines has been laid down for the purpose of opening up forest lands, mining districts, or sugar areas, and these lines are not generally used for the conveyance of passengers or the public conveyance of goods. (See § 5 *Private Railways*, hereinafter.)

The subjoined table shows the mileage of Commonwealth Government, State Government, and private lines open for traffic (exclusive of sidings and cross-overs) in each State for each of the years 1918–19 to 1922–23. The railway mileage given for each State includes both Commonwealth and State Government railways in that State, and in this table and in those immediately following is estimated from the geographic point of view and not from that of ownership. The figures are to the end of the financial year ending on the 30th June, excepting the mileages for private lines, which are in most cases taken for the calendar year :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN, 1919 TO 1923.

| State or Territory. | 1918–19. | 1919–20. | 1920–21. | 1921–22. | 1922–23. |
|------------------------------|-----------|-----------|-----------|-----------|-----------|
| | Miles. | Miles. | Miles. | Miles. | Miles. |
| New South Wales .. | 5,169.82 | 5,376.99 | 5,402.08 | 5,475.44 | 5,689.18 |
| Victoria .. | 4,260.58 | 4,284.65 | 4,337.35 | 4,374.73 | 4,393.48 |
| Queensland .. | 6,841.41 | 6,946.69 | 7,012.62 | 7,063.89 | 7,180.10 |
| South Australia .. | 3,404.10 | 3,458.26 | 3,463.35 | 3,487.37 | 3,503.40 |
| Western Australia .. | 4,965.48 | 4,846.02 | 4,905.83 | 4,867.48 | 4,844.93 |
| Tasmania .. | 811.03 | 840.25 | 877.01 | 872.49 | 896.36 |
| Federal Capital Territory .. | 4.94 | 4.94 | 4.94 | 4.94 | 4.94 |
| Northern Territory .. | 199.56 | 198.68 | 198.68 | 198.68 | 198.68 |
| Australia .. | 25,656.92 | 25,956.48 | 26,201.86 | 26,345.02 | 26,711.07 |

In previous issues of the Year Book particulars were given for different periods from 1855 onwards. (See No. 15, page 537.)

(ii) *Government and Private Lines Separately.* The subjoined table shows for each State (a) the length of lines owned by the State Government, and by the Commonwealth Government in that State, all of which lines are open for general use by the public, (b) the length of private lines available for general use by the public, and (c) the length of the private lines not so available. The mileages specified in the case of Government lines

are to the 30th June, 1923; those given for private lines are to the same date with an exception of Western Australia, which are to 31st December, 1922:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1922-23.

| State or Territory. | Government Lines— | | Private Lines available for General Traffic. | Total Open for General Traffic. | Private Lines used for special Purposes only. | Grand Total. |
|------------------------------|-------------------|----------|--|---------------------------------|---|--------------|
| | State. | Federal. | | | | |
| | Miles. | Miles. | | | | |
| New South Wales | 5,317.79 | .. | 188.38 | 5,506.17 | 183.01 | 5,689.18 |
| Victoria .. | 4,333.35 | .. | 24.94 | 4,358.29 | 35.19 | 4,393.48 |
| Queensland .. | 5,905.41 | .. | 280.31 | 6,185.72 | 994.38 | 7,180.10 |
| South Australia .. | 2,373.09 | 1,075.41 | 33.80 | 3,482.30 | 21.10 | 3,503.40 |
| Western Australia | 3,554.84 | 453.99 | 278.35 | 4,287.18 | 557.75 | 4,844.93 |
| Tasmania .. | 663.38 | .. | 194.90 | 858.28 | 38.08 | 896.36 |
| Federal Capital Territory .. | .. | 4.94 | .. | 4.94 | .. | 4.94 |
| Northern Territory | .. | 198.68 | .. | 198.68 | .. | 198.68 |
| Australia .. | 22,147.86 | 1,733.02 | 1,000.68 | 24,881.56 | 1,829.51 | 26,711.07 |

7. **Comparative Railway Facilities.**—The relation to population and area respectively of the mileage of line open to the public for general traffic (including both Government and private lines) on the 30th June, 1923, are shown in the subjoined statement:—

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1923.

| State or Territory. | Population, 30th June 1923. | Area. | Mileage of Railway. | |
|------------------------------|-----------------------------|-----------|--------------------------|-----------------------------------|
| | | | Per 1,000 of Population. | Per 1,000 sq. miles of Territory. |
| | | | Miles | Miles. |
| New South Wales .. | 2,189,379 | 309,432 | 2.60 | 18.39 |
| Victoria .. | 1,607,586 | 87,884 | 2.73 | 49.97 |
| Queensland .. | 805,636 | 670,500 | 8.97 | 10.60 |
| South Australia .. | 516,685 | 380,070 | 6.78 | 9.22 |
| Western Australia .. | 348,119 | 975,920 | 13.92 | 4.96 |
| Tasmania .. | 213,784 | 26,215 | 4.19 | 34.19 |
| Federal Capital Territory .. | 3,255 | 940 | 1.52 | 5.26 |
| Northern Territory .. | 3,648 | 523,620 | 54.45 | 0.38 |
| Australia .. | 5,688,092 | 2,974,581 | 4.69 | 8.98 |

8. **Classification of Lines according to Gauge, 1922-23.**—The next table gives a classification, according to gauge, of the total mileage, exclusive of sidings and cross-overs, of (i) Commonwealth Government railways, given in the State or Territory in which situated; (ii) State Government railways; (iii) Private railways open to the public for general traffic; and (iv) Private lines open for special purposes. Particulars of Government railways are up to the 30th June, 1923, of private railways open for general

traffic to the 31st December, 1923, as nearly as possible, and of private railways open for special purposes to the 30th June, 1923, with the exception of Western Australia, the figures for which State are to the 31st December, 1922.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1922-23.

| State or Territory in which situated. | Route mileage having a gauge of— | | | | | | | | Total. |
|---------------------------------------|----------------------------------|-------------|-------------|------------|-------------|-------------|-------------|-------------|----------|
| | 5 ft. 3 in. | 4ft. 8½ in. | 3 ft. 6 in. | 3 ft. 0in. | 2 ft. 6 in. | 2 ft. 3 in. | 2 ft. 0 in. | 1 ft. 8 in. | |
| FEDERAL RAILWAYS. | | | | | | | | | |
| | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. |
| South Australia .. | .. | 597.46 | 477.95 | .. | .. | .. | .. | .. | 1,075.41 |
| Western Australia .. | .. | 453.99 | .. | .. | .. | .. | .. | .. | 453.99 |
| Federal Capital Territory .. | .. | 4.94 | .. | .. | .. | .. | .. | .. | 4.94 |
| Northern Territory .. | .. | .. | 198.68 | .. | .. | .. | .. | .. | 198.68 |
| Total .. | .. | 1,056.39 | 676.63 | .. | .. | .. | .. | .. | 1,733.02 |

| | | | | | | | | | |
|------------------------|----------|----------|-----------|----|--------|----|-------|----|-----------|
| STATE RAILWAYS. | | | | | | | | | |
| New South Wales .. | .. | 5,278.28 | 39.51 | .. | .. | .. | .. | .. | 5,317.79 |
| Victoria .. | 4,211.58 | .. | .. | .. | 121.77 | .. | .. | .. | 4,333.35 |
| Queensland .. | .. | .. | 5,875.15 | .. | .. | .. | 30.26 | .. | 5,905.41 |
| South Australia .. | 1,163.51 | .. | 1,200.58 | .. | .. | .. | .. | .. | 2,373.09 |
| Western Australia .. | .. | .. | 3,554.84 | .. | .. | .. | .. | .. | 3,554.84 |
| Tasmania .. | .. | .. | 638.55 | .. | .. | .. | 24.83 | .. | 663.38 |
| Total .. | 5,375.09 | 5,278.28 | 11,317.63 | .. | 121.77 | .. | 55.09 | .. | 22,147.86 |

PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

| | | | | | | | | | |
|----------------------|-------|-------|--------|-------|------|----|--------|----|----------|
| New South Wales .. | 45.00 | 80.46 | 36.67 | .. | .. | .. | 26.25 | .. | 183.38 |
| Victoria .. | 13.94 | .. | .. | 11.00 | .. | .. | .. | .. | 24.94 |
| Queensland .. | .. | .. | 120.72 | .. | 7.00 | .. | 152.59 | .. | 280.31 |
| South Australia .. | .. | .. | 33.80 | .. | .. | .. | .. | .. | 33.80 |
| Western Australia .. | .. | .. | 278.35 | .. | .. | .. | .. | .. | 278.35 |
| Tasmania .. | .. | .. | 178.41 | .. | .. | .. | 16.49 | .. | 194.90 |
| Total .. | 58.94 | 80.46 | 647.95 | 11.00 | 7.00 | .. | 195.33 | .. | 1,000.68 |

PRIVATE RAILWAYS OPEN FOR SPECIAL PURPOSES.

| | | | | | | | | | |
|----------------------|-------|--------|--------|------|--------|------|--------|------|----------|
| New South Wales .. | .. | 169.25 | 3.50 | .. | .. | .. | 10.26 | .. | 183.01 |
| Victoria .. | 18.09 | .. | .. | 4.50 | .. | .. | 12.60 | .. | 35.19 |
| Queensland .. | .. | .. | 227.50 | .. | 240.00 | .. | 526.88 | .. | 994.38 |
| South Australia .. | .. | .. | .. | .. | 2.00 | 3.75 | 15.35 | .. | 21.10 |
| Western Australia .. | .. | .. | 534.75 | .. | .. | .. | 14.00 | 9.00 | 557.75 |
| Tasmania .. | .. | .. | 21.00 | .. | .. | .. | 17.08 | .. | 38.08 |
| Total .. | 18.09 | 169.25 | 786.75 | 4.50 | 242.00 | 3.75 | 536.17 | 9.00 | 1,829.51 |

ALL RAILWAYS.

| | | | | | | | | | |
|------------------------------|----------|----------|-----------|-------|--------|------|--------|------|-----------|
| New South Wales .. | 45.00 | 5,527.99 | 79.68 | .. | .. | .. | 36.51 | .. | 5,689.18 |
| Victoria .. | 4,243.61 | .. | .. | 15.50 | 121.77 | .. | 12.60 | .. | 4,393.48 |
| Queensland .. | .. | .. | 6,223.37 | .. | 247.00 | .. | 709.73 | .. | 7,180.10 |
| South Australia .. | 1,163.51 | 597.46 | 1,521.33 | .. | 2.00 | 3.75 | 15.35 | .. | 3,503.40 |
| Western Australia .. | .. | 453.99 | 4,367.94 | .. | .. | .. | 14.00 | 9.00 | 4,844.93 |
| Tasmania .. | .. | .. | 837.96 | .. | .. | .. | 58.40 | .. | 893.36 |
| Federal Capital Territory .. | .. | 4.94 | .. | .. | .. | .. | .. | .. | 4.94 |
| Northern Territory .. | .. | .. | 198.68 | .. | .. | .. | .. | .. | 198.68 |
| GRAND TOTAL | 5,452.12 | 6,584.38 | 13,428.96 | 15.50 | 370.77 | 3.75 | 846.59 | 9.00 | 26,711.07 |

§ 2. Federal Railways.

1. **General.**—On the 1st January, 1911, the Commonwealth Government took over the Northern Territory from the South Australian Government, and at the same time the railways from Darwin to Pine Creek in the Northern Territory, and from Port Augusta to Oodnadatta in South Australia, came under its control. Subsequently the construction of a transcontinental line from Port Augusta in South Australia to Kalgoorlie in Western Australia was undertaken by the Commonwealth Government, while a line has been constructed in the Federal Capital Territory, connecting Canberra with the New South Wales railway system at Queanbeyan. In 1917 an Act was passed by which all the Federal railways were vested in a Commonwealth Railways Commissioner.

2. **Northern Territory Railway.**—(i) *Darwin to Katherine.* On the 1st January, 1911, the line from Darwin to Pine Creek came under the jurisdiction of the then Department of External Affairs, and was worked under the Administrator of the Northern Territory. As mentioned above, the management of this railway is now vested in the Commonwealth Railways Commissioner.

In the Northern Territory Acceptance Act the construction of a transcontinental line from South Australia is provided for. The extension of the line from Pine Creek to Katherine River was completed, and the first train ran through to Emungalan (Katherine River) on 13th May, 1917.

(ii) *Proposed Extension.* The selection of the route of the transcontinental line from North to South has been the subject of investigations by the Parliamentary Standing Committee on Public Works which, after a tour of inspection and the taking of a mass of evidence, recommended to Parliament that—

- (a) the existing line (Darwin to Emungalan) be extended to Daly Waters on the understanding that it is to form portion of an eventual line through Newcastle Waters to Camooweal;
- (b) a light low-level line be constructed from Oodnadatta to Alice Springs;
- (c) these lines be regarded as providing sufficient railway development for the Northern Territory for some years;
- (d) the 3 ft. 6 in. gauge be adopted.

Several other recommendations relative to sleepers and rails, bridges, labour, and the developmental policy of the Northern Territory were also submitted.

(iii) *Line Authorized for Construction.* The Northern Territory Railway Extension Act 1923 provides for the construction of a 3 ft. 6 in. gauge line from the present terminus Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,000.

3. **Port Augusta to Oodnadatta Railway.**—This line was taken over by the Commonwealth Government from 1st January, 1911, but was held under lease by the South Australian Government until 31st December, 1913. From the 1st January, 1914, the line has been worked by the South Australian Government for and on behalf of the Commonwealth. It is provided in the Northern Territory Acceptance Act that the Commonwealth shall annually reimburse the State with the interest payable on the amount of loans raised by the State for the purpose of constructing the railway, and the agreement for working the line prescribes that the Commonwealth is responsible to the State for any financial loss incurred by the State in the working and management of the railway, but is entitled to receive from the State any profit made in such working and management.

4. **Federal Capital Territory Railway—Queanbeyan-Canberra.**—This line was built by the Railway Construction Branch of the Public Works Department, New South Wales, and was completed and taken over by the Chief Commissioner of Railways for that State, who has since worked the line for and on behalf of the Commonwealth Government. The line was opened for departmental goods traffic on 25th May, 1914. It connects with the New South Wales railway system at Queanbeyan, is 4.94 miles in length, and has sidings of an aggregate length of 2.00 miles.

5. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—In the issue of the Year Book for 1918 (No. 11, pp. 663 to 666 and p. 1213), a short history of the construction of the Trans-Australian line is given, also a description of the country through which the line passes between Kalgoorlie and Port Augusta.

On the 22nd October, 1917, the first through train left Port Augusta with an official party on board for Kalgoorlie. It should be mentioned that owing to deviations from the original route, the length of this line was reduced from 1,063.39 miles to 1,051.45 miles, a saving of 11.94 miles.

6. Lines Open, Surveyed, etc.—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1923, together with the lines which have been or are being surveyed :—

RAILWAYS, FEDERAL, 30th JUNE, 1923.

| Terminals. | Miles. |
|---|----------|
| OPEN FOR TRAFFIC. | |
| Trans-Australian—Port Augusta (South Australia) to Kalgoorlie (Western Australia) | 1,051.45 |
| Port Augusta to Oodnadatta (South Australia) | 477.95 |
| Queanbeyan to Canberra (Federal Capital Territory) | 4.94 |
| Northern Territory Railway—Darwin to Emungalan, Katherine River | 198.68 |
| Total opened for traffic | 1,733.02 |
| SURVEYED, OR BEING SURVEYED. | |
| Katherine River to Mataranka (Northern Territory) | 65.44 |
| Mataranka to Daly Waters (Northern Territory) | 95.00 |
| Kingoonya to Boorthanna (South Australia) | 176.44 |
| Canberra to Jervis Bay (Federal Capital Territory) | 140.22 |
| Canberra (Federal Capital Territory) to Federal Capital Territory Border in the direction of Yass (New South Wales) | 11.67 |
| Daly Waters (Northern Territory) to Oodnadatta (South Australia) | 851.50 |
| Port Augusta to Crystal Brook (South Australia) | 69.25 |
| Total surveyed or being surveyed | 1,409.52 |

7. Mileage open, worked, and Train miles run.—The following table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1919 to 1923 :—

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1919 TO 1923.

| Year ended 30th June— | Railway. | | | | Total. |
|--------------------------|-----------------------|-------------|-------------------------------|------------------------|--------|
| | Trans- Australian. | Oodnadatta. | Federal Capital Territory. | Northern Territory. | |
| MILES OPEN FOR TRAFFIC. | | | | | |
| | Miles. | Miles. | Miles. | Miles. | Miles. |
| 1919 | 1,051 | 478 | 5 | 200 | 1,734 |
| 1920 | 1,051 | 478 | 5 | 199 | 1,733 |
| 1921 | 1,051 | 478 | 5 | 199 | 1,733 |
| 1922 | 1,051 | 478 | 5 | 199 | 1,733 |
| 1923 | 1,051 | 478 | 5 | 199 | 1,733 |

**RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES,
1919 TO 1923—continued.**

| Year ended 30th June— | Railway. | | | | Total. |
|--------------------------|-----------------------|-------------|-------------------------------|------------------------|--------|
| | Trans- Australian. | Oodnadatta. | Federal Capital Territory. | Northern Territory. | |

AVERAGE MILES WORKED.

| | Miles. | Miles. | Miles. | Miles. | Miles. |
|------------|--------|--------|--------|--------|--------|
| 1919 | 1,051 | 478 | 5 | 200 | 1,734 |
| 1920 | 1,051 | 478 | 5 | 199 | 1,733 |
| 1921 | 1,051 | 478 | 5 | 199 | 1,733 |
| 1922 | 1,051 | 478 | 5 | 199 | 1,733 |
| 1923 | 1,051 | 478 | 5 | 199 | 1,733 |

TRAIN MILES RUN.

| | | | | | |
|------------|---------|---------|-------|--------|---------|
| 1919 | 368,886 | 221,763 | 1,015 | 83,209 | 674,873 |
| 1920 | 401,709 | 262,917 | 1,000 | 60,348 | 725,974 |
| 1921 | 472,290 | 320,292 | 1,058 | 17,270 | 810,910 |
| 1922 | 471,061 | 242,751 | 1,263 | 16,078 | 731,153 |
| 1923 | 449,609 | 303,187 | 1,065 | 20,823 | 774,684 |

8. Cost of Construction and Equipment.—In the following table particulars are given of the cost of construction and equipment for traffic of the undermentioned railways for each of the years 1919 to 1923 :—

RAILWAYS, FEDERAL.—CAPITAL COST, 1919 TO 1923.

| Year ended 30th June— | Railway. | | | | Total. |
|--------------------------|-----------------------|--------------------|--------------------------------------|------------------------|--------|
| | Trans- Australian. | Oodnadatta. (a) | Federal Capital Territory. (b) | Northern Territory. | |

TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.

| | £ | £ | £ | £ | £ |
|------------|-----------|-----------|--------|-----------|------------|
| 1919 | 6,911,624 | 2,282,973 | 48,124 | 1,707,392 | 10,950,113 |
| 1920 | 7,053,900 | 2,282,934 | 48,144 | 1,709,932 | 11,094,910 |
| 1921 | 7,137,365 | 2,287,193 | 48,144 | 1,711,585 | 11,184,287 |
| 1922 | 7,213,923 | 2,296,139 | 48,144 | 1,718,021 | 11,276,227 |
| 1923 | 7,301,433 | 2,309,136 | 48,144 | 1,725,666 | 11,384,379 |

COST PER MILE OPEN.

| | | | | | |
|------------|-------|-------|-------|-------|-------|
| 1919 | 6,574 | 4,776 | 9,742 | 8,556 | 6,316 |
| 1920 | 6,710 | 4,776 | 9,746 | 8,607 | 6,402 |
| 1921 | 6,788 | 4,785 | 9,746 | 8,615 | 6,454 |
| 1922 | 6,861 | 4,804 | 9,746 | 8,647 | 6,507 |
| 1923 | 6,944 | 4,381 | 9,746 | 8,686 | 6,569 |

(a) Exclusive of Rolling Stock the property of South Australian Government Railways.

(b) Exclusive of Rolling Stock the property of New South Wales Government Railways.

9. Gross Revenue.—(i) *Total, per average mile worked, and per train mile run.* The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train mile run for each of the undermentioned railways for the financial years 1919 to 1923 inclusive :—

RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC., 1919 TO 1923.

| Year ended 30th June— | Railway. | | | | Total. |
|-----------------------|-------------------|-------------|----------------------------|---------------------|--------|
| | Trans-Australian. | Oodnadatta. | Federal Capital Territory. | Northern Territory. | |

TOTAL GROSS REVENUE.

| | £ | £ | £ | £ | £ |
|------------|---------|---------|-------|--------|---------|
| 1919 | 175,134 | 58,286 | 407 | 32,237 | 266,064 |
| 1920 | 213,388 | 74,709 | 571 | 27,089 | 315,757 |
| 1921 | 206,871 | 112,091 | 1,240 | 12,214 | 332,416 |
| 1922 | 206,826 | 99,462 | 1,847 | 14,364 | 322,499 |
| 1923 | 208,925 | 108,770 | 2,883 | 15,835 | 336,413 |

GROSS REVENUE PER AVERAGE MILE WORKED.

| 1919 | 167 | 122 | 82 | 162 | 153 |
|------------|-----|-----|-----|-----|-----|
| 1920 | 203 | 156 | 116 | 136 | 182 |
| 1921 | 197 | 235 | 251 | 62 | 192 |
| 1922 | 197 | 208 | 374 | 72 | 186 |
| 1923 | 199 | 228 | 584 | 80 | 194 |

GROSS REVENUE PER TRAIN-MILE RUN.

| | d. | d. | d. | d. | d. |
|------------|--------|-------|--------|--------|--------|
| 1919 | 113.94 | 63.08 | 96.24 | 92.98 | 94.62 |
| 1920 | 127.49 | 68.25 | 137.04 | 107.73 | 104.39 |
| 1921 | 105.12 | 83.99 | 281.29 | 169.74 | 98.38 |
| 1922 | 105.37 | 98.34 | 350.97 | 214.41 | 105.86 |
| 1923 | 111.52 | 86.10 | 649.69 | 182.51 | 104.22 |

(ii) *Classification and Percentages.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The subjoined table shows the gross revenue for 1919 to 1923 classified according to the three chief sources of receipts, together with their percentages on the total revenue. The respective totals of the three items are given in the preceding table.

RAILWAYS, FEDERAL.—RECEIPTS, VARIOUS SOURCES, 1919 TO 1923.

| Year ended 30th June | Railway. | | | | | | | | | |
|-------------------------|-------------------|-----------|-------------|-----------|----------------------------|-----------|---------------------|-----------|--------|-----------|
| | Trans-Australian. | | Oodnadatta. | | Federal Capital Territory. | | Northern Territory. | | Total. | |
| | Total. | Per Cent. | Total. | Per Cent. | Total. | Per Cent. | Total. | Per Cent. | Total. | Per Cent. |

COACHING TRAFFIC RECEIPTS.

| | £ | % | £ | % | £ | % | £ | % | £ | % |
|---------|---------|-------|--------|-------|----|------|-------|-------|---------|-------|
| 1919 .. | 93,867 | 53.60 | 12,455 | 21.37 | 34 | 8.25 | 5,250 | 16.28 | 111,606 | 41.95 |
| 1920 .. | 95,671 | 44.83 | 10,600 | 14.19 | 15 | 2.63 | 4,433 | 16.36 | 110,719 | 35.07 |
| 1921 .. | 128,953 | 62.34 | 18,589 | 16.58 | 20 | 1.61 | 2,700 | 22.11 | 150,262 | 45.20 |
| 1922 .. | 139,192 | 67.30 | 19,669 | 19.78 | 48 | 2.60 | 2,685 | 18.69 | 161,594 | 50.11 |
| 1923 .. | 138,304 | 66.20 | 17,927 | 16.48 | 47 | 1.63 | 397 | 2.51 | 156,675 | 46.57 |

GOODS AND LIVE STOCK RECEIPTS.

| 1919 .. | 50,485 | 28.83 | 43,194 | 74.11 | 373 | 91.75 | 19,676 | 61.04 | 113,728 | 42.74 |
|---------|--------|-------|--------|-------|-------|-------|--------|-------|---------|-------|
| 1920 .. | 82,490 | 38.67 | 61,401 | 82.19 | 453 | 79.33 | 14,930 | 55.12 | 159,274 | 50.44 |
| 1921 .. | 39,750 | 19.21 | 90,802 | 81.01 | 1,210 | 97.58 | 4,859 | 39.78 | 136,621 | 41.10 |
| 1922 .. | 31,081 | 15.03 | 76,710 | 77.12 | 1,779 | 96.32 | 5,194 | 36.16 | 114,764 | 35.58 |
| 1923 .. | 31,005 | 14.84 | 87,552 | 80.49 | 2,819 | 97.78 | 7,163 | 45.23 | 128,539 | 38.21 |

MISCELLANEOUS RECEIPTS.

| 1919 .. | 30,783 | 17.57 | 2,636 | 4.52 | .. | .. | 7,311 | 22.68 | 40,730 | 15.31 |
|---------|--------|-------|-------|------|-----|-------|-------|-------|--------|-------|
| 1920 .. | 35,227 | 16.50 | 2,708 | 3.62 | 103 | 18.04 | 7,726 | 28.52 | 45,764 | 14.49 |
| 1921 .. | 38,168 | 18.45 | 2,700 | 2.41 | 10 | 0.81 | 4,655 | 38.11 | 45,533 | 13.70 |
| 1922 .. | 36,553 | 17.67 | 3,083 | 3.10 | 20 | 1.08 | 6,485 | 45.15 | 46,141 | 14.31 |
| 1923 .. | 39,616 | 18.96 | 3,291 | 3.03 | 17 | 0.59 | 8,275 | 52.26 | 51,199 | 15.22 |

10. Working Expenses.—(i) *Total.* The following table shows the total working expenses, and the percentages on the corresponding gross revenues of each railway for each year from 1919 to 1923.

Details of the annual expenditure on (a) maintenance of ways, works and buildings, (b) locomotives, carriages and wagons repairs and renewals, (c) traffic expenses, and (d) compensation, general and miscellaneous charges, are given in (iii) following.

RAILWAYS, FEDERAL.—WORKING EXPENSES, TOTAL, ETC.. 1919 TO 1923.

| Year ended 30th June— | Railway. | | | | Total. |
|-----------------------|-------------------|-------------|----------------------------|---------------------|--------|
| | Trans-Australian. | Oodnadatta. | Federal Capital Territory. | Northern Territory. | |

TOTAL WORKING EXPENSES.

| | £ | £ | £ | £ | £ |
|------------|---------|---------|-------|--------|---------|
| 1919 | 243,988 | 111,362 | 1,288 | 50,617 | 407,255 |
| 1920 | 256,027 | 112,192 | 801 | 48,617 | 417,637 |
| 1921 | 298,209 | 172,552 | 655 | 27,551 | 498,967 |
| 1922 | 255,434 | 177,369 | 1,308 | 26 511 | 460,622 |
| 1923 | 250,280 | 178,181 | 1,588 | 30,984 | 461,033 |

PERCENTAGE OF WORKING EXPENSES ON REVENUE.

| | % | % | % | % | % |
|------------|--------|--------|--------|--------|--------|
| 1919 | 139.31 | 191.06 | 316.45 | 157.02 | 153.07 |
| 1920 | 119.98 | 150.17 | 140.28 | 179.47 | 132.26 |
| 1921 | 144.15 | 153.94 | 52.82 | 225.57 | 150.10 |
| 1922 | 123.50 | 178.33 | 70.82 | 184.56 | 142.83 |
| 1923 | 119.79 | 163.81 | 55.08 | 195.67 | 137.04 |

(ii) *Averages.* The following table shows the working expenses per average mile worked and per train-mile run for each railway for the years 1919 to 1923 :—

RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES, 1919 TO 1923.

| Year ended 30th June— | Railway. | | | | Total. |
|-----------------------|-------------------|-------------|----------------------------|---------------------|--------|
| | Trans-Australian. | Oodnadatta. | Federal Capital Territory. | Northern Territory. | |

WORKING EXPENSES PER AVERAGE MILE WORKED.

| | £ | £ | £ | £ | £ |
|------------|-----|-----|-----|-----|-----|
| 1919 | 232 | 233 | 261 | 254 | 235 |
| 1920 | 243 | 235 | 162 | 245 | 241 |
| 1921 | 284 | 361 | 133 | 139 | 288 |
| 1922 | 243 | 371 | 265 | 133 | 266 |
| 1923 | 238 | 373 | 322 | 156 | 266 |

WORKING EXPENSES PER TRAIN-MILE RUN.

| | d. | d. | d. | d. | d. |
|------------|--------|--------|--------|--------|--------|
| 1919 | 158.74 | 120.52 | 304.55 | 145.99 | 145.00 |
| 1920 | 152.96 | 102.41 | 192.40 | 193.34 | 138.07 |
| 1921 | 151.54 | 129.30 | 148.59 | 382.87 | 147.67 |
| 1922 | 130.14 | 175.36 | 248.55 | 395.73 | 151.20 |
| 1923 | 133.60 | 141.04 | 357.85 | 357.11 | 142.83 |

(iii) *Classification and Percentages.* The subjoined table shows the distribution of working expenses among four chief heads of expenditure for the years 1919 to 1923, together with their percentages on the total working expenses which are given in 10 (i) hereinbefore :—

RAILWAYS, FEDERAL.—DISTRIBUTION OF WORKING EXPENSES, 1919 TO 1923.

| Year ended 30th June. | Railway. | | | | | | | | Total. | |
|--------------------------|-------------------|-----------|-------------|-----------|----------------------------|-----------|---------------------|-----------|--------|-----------|
| | Trans-Australian. | | Oodnadatta. | | Federal Capital Territory. | | Northern Territory. | | | |
| | Total. | Per Cent. | Total. | Per Cent. | Total. | Per Cent. | Total. | Per Cent. | Total. | Per Cent. |

MAINTENANCE.

| | £ | % | £ | % | £ | % | £ | % | £ | % |
|---------|--------|-------|--------|-------|-----|-------|--------|-------|---------|-------|
| 1919 .. | 71,309 | 29.23 | 45,284 | 40.87 | 601 | 46.86 | 21,500 | 42.48 | 138,694 | 34.06 |
| 1920 .. | 72,197 | 28.20 | 43,967 | 39.19 | 553 | 69.04 | 20,664 | 42.51 | 137,381 | 32.89 |
| 1921 .. | 99,559 | 33.38 | 57,920 | 33.57 | 254 | 38.73 | 13,236 | 48.04 | 170,969 | 34.27 |
| 1922 .. | 75,941 | 29.73 | 78,780 | 44.42 | 736 | 56.27 | 14,683 | 55.38 | 170,140 | 36.94 |
| 1923 .. | 72,822 | 29.10 | 83,014 | 46.59 | 810 | 51.01 | 16,350 | 52.77 | 172,996 | 37.52 |

LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.

| | £ | % | £ | % | £ | % | £ | % | £ | % |
|---------|---------|-------|--------|-------|-----|-------|--------|-------|---------|-------|
| 1919 .. | 118,163 | 48.43 | 52,377 | 47.03 | 351 | 27.25 | 20,796 | 41.09 | 191,687 | 47.07 |
| 1920 .. | 119,753 | 46.77 | 53,437 | 47.63 | 196 | 24.47 | 19,841 | 40.81 | 193,227 | 46.27 |
| 1921 .. | 128,680 | 43.15 | 94,381 | 54.70 | 340 | 51.91 | 9,269 | 33.64 | 232,670 | 46.63 |
| 1922 .. | 112,317 | 43.97 | 79,640 | 44.90 | 508 | 38.84 | 4,848 | 18.29 | 197,313 | 42.84 |
| 1923 .. | 110,652 | 44.21 | 73,476 | 41.24 | 721 | 45.40 | 7,528 | 24.30 | 192,377 | 41.73 |

TRAFFIC EXPENSES.

| | £ | % | £ | % | £ | % | £ | % | £ | % |
|---------|--------|-------|--------|-------|-----|-------|-------|-------|--------|-------|
| 1919 .. | 47,572 | 19.50 | 11,471 | 10.30 | 336 | 26.09 | 7,104 | 14.03 | 66,483 | 16.32 |
| 1920 .. | 54,606 | 21.33 | 12,803 | 11.41 | 52 | 6.49 | 6,881 | 14.15 | 74,342 | 17.80 |
| 1921 .. | 41,294 | 13.85 | 17,656 | 10.23 | 61 | 9.31 | 4,129 | 14.99 | 63,140 | 12.65 |
| 1922 .. | 38,416 | 15.04 | 16,609 | 9.36 | 64 | 4.89 | 6,248 | 23.57 | 61,337 | 13.31 |
| 1923 .. | 37,139 | 14.84 | 18,589 | 10.43 | 57 | 3.59 | 6,481 | 20.92 | 62,266 | 13.51 |

OTHER CHARGES.

| | £ | % | £ | % | £ | % | £ | % | £ | % |
|---------|--------|-------|-------|------|----|----|-------|------|--------|------|
| 1919 .. | 6,944 | 2.84 | 2,230 | 2.00 | .. | .. | 1,217 | 2.40 | 10,391 | 2.55 |
| 1920 .. | 9,471 | 3.70 | 1,985 | 1.77 | .. | .. | 1,231 | 2.53 | 12,687 | 3.04 |
| 1921 .. | 28,676 | 9.62 | 2,595 | 1.50 | .. | .. | 917 | 3.33 | 32,188 | 6.45 |
| 1922 .. | 28,760 | 11.26 | 2,340 | 1.32 | .. | .. | 732 | 2.76 | 31,832 | 6.91 |
| 1923 .. | 29,667 | 11.85 | 3,102 | 1.74 | .. | .. | 625 | 2.01 | 33,394 | 7.24 |

11. *Passenger Journeys, and Tonnage of Goods and Live Stock.*—(i) *General.* In the next table particulars are given of the passenger journeys, and tonnage of goods and live stock carried on the Federal railways during the years 1919 to 1923 :—

RAILWAYS, FEDERAL.—TRAFFIC, 1919 TO 1923.

| Year ended 30th June. | Railway. | | | | Total. |
|--------------------------|-------------------|-------------|----------------------------|---------------------|--------|
| | Trans-Australian. | Oodnadatta. | Federal Capital Territory. | Northern Territory. | |

PASSENGER JOURNEYS.

| | No. | No. | No. | No. | No. |
|---------|--------|--------|-----|-------|---------|
| 1919 .. | 23,942 | 51,516 | 93 | 5,842 | 81,393 |
| 1920 .. | 22,968 | 55,742 | .. | 4,818 | 83,528 |
| 1921 .. | 29,686 | 69,407 | .. | 3,704 | 102,797 |
| 1922 .. | 28,003 | 64,477 | .. | 3,343 | 95,823 |
| 1923 .. | 32,914 | 67,311 | .. | 3,063 | 103,288 |

TONNAGE OF GOODS AND LIVE STOCK CARRIED.

| | tons. | tons. | tons. | tons. | tons. |
|---------|---------|--------|--------|--------|---------|
| 1919 .. | 116,971 | 57,565 | 4,385 | 35,124 | 214,045 |
| 1920 .. | 53,722 | 94,892 | 4,691 | 23,122 | 176,427 |
| 1921 .. | 20,089 | 87,879 | 6,913 | 3,610 | 118,491 |
| 1922 .. | 20,780 | 76,089 | 9,817 | 2,251 | 108,937 |
| 1923 .. | 33,252 | 72,392 | 14,702 | 2,954 | 123,300 |

(ii) *Passenger Mileage Summary.* The appended table gives particulars of " Passenger-Mileage " on each of the Federal Railways for the year 1922-23 :—

RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1922-23.

| Railway. | Passenger Train Mileage. | Number of Passenger Journeys. | Total " Passenger-Miles." | Amount Received from Passengers. | Average Number of Passengers carried per Train Mile. | Average Mileage per Passenger Journey. | Average Earnings per " Passenger-Mile." | Average Fare per Passenger Journey. | Density of Traffic per Average Mile Worked. |
|------------------------------|--------------------------|-------------------------------|---------------------------|----------------------------------|--|--|---|-------------------------------------|---|
| | | | ,000 omitted. | £ | | Miles. | d. | £ s. d. | |
| Trans-Australian .. | 364,861 | 32,914 | 25,243 | 115,857 | 69 | 767 | 1.10 | 3 10 5 | 24,008 |
| Oodnadatta .. | 45,730 | 67,311 | 2,521 | 14,032 | 57 | 37 | 1.34 | 0 4 12 | 5,274 |
| Federal Capital Territory .. | | | | | | | | | |
| Northern Territory .. | 5,503 | 3,063 | 258 | 2,191 | 47 | 84 | 2.04 | 0 14 4 | 1,296 |

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal Railways for the year 1922-23 :—

RAILWAYS, FEDERAL.—"TON-MILEAGE" SUMMARY, 1922-23.

| Railway. | Goods Train Mileage. | Total Tons Carried. | Total " Ton-Miles." | Goods Earnings. | Average Freight-paying Load per Train Mile. | Average Haul per ton. | Earnings per " Ton-Mile." | Density of Traffic per Average Mile Worked. |
|------------------------------|----------------------|---------------------|---------------------|-----------------|---|-----------------------|---------------------------|---|
| | | | ,000 omitted. | £ | | Miles. | d. | |
| Trans-Australian .. | 84,748 | 33,252 | 5,743 | 31,005 | 68 | 173 | 1.30 | 5,462 |
| Oodnadatta .. | 257,457 | 72,392 | 9,604 | 87,552 | 37 | 133 | 2.19 | 26,093 |
| Federal Capital Territory .. | 1,055 | 14,702 | 74 | 2,819 | 68 | 5 | 9.20 | 14,879 |
| Northern Territory .. | 15,320 | 2,954 | 414 | 7,163 | 27 | 140 | 4.16 | 2,082 |

12. *Passenger Fares, Goods Rates, and Parcel Rates.*—(i) *Passenger Fares.* In the following table the fares for certain specified distances on the Trans-Australian, Oodnadatta, and Northern Territory railways are set out :—

RAILWAYS, FEDERAL.—PASSENGER MILEAGE RATES, 1923.

| Single Fare for a Journey of— | Trans-Australian Railway. | | | | Oodnadatta Railway. | | | | Northern Territory Railway. | | | |
|-------------------------------|---------------------------|-----------------------------|---------------|-----------------------------|---------------------|-----------------------------|---------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------------------|
| | First Class. | | Second Class. | | First Class. | | Second Class. | | First Class. | | Second Class. | |
| | Fare. | Average per Passenger-Mile. | Fare. | Average per Passenger-Mile. | Fare. | Average per Passenger-Mile. | Fare. | Average per Passenger-Mile. | Fare. | Average per Passenger-Mile. | Fare. | Average per Passenger-Mile. |
| | Miles. | s. d. | d. | s. d. | d. | s. d. | d. | s. d. | s. d. | d. | s. d. | d. |
| 50 | 9 7 | 2.30 | 6 5 | 1.54 | 9 9 | 2.34 | 6 7 | 1.58 | 11 6 | 2.76 | 7 8 | 1.84 |
| 100 | 19 2 | 2.30 | 12 9 | 1.53 | 19 9 | 2.37 | 13 3 | 1.59 | 22 11 | 2.75 | 15 3 | 1.83 |
| 200 | 38 4 | 2.30 | 25 7 | 1.54 | 39 3 | 2.36 | 26 0 | 1.56 | 45 10 | 2.75 | 30 7 | 1.83 |
| 300 | 57 6 | 2.30 | 38 4 | 1.53 | 58 6 | 2.34 | 39 3 | 1.57 | | | | |
| 400 | 64 7 | 1.94 | 43 1 | 1.29 | 78 0 | 2.34 | 52 0 | 1.56 | | | | |
| 500 | 77 1 | 1.85 | 51 5 | 1.23 | | | | | | | | |
| 600 | 89 7 | 1.79 | 59 9 | 1.20 | | | | | | | | |
| 700 | 102 1 | 1.75 | 68 1 | 1.17 | | | | | | | | |
| 800 | 110 5 | 1.66 | 73 8 | 1.11 | | | | | | | | |
| 900 | 117 9 | 1.57 | 78 6 | 1.05 | | | | | | | | |
| 1,000 | 122 11 | 1.48 | 81 11 | 0.98 | | | | | | | | |
| 1,051 | 125 0 | 1.43 | 83 4 | 0.95 | | | | | | | | |

In the case of the Trans-Australian railway, through passengers have to pay for sleeping berths and meals in addition to the ordinary fares. For the first class sleeping-berths the charge is twelve shillings and sixpence for a night or part of a night, the corresponding charge for the second class being eight shillings. There is a fixed scale of charges made in respect of the meals served to other than through passengers between Port Augusta and Kalgoorlie. It will be observed that both the first and second class fares on the Trans-Australian railway have a constant rate for distances up to 300

miles and then have a tapering character beyond that distance; while those for the Oodnadatta and the Northern Territory railways are practically uniform for all distances.

(ii) *Agricultural Produce and Ordinary Goods Rates.* The rates for agricultural produce and ordinary goods on the Trans-Australian and Northern Territory railways are set out in the following tables :—

RAILWAYS, FEDERAL.—RATES FOR AGRICULTURAL PRODUCE, 1923.

| For a haul of— | Northern Territory Railway. | | Trans-Australian Railway. | | For a haul of— | Trans-Australian Railway, <i>contd.</i> | |
|----------------|------------------------------|-----------------------|------------------------------|-----------------------|----------------|---|-----------------------|
| | Rate per Ton in Truck Loads. | Average per Ton-Mile. | Rate per Ton in Truck Loads. | Average per Ton-Mile. | | Rate per Ton in Truck Loads. | Average per Ton-Mile. |
| 50 miles .. | s. d. 8 5 | d. 2.02 | s. d. 6 3 | d. 1.50 | 600 miles .. | s. d. 38 4 | d. 0.77 |
| 100 " .. | 13 8 | 1.64 | 10 1 | 1.21 | 700 " .. | 42 6 | 0.78 |
| 200 " .. | 24 1 | 1.44 | 17 9 | 1.07 | 800 " .. | 46 8 | 0.70 |
| 300 " .. | .. | .. | 24 11 | 0.99 | 900 " .. | 50 5 | 0.67 |
| 400 " .. | .. | .. | 27 6 | 0.83 | 1,000 " .. | 53 0 | 0.65 |
| 500 " .. | .. | .. | 33 4 | 0.80 | 1,051 " .. | 55 0 | 0.63 |

RAILWAYS, FEDERAL.—RATES FOR ORDINARY GOODS, 1923.

| For a Haul of— | Northern Territory Railway. | | | | | Trans-Australian Railway. | | | | | For a Haul of— | Trans-Australian Railway, <i>contd.</i> | | | | | | | |
|----------------|-----------------------------|-----------------------|---------------|-----------------------|-----------|---------------------------|-----------------------|---------------|-----------------------|----|----------------|---|-----------------------|---------------|-----------------------|-----------|----|---|------|
| | Class of Freight. | | | | | Class of Freight. | | | | | | Class of Freight. | | | | | | | |
| | Highest. | | Lowest. | | | Highest. | | Lowest. | | | | Highest. | | Lowest. | | | | | |
| | Rate per Ton. | Average per Ton-Mile. | Rate per Ton. | Average per Ton-Mile. | | Rate per Ton. | Average per Ton-Mile. | Rate per Ton. | Average per Ton-Mile. | | | Rate per Ton. | Average per Ton-Mile. | Rate per Ton. | Average per Ton-Mile. | | | | |
| Miles. | <i>s.</i> | <i>d.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> | <i>d.</i> | | <i>s.</i> | <i>d.</i> | <i>d.</i> | <i>s.</i> | <i>d.</i> | <i>d.</i> | | | |
| 50 | 49 | 3 | 11.82 | 8 | 5 | 2.02 | 36 | 2 | 8.68 | 6 | 3 | 1.50 | 600 | 223 | 9 | 4.48 | 38 | 4 | 0.77 |
| 100 | 89 | 11 | 10.79 | 13 | 8 | 1.54 | 66 | 2 | 7.94 | 10 | 1 | 1.21 | 700 | 239 | 5 | 4.10 | 42 | 6 | 0.73 |
| 200 | 165 | 6 | 9.93 | 24 | 1 | 1.45 | 122 | 5 | 7.34 | 17 | 9 | 1.07 | 800 | 255 | 0 | 3.83 | 46 | 8 | 0.70 |
| 300 | .. | .. | .. | .. | .. | .. | 164 | 6 | 6.58 | 24 | 11 | 0.99 | 900 | 269 | 1 | 3.59 | 50 | 5 | 0.67 |
| 400 | .. | .. | .. | .. | .. | .. | 172 | 2 | 5.17 | 27 | 6 | 0.83 | 1,000 | 281 | 7 | 3.38 | 53 | 9 | 0.65 |
| 500 | .. | .. | .. | .. | .. | .. | 201 | 4 | 4.83 | 33 | 4 | 0.80 | 1,051 | 287 | 6 | 3.28 | 55 | 0 | 0.63 |

In the above tables it will be seen that the average rates per ton-mile are of a tapering character.

(iii) *Parcel Rates.* On the Trans-Australian railway, parcels weighing between 85 and 112 lbs. are taken by passenger train 500 miles for thirteen shillings and threepence.

13. *Rolling Stock, 1923.*—The following table shows the numbers of locomotives and rolling stock in use on the Federal railways, classified according to gauge :—

RAILWAYS, FEDERAL.—LOCOMOTIVES AND ROLLING STOCK, 1923.

| Railway. | Gauge. | | Total. | Gauge. | | Total. | Gauge. | | Total. |
|--------------------|--------------|-------------|--------|-----------------|-------------|--------|----------------------------|-------------|--------|
| | 4 ft. 8½ in. | 3 ft. 6 in. | | 4 ft. 8½ in. | 3 ft. 6 in. | | 4 ft. 8½ in. | 3 ft. 6 in. | |
| | LOCOMOTIVES. | | | COACHING STOCK. | | | STOCK OTHER THAN COACHING. | | |
| Trans-Australian | 63 | 1 | 69 | 48 | .. | 48 | 736 | 31 | 767 |
| Northern Territory | .. | 13 | 13 | .. | 9 | 9 | .. | 302 | 302 |
| ° Total | 63 | 14 | 82 | 48 | 9 | 57 | 736 | 333 | 1,069 |

The Oodnadatta and Federal Capital Territory Railways are worked by the South Australian and New South Wales Government Railways Departments respectively, which use their own rolling stock.

14. **Employees.**—The following table shows the number of employees on the Federal railways at 30th June in each year from 1919 to 1923 inclusive, classified according to salaried and wages staffs :—

RAILWAYS, FEDERAL.—EMPLOYEES, 1919 TO 1923.

| Railway. | 30th June— | | | | | | | | | |
|----------------------------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|
| | 1919. | | 1920. | | 1921. | | 1922. | | 1923. | |
| | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. |
| Trans-Australian | No. 194 | No. 846 | No. 184 | No. 798 | No. 172 | No. 961 | No. 161 | No. 802 | No. 157 | No. 852 |
| Oodnadatta (a) .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Federal Capital Territory (b) .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Northern Territory | 20 | 150 | 12 | 79 | 7 | 60 | 8 | 54 | 9 | 71 |
| Total .. | 214 | 996 | 196 | 877 | 179 | 1,021 | 169 | 856 | 166 | 923 |

(a) Worked by South Australian Government Railways.

(b) Worked by New South Wales Government Railways.

Of the 157 salaried staff employed on the Trans-Australian Railway, 23 were engaged in the Construction Branch and 173 of the wages staff were similarly employed. Only 15 of the wages staff of the Northern Territory Railway were on the strength of the Construction Branch at the 30th June, 1923.

The average numbers of general employees during the year were 748 on working expenses and 34 on capital works on the Trans-Australian Railway, and 63 and 3 respectively on the Northern Territory Railway.

15. **Accidents.**—(i) *Classification.* The table hereunder furnishes a classification of accidents on the Federal railways during the year 1922-23 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1922-23.

[illegible]

(ii) *Particulars for Quinquennium 1919-23.* The following table shows the number of accidents in each of the years 1919 to 1923 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1919 TO 1923.

| Railway. | Number of Persons— | | | | | | | | | |
|------------------------------|--------------------|-------|-------|-------|-------|----------|-------|-------|-------|-------|
| | Killed. | | | | | Injured. | | | | |
| | 1919. | 1920. | 1921. | 1922. | 1923. | 1919. | 1920. | 1921. | 1922. | 1923. |
| Trans-Australian .. | 1 | 3 | .. | .. | 1 | 10 | 6 | 3 | 8 | 14 |
| Oodnadatta .. | .. | .. | .. | .. | .. | 8 | 12 | 6 | 8 | 7 |
| Federal Capital Territory .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Northern Territory .. | .. | .. | 3 | .. | .. | .. | 3 | 1 | 1 | 1 |
| Total .. | 1 | 3 | 3 | .. | 1 | 18 | 21 | 10 | 17 | 22 |

§ 3. State Railways.

1. *Administration and Control of State Railways.*—The policy of Government control of the railways has been adopted in each State, and earlier issues of the Year Book (see No. 6, p. 693) contain a description of the methods adopted by the various State Governments in the control and management of their railways.

2. *Mileage Open, 1919 to 1923.*—The following table shows the length of State railways open for traffic on the 30th June in the years 1919 to 1923 :—

RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|-----------------------|--------|-----------|---------|----------|----------|--------|-------------|
| | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. |
| 1919 | 4,825 | 4,190 | 5,469 | 2,290 | 3,538 | 601 | 20,913 |
| 1920 | 5,015 | 4,214 | 5,685 | 2,333 | 3,538 | 629 | 21,414 |
| 1921 | 5,043 | 4,267 | 5,752 | 2,333 | 3,538 | 630 | 21,563 |
| 1922 | 5,116 | 4,317 | 5,799 | 2,357 | 3,538 | 637 | 21,764 |
| 1923 | 5,318 | 4,333 | 5,906 | 2,373 | 3,555 | 663 | 22,148 |

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1923 accompanies this chapter.

The following statement shows the actual mileage opened for traffic in the year 1923, and also the annual average increase in mileage opened since 1913 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.

| Mileage. | N.S.W. | Vic. | Q'land. | S. Aust. | W. Aust. | Tas. | Total all States. |
|--|--------|-------|---------|----------|----------|-------|-------------------|
| Mileage opened during 1922-23 | 201.71 | 16.49 | 106.08 | 15.88 | 16.61 | 26.58 | 383.35 |
| Average annual mileage increase for 10 years to 30th June, 1923 .. | 138.8 | 68.6 | 152.5 | 68.3 | 70.1 | 15.5 | 513.8 |

(i) *New South Wales.* During the year ended 30th June, 1923, the extensions from Coffs Harbour to Glenreagh (27.80 miles); Canowindra to Eugowra (26.21 miles); Barmedman to Rankin's Springs (71.69 miles); Westmead to Castle Hill (6.73 miles). Urunga to Raleigh (3.43 miles); and from Griffith to Hillston (66.70 miles) were opened for traffic. A few small readjustments of actual mileage due to remeasurement on existing lines were made, reducing the mileage opened by 0.85 miles.

(ii) *Victoria.* The following lines were opened for traffic during 1922-23:—Won Wron to Woodside (9.68 miles) and from Colac to Alvie (9.65 miles). Owing to the whole system being remeasured the existing mileage was reduced by 2.84 miles—the net increase for the year being 16.49 miles.

(iii) *Queensland.* The increase of 106.08 miles in the mileage opened for traffic in 1922-23 was due to the opening of the following lines:—Kalbar to Mt. Edwards (10.39 miles); Murgon to Proston (26.18 miles); 5 miles 37 chains to Owen's Creek (0.65 miles); Merinda to Collinsville (48.69 miles); and Innisfail to El Arish (20.28 miles.) Certain minor readjustments to the mileage of existing lines reduced the mileage by 0.11 miles.

(iv) *South Australia.* A line from Long Plains to Bowmans (15.88 miles) was opened for traffic during the year.

(v) *Western Australia.* A line from Waroona to Lake Clifton (16.61 miles) was opened during the year.

(vi) *Tasmania.* During the year the line from Myalla to Wiltshire (27.16 miles) was opened for traffic, and several adjustments decreased the existing mileage by 0.58 miles, making a total net increase of 26.58 miles.

3. *Length and Gauge of Railway Systems in each State.*—In all the States the Government railways are grouped, for the convenience of administration and management, into several divisions or systems. A summary showing concisely the gauge and length of the main and branch lines included in each division or system of the different States for the year ended 30th June, 1923, is given in the Transport and Communication Bulletin No. 15 issued by this Bureau.

4. *Average Mileage Worked and Train-Miles Run.*—The total mileage open for traffic at the end of each financial year has been given previously, but, in considering the returns relating to revenue and expenditure and other matters, it is desirable to know the average number of miles actually worked during each year. The next table shows the average number of miles worked and the total number of train-miles run by the Government railways of each State during the years 1919 to 1923 inclusive:—

RAILWAYS, STATE.—MILEAGE WORKED AND MILES RUN, 1919 TO 1923.

| Year ended 30th June. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
|--------------------------|------------|------------|------------|-----------|-----------|-----------|-------------|
| AVERAGE MILEAGE WORKED. | | | | | | | |
| 1919 | 4,737 | 4,159 | 5,324 | 2,285 | 3,507 | 599 | 20,611 |
| 1920 | 4,966 | 4,194 | 5,635 | 2,316 | 3,538 | 635 | 21,284 |
| 1921 | 5,019 | 4,237 | 5,733 | 2,333 | 3,538 | 637 | 21,497 |
| 1922 | 5,077 | 4,279 | 5,784 | 2,344 | 3,538 | 635 | 21,657 |
| 1923 | 5,197 | 4,314 | 5,868 | 2,359 | 3,552 | 663 | 21,953 |
| TRAIN-MILES RUN. | | | | | | | |
| 1919 | 19,935,202 | 13,081,655 | 9,942,744 | 5,412,924 | 4,256,627 | 1,107,890 | 53,687,042 |
| 1920 | 22,834,889 | 15,022,465 | 10,443,619 | 5,192,038 | 4,851,446 | 1,266,625 | 59,611,082 |
| 1921 | 22,792,053 | 15,533,556 | 10,735,723 | 5,712,491 | 4,918,113 | 1,387,417 | 61,079,353 |
| 1922 | 21,887,065 | 15,856,815 | 9,634,532 | 5,629,957 | 4,564,631 | 1,433,099 | 59,006,099 |
| 1923 | 21,693,861 | 16,394,239 | 10,917,584 | 6,206,256 | 4,505,299 | 1,434,816 | 61,152,055 |

In some years the average mileage worked in Tasmania is greater than the mileage open owing to the Railway Department having running powers over certain private lines.

5. Lines under Construction, and Lines Authorized, 1923.—(i) *General.* The following statement gives particulars up to the 30th June, 1923, of the mileage of State railways (a) under construction, and (b) authorized for construction but not commenced :—

**RAILWAYS, STATE.—MILEAGE UNDER CONSTRUCTION AND AUTHORIZED,
30th JUNE, 1923.**

| Particulars. | N.S.W. | Vic. | Q'land. | S.A. | W.A. | Tas. | All States. |
|--|--------|--------|----------|--------|--------|------|-------------|
| Mileage under construction | 430.19 | 72.00 | 574.00 | 100.12 | 132.50 | 9.25 | 1,318.06 |
| Mileage authorized but not commenced | 209.84 | 262.75 | 1,178.00 | 33.75 | 103.50 | .. | 1,787.84 |

(a) Exclusive of 155.70 miles on which work has been suspended.

(b) Exclusive of 130 miles on which work has been suspended.

(c) Exclusive of 87.75 miles on which work has been suspended.

(ii) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875, there are still, in some of the States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States is to extend the existing lines inland, in the form of light railways, as settlement increases, and although it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting is kept in view.

(a) *New South Wales.* The total mileage under construction was 430.19 miles, consisting of the following lines :—Molong to Dubbo (80.15 miles); Binnaway to Werris Creek (91.04 miles); Coonabarabran to Burren Junction (95.35 miles); Gilmore to Batlow (21.53 miles); Glenreagh to Dorriggo (42.95 miles); Regent's Park to Cabramatta and Enfield (8.90 miles); Macksville to Urunga (17.28 miles); Tarana to Oberon (14.74 miles); Sydenham to Botany (5.20 miles); The Rock to Pulletop (26.12 miles); and Roslyn to Taralga (15.83 miles). Work on the City and Suburban Electric Railway (11.09 miles) was recommenced after being shut down for four and a half years.

A line from Trida to Menindie (155.70 miles) has been commenced, but work was suspended at 30th June, 1923.

(b) *Victoria.* In this State 72 miles of 5 ft. 3 in. gauge lines are being constructed, viz. :—Red Cliffs to Millewa North (35 miles); Annuello to Bumbang (20 miles); and from Kerang to Gonn's Crossing (17 miles).

(c) *Queensland.* In previous issues of the Year Book details were given of the scheme of railway construction under the provisions of the North Coast Railway Act 1910 (see Year Book No. 15, p. 551). On the 30th June, 1923, the following lines, of an aggregate length of 574 miles, were under construction :—Northern Division (North Coast Railway)—El Arish to Cardwell (24 miles); Lilypond to Cardwell (28 miles); Farleigh to Proserpine (68 miles); Central Division—Many Peaks to Monto (45 miles); Rannes to Monto (106 miles); Baralaba to Castle Creek (53 miles); and Longreach to Winton (110 miles); Southern Division—Mundubbera to Monto (65 miles); Winderera Branch (12 miles); and Tara towards Surat (50 miles). The following lines are partially constructed, but work thereon is temporarily suspended :—Wallaville to Kalliwa (18 miles); Yaraka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Mt. Molloy Extension (7 miles); and Winton to 37-Mile (37 miles); a total of 130 miles.

(d) *South Australia.* In this State the lines under construction on the 30th June, 1923, were as follows:—Wandana to Penong (54.00 miles), and Bowmans to Redhill (46.12 miles), an aggregate distance of 100.12 miles.

(e) *Western Australia.* The following lines were in course of construction by the Public Works Department on the 30th June, 1923:—Esperance northward (60 miles). Mt. Marshall Extension (32.50 miles), and from Busselton to Margaret River (40 miles). a total of 120.75 miles. The construction of the lines from Narembeen to Merredin (53.25 miles, and Dwarda to Narrogin (33.50 miles) are at present in abeyance.

(f) *Tasmania.* At 30th June, 1923, the following lines were under construction:—Melrose Extension (4.75 miles) and Preolenna Extension (4.50 miles); a total of 9.25 miles.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1923, the following lines had been authorized for construction but not commenced:—Gilgandra to Collie (21.51 miles); Grafton to South Grafton, with bridge over Clarence River (2.34 miles); Ballina to Buyong (15.20 miles); Bankstown to Regent's Park (2.35 miles); Camurra to Boggabilla (70 miles); Ungarie to Naradhan (37 miles); Uranquinty towards Moon's Siding (28.44 miles); and Wyalong to Condobolin (33 miles); a total distance of 209.84 miles.

(b) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1923:—5 ft. 3 in. gauge: Port Fairy to Yambuk (11.50 miles); Hopetoun to Patchewollock (27.25 miles); Moama to Balranald (120 miles); Gonn Crossing to Stony Crossing (44 miles); Euston Extension (30 miles); Mildura to Murray River (10 miles); and Gol Gol Extension (20 miles); an aggregate of 262.75 miles.

(c) *Queensland.* In addition to the new lines upon which work has been commenced, Parliament has authorized the construction of the following parts of the Great Western Railway: Section A, from Quilpie to Eromanga (120 miles); Section B, from Powell's Creek (224 miles); Section C, from 37-Mile to Springvale (324 miles); and Section D, from Moonah Creek (217 miles). The following lines were also authorized for construction: Branch to Windera (12 miles); Inglewood to Texas and Silverspur (44 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Juandah to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles); Dobbryn to Myally Creek (50 miles); Peeramoon towards Boonjee (11 miles); a total of 1,178 miles.

(d) *South Australia.* Parliament has authorized the construction of lines on the 5-ft. 3-in. gauge from Paringa to Renmark, a distance of 2.50 miles; on the 3-ft. 6-in. gauge from Kielpa to Mangalo Hall (26.25 miles); and from Kowulka to Sec. 2, Hundred of Kevin (5 miles). The conversion of certain 3-ft. 6-in. gauge lines in the north-west of the State to 5-ft. 3-in. gauge has also been authorized. About 175 miles of line are involved in this scheme.

(e) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1923:—Piawing northwards (24 miles); Bridgetown-Jarnadup Ext. (44.50 miles); and Albury to Denmark (35 miles); a distance of 103.50 miles.

(f) *Tasmania.* There were no new railways authorized on which work had not been commenced at 30th June, 1923.

6. *Cost of Construction and Equipment.*—(i) *General.* The total cost of construction and equipment of the State railways at the 30th June, 1923, amounted to £242,142,140, or to an average cost of £10,933 per mile open for traffic. Particulars of the capital expenditure incurred on lines open for traffic are given in the following table:—

RAILWAYS, STATE.—MILEAGE AND COST TO 30th JUNE, 1923.

| State. | Length of Line Open (Route). | Total Cost of Construction and Equipment. | Average Cost per Mile Open. | Cost per Head of Population. | Mileage per 1,000 of Population. |
|------------------------|------------------------------|---|-----------------------------|------------------------------|----------------------------------|
| | Miles. | £ | £ | £ | Miles. |
| New South Wales (a) .. | 5,317.79 | 87,713,871 | 16,494 | 40.06 | 2.42 |
| Victoria ... | 4,333.35 | (b) 64,615,435 | (b) 14,883 | 40.19 | 2.69 |
| Queensland ... | 5,905.41 | 44,823,991 | 7,590 | 55.63 | 7.33 |
| South Australia (a) .. | 2,373.09 | (c) 20,234,003 | (c) 8,527 | 39.16 | 4.59 |
| Western Australia (a) | 3,554.84 | 18,555,115 | 5,219 | 53.30 | 10.21 |
| Tasmania .. | 663.38 | 6,199,725 | 9,346 | 28.99 | 3.10 |
| All States .. | 22,147.86 | 242,142,140 | 10,933 | 42.62 | 3.89 |

(a) Exclusive of Federal railways.

(b) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).

(c) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

The lowest average cost (£5,219) per mile open is in Western Australia, and the highest (£16,494) in New South Wales, as compared with an average of £10,933 for all States. There were few costly engineering difficulties in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contracts considerably reduced expenditure, particularly in respect of all goldfield contracts.

In the above table the figures relating to cost of construction and equipment do not include the discounts and flotation charges on loans allocated to the railways. This will explain the reason for the differences between the amounts shown above for Queensland, South Australia, and Western Australia and those shown in the Railway Reports for these States.

(ii) *Variations of Cost per mile.* The average cost per mile open of certain sections of line (exclusive of equipment) ranges from £51,955 to as low as £1,287.

(iii) *Capital Cost, All Lines.* The increase in the total capital cost of construction and equipment of Government railways for each year from 1919 to 1923 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN, 1919 TO 1923.

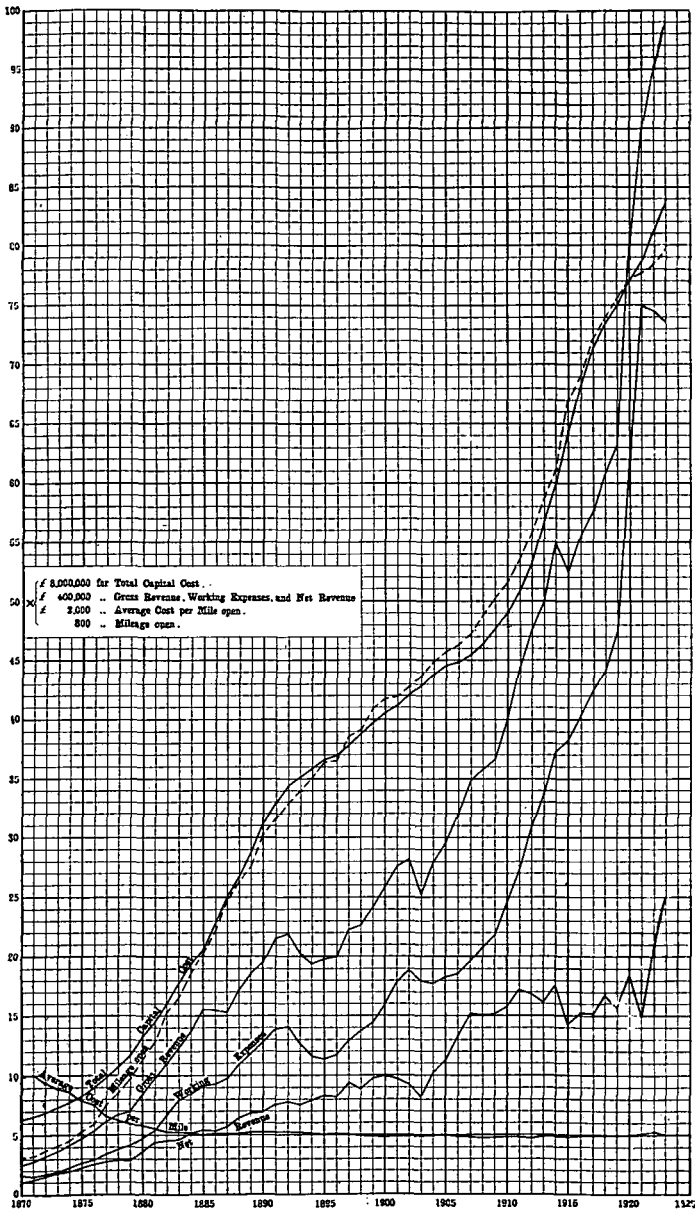
| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
|---------------------------|--------------|---------------|--------------|---------------|--------------|-------------|-------------------|
| TOTAL COST OF LINES OPEN. | | | | | | | |
| 1919 .. | £ 76,601,591 | £ a57,403,576 | £ 38,244,494 | £ b18,649,979 | £ 17,995,941 | £ 5,076,014 | (a, b)213,971,595 |
| 1920 .. | 79,318,917 | a58,287,897 | 40,005,868 | b19,105,510 | 18,062,354 | 5,240,276 | (a, b)220,020,822 |
| 1921 .. | 80,756,194 | a59,798,696 | 41,368,640 | b19,270,704 | 18,169,980 | 5,363,192 | (a, b)224,747,406 |
| 1922 .. | 83,789,871 | a62,941,364 | 42,519,012 | b19,742,821 | 18,330,557 | 5,753,381 | (a, b)233,077,006 |
| 1923 .. | 87,713,871 | a64,615,435 | 44,823,991 | b20,234,003 | 18,555,115 | 6,199,725 | (a, b)242,142,140 |
| COST PER MILE OPEN. | | | | | | | |
| 1919 .. | 15,877 | (a)13,743 | 6,992 | (b)8,186 | 5,086 | 8,438 | (a, b)10,243 |
| 1920 .. | 15,815 | (a)13,832 | 7,037 | (b)8,188 | 5,105 | 8,344 | (a, b)10,275 |
| 1921 .. | 16,014 | (a)14,016 | 7,192 | (b)8,259 | 5,135 | 8,547 | (a, b)10,495 |
| 1922 .. | 16,378 | (a)14,560 | 7,332 | (b)8,376 | 5,181 | 9,035 | (a, b)10,707 |
| 1923 .. | 16,494 | (a)14,883 | 7,590 | (b)8,527 | 5,219 | 9,346 | (a, b)10,933 |

(a) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).

(b) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

(iv) *Loan Expenditure.* The subjoined table shows the total loan expenditure on Government railways (including lines both open and unopen) in each State, except Tasmania, and on Government railways and tramways in the latter State for the years 1919 to 1923 :—

FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1923.



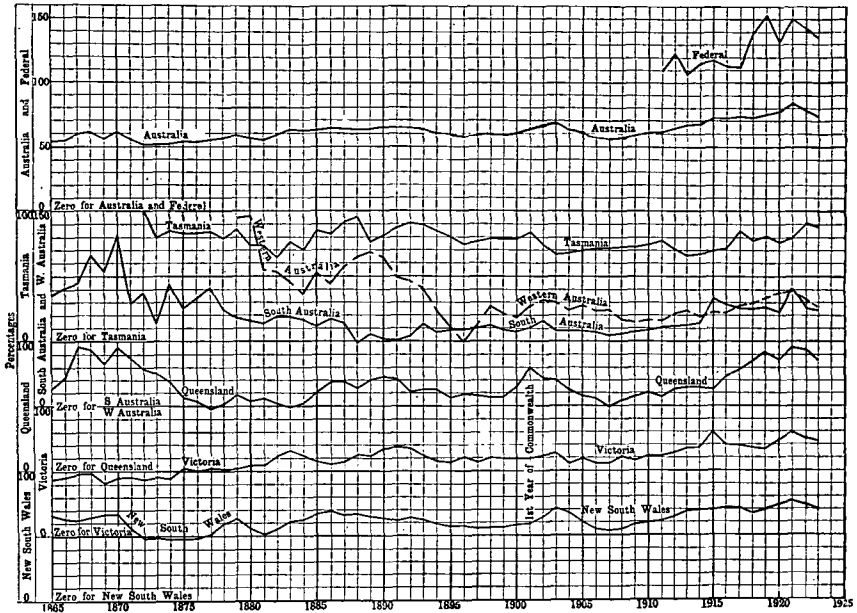
(See page 317.)

EXPLANATION.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curve for the total capital cost, the vertical side of each square represents £3,000,000.

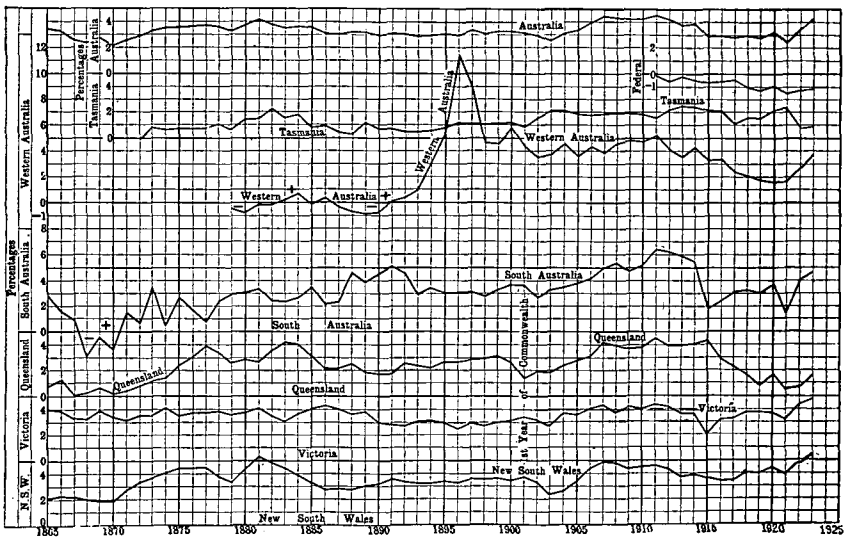
In the curves for (i) gross revenue, (ii) working expenses, and (iii) net revenue, the vertical height of each small square represents £400,000. For the curve of average cost per mile open, the vertical side of each small square represents £2,000. The mileage open is shown by a dotted curve, the vertical side of each square representing 300 miles.

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT
RAILWAYS, 1865 TO 1923.



EXPLANATION.—The base of each small square represents throughout one year. The vertical side of a small square denotes throughout 10 per cent., the heavy zero lines being different for each State and Australia, with, however, two exceptions, the zero lines for South Australia and Western Australia being identical, as is also the case with the zero line for Australia and Federal.

PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT
RAILWAYS, 1865 TO 1923.



EXPLANATION.—The base of each small square represents throughout one year. The vertical side of a small square denotes 1 per cent., the thick zero lines, however, for each State and Australia being different, but the zero line for Federal is the same as that for Australia.

Where the curve for any State falls below that State's zero line, loss is indicated, the working expenses having exceeded the gross revenue.

RAILWAYS, STATE.—LOAN EXPENDITURE, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. (a) | All States. |
|-----------------------|-----------|-----------|-----------|----------|----------|----------|-------------|
| | £ | £ | £ | £ | £ | £ | £ |
| 1919 .. | 1,441,105 | 878,384 | 1,416,302 | 324,041 | 154,720 | 39,165 | 4,253,717 |
| 1920 .. | 2,387,303 | 982,182 | 2,356,498 | 236,925 | 93,676 | 91,221 | 6,147,805 |
| 1921 .. | 3,598,351 | 1,685,329 | 1,760,932 | 252,097 | 145,724 | 254,079 | 7,696,512 |
| 1922 .. | 4,399,725 | 3,478,021 | 1,226,280 | 572,482 | 323,296 | 490,990 | 10,490,794 |
| 1923 .. | 4,177,273 | 1,674,643 | 2,134,162 | 659,120 | 519,557 | 254,120 | 9,418,875 |

(a) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1923 :—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1923.

| State .. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania, a | All States. |
|-------------|------------|------------|------------|------------|------------|-------------|-------------|
| | £ | £ | £ | £ | £ | £ | £ |
| Expenditure | 96,065,477 | 63,371,086 | 47,868,192 | 22,683,533 | 18,420,575 | 6,596,175 | 255,014,038 |

(a) Including tramways.

7. Gross Revenue.—(i) *General*. The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1919 to 1923 inclusive :—

RAILWAYS, STATE.—GROSS REVENUE, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|-----------------------|--------|-----------|---------|----------|----------|------|-------------|
|-----------------------|--------|-----------|---------|----------|----------|------|-------------|

TOTAL GROSS REVENUE.

| | £ | £ | £ | £ | £ | £ | £ |
|---------|------------|------------|-----------|-----------|-----------|---------|------------|
| 1919 .. | 9,058,173 | 6,432,277 | 3,984,597 | 2,391,409 | 1,872,897 | 401,364 | 25,040,717 |
| 1920 .. | 13,083,847 | 8,224,972 | 4,960,150 | 2,726,540 | 2,291,876 | 506,177 | 31,793,562 |
| 1921 .. | 14,267,205 | 9,795,763 | 5,279,412 | 2,942,028 | 2,720,032 | 600,045 | 35,604,485 |
| 1922 .. | 15,213,019 | 10,791,082 | 5,154,530 | 3,297,347 | 2,827,856 | 588,297 | 37,872,131 |
| 1923 .. | 15,221,333 | 11,347,057 | 5,420,400 | 3,710,922 | 2,915,985 | 572,417 | 39,188,114 |

GROSS REVENUE PER AVERAGE MILE WORKED.

| | £ | £ | £ | £ | £ | £ | £ |
|---------|-------|-------|-----|-------|-----|-----|-------|
| 1919 .. | 2,102 | 1,547 | 748 | 1,047 | 534 | 670 | 1,215 |
| 1920 .. | 2,635 | 1,961 | 880 | 1,177 | 648 | 797 | 1,494 |
| 1921 .. | 2,843 | 2,312 | 921 | 1,261 | 768 | 942 | 1,656 |
| 1922 .. | 2,996 | 2,522 | 891 | 1,406 | 799 | 927 | 1,749 |
| 1923 .. | 2,929 | 2,630 | 924 | 1,573 | 821 | 863 | 1,785 |

GROSS REVENUE PER TRAIN-MILE RUN.

| | d. | d. | d. | d. | d. | d. | d. |
|---------|--------|--------|--------|--------|--------|--------|--------|
| 1919 .. | 119.88 | 118.46 | 96.18 | 106.03 | 105.60 | 86.95 | 111.94 |
| 1920 .. | 137.51 | 131.40 | 113.99 | 126.03 | 113.38 | 95.91 | 127.80 |
| 1921 .. | 150.23 | 151.35 | 118.02 | 123.60 | 132.74 | 102.79 | 139.90 |
| 1922 .. | 166.82 | 163.33 | 128.40 | 140.56 | 148.68 | 98.51 | 150.04 |
| 1923 .. | 168.39 | 166.11 | 119.15 | 143.50 | 155.34 | 95.74 | 153.80 |

The amounts of revenue earned per average mile worked and per train-mile run in respect of (a) coaching and (b) goods and live stock traffic, separately, are given elsewhere.

(ii) *Coaching, Goods, and Miscellaneous Receipts.* (a) *Totals.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The subjoined table shows the gross revenue for 1919 to 1923, classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

RAILWAYS, STATE.—COACHING, GOODS, ETC., RECEIPTS, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|--------------------------|--------|-----------|---------|----------|----------|------|-------------|
|--------------------------|--------|-----------|---------|----------|----------|------|-------------|

COACHING TRAFFIC RECEIPTS.

| | £ | £ | £ | £ | £ | £ | £ |
|---------|-----------|-----------|-----------|-----------|---------|---------|------------|
| 1919 .. | 3,978,180 | 3,241,194 | 1,392,476 | 807,747 | 637,851 | 188,329 | 10,245,777 |
| 1920 .. | 5,714,131 | 4,205,420 | 1,833,349 | 1,130,659 | 764,872 | 236,763 | 13,885,194 |
| 1921 .. | 6,384,031 | 4,897,258 | 1,885,677 | 1,185,878 | 911,007 | 270,635 | 15,534,486 |
| 1922 .. | 6,636,530 | 5,376,620 | 1,898,050 | 1,240,354 | 973,153 | 263,340 | 16,388,047 |
| 1923 .. | 6,694,353 | 5,664,738 | 2,008,282 | 1,270,590 | 972,318 | 262,373 | 16,872,654 |

GOODS AND LIVE STOCK TRAFFIC RECEIPTS.

| | | | | | | | |
|---------|-----------|-----------|-----------|-----------|-----------|---------|------------|
| 1919 .. | 5,583,982 | 2,957,789 | 2,483,698 | 1,536,209 | 1,127,539 | 203,412 | 13,892,629 |
| 1920 .. | 6,807,792 | 3,721,122 | 3,000,829 | 1,556,224 | 1,394,908 | 261,657 | 16,742,532 |
| 1921 .. | 7,270,856 | 4,411,276 | 3,267,289 | 1,719,556 | 1,637,979 | 320,798 | 18,627,754 |
| 1922 .. | 7,953,909 | 4,815,056 | 3,105,485 | 2,000,716 | 1,688,482 | 312,890 | 19,876,538 |
| 1923 .. | 7,868,769 | 4,953,192 | 3,290,471 | 2,378,034 | 1,768,211 | 294,831 | 20,553,508 |

MISCELLANEOUS RECEIPTS.

| | | | | | | | |
|---------|---------|---------|---------|--------|---------|--------|-----------|
| 1919 .. | 396,011 | 233,294 | 108,423 | 47,453 | 107,507 | 9,623 | 902,311 |
| 1920 .. | 561,924 | 298,430 | 125,972 | 39,657 | 132,096 | 7,757 | 1,165,836 |
| 1921 .. | 612,318 | 487,229 | 126,446 | 36,594 | 171,046 | 8,612 | 1,442,245 |
| 1922 .. | 622,580 | 599,406 | 150,995 | 56,277 | 166,221 | 12,067 | 1,607,546 |
| 1923 .. | 658,211 | 729,127 | 121,647 | 62,298 | 175,456 | 15,213 | 1,761,952 |

(1) *New South Wales.* The increase in revenue over 1922 was considerably less than anticipated. Owing to drought large numbers of starving stock and considerable quantities of fodder were carried at reduced rates.

(2) *Victoria.* The expansion of traffic due to electrification increased business on the suburban lines, while the heavy increase in the carriage of live stock together with the greater receipts for the sale of electrical power were responsible for the rise of £555,975 over the receipts for the previous year.

(3) *Queensland.* The greater volume of goods and live stock traffic was the chief source of the increased revenue for the year.

(4) *South Australia.* The heavier traffic in minerals during the year was principally responsible for the increased revenue.

(5) *Western Australia.* Practically all sources of revenue with the exception of that from the carriage of mails and passengers showed increases over the previous year, the most noteworthy being in goods and mineral traffic.

(6) *Tasmania.* The falling off in the revenue during the year from the carriage of minerals was partly responsible for the smaller returns.

(b) *Percentages.* The following table shows for the two years 1921-22 and 1922-23 the percentage which each class of receipts bears to the total gross revenue :—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS, 1922 AND 1923.

| State. | 1922. | | | 1923. | | |
|----------------------|-----------|-----------------------|----------------|-----------|-----------------------|----------------|
| | Coaching. | Goods and Live Stock. | Miscellaneous. | Coaching. | Goods and Live Stock. | Miscellaneous. |
| | % | % | % | % | % | % |
| New South Wales .. | 43.63 | 52.28 | 4.09 | 43.98 | 51.69 | 4.33 |
| Victoria .. | 49.83 | 44.62 | 5.55 | 49.92 | 43.65 | 6.43 |
| Queensland .. | 36.82 | 60.25 | 2.93 | 37.05 | 60.71 | 2.24 |
| South Australia .. | 37.62 | 60.67 | 1.71 | 34.24 | 64.08 | 1.68 |
| Western Australia .. | 34.41 | 59.71 | 5.88 | 33.35 | 60.64 | 6.01 |
| Tasmania .. | 44.76 | 53.19 | 2.05 | 45.83 | 51.51 | 2.66 |
| All States .. | 43.27 | 52.48 | 4.25 | 43.05 | 52.45 | 4.50 |

(c) *Averages for Coaching Traffic Receipts.* The subjoined table shows the receipts from coaching traffic per average mile of line worked, and per passenger-train-mile, in each State for the year ended the 30th June, 1923 :—

RAILWAYS, STATE.—COACHING TRAFFIC RECEIPTS, AVERAGES, 1923.

| State. | Number of Passenger-Train-Miles. | Coaching Traffic Receipts. | | |
|----------------------|----------------------------------|----------------------------|--------------------------|---------------------------|
| | | Gross. | Per Average Mile Worked. | Per Passenger-Train-Mile. |
| | No. | £. | £ | d. |
| New South Wales .. | 11,822,488 | 6,694,353 | 1,288 | 135.89 |
| Victoria .. | 10,625,918 | 5,664,738 | 1,313 | 127.94 |
| Queensland .. | 3,954,281 | 2,008,282 | 342 | 121.88 |
| South Australia .. | 2,832,652 | 1,270,590 | 539 | 107.65 |
| Western Australia .. | 1,846,008 | 972,318 | 274 | 126.41 |
| Tasmania .. | 691,733 | 262,373 | 395 | 91.02 |
| All States .. | 31,773,080 | 16,872,654 | 769 | 127.44 |

(d) *Averages for Goods and Live Stock Traffic.* The following table shows the gross receipts from goods and live stock traffic per mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1923 :—

RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1923.

| State. | Number of Goods-Train-Miles. | Goods and Live-Stock Tonnage. | Goods and Live-Stock Traffic Receipts. | | | |
|----------------------|------------------------------|-------------------------------|--|--------------------------|-----------------------|------------------|
| | | | Gross. | Per Average Mile Worked. | Per Goods-Train-Mile. | Per Ton Carried. |
| | No. | Tons. | £ | £ | d. | d. |
| New South Wales .. | 9,871,373 | 13,801,310 | 7,868,769 | 1,514 | 191.31 | 136.83 |
| Victoria .. | 5,768,321 | 7,517,216 | 4,953,192 | 1,148 | 206.08 | 158.13 |
| Queensland .. | 6,963,303 | 4,208,989 | 3,290,471 | 561 | 113.40 | 187.62 |
| South Australia .. | 3,373,604 | 3,283,594 | 2,378,034 | 1,008 | 169.17 | 173.81 |
| Western Australia .. | 2,659,291 | 2,624,320 | 1,768,211 | 498 | 159.57 | 161.70 |
| Tasmania .. | 743,083 | 568,346 | 294,831 | 444 | 95.22 | 124.50 |
| All States .. | 29,378,975 | 32,003,775 | 20,553,508 | 936 | 167.90 | 154.13 |

8. **Working Expenses.**—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the railways of the different States, but also on different portions of the same system. Where traffic is light, the percentage of working expenses is naturally greater than where traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure and the percentage of the total of these expenses upon the corresponding gross revenues in each State for each year 1919 to 1923 :—

RAILWAYS, STATE.—WORKING EXPENSES, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
|--|------------|-----------|-----------|-----------|-----------|-----------|-------------|
| TOTAL WORKING EXPENSES. | | | | | | | |
| | £ | £ | £ | £ | £ | £ | £ |
| 1919 | 6,904,450 | 4,279,663 | 3,690,445 | 1,829,634 | 1,567,591 | 324,595 | 18,596,378 |
| 1920 | 9,570,983 | 6,058,912 | 4,323,392 | 2,007,361 | 2,000,473 | 390,191 | 24,351,312 |
| 1921 | 11,032,677 | 7,835,756 | 5,048,498 | 2,655,465 | 2,422,004 | 476,187 | 29,470,587 |
| 1922 | 11,116,302 | 8,026,665 | 4,810,362 | 2,537,110 | 2,328,843 | 538,066 | 29,357,348 |
| 1923 | 10,649,974 | 8,181,926 | 4,714,262 | 2,781,547 | 2,210,348 | 514,350 | 29,052,407 |
| PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE. | | | | | | | |
| | % | % | % | % | % | % | % |
| 1919 | 69.33 | 66.53 | 92.62 | 76.51 | 83.70 | 80.87 | 74.26 |
| 1920 | 73.15 | 73.66 | 87.16 | 73.62 | 87.29 | 77.08 | 76.59 |
| 1921 | 77.33 | 79.99 | 95.63 | 90.26 | 89.04 | 79.35 | 82.77 |
| 1922 | 73.07 | 74.38 | 93.32 | 76.94 | 82.35 | 91.46 | 77.52 |
| 1923 | 69.97 | 72.11 | 86.97 | 74.96 | 75.80 | 89.86 | 74.14 |

(a) *New South Wales.* The decrease in working expenses over 1921–22 was due to the reduction in the basic wage and the partial restoration of the 48 hour week. These decreases were off-set to a certain extent by the increased mileage open and the drought conditions prevailing.

(b) *Victoria.* The increase in working expenses over 1921–22 was due to the larger expenditure incurred in connexion with the maintenance of way and works, and maintenance of rolling stock and in the electrical engineering branch. The considerable decrease in the expenditure on locomotive power is attributable to the electrification of the suburban railways.

(c) *Queensland.* Reductions in salaries, saving in fuel costs owing to the opening of the railway to Bowen coalfields, and economies effected by improved loading systems were responsible for the decrease in expenditure compared with the previous year.

(d) *South Australia.* The growth in working expenses arose in connexion with the Rolling Stock and the Transportation and Traffic Branches and was due to the increase of 576,299 in the number of train-miles run.

(e) *Western Australia.* A fairly general decrease was recorded, except in the case of pensions and gratuities, the decline being due to improved methods in train loading and in other directions. The train mileage decreased by 59,322 miles.

(f) *Tasmania.* The working expenses of practically all branches showed a general decrease.

(g) *All States.* In each State the percentages of the working expenses on the gross earnings during the last five years generally reached the maximum in 1921–22.

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1923 is illustrated in the graph which accompanies this chapter.

(ii) *Averages.* The following table shows the working expenses per average mile worked and per train-mile run in each State for the years 1919 to 1923 :—

RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|--|--------|-----------|---------|----------|----------|-------|-------------|
| WORKING EXPENSES PER AVERAGE MILE WORKED. | | | | | | | |
| | £ | £ | £ | £ | £ | £ | £ |
| 1919 | 1,457 | 1,029 | 693 | 801 | 447 | 542 | 902 |
| 1920 | 1,927 | 1,445 | 767 | 867 | 565 | 614 | 1,144 |
| 1921 | 2,198 | 1,849 | 881 | 1,138 | 684 | 748 | 1,371 |
| 1922 | 2,189 | 1,876 | 832 | 1,082 | 658 | 848 | 1,356 |
| 1923 | 2,049 | 1,896 | 803 | 1,179 | 622 | 775 | 1,323 |
| WORKING EXPENSES PER TRAIN-MILE RUN. | | | | | | | |
| | d. | d. | d. | d. | d. | d. | d. |
| 1919 | 83.12 | 78.82 | 89.08 | 81.12 | 88.39 | 70.32 | 83.13 |
| 1920 | 100.59 | 96.80 | 99.35 | 92.79 | 98.96 | 73.93 | 98.04 |
| 1921 | 116.17 | 118.21 | 112.86 | 111.56 | 118.19 | 82.37 | 115.10 |
| 1922 | 121.89 | 121.49 | 119.83 | 108.15 | 122.45 | 90.11 | 119.41 |
| 1923 | 117.82 | 119.78 | 103.63 | 107.56 | 117.75 | 86.03 | 114.02 |

The working expenses per average mile worked for all States for the year 1923 increased by £421 over the year 1919, but at the same time it must be taken into consideration that the gross revenue shows a still greater increase, viz., £570. The working expenses per train-mile run increased during the same period by 30.89d., while the gross revenue rose by 41.86d.

(iii) *Distribution.* The subjoined table shows the distribution of working expenses, under four chief heads of expenditure, for the years 1919 to 1923 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|---|-----------|-----------|-----------|-----------|-----------|---------|-------------|
| MAINTENANCE. | | | | | | | |
| | £ | £ | £ | £ | £ | £ | £ |
| 1919 | 1,126,118 | 870,123 | 904,199 | 338,785 | 411,986 | 87,902 | 3,739,113 |
| 1920 | 1,589,472 | 1,288,030 | 988,881 | 350,953 | 485,647 | 100,276 | 4,803,259 |
| 1921 | 1,808,531 | 1,576,857 | 1,153,095 | 526,120 | 561,845 | 122,349 | 5,748,797 |
| 1922 | 1,940,794 | 1,708,539 | 1,162,367 | 400,541 | 557,091 | 152,168 | 5,921,500 |
| 1923 | 1,891,233 | 1,761,951 | 1,103,893 | 414,395 | 513,790 | 144,973 | 5,830,235 |
| LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES. | | | | | | | |
| 1919 | 3,277,623 | 2,019,967 | 1,650,263 | 981,646 | 689,333 | 149,260 | 8,768,092 |
| 1920 | 4,603,775 | 2,785,614 | 2,000,901 | 1,101,629 | 927,139 | 185,576 | 11,604,634 |
| 1921 | 5,466,880 | 3,541,967 | 2,374,560 | 1,414,866 | 1,095,300 | 229,154 | 14,122,727 |
| 1922 | 5,474,485 | 3,426,370 | 2,165,438 | 1,417,305 | 1,074,460 | 239,158 | 13,797,216 |
| 1923 | 5,247,950 | 3,482,711 | 2,120,267 | 1,579,432 | 1,042,751 | 228,308 | 13,701,449 |
| TRAFFIC EXPENSES. | | | | | | | |
| 1919 | 1,927,612 | 1,257,685 | 1,067,667 | 459,147 | 418,050 | 72,514 | 5,202,675 |
| 1920 | 2,535,813 | 1,820,588 | 1,251,192 | 495,700 | 529,802 | 87,786 | 6,720,881 |
| 1921 | 3,027,041 | 2,246,443 | 1,428,008 | 651,579 | 688,077 | 109,521 | 8,150,669 |
| 1922 | 2,993,601 | 2,395,694 | 1,387,425 | 660,202 | 621,058 | 125,038 | 8,183,018 |
| 1923 | 2,806,970 | 2,399,867 | 1,400,869 | 722,641 | 592,445 | 117,607 | 8,040,399 |
| OTHER CHARGES. | | | | | | | |
| 1919 | 573,097 | 131,888 | 68,316 | 50,056 | 48,222 | 14,919 | 886,498 |
| 1920 | 841,923 | 164,680 | 82,418 | 59,079 | 57,885 | 16,553 | 1,222,538 |
| 1921 | 730,225 | 470,489 | 92,835 | 62,900 | 76,782 | 15,163 | 1,448,394 |
| 1922 | 707,422 | 496,062 | 95,132 | 59,062 | 76,234 | 21,702 | 1,455,614 |
| 1923 | 703,791 | 537,397 | 89,233 | 65,079 | 61,362 | 23,462 | 1,480,324 |

In New South Wales and Victoria the expenditure in connexion with refreshment rooms is included in "Other Charges" for the whole five years in the case of the former State, and from 1920 inclusive in the case of Victoria.

9. *Net Revenue.*—(i) *Net Revenue and Percentage on Capital Cost.* The following table shows the net sums available to meet interest charges, also the percentage of such sums upon the capital cost of construction and equipment of lines opened for traffic in each State for the years 1919 to 1923 :—

RAILWAYS, STATE.—NET REVENUE AND PERCENTAGE OF NET REVENUE ON CAPITAL COST OF LINES OPEN, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
|---|-----------|-----------|---------|----------|----------|-----------|-------------|
| NET REVENUE. | | | | | | | |
| | £ | £ | £ | £ | £ | £ | £ |
| 1919 | 3,053,723 | 2,152,614 | 294,152 | 561,775 | 305,306 | 76,769 | 6,444,339 |
| 1920 | 3,512,863 | 2,166,060 | 636,758 | 719,180 | 291,403 | 115,086 | 7,442,250 |
| 1921 | 3,234,528 | 1,980,007 | 230,914 | 286,563 | 298,028 | 123,858 | 6,133,898 |
| 1922 | 4,096,717 | 2,764,417 | 344,168 | 760,237 | 499,013 | 50,231 | 8,514,783 |
| 1923 | 4,571,359 | 3,165,131 | 703,138 | 929,375 | 705,637 | 58,067 | 10,135,707 |
| PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE. | | | | | | | |
| | % | % | % | % | % | % | % |
| 1919 | 3.99 | 3.75 | 0.77 | 3.01 | 1.70 | 1.51 | 3.01 |
| 1920 | 4.43 | 3.72 | 1.59 | 3.76 | 1.61 | 2.21 | 3.38 |
| 1921 | 3.93 | 3.27 | 0.56 | 1.48 | 1.64 | 2.30 | 2.72 |
| 1922 | 4.89 | 4.39 | 0.81 | 3.85 | 2.72 | 0.87 | 3.65 |
| 1923 | 5.21 | 4.90 | 1.58 | 4.59 | 3.80 | 0.94 | 4.19 |

These figures are also represented in the graphs which accompany this chapter.

The percentage of net revenue on capital expenditure for all States during the past five years reached its maximum during the year 1922–23, with a return of 4.19. This was, however, insufficient to meet interest payable, for which particulars are included in the following sub-section.

(ii) *Net Revenue Averages.* Tables showing the gross earnings and the working expenses per average mile worked and per train-mile run have been given previously. The net earnings, i.e., the excess of gross earnings over working expenses per average mile worked and per train-mile run are shown in the following table :—

RAILWAYS, STATE.—NET REVENUE AVERAGES, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|--------------------------------------|--------|-----------|---------|----------|----------|-------|-------------|
| NET REVENUE PER AVERAGE MILE WORKED. | | | | | | | |
| | £ | £ | £ | £ | £ | £ | £ |
| 1919 | 645 | 518 | 55 | 246 | 87 | 128 | 313 |
| 1920 | 708 | 516 | 113 | 311 | 82 | 183 | 350 |
| 1921 | 645 | 463 | 40 | 123 | 84 | 194 | 286 |
| 1922 | 807 | 646 | 59 | 324 | 141 | 79 | 393 |
| 1923 | 880 | 734 | 121 | 394 | 199 | 88 | 462 |
| NET REVENUE PER TRAIN-MILE RUN. | | | | | | | |
| | d. | d. | d. | d. | d. | d. | d. |
| 1919 | 36.76 | 39.64 | 7.10 | 24.91 | 17.21 | 16.63 | 28.81 |
| 1920 | 36.92 | 34.61 | 14.63 | 33.24 | 14.42 | 21.97 | 29.96 |
| 1921 | 34.06 | 29.56 | 5.16 | 12.04 | 14.55 | 21.42 | 23.95 |
| 1922 | 44.93 | 41.84 | 8.57 | 32.41 | 26.23 | 8.41 | 30.63 |
| 1923 | 50.57 | 46.33 | 15.52 | 35.94 | 37.59 | 9.71 | 39.78 |

The substantial increases in the net revenue per average mile worked and per train-mile run are due to the causes mentioned in dealing with the increased gross revenue and decreased working expenses.

10. Profit or Loss.—The net revenue after payment of working expenses is shown in the previous sub-section. The following table shows the amount of interest payable on expenditure from loans on the construction and equipment of the railways, the actual profit or loss after deducting working expenses and interest and all other charges from the gross revenue, and the percentage of such profit or loss on the total capital cost of construction and equipment:—

RAILWAYS, STATE.—PROFIT OR LOSS, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
|-----------------------|--------|-----------|---------|----------|----------|-----------|-------------|
|-----------------------|--------|-----------|---------|----------|----------|-----------|-------------|

AMOUNT OF INTEREST ON RAILWAY LOAN EXPENDITURE.

| | | £ | £ | £ | £ | £ | £ | £ |
|------|-------|-----------|-----------|-----------|---------|---------|---------|------------|
| 1919 | .. .. | 3,265,540 | 2,157,798 | 1,617,404 | 747,671 | 665,100 | 186,402 | 8,639,915 |
| 1920 | .. .. | 3,641,988 | 2,225,881 | 1,723,760 | 789,362 | 690,618 | 197,587 | 9,269,196 |
| 1921 | .. .. | 3,811,560 | 2,401,132 | 1,811,974 | 847,867 | 716,398 | 205,765 | 9,794,696 |
| 1922 | .. .. | 4,217,881 | 2,580,001 | 1,924,375 | 905,319 | 756,737 | 228,483 | 10,612,801 |
| 1923 | .. .. | 4,487,303 | 2,937,709 | 1,998,694 | 923,606 | 763,244 | 255,007 | 11,370,563 |

PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST, AND OTHER CHARGES.

| | | £ | £ | £ | £ | £ | £ | £ |
|------|-------|-----------|----------|------------|----------|-----------|----------|------------|
| 1919 | .. .. | - 211,817 | - 5,184 | -1,323,252 | -185,896 | - 359,794 | -109,633 | -2,195,576 |
| 1920 | .. .. | -129,125 | - 59,821 | -1,087,001 | - 70,182 | -399,215 | - 81,601 | -1,826,945 |
| 1921 | .. .. | -577,032 | -441,125 | -1,581,060 | -561,304 | -418,370 | - 81,907 | -3,660,798 |
| 1922 | .. .. | -121,164 | +184,416 | -1,580,207 | -145,082 | -257,724 | -178,257 | -2,098,018 |
| 1923 | .. .. | + 84,056 | +227,422 | -1,292,556 | + 5,769 | - 62,607 | -196,940 | -1,234,856 |

PERCENTAGE OF PROFIT OR LOSS ON CAPITAL COST OF CONSTRUCTION AND EQUIPMENT.

| | | % | % | % | % | % | % | % |
|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1919 | .. .. | -0.28 | -0.01 | -3.46 | -1.00 | -2.00 | -2.16 | -1.03 |
| 1920 | .. .. | -0.16 | -0.10 | -2.71 | -0.36 | -2.21 | -1.55 | -0.83 |
| 1921 | .. .. | -0.70 | -0.74 | -3.82 | -2.91 | -2.30 | -1.52 | -1.62 |
| 1922 | .. .. | -0.15 | +0.29 | -3.72 | -0.74 | -1.41 | -3.10 | -0.90 |
| 1923 | .. .. | +0.10 | +0.35 | -2.88 | +0.03 | -0.34 | -3.18 | -0.51 |

— Indicates a loss.

The losses during the last five years in all the States are due to the causes to which allusion has already been made in the remarks as to increases in the working expenses. It will be observed in the preceding table that the interest charges in 1923 were £2,730,648 higher than they were in 1919, in which year the rate was 4.04 per cent. as against 4.70 per cent. in 1923.

11. Traffic.—(i) General. Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several States, but also on different lines in the same States, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to sea-borne competition. On most of the lines extending into the interior traffic is light, as the density of population diminishes rapidly as the coastal regions are left behind and there is a corresponding diminution in the volume of traffic, while, in comparison with other more settled countries, there is but little back-loading.

The following table gives particulars for the years 1919 to 1923 :—

RAILWAYS, STATE.—TRAFFIC, 1919 TO 1923.

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
|-----------------------|--------|-----------|---------|----------|----------|-----------|-------------|
|-----------------------|--------|-----------|---------|----------|----------|-----------|-------------|

NUMBER OF PASSENGER JOURNEYS.

| | | | | | | | | |
|------|----|-------------|-------------|------------|------------|------------|-----------|-------------|
| 1919 | .. | 98,668,768 | 111,904,786 | 26,414,817 | 20,176,544 | 17,325,424 | 1,889,102 | 276,279,441 |
| 1920 | .. | 114,654,660 | 134,012,162 | 28,177,817 | 22,852,116 | 18,411,281 | 2,267,856 | 320,375,842 |
| 1921 | .. | 120,735,140 | 134,045,688 | 27,735,179 | 23,787,884 | 17,732,571 | 2,687,837 | 326,724,294 |
| 1922 | .. | 121,298,861 | 142,456,924 | 27,155,606 | 23,316,141 | 17,895,509 | 2,757,702 | 334,880,743 |
| 1923 | .. | 123,714,619 | 155,957,240 | 28,358,170 | 24,475,170 | 17,830,292 | 2,884,210 | 353,219,701 |

PER 100 OF MEAN POPULATION.

| | | | | | | | | |
|------|----|-------|-------|-------|-------|-------|-------|-------|
| 1919 | .. | 5,107 | 7,821 | 3,804 | 4,527 | 5,527 | 904 | 5,492 |
| 1920 | .. | 5,651 | 8,907 | 3,837 | 4,835 | 5,512 | 1,042 | 6,054 |
| 1921 | .. | 5,732 | 8,720 | 3,627 | 4,782 | 5,322 | 1,260 | 5,992 |
| 1922 | .. | 5,645 | 9,067 | 3,469 | 4,606 | 5,272 | 1,283 | 6,020 |
| 1923 | .. | 5,648 | 9,700 | 3,533 | 4,730 | 5,120 | 1,339 | 6,216 |

PER AVERAGE MILE OF LINE WORKED.

| | | | | | | | | |
|------|----|--------|--------|-------|--------|-------|-------|--------|
| 1919 | .. | 20,808 | 26,907 | 4,961 | 8,830 | 4,940 | 3,154 | 13,404 |
| 1920 | .. | 23,087 | 31,953 | 5,003 | 9,867 | 5,203 | 3,570 | 15,052 |
| 1921 | .. | 24,058 | 31,639 | 4,838 | 10,195 | 5,012 | 4,220 | 15,199 |
| 1922 | .. | 23,892 | 33,290 | 4,695 | 9,945 | 5,059 | 4,345 | 15,462 |
| 1923 | .. | 23,805 | 36,151 | 4,833 | 10,375 | 5,020 | 4,350 | 16,090 |

TONNAGE OF GOODS AND LIVE STOCK CARRIED.

| | | | | | | | | |
|------|----|------------|-----------|-----------|-----------|-----------|---------|------------|
| 1919 | .. | 12,714,012 | 6,515,470 | 3,783,334 | 2,618,510 | 2,379,403 | 472,926 | 28,483,655 |
| 1920 | .. | 13,293,528 | 7,770,694 | 3,790,881 | 2,578,908 | 2,613,606 | 575,169 | 30,622,786 |
| 1921 | .. | 15,563,131 | 7,572,993 | 3,867,650 | 2,682,218 | 2,604,068 | 672,127 | 32,962,187 |
| 1922 | .. | 14,197,055 | 7,491,031 | 3,732,413 | 2,827,681 | 2,548,258 | 621,751 | 31,418,189 |
| 1923 | .. | 13,801,310 | 7,517,216 | 4,208,989 | 3,283,594 | 2,624,320 | 568,346 | 32,003,775 |

PER 100 OF MEAN POPULATION.

| | | | | | | | | |
|------|----|-----|-----|-----|-----|-----|-----|-----|
| 1919 | .. | 659 | 455 | 545 | 587 | 759 | 226 | 566 |
| 1920 | .. | 655 | 516 | 516 | 546 | 782 | 264 | 579 |
| 1921 | .. | 739 | 493 | 506 | 539 | 782 | 315 | 605 |
| 1922 | .. | 661 | 477 | 477 | 559 | 751 | 289 | 565 |
| 1923 | .. | 630 | 467 | 524 | 635 | 754 | 264 | 563 |

PER AVERAGE MILE OF LINE WORKED.

| | | | | | | | | |
|------|----|-------|-------|-----|-------|-----|-------|-------|
| 1919 | .. | 2,684 | 1,567 | 711 | 1,146 | 678 | 790 | 1,382 |
| 1920 | .. | 2,676 | 1,852 | 672 | 1,113 | 738 | 905 | 1,438 |
| 1921 | .. | 3,101 | 1,787 | 675 | 1,150 | 736 | 1,055 | 1,533 |
| 1922 | .. | 2,796 | 1,751 | 645 | 1,206 | 720 | 980 | 1,451 |
| 1923 | .. | 2,656 | 1,743 | 717 | 1,391 | 739 | 857 | 1,458 |

(ii) *Metropolitan and Country Passenger Traffic and Revenue.* A further indication of the difference in passenger traffic conditions is obtained from a comparison of the volume of metropolitan, suburban, and country traffic in each State. Particulars were available for the first time in 1923 for all States.

**RAILWAYS, STATE.—METROPOLITAN, SUBURBAN, AND COUNTRY
PASSENGER TRAFFIC AND RECEIPTS, 1922-23.**

| Particulars. | Number of Passenger Journeys. | | | Revenue. | | |
|-----------------|-------------------------------|------------|-------------|---------------|-----------|------------|
| | Metropolitan. | Country. | Total. | Metropolitan. | Country. | Total. |
| | | | | £ | £ | £ |
| N.S.W. .. | a 113,017,247 | 10,697,392 | 123,714,639 | 2,249,703 | 3,754,999 | 6,004,702 |
| Victoria .. | b 145,910,182 | 10,047,058 | 155,957,240 | 2,399,451 | 2,695,144 | 5,094,595 |
| Queensland .. | 21,675,874 | 6,682,296 | 28,358,170 | 367,641 | 1,295,262 | 1,662,903 |
| S. Australia .. | c 22,373,991 | 2,101,179 | 24,475,170 | 411,244 | 665,542 | 1,076,786 |
| W. Australia | 15,051,679 | 2,778,613 | 17,830,292 | 285,883 | 548,488 | 834,371 |
| Tasmania .. | d 1,792,230 | 1,091,980 | 2,884,210 | 23,871 | 204,587 | 228,458 |
| Total | 319,821,203 | 33,398,518 | 353,219,721 | 5,737,793 | 9,164,022 | 14,901,815 |

(a) Within 34 miles of Sydney and Newcastle, including the Richmond line.

(c) Within 25 miles of Adelaide.

(b) Within 20 miles of Melbourne.

(d) Within 10 miles of Hobart.

Although the number of passenger journeys recorded in the metropolitan area in Victoria is considerably greater than in New South Wales, it must be borne in mind that in the latter State other transport facilities, viz., tramways, motor-omnibuses, and ferries, are more extensively used.

(iii) *Electrification of Melbourne Suburban Railways.* Electrification of the Melbourne Suburban Railways was completed in April, 1923. The scheme comprised the electrification of 143 route-miles of steam-operated railway, including sidings, and the conversion and construction of the necessary rolling stock. Particulars of the lines concerned were given in Year Book No. 15, p. 564.

(iv) *Country Lines.* As the traffic on main country lines develops, it is intended to convert to electric traction busy sections which are within reasonable distance of a cheap power supply, and investigations are being made in order to determine which lines offer prospects of financial success.

(v) *Goods Traffic.* (a) *Classification.* The differing conditions of the traffic in each State might also, to some extent, be analysed by an examination of the tonnage of various classes of commodities carried, and of the revenue derived therefrom. Comparative particulars regarding the quantities of some of the leading classes of commodities carried are available for all the States, and the following table shows the number of tons of various representative commodities carried, with the percentage of each class on the total for the financial year 1922-23 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED, 1922-23.

| State. | Minerals. | Fire-wood. | Grain and Flour. | Hay, Straw, and Chaff. | Wool. | Live Stock. | All other Com-mo-dities. | Total. |
|-------------------|------------|------------|------------------|------------------------|---------|-------------|--------------------------|------------|
| TONS CARRIED. | | | | | | | | |
| | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. | Tons. |
| New South Wales | 8,340,206 | 185,815 | c 827,775 | 484,980 | 124,033 | 736,895 | 2,901,606 | 13,801,310 |
| Victoria .. | 61,620,958 | 614,080 | 1,181,081 | 376,214 | 76,295 | 574,205 | 3,074,383 | 7,517,216 |
| Queensland .. | 1,131,608 | 266,125 | d 46,057 | f 450,042 | 64,432 | 396,679 | 1,854,046 | 4,208,989 |
| South Australia | 1,389,334 | 195,761 | 537,265 | 92,197 | 30,571 | 156,693 | 881,773 | 3,233,594 |
| Western Australia | 619,019 | 439,865 | 457,682 | 111,500 | 16,134 | 90,207 | 889,913 | 2,624,320 |
| Tasmania .. | a 106,246 | 58,564 | e 119,702 | 54,361 | 2,594 | 21,549 | 205,330 | 568,346 |
| All States .. | 13,407,371 | 1,760,210 | 3,169,562 | 1,569,294 | 314,059 | 1,976,228 | 9,807,051 | 32,003,775 |

PERCENTAGE ON TOTAL TONNAGE CARRIED.

| | % | % | % | % | % | % | % | % |
|-------------------|-------|-------|-------|-------|------|------|-------|--------|
| New South Wales | 61.88 | 1.35 | 6.00 | 3.51 | 0.90 | 5.34 | 21.02 | 100.00 |
| Victoria .. | 21.56 | 8.17 | 15.71 | 5.00 | 1.01 | 7.64 | 40.91 | 100.00 |
| Queensland .. | 26.89 | 6.32 | 1.09 | 10.69 | 1.53 | 9.43 | 44.05 | 100.00 |
| South Australia | 42.31 | 5.96 | 16.36 | 2.81 | 0.93 | 4.78 | 26.85 | 100.00 |
| Western Australia | 23.59 | 16.76 | 17.44 | 4.25 | 0.61 | 3.44 | 33.91 | 100.00 |
| Tasmania .. | 18.70 | 10.30 | 21.06 | 9.56 | 0.46 | 3.79 | 36.13 | 100.00 |
| All States .. | 41.90 | 5.50 | 9.90 | 4.90 | 0.98 | 6.17 | 30.65 | 100.00 |

(a) Exclusive of departmental coal hitherto included. (b) Coal, stone, gravel, and sand. (c) Up journey only (to coast). (d) Flour only. (e) Fruit and agricultural produce. (f) Sugar-cane.

(b) *Revenue.* Corresponding information regarding the revenue derived from each class of commodity mentioned above is not generally available in a comparable form. In this connexion it may be stated that the following resolution was passed at the Inter-State Conference of Railway Commissioners held in Melbourne in May, 1909:—"That in view of the variations in the character and classification of the goods traffic in the different States, the sub-divisions of tonnage carried and revenue in each State shall be those which best suit local conditions." The following table, however, shows the revenue derived from goods and live stock traffic during 1922-23 according to a classification which has been adopted by all States:—

RAILWAYS, STATE.—GOODS, etc., TRAFFIC—REVENUE, 1922-23.

| Class. | New South Wales. | Victoria. | Queens-land. | South Australia. | Western Australia. | Tasmania. | Total. |
|--------------------------|------------------|-----------|--------------|------------------|--------------------|------------|------------|
| | £ | £ | £ | £ | £ | £ | £ |
| General merchandise | 4,361,189 | 3,539,473 | 2,048,896 | 1,156,210 | 1,182,080 | 241,021 | 12,528,869 |
| Wheat .. | (a) | 461,512 | (a) | 202,486 | 188,911 | (a) | 852,909 |
| Wool .. | 541,998 | 177,207 | 370,157 | 59,775 | 48,561 | 4,851 | 1,202,549 |
| Live stock .. | 1,462,727 | 653,229 | 541,151 | 209,766 | 134,616 | 19,481 | 3,020,970 |
| Minerals— | | | | | | | |
| Coal, coke, and shale .. | 1,186,322 | 120,928 | 196,072 | 145,725 | 114,750 | (b) 17,143 | 1,780,940 |
| Others .. | 316,533 | 843 | 134,195 | 604,072 | 99,293 | (c) 12,335 | 1,167,271 |
| Total .. | 7,868,769 | 4,953,192 | 3,290,471 | 2,378,034 | 1,768,211 | 294,831 | 20,553,508 |

(a) Not available. (b) Native coal. (c) Minerals other than native coal.

(vi) *Parcels Traffic.* In Victoria three electric motor coaches have been constructed and put into operation for the transfer of parcels from the central stations to suburban stations, and also to convey luggage and parcels between the two main terminal stations. These coaches, which run to a fixed schedule, are the nucleus of a fleet which will eventually separate the whole of the parcels traffic from the passenger traffic on the suburban system.

12. *Passenger-Mileage and Ton-Mileage.*—(i) *General.* In earlier issues of the Year Book reference has been made to the resolution on the subject of passenger-mileage and ton-mileage statistics passed at the Inter-State Conference of Railway Commissioners

held in Melbourne in May, 1909; and to the Report [Cd. 4697] on the same subject by a Committee appointed by the President of the Board of Trade in the United Kingdom (see Year Book No. 10, p. 654).

(ii) *Passenger-Miles.* The subjoined table gives particulars of passenger-mileage in respect of the States of New South Wales, Victoria, South Australia, and Tasmania for the years 1918-19 to 1922-23. The average number of passengers carried per "train" is obtained by dividing the number of "passenger-miles" by the number of "passenger-train-miles." Similarly, the "density of traffic" is obtained by dividing the number of "passenger-miles" by the "average miles worked."

RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES," 1919 TO 1923.

| Year ended 30th June— | Passenger-Train-Mileage. | Number of Passenger Journeys. | Total Passenger-Miles. | Amount Received from Passengers. | Average Number of Passengers carried per Train. | Average Mileage per Passenger Journey. | Average Earnings per Passenger-Mile. | Average Fare per Passenger Journey. | Density of Traffic per Average Mile Worked. |
|-----------------------|--------------------------|-------------------------------|------------------------|----------------------------------|---|--|--------------------------------------|-------------------------------------|---|
| | Miles. (,000 omitted.) | No. (,000 omitted.) | No. (,000 omitted.) | £ | No. | Miles. | d. | d. | No. |
| NEW SOUTH WALES. | | | | | | | | | |
| 1919 | 9,689 | 98,569 | 1,367,691 | 3,533,869 | 144 | 13.88 | 0.62 | 8.60 | 288,725 |
| 1920 | 11,136 | 114,655 | 1,632,627 | 5,137,247 | 151 | 14.24 | 0.74 | 10.75 | 328,761 |
| 1921 | 11,301 | 120,735 | 1,620,857 | 5,736,256 | 147 | 13.42 | 0.85 | 11.57 | 322,976 |
| 1922 | 11,379 | 121,299 | 1,610,619 | 5,934,616 | 145 | 13.27 | 0.88 | 11.74 | 320,936 |
| 1923 | 11,822 | 123,715 | 1,679,903 | 6,004,702 | 142 | 13.58 | 0.86 | 11.65 | 323,260 |
| VICTORIA. | | | | | | | | | |
| 1919 | 5,308 | 111,905 | 1,012,955 | 2,894,409 | 131 | 9.05 | 0.69 | 6.21 | 243,557 |
| 1920 | 6,655 | 134,012 | 1,239,022 | 3,780,251 | 148 | 9.25 | 0.73 | 6.77 | 295,427 |
| 1921 | 8,822 | 134,046 | 1,205,052 | 4,398,124 | 138 | 8.99 | 0.88 | 7.87 | 284,412 |
| 1922 | 9,865 | 142,457 | 1,231,828 | 4,814,820 | 125 | 8.65 | 0.94 | 8.11 | 287,777 |
| 1923 | 10,626 | 155,957 | 1,332,694 | 5,094,595 | 125 | 8.54 | 0.92 | 7.84 | 308,892 |
| SOUTH AUSTRALIA. | | | | | | | | | |
| 1919 | 2,644 | 20,177 | 238,845 | 703,748 | 90 | 11.84 | 0.71 | 8.37 | 104,527 |
| 1920 | 2,576 | 22,852 | 305,834 | 979,596 | 119 | 13.38 | 0.77 | 10.29 | 132,052 |
| 1921 | 2,815 | 23,788 | 280,904 | 1,019,480 | 100 | 11.81 | 0.87 | 10.29 | 120,438 |
| 1922 | 2,749 | 23,330 | 268,558 | 1,045,530 | 102 | 11.51 | 0.93 | 10.76 | 115,110 |
| 1923 | 2,833 | 24,481 | 282,387 | 1,078,155 | 100 | 11.54 | 0.92 | 10.57 | 119,718 |
| TASMANIA. | | | | | | | | | |
| 1919 | 448 | 1,889 | 39,961 | 167,035 | 89 | 21.15 | 1.00 | 21.22 | 67,713 |
| 1920 | 472 | 2,268 | 46,015 | 209,866 | 97 | 20.29 | 1.09 | 22.21 | 72,465 |
| 1921 | 494 | 2,688 | 50,263 | 238,719 | 102 | 18.70 | 1.14 | 21.31 | 78,905 |
| 1922 | 662 | 2,758 | 46,550 | 233,608 | 70 | 16.88 | 1.15 | 20.33 | 73,336 |
| 1923 | 692 | 2,884 | 46,032 | 228,458 | 67 | 15.96 | 1.19 | 19.01 | 69,388 |

The difference in the number of passenger journeys given in this table and that in connexion with traffic in respect of the State of South Australia is accounted for by the fact that the latter table is compiled from the receipts from passenger traffic while the former is based on the passenger traffic carried.

(iii) *Ton-Miles.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1918-19 to 1922-23 in respect of all States with the exception of Queensland :—

RAILWAYS, STATE.—SUMMARY OF "TON-MILES," 1919 TO 1923.

| Year ended the 30th June | Goods-Train-Mileage. | Total Tons Carried. | Total "Ton-miles." | Earnings. | Average Freight-paying Load carried per "Train." | Average haul per Ton. | Earnings per "Ton-mile." | Density of Traffic per Average Mile Worked. |
|--------------------------|----------------------|---------------------|---------------------|-----------|--|-----------------------|--------------------------|---|
| | No. (,000 omitted.) | No. (,000 omitted.) | No. (,000 omitted.) | £ | Tons. | Miles. | d. | Tons. |
| NEW SOUTH WALES. | | | | | | | | |
| 1919 | 10,246 | 12,469 | 1,237,806 | 4,889,343 | 121 | 99.27 | 0.95 | 261,306 |
| 1920 | 11,698 | 13,010 | 1,394,099 | 6,106,563 | 119 | 107.15 | 1.05 | 280,729 |
| 1921 | 11,491 | 15,262 | 1,418,386 | 6,501,914 | 123 | 92.94 | 1.10 | 282,631 |
| 1922 | 10,508 | 14,197 | 1,365,961 | 7,953,910 | 154 | 96.21 | 1.38 | 269,049 |
| 1923 | 9,871 | 13,567 | 1,166,238 | 7,868,769 | 160 | 85.96 | 1.60 | 224,417 |
| VICTORIA. | | | | | | | | |
| 1919 | 5,308 | 6,515 | 487,083 | 2,957,789 | 92 | 74.76 | 1.46 | 117,115 |
| 1920 | 6,655 | 7,771 | 631,374 | 3,721,122 | 95 | 81.25 | 1.41 | 150,542 |
| 1921 | 6,711 | 7,573 | 727,930 | 4,411,276 | 137 | 96.12 | 1.45 | 171,803 |
| 1922 | 5,992 | 7,491 | 684,887 | 4,815,056 | 143 | 91.43 | 1.69 | 160,058 |
| 1923 | 5,768 | 7,517 | 673,904 | 4,953,192 | 145 | 89.65 | 1.76 | 156,198 |
| SOUTH AUSTRALIA. | | | | | | | | |
| 1919 | 2,769 | 2,619 | 263,984 | 1,536,209 | 95 | 100.81 | 1.40 | 115,529 |
| 1920 | 2,616 | 2,579 | 196,534 | 1,556,224 | 75 | 76.21 | 1.90 | 84,859 |
| 1921 | 2,897 | 2,682 | 217,879 | 1,719,556 | 75 | 81.23 | 1.81 | 93,383 |
| 1922 | 2,881 | 2,828 | 284,269 | 2,000,716 | 99 | 100.53 | 1.68 | 121,253 |
| 1923 | 3,374 | 3,284 | 368,525 | 2,378,035 | 113 | 112.23 | 1.55 | 156,241 |
| WESTERN AUSTRALIA. | | | | | | | | |
| 1919 | 2,485 | 2,379 | 173,283 | 1,127,539 | 70 | 72.83 | 1.56 | 49,411 |
| 1920 | 2,873 | 2,614 | 207,384 | 1,394,908 | 72 | 79.34 | 1.61 | 58,616 |
| 1921 | 2,865 | 2,604 | 200,379 | 1,637,979 | 70 | 76.95 | 1.96 | 56,633 |
| 1922 | 2,689 | 2,548 | 208,347 | 1,688,482 | 77 | 81.76 | 1.95 | 58,894 |
| 1923 | 2,659 | 2,624 | 210,151 | 1,768,211 | 93 | 80.08 | 2.02 | 59,164 |
| TASMANIA. | | | | | | | | |
| 1919 | 660 | 456 | 23,745 | 190,524 | 36 | 52.12 | 1.93 | 39,641 |
| 1920 | 794 | 553 | 30,967 | 234,147 | 39 | 56.01 | 1.81 | 48,767 |
| 1921 | 893 | 650 | 33,638 | 302,594 | 38 | 51.78 | 2.15 | 52,807 |
| 1922 | 771 | 602 | 30,850 | 295,480 | 40 | 51.28 | 2.29 | 48,602 |
| 1923 | 743 | 547 | 27,297 | 275,968 | 37 | 49.29 | 2.42 | 41,147 |

In New South Wales the tonnage carried is exclusive of coal, on which shunting and haulage charges only have been collected, and terminal charges have also been disregarded, but in the cases of South Australia and Tasmania such charges are included.

13. **Passenger Fares and Goods Rates.**—(i) *General.* Fares and rates are changed from time to time to suit the varying necessities of the railways, but as traffic develops and revenue increases they are in many cases reduced to an extent consistent with the direct payment by the customers of the railways of the cost of working and interest charges. When drought conditions prevail, special concessions are made in the rates for the carriage of fodder and water and for the transfer of starving stock to other areas.

(ii) *Passenger Fares.* Two classes are provided for passenger traffic, and the fares charged may be grouped as follows:—(a) Fares between specified stations (including suburban fares). (b) Fares computed according to mileage rates. (c) Return, periodical and excursion fares. (d) Special fares for working men, school pupils, and others. Fares in class (a) are issued at rates lower than the ordinary mileage rates. Fares in class (b) are charged between stations not included in class (a).

The following table shows the passenger fares for different distances charged in each State between stations for which specific fares are not fixed:—

RAILWAYS, STATE.—ORDINARY PASSENGER MILEAGE RATES, 1923.

| State. | For a Journey of— | | | | | | | | | | | |
|----------------------------|-------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|
| | 50 Miles. | | 100 Miles. | | 200 Miles. | | 300 Miles. | | 400 Miles. | | 500 Miles. | |
| | First Class. | Second Class. | First Class. | Second Class. | First Class. | Second Class. | First Class. | Second Class. | First Class. | Second Class. | First Class. | Second Class. |
| New South Wales | s. d. 11. 0 | s. d. 7 2 | s. d. 22 0 | s. d. 14 7 | s. d. 43 11 | s. d. 27 3 | s. d. 65 4 | s. d. 39 9 | s. d. 86 10 | s. d. 50 9 | s. d. 101 6 | s. d. 57 10 |
| Victoria .. | 9 9 | 6 6 | 18 11 | 12 7 | 37 9 | 25 2 | 52 9 | 35 2 | 64 0 | 42 8 | 75 3 | 50 1 |
| Queensland .. | 9 4 | 6 3 | 17 0 | 11 0 | 32 0 | 20 6 | 46 0 | 28 9 | 59 0 | 36 0 | 71 0 | 43 0 |
| South Australia | 9 9 | 6 7 | 19 9 | 13 3 | 39 3 | 26 0 | 58 6 | 39 3 | 78 0 | 52 0 | 97 6 | 65 3 |
| Western Australia | 8 4 | 5 3 | 16 8 | 10 5 | 33 4 | 20 10 | 50 0 | 31 3 | 66 8 | 41 8 | 83 4 | 52 1 |
| Tasmania .. | 10 6 | 6 9 | 20 9 | 13 9 | 41 0 | 27 6 | 61 3 | 41 0 | .. | .. | .. | .. |
| Average .. | 9 9 | 6 5 | 19 2 | 12 7 | 37 10 | 24 6 | 55 8 | 35 10 | 70 11 | 44 7 | 85 9 | 53 8 |
| Average per passenger-mile | d. 2.34 | d. 1.54 | d. 2.30 | d. 1.51 | d. 2.27 | d. 1.47 | d. 2.23 | d. 1.43 | d. 2.13 | d. 1.34 | d. 2.46 | d. 1.29 |

The above rates, which were in force on the 30th June, 1923, were not changed during the year ending on that date.

(iii) *Parcel Rates.* Parcels may be transmitted by passenger train at rates based upon weight and distance carried. The charges vary slightly in the different States. In New South Wales they range from fivepence for a parcel not exceeding 3 lbs. for any distance up to 25 miles to eighteen shillings and eightpence for a parcel weighing from 85 lbs. to 112 lbs. for a distance of 500 miles. In Victoria the charge for a parcel weighing from 84 lbs. to 112 lbs. for a distance of 450 miles is sixteen shillings and elevenpence. The rate in Queensland for a parcel weighing from 85 lbs. to 112 lbs. for 500 miles is sixteen shillings and threepence; in South Australia for 550 miles seventeen shillings and fourpence; in Western Australia for a parcel weighing from 99 lbs. to 112 lbs. for 500 miles fifteen shillings and sixpence; and in Tasmania for a distance of 250 miles the rate is eight shillings.

(iv) *Goods Rates.* (a) *General.* The rates charged for the conveyance of goods and merchandise may be divided into three classes, viz.:—(a) Mileage rates, (b) District or "development" rates, and (c) Commodity rates. In each of the States there is a number—ranging from nine in Victoria to fifteen in Tasmania—of different classes of freight. Most of the mileage rates are based upon a tapering principle, i.e., a lower charge per ton-mile is made for a long haul than for a short haul; but for some classes of freight there is a fixed rate per mile irrespective of distance. District rates are charged between specified stations, and are somewhat lower than the mileage rates. In addition to the ordinary classification of freights under class (a), certain commodities, such as wool, grain, agricultural produce, and crude ores, are given under class (c) special rates, lower than the mileage rates.

Limits of space preclude a detailed analysis of goods rates in the several States, but the subjoined tables give an indication of the range and amount of the rates for the highest and lowest class freights and for agricultural produce at 30th June, 1923.

(b) *Highest and Lowest Class Freights.* The ordinary mileage rates charged per ton for hauls of different distances in respect of (a) the highest-class freight and (b) the lowest-class freight are given hereunder :—

RAILWAYS, STATE.—HIGHEST AND LOWEST CLASS FREIGHT RATES, 1923.

| State. | Charge per Ton for a Haul of— | | | | | | | | | | | |
|----------------------|-------------------------------|------------|------------|------------|------------|------------|-----------------------|------------|------------|------------|------------|------------|
| | 50 Miles. | 100 Miles. | 200 Miles. | 300 Miles. | 400 Miles. | 500 Miles. | 50 Miles. | 100 Miles. | 200 Miles. | 300 Miles. | 400 Miles. | 500 Miles. |
| | Highest Class Freight. | | | | | | Lowest Class Freight. | | | | | |
| | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| N.S. Wales | 39 2 | 76 8 | 130 10 | 160 0 | 180 0 | 197 6 | 5 0 | 6 9 | 8 5 | 10 0 | 11 3 | 12 4 |
| Victoria .. | 32 6 | 63 3 | 119 3 | 163 0 | 200 6 | 233 3 | 3 6 | 5 4 | 7 10 | 10 6 | 11 8 | 12 8 |
| Queensland | 51 10 | 89 4 | 159 8 | 220 6 | 254 1 | 268 4 | 3 10 | 4 2 | 8 4 | 9 5 | 12 6 | 15 8 |
| South Aust. | 40 10 | 78 0 | 145 11 | 200 2 | 247 10 | 288 6 | 4 3 | 8 0 | 13 9 | 18 0 | 22 3 | 26 6 |
| Westn. Aust. | 47 1 | 77 1 | 131 10 | 177 9 | 215 4 | 246 8 | 3 3 | 4 1 | 6 2 | 8 3 | 10 4 | 12 5 |
| Tasmania .. | 46 1 | 72 9 | 134 1 | 186 4 | .. | .. | 4 4 | 7 0 | 16 8 | 20 0 | .. | .. |
| Average .. | 42 11 | 76 2 | 136 11 | 184 7 | 219 7 | 247 10 | 4 1 | 5 11 | 10 2 | 12 8 | 13 7 | 15 11 |
| Average per ton-mile | 10.30 | 9.14 | 8.21 | 7.38 | 6.59 | 5.95 | 0.98 | 0.71 | 0.61 | 0.51 | 0.41 | 0.38 |

(a) Maximum freight for distances up to 500 miles on highest-class goods to Western stations is 210 shillings per ton.

The only change in the rates from the preceding year was an increase in those for lowest class freights in Queensland.

Generally, the highest-class freight includes expensive, bulky, or fragile articles, while the lowest-class comprises many ordinary articles of merchandise, particularly those identified or connected with the primary industries.

In New South Wales, for example, the highest-class freight comprises such articles as boots, drapery, drugs, groceries, furniture, liquors, crockery and glassware, cutlery, ironmongery, confectionery, and carpets. In the same State the lowest-class freight includes agricultural produce, ores, manures, coal, coke, shale, firewood, limestone, stone, slate, bricks, screenings, rabbit-proof netting, timber, and posts and rails.

(c) *Agricultural Produce.* The rates at 30th June, 1923, for agricultural produce in truck loads are given in the table below :—

RAILWAYS, STATE.—RATES FOR AGRICULTURAL PRODUCE, 1923.

| State. | Charge per Ton in Truck-loads for a Haul of— | | | | | |
|----------------------|--|------------|------------|------------|------------|------------|
| | 50 Miles. | 100 Miles. | 200 Miles. | 300 Miles. | 400 Miles. | 500 Miles. |
| | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| New South Wales .. | 7 4 | 11 6 | 14 5 | 16 1 | 17 9 | 19 0 |
| Victoria .. | 7 0 | 10 10 | 14 4 | 16 6 | 18 8 | 20 8 |
| Queensland .. | 5 8 | 10 2 | 12 0 | 13 0 | 14 6 | 15 6 |
| South Australia .. | 7 5 | 11 5 | 14 1 | 16 7 | 18 10 | 21 1 |
| Western Australia .. | 8 3 | 10 11 | 14 1 | 19 0 | 24 0 | 26 0 |
| Tasmania .. | 8 4 | 12 11 | 16 8 | 20 0 | .. | .. |
| Average .. | 7 4 | 11 4 | 14 3 | 16 10 | 18 9 | 20 5 |
| Average per ton-mile | d. | d. | d. | d. | d. | d. |
| | 1.76 | 1.36 | 0.85 | 0.67 | 0.56 | 0.49 |

The rates in force in June, 1923, did not vary from those for June, 1922, except in South Australia, where the rate quoted is for wheat and products thereof. Previously the rates specified were for grain other than wheat.

14. Rolling Stock, 1923.—The following table shows the rolling stock in use at the 30th June, 1923, classified according to gauge:—

RAILWAYS, STATE.—ROLLING STOCK, 1923.

| State. | Gauge. | | | | | Total. |
|--------|-------------|--------------|-------------|-------------|-------------|--------|
| | 5 ft. 3 in. | 4 ft. 8½ in. | 3 ft. 6 in. | 2 ft. 6 in. | 2 ft. 0 in. | |

LOCOMOTIVES.

| | | | | | | |
|-------------------|-------|-------|-------|----|----|-------|
| New South Wales | .. | 1,341 | .. | .. | .. | 1,341 |
| Victoria .. | 781 | .. | .. | 17 | .. | 798 |
| Queensland .. | .. | .. | 690 | .. | 8 | 698 |
| South Australia.. | 261 | .. | 233 | .. | .. | 494 |
| Western Australia | .. | .. | 421 | .. | .. | 421 |
| Tasmania .. | .. | .. | 89 | .. | 7 | 96 |
| All States .. | 1,042 | 1,341 | 1,433 | 17 | 15 | 3,848 |

COACHING STOCK.

| | Ordinary. | With Motors. | Ordinary. | With Motors. | Ordinary. | With Motors. | | | Ordinary. | With Motors. |
|-------------------|-----------|--------------|-----------|--------------|-----------|--------------|----|----|-----------|--------------|
| New South Wales | .. | .. | 2,186 | 2 | .. | .. | .. | .. | 2,186 | 2 |
| Victoria .. | 2,165 | 364 | .. | .. | .. | .. | 55 | .. | 2,220 | 364 |
| Queensland .. | .. | .. | .. | .. | 1,061 | 17 | .. | 10 | 1,071 | 17 |
| South Australia.. | 500 | 1 | .. | .. | 223 | 2 | .. | .. | 723 | 3 |
| Western Australia | .. | .. | .. | .. | 482 | 3 | .. | .. | 482 | 3 |
| Tasmania .. | .. | .. | .. | .. | 227 | 2 | .. | 6 | 233 | 2 |
| All States .. | 2,665 | 365 | 2,186 | 2 | 1,993 | 24 | 55 | 16 | 6,915 | 391 |

STOCK OTHER THAN COACHING.

| | | | | | | |
|-------------------|--------|--------|--------|-----|-----|--------|
| New South Wales | .. | 23,483 | .. | .. | .. | 23,483 |
| Victoria .. | 19,695 | .. | .. | 243 | .. | 19,938 |
| Queensland .. | .. | .. | 14,922 | .. | 254 | 15,176 |
| South Australia.. | 4,285 | .. | 5,548 | .. | .. | 9,833 |
| Western Australia | .. | .. | 10,163 | .. | .. | 10,163 |
| Tasmania .. | .. | .. | 1,703 | .. | 77 | 1,780 |
| All States .. | 23,980 | 23,483 | 32,336 | 243 | 331 | 80,373 |

Prior to the issue of Year Book No. 16 (1921-22) the particulars of rolling stock were classified under the headings of "Locomotives," "Passenger Vehicles," and "Vehicles other than Passenger." The present classification has been adopted by all States with the exception of Queensland.

15. **Employees.**—The following table gives the number of railway employees in each year from 1919 to 1923 inclusive, classified according to (a) salaried staff, and (b) wages staff :—

RAILWAYS, STATE.—EMPLOYEES, 1919 TO 1923.

| State. | At 30th June— | | | | | | | | | |
|----------------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|
| | 1919. | | 1920. | | 1921. | | 1922. | | 1923. | |
| | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. | Salaried Staff. | Wages Staff. |
| New South Wales | a4,937 | a29,776 | 4,913 | a29,807 | 5,088 | 32,470 | 5,302 | 36,018 | 5,356 | 34,274 |
| Victoria .. | b2,525 | b17,285 | 2,727 | 21,824 | 2,738 | 24,411 | 3,097 | 23,791 | 4,052 | 22,668 |
| Queensland .. | 3,296 | 11,222 | 3,239 | 10,692 | 3,121 | 11,237 | 3,458 | 14,862 | 3,250 | 17,621 |
| South Australia .. | a1,075 | a8,570 | 1,004 | 8,122 | 1,038 | 8,392 | 1,116 | 8,448 | 1,108 | 8,429 |
| Western Australia .. | 1,037 | 6,057 | 1,115 | 6,553 | 1,187 | 6,896 | 1,175 | 6,330 | 1,180 | 6,259 |
| Tasmania .. | 199 | 1,240 | 210 | 1,330 | 205 | 1,454 | 215 | 1,491 | 216 | 1,842 |
| All States .. | 13,069 | 74,150 | 13,208 | 78,328 | 13,377 | 84,860 | 14,363 | 90,940 | 15,162 | 91,093 |

(a) Including those absent on military or naval service. (b) Excluding those absent on active service.

In the period under review the totals of salaried and wages staffs rose from 87,219 in 1919 to 106,255 in 1923, an increase of nearly 22 per cent.

16. **Accidents.**—(i) *Classification.* The following classification of accidents which occurred through the movement of rolling stock was adopted by each State in 1921–22, and particulars for the year 1922–23 in accordance therewith are given hereunder :—

RAILWAYS, STATE.—ACCIDENTS, 1923.

| Particulars. | N.S.W. | | Vic. | | Q'land. | | S. Aust. | | W. Aust. | | Tas. | | All States. | |
|---|-----------|-------------|-----------|-------------|-----------|-------------|-------------|--------------|-----------|-------------|-----------|-----------|-------------|--------------|
| | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. |
| Passengers— | | | | | | | | | | | | | | |
| Through causes beyond their own control .. | .. | 22 | .. | 5 | .. | 18 | 1 | 59 | .. | 11 | .. | .. | 1 | 115 |
| Through contributory negligence .. | .. | .. | .. | 6 | .. | 10 | .. | 2 | .. | 5 | .. | .. | .. | 23 |
| Solely through their own negligence .. | 10 | 145 | 6 | 134 | .. | 42 | 3 | 81 | 2 | 44 | .. | 5 | 21 | 451 |
| Employees in the execution of their duty— | | | | | | | | | | | | | | |
| Through causes beyond their own control .. | .. | 16 | 1 | 33 | 2 | 271 | 2 | 51 | 2 | 26 | .. | 7 | 7 | 404 |
| Through contributory negligence .. | .. | 63 | 2 | 34 | 1 | 117 | .. | 3 | .. | 27 | .. | 11 | 3 | 255 |
| Solely through their own negligence .. | 9 | 189 | 7 | 116 | 1 | 61 | 2 | 32 | 1 | 11 | 1 | 8 | 21 | 397 |
| Employees proceeding to or from their duty within Railway boundaries .. | 1 | 4 | 1 | 2 | .. | 3 | 1 | 6 | .. | .. | .. | .. | 3 | 15 |
| Persons killed or injured at crossings .. | 3 | 9 | 11 | 11 | 3 | 3 | 5 | 20 | 6 | 4 | .. | 1 | 28 | 48 |
| Trespassers .. | 19 | 7 | 20 | 10 | 7 | 27 | 2 | .. | 2 | 5 | .. | 1 | 50 | 50 |
| Miscellaneous .. | 3 | 63 | 3 | 21 | 3 | 11 | .. | 8 | 1 | 14 | .. | 1 | 10 | 118 |
| Total .. | 45 | 493 | 51 | 372 | 17 | 563 | 16 | 262 | 14 | 147 | 1 | 34 | 144 | 1,876 |
| Number of passengers killed or injured through causes beyond their own control, per million carried .. | .. | .178 | .. | .032 | .. | .614 | .040 | 2.410 | .. | .617 | .. | .. | .. | .326 |

(ii) *Particulars for Quinquennium.* The subjoined table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways in each State for each of the years 1919 to 1923 inclusive :—

RAILWAYS, STATE.—ACCIDENTS, 1919 TO 1923.

| State. | In year ended 30th June— | | | | | | | | | |
|----------------------|--------------------------|----------|---------|----------|---------|----------|---------|----------|---------|----------|
| | 1919. | | 1920. | | 1921. | | 1922. | | 1923. | |
| | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. | Killed. | Injured. |
| New South Wales | 44 | 690 | 70 | 751 | 68 | 554 | 67 | 467 | 45 | 498 |
| Victoria .. | 52 | 510 | 38 | 451 | 41 | 507 | 58 | 408 | 51 | 372 |
| Queensland .. | 28 | 162 | 20 | 694 | 20 | 905 | 18 | 564 | 17 | 563 |
| South Australia .. | 22 | 193 | 13 | 157 | 12 | 174 | 6 | 192 | 16 | 262 |
| Western Australia .. | 20 | 140 | 30 | 127 | 18 | 134 | 15 | 107 | 14 | 147 |
| Tasmania .. | 4 | 7 | 3 | 31 | .. | 47 | 2 | 34 | 1 | 34 |
| All States .. | 170 | 1,702 | 174 | 2,211 | 159 | 2,411 | 166 | 1,772 | 144 | 1,876 |

§ 4. Government Railways Generally.

1. *Summary, Federal and State Government Railways.*—In the following table a summary is given of the working of all Federal and State Government railways for the year ended 30th June, 1923 :—

RAILWAYS, FEDERAL AND STATE.—SUMMARY, 1923.

| Particulars. | Federal Railways. | State Railways. | Total for Australia. |
|---|-------------------|-----------------|----------------------|
| Total mileage open Miles | 1,733.02 | 22,147.86 | 23,880.88 |
| Average miles open during the year | 1,733 | 21,953 | 23,686 |
| Total train mileage | 774,684 | 61,152,055 | 61,926,739 |
| Total cost of construction of lines open £ | 11,384,379 | a242,142,140 | 253,526,519 |
| Cost per mile £ | 6,569 | a10,933 | 10,616 |
| Gross revenue £ | 336,413 | 39,188,114 | 39,524,527 |
| Working expenses £ | 461,033 | 29,052,407 | 29,513,440 |
| Percentage of working expenses on gross revenue % | 137.04 | 74.14 | 74.67 |
| Net revenue £ | — 124,620 | 10,135,707 | 10,011,087 |
| Interest payable £ | 231,221 | 11,370,563 | 11,601,784 |
| Number of passenger journeys .. No. | 103,288 | 353,219,701 | 353,322,989 |
| Tonnage of goods and live stock carried Tons | 123,300 | 32,003,775 | 32,127,075 |
| Number of employees at 30th June, 1923— | | | |
| Salaried No. | 166 | 15,162 | 15,328 |
| Wages | 923 | 91,093 | 92,016 |
| Number of persons killed and injured during the year through train accidents and movement of rolling stock— | | | |
| Killed | 1 | 144 | 145 |
| Injured | 22 | 1,876 | 1,898 |

(a) Exclusive of cost of lines from Mount Gambier to Victorian border, and from Murrayville to Victorian border.

NOTE.—(—) Denotes a loss on working.

A graph which accompanies this chapter illustrates the total capital cost, mileage open, average cost per mile open, gross revenue, working expenses, and net revenue for each of the years 1870 to 1923.

2. **Government Railway Facilities.**—The population per mile of line open for general traffic in respect of the States' railways for each State has been given previously. The following table gives the mileage of all Government railways, and the mileage per 1,000 of population :—

RAILWAYS, FEDERAL AND STATE.—MILEAGE AND POPULATION, 1923.

| State or Territory. | Length of Line Open (Route). | | | Mileage per 1,000 of Population. |
|---------------------------------|------------------------------|--------------|---------------|----------------------------------|
| | State. | Federal. | Total. | |
| | Miles. | Miles. | Miles. | Miles. |
| New South Wales | 5,317.79 | .. | 5,317.79 | 2.43 |
| Victoria | 4,333.35 | .. | 4,333.35 | 2.70 |
| Queensland | 5,905.41 | .. | 5,905.41 | 7.33 |
| South Australia | 2,373.09 | 1,075.41 | 3,448.50 | 6.67 |
| Western Australia | 3,554.84 | 453.99 | 4,008.83 | 11.52 |
| Tasmania | 663.38 | .. | 663.38 | 3.10 |
| Federal Capital Territory | .. | 4.94 | 4.94 | 1.52 |
| Northern Territory | .. | 198.68 | 198.68 | 54.45 |
| Australia | 22,147.86 | 1,733.02 | 23,880.88 | 4.20 |

3. **Mileage Open for Traffic.**—(i) *Route Mileage.* The Government railway route mileages open for traffic, classified according to gauge, as at the 30th June in each of the years 1920 to 1923 are set out in the following table, which gives also the percentages of each mileage on the total on the mainland—the figures for Tasmania being shown separately, as in the case of the table hereinafter relating to rolling stock :—

RAILWAYS, FEDERAL AND STATE.—ROUTE MILEAGE, 1920 TO 1923.

| Gauge. | At 30th June— | | | | | | | |
|------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|
| | 1920. | | 1921. | | 1922. | | 1923. | |
| | Miles. | % | Miles. | % | Miles. | % | Miles. | % |
| Mainland— | | | | | | | | |
| 5 ft. 3 in. .. | 5,215.70 | 23.16 | 5,268.28 | 23.24 | 5,342.60 | 23.37 | 5,375.09 | 23.15 |
| 4 ft. 8½ in. .. | 6,032.05 | 26.79 | 6,059.66 | 26.74 | 6,132.96 | 26.83 | 6,334.67 | 27.28 |
| 3 ft. 6 in. .. | 11,118.81 | 49.38 | 11,185.41 | 49.36 | 11,233.01 | 49.14 | 11,355.71 | 48.91 |
| 2 ft. 6 in. .. | 121.90 | 0.54 | 121.90 | 0.53 | 121.90 | 0.53 | 121.77 | 0.53 |
| 2 ft. 0 in. .. | 30.26 | 0.13 | 30.26 | 0.13 | 30.26 | 0.13 | 30.26 | 0.13 |
| Total .. | 22,518.72 | 100.00 | 22,665.51 | 100.00 | 22,860.73 | 100.00 | 23,217.50 | 100.00 |
| Tasmania— | | | | | | | | |
| 3 ft. 6 in. .. | 605.12 | .. | 606.26 | .. | 611.97 | .. | 638.55 | .. |
| 2 ft. 0 in. .. | 23.58 | .. | 23.58 | .. | 24.83 | .. | 24.83 | .. |
| Grand Total | 23,147.42 | .. | 23,295.35 | .. | 23,497.53 | .. | 23,880.88 | .. |

In the four years from 1920 to 1923 the 5-ft. 3-in. gauge percentage has not changed materially, but, while the 4-ft. 8½-in. gauge has risen by 0.49, the 3-ft. 6-in. gauge has fallen by a similar percentage.

(ii) *Track Mileage.* The following table gives the track mileages of all Government railways and sidings, exclusive of Tasmania, for the years ended 30th June, 1920 to 1923, classified according to gauge, together with the percentages of each mileage on the total:—

RAILWAYS, FEDERAL AND STATE.—TRACK MILEAGE (a), 1920 TO 1923.

| Gauge. | At 30th June— | | | | | | | |
|-----------------|---------------|--------|-----------|--------|-----------|--------|-----------|--------|
| | 1920. | | 1921. | | 1922. | | 1923. | |
| | Miles. | % | Miles. | % | Miles. | % | Miles. | % |
| 5 ft. 3 in. .. | 6,650.84 | 24.71 | 6,671.62 | 24.67 | 6,756.56 | 24.81 | 6,930.03 | 25.03 |
| 4 ft. 8½ in. .. | 7,794.49 | 28.96 | 7,827.13 | 28.96 | 7,923.12 | 29.08 | 8,177.04 | 29.54 |
| 3 ft. 6 in. .. | 12,302.01 | 45.71 | 12,376.10 | 45.77 | 12,398.50 | 45.51 | 12,412.02 | 44.83 |
| 2 ft. 6 in. .. | 131.04 | 0.49 | 131.07 | 0.48 | 131.09 | 0.48 | 131.54 | 0.48 |
| 2 ft. 0 in. .. | 34.00 | 0.13 | 34.00 | 0.12 | 34.00 | 0.12 | 34.00 | 0.12 |
| Total .. | 26,912.38 | 100.00 | 27,039.92 | 100.00 | 27,243.27 | 100.00 | 27,684.63 | 100.00 |

(a) Exclusive of Tasmania.

4. *Rolling Stock.*—The numbers of the rolling stock employed on both the Federal and State Government railways are set out hereunder, classified according to gauge, as at the 30th June, 1923, together with the percentage of the numbers for each gauge on the total for the mainland. The figures for Tasmania are shown separately from those for the mainland.

RAILWAYS, FEDERAL AND STATE.—ROLLING STOCK, 1923.

| Gauge. | Locomotives. | | Coaching Stock. | | | | | | Vehicles other than Coaching. | |
|-----------------|--------------|--------|-----------------|--------|--------------|--------|--------|--------|-------------------------------|--------|
| | | | Ordinary. | | With Motors. | | Total. | | | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Mainland— | | | | | | | | | | |
| 5 ft. 3 in. .. | 1,042 | 27.18 | 2,665 | 39.54 | 365 | 93.83 | 3,030 | 42.51 | 23,980 | 30.10 |
| 4 ft. 8½ in. .. | 1,409 | 36.75 | 2,234 | 33.15 | 2 | 0.51 | 2,236 | 31.37 | 24,219 | 30.40 |
| 3 ft. 6 in. .. | 1,358 | 35.42 | 1,775 | 26.34 | 22 | 5.66 | 1,797 | 25.21 | 30,966 | 38.87 |
| 2 ft. 6 in. .. | 17 | 0.44 | 55 | 0.82 | .. | .. | 55 | 0.77 | 243 | 0.31 |
| 2 ft. 0 in. .. | 8 | 0.21 | 10 | 0.15 | .. | .. | 10 | 0.14 | 254 | 0.32 |
| Total .. | 3,834 | 100.00 | 6,739 | 100.00 | 389 | 100.00 | 7,128 | 100.00 | 79,662 | 100.00 |
| Tasmania— | | | | | | | | | | |
| 3 ft. 6 in. .. | 89 | .. | 227 | .. | 2 | .. | 229 | .. | 1,703 | .. |
| 2 ft. 0 in. .. | 7 | .. | 6 | .. | .. | .. | 6 | .. | 77 | .. |
| Grand Total | 3,930 | .. | 6,972 | .. | 391 | .. | 7,363 | .. | 81,442 | .. |

The present classification was adopted by the Conference of Railways Commissioners in 1921.

§ 5. Private Railways.

1. *Classification.*—A list of private railways, including those open to the public for general traffic and for special purposes, is given in "Transport and Communication Bulletin, No. 15," but, owing to limitations of space, it is not possible to include the information in this volume.

2. **Total Mileage Open, 1922-23.**—As stated in a previous page, a number of private railway lines have from time to time been constructed in Australia. Most of these lines, however, have been laid down for the purpose of hauling timber, sugar-cane, coal, or other minerals, and they are not generally used for the conveyance of passengers or for public traffic. In many cases the lines are practically unballasted and easily removable, and they run through bush country in connexion with the timber and sugar-milling industries, and for conveying firewood for mining purposes. Private railways referred to herein include (a) lines open to the public for general passenger and goods traffic; and (b) branch lines from Government railways and other lines which are used for special purposes and which are of a permanent description. Other lines are referred to in the part of this chapter dealing with Tramways (see C. *Tramways*).

The following table gives particulars of private railways open for traffic for general and special purposes during 1922-23. A classification of these lines according to gauge has already been given in § 1.

RAILWAYS, PRIVATE.—MILEAGE OPEN, 1922-23.

| Particulars. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | All States. |
|----------------------|--------|-----------|----------|----------|----------|--------|-------------|
| | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. |
| For general traffic | 188.38 | 24.94 | 280.31 | 33.80 | 278.35 | 194.90 | 1,000.68 |
| For special purposes | 183.01 | 35.19 | 994.38 | 21.10 | 557.75 | 38.08 | 1,829.51 |
| Total | 371.39 | 60.13 | 1,274.69 | 54.90 | 836.10 | 232.98 | 2,830.19 |

3. **Lines Open for General Traffic.**—The following statement shows, in tabular form, for each State the particulars of the operations of private railways open for general traffic for the year 1923. More detailed information regarding these lines will be found in "Transport and Communication Bulletin No. 15," published by this Bureau.

RAILWAYS, PRIVATE.—SUMMARY, 1922-23.

| State. | Companies from which returns were received. | Miles Open (Route). | Train-Miles. | Capital Cost. | Gross Revenue. | Working Expenses. | Rolling Stock. | | | Passenger Journeys. | Tons of Goods, etc. | No. of Employees. |
|--------------------|---|---------------------|--------------|------------------|----------------|-------------------|----------------|----------|-----------------|---------------------|---------------------|-------------------|
| | | | | | | | Locos. | Coaches. | Other Vehicles. | | | |
| | No. | Miles. | No. | £ | £ | £ | No. | No. | No. | No. | Tons. | No. |
| New South Wales .. | 10 | 188.38 | 612,926 | 2,614,458 | 3,8472 | 266,169 | 50 | 45 | 880 | 1,653,152 | 1,145,747 | 724 |
| Victoria .. | 2 | 24.94 | 28,466 | 86,744 | 14,954 | 10,342 | 4 | 4 | 42 | 31,030 | 89,752 | 25 |
| Queensland | 15 | 280.31 | 59,484 | 6407,635 | 38,910 | 22,581 | 16 | 21 | 271 | 101,284 | 120,426 | 81 |
| South Australia .. | 1 | 33.80 | 23,475 | (a) | (a) | (a) | 7 | 3 | 165 | 364 | 103,145 | 31 |
| West. Australia .. | 1 | 278.35 | 240,334 | 2,061,789 | 143,982 | 75,292 | 18 | 20 | 400 | 54,909 | 110,183 | 220 |
| Tasmania | 6 | 194.90 | 155,704 | 1,230,389 | 97,213 | 72,195 | 26 | 18 | 430 | 56,441 | 142,172 | 261 |
| All States | 35 | 1,000.68 | 1,120,389 | 6,401,015 (b) | 693,561 (b) | 446,632 | 130 | 111 | 2,188 | 1,897,189 | 1,711,425 | 1,342 |

(a) Not available.

(b) Incomplete.

The particulars given in the table are incomplete in respect of the States of New South Wales, Queensland, South Australia, and Tasmania. In New South Wales and Queensland several of these lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon.

§ 6. Comparative Railway Statistics, Various Countries.

A table has been given showing the railway facilities in 1922-23 in the States, in the Northern Territory, and in the Commonwealth, the railway mileage open for traffic being compared both with the area and population.

In the table below, comparative railway statistics of a like character are given in respect of the principal countries of the world at certain dates. The dates have been so chosen as to bring into relation the latest accurate figures for both population and railway mileage.

RAILWAYS, VARIOUS COUNTRIES.—MILEAGE, POPULATION, AND AREA.

| Country. | Year. | Miles of Railway. | Population. | Area in Square Miles. | Miles of Railway. | |
|-----------------------------|-------|-------------------|-------------|-----------------------|---------------------------|-----------------------------------|
| | | | | | Per 1,000 of Popu-lation. | Per 1,000 Sq. Miles of Territory. |
| Europe— | | | | | | |
| United Kingdom .. | 1920 | 23,734 | 47,307,601 | 121,633 | 0.50 | 195.12 |
| Belgium .. | 1919 | 4,649 | 7,478,840 | 11,752 | 0.62 | 395.59 |
| Denmark .. | 1920 | 2,662 | 3,289,195 | 17,144 | 0.81 | 155.27 |
| France .. | 1922 | 25,766 | 39,209,518 | 212,659 | 0.66 | 121.16 |
| Germany .. | 1920 | 35,677 | 59,858,284 | 182,271 | 0.60 | 195.74 |
| Greece .. | 1920 | 1,470 | 5,536,375 | 41,933 | 0.27 | 35.06 |
| Italy .. | 1921 | 10,290 | 38,835,941 | 110,632 | 0.26 | 93.01 |
| Netherlands .. | 1921 | 2,377 | 6,977,430 | 12,582 | 0.34 | 188.92 |
| Norway .. | 1921 | 2,141 | 2,649,775 | 124,964 | 0.81 | 17.13 |
| Portugal .. | 1920 | 2,128 | 6,041,000 | 35,490 | 0.35 | 59.96 |
| Spain .. | 1920 | 9,504 | 21,347,335 | 194,800 | 0.45 | 48.79 |
| Sweden .. | 1921 | 9,417 | 5,954,316 | 173,035 | 1.58 | 54.42 |
| Switzerland .. | 1920 | 3,915 | 3,880,320 | 15,976 | 1.01 | 245.06 |
| Asia— | | | | | | |
| India .. | 1922 | 37,266 | 318,942,480 | 1,802,629 | 0.12 | 20.67 |
| Japan .. | 1922 | 6,728 | 76,987,469 | 260,738 | 0.08 | 25.80 |
| Africa— | | | | | | |
| Egypt .. | 1922 | 3,040 | 13,551,000 | 350,000 | 0.22 | 8.69 |
| Union of South Africa | 1922 | 10,056 | 7,055,158 | 473,089 | 1.43 | 21.26 |
| America, North and Central— | | | | | | |
| Canada .. | 1922 | 41,498 | 8,966,834 | 3,729,665 | 4.63 | 11.13 |
| Mexico .. | 1920 | 10,754 | 13,887,080 | 767,198 | 0.77 | 14.02 |
| United States .. | 1920 | 254,845 | 105,710,620 | 3,026,789 | 2.41 | 84.19 |
| America, South— | | | | | | |
| Argentina .. | 1922 | 21,935 | 8,750,000 | 1,153,119 | 2.51 | 19.02 |
| Brazil .. | 1920 | 17,213 | 30,635,605 | 3,275,510 | 0.56 | 5.26 |
| Chile .. | 1920 | 5,403 | 3,754,723 | 289,829 | 1.44 | 18.64 |
| Australasia— | | | | | | |
| Australia .. | 1923 | 26,711 | 5,749,807 | 2,974,581 | 4.65 | 8.98 |
| New Zealand .. | 1923 | 3,188 | 1,289,221 | 103,861 | 2.47 | 30.69 |

It will be seen from the above table that per 1,000 of population Australia had the greatest mileage (in 1923), 4.65 miles; the next in magnitude being Canada (1922), with 4.63 miles, Argentina (1922), with 2.51 miles, New Zealand (1923), with 2.47 miles, and United States (1920), with 2.41 miles.

The least mileage per 1,000 of population is shown in the case of Japan (1922), with 0.08 mile, followed by India (1922), with 0.12 mile.

With regard to the mileage per 1,000 square miles of territory, Belgium (1919) with 395.59 miles was easily first, followed by Switzerland (in 1920) with 245.06 miles, Germany (in 1920) with 195.74 miles, the United Kingdom (in 1920) with 195.12 miles, Netherlands (in 1921) with 188.92 miles, and Denmark (in 1920) with 155.27 miles.

The least mileage open per 1,000 square miles is that of Brazil (in 1920) with 5.26 miles.

C. TRAMWAYS.

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable progress has been made in the adoption of electrical traction, the benefit of which is now enjoyed by a number of the larger towns.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are really private railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present paragraph.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show the total mileage of tramway lines open for general passenger traffic for the year 1922-23, and also in Australia as a whole for the years 1918-19 to 1922-23, classified (a) according to the nature of the authority by which the lines are controlled; (b) according to the motive power utilized, and (c) according to gauge:—

TRAMWAYS.—ROUTE MILEAGE OPEN, 1922-23.

| Nature of Motive Power, and Gauge. | N.S. Wales. | Victoria. | Q'land. | South Australia. | Western Australia. | Tasmania. | Total Australia. |
|------------------------------------|-------------|-----------|---------|------------------|--------------------|-----------|------------------|
|------------------------------------|-------------|-----------|---------|------------------|--------------------|-----------|------------------|

GOVERNMENT.

| | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | Miles. |
|----------------|--------|--------|----------|--------|--------|--------|--------|
| Electric | 158.99 | 79.10 | (a)42.60 | .. | 30.38 | .. | 311.07 |
| Steam | 65.91 | .. | .. | .. | 17.75 | .. | 83.66 |
| Cable | .. | 45.90 | .. | .. | .. | .. | 45.90 |
| Horse | .. | 0.63 | .. | .. | 7.39 | .. | 8.02 |
| Total | 224.90 | 125.63 | 42.60 | .. | 55.52 | .. | 448.65 |

MUNICIPAL.

| | | | | | | | |
|----------------|----|----|------|-------|------|-------|--------|
| Electric | .. | .. | .. | 71.71 | 8.61 | 26.28 | 106.60 |
| Steam | .. | .. | 6.65 | .. | .. | .. | 6.65 |
| Total | .. | .. | 6.65 | 71.71 | 8.61 | 26.28 | 113.25 |

PRIVATE.

| | | | | | | | |
|----------------|------|-------|----|----|-------|----|-------|
| Electric | .. | 27.69 | .. | .. | 14.82 | .. | 42.51 |
| Steam | 3.50 | .. | .. | .. | .. | .. | 3.50 |
| Total | 3.50 | 27.69 | .. | .. | 14.82 | .. | 46.01 |

ALL CONTROLLING AUTHORITIES.

| | | | | | | | |
|----------------|--------|--------|-------|-------|-------|-------|--------|
| Electric | 158.99 | 106.79 | 42.60 | 71.71 | 53.81 | 26.28 | 460.18 |
| Steam | 69.41 | .. | 6.65 | .. | 17.75 | .. | 93.81 |
| Cable | .. | 45.90 | .. | .. | .. | .. | 45.90 |
| Horse | .. | 0.63 | .. | .. | 7.39 | .. | 8.02 |
| Total | 228.40 | 153.32 | 49.25 | 71.71 | 78.95 | 26.28 | 607.91 |

ACCORDING TO GAUGE.

| | | | | | | | |
|-----------------|--------|--------|-------|-------|-------|-------|--------|
| Gauge— | | | | | | | |
| 5 ft. 3 in. .. | .. | 5.18 | .. | .. | .. | .. | 5.18 |
| 4 ft. 8½ in. .. | 228.40 | 148.14 | 42.60 | 71.71 | .. | .. | 490.85 |
| 3 ft. 6 in. .. | .. | .. | 6.65 | .. | 61.57 | 26.28 | 94.50 |
| 2 ft. 0 in. .. | .. | .. | .. | .. | 17.38 | .. | 17.38 |
| Total | 228.40 | 153.32 | 49.25 | 71.71 | 78.95 | 26.28 | 607.91 |

(a) Mileage as at 31st December, 1922. Transferred from a Private Company on 1st January, 1923.

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA, 1918-19 TO 1922-23.

| Nature of Motive Power, Controlling Authority, and Gauge. | | | 1918-19. | 1919-20. | 1920-21. | 1921-22. | 1922-23. |
|---|--|--|----------|----------|----------|----------|----------|
| ACCORDING TO MOTIVE POWER. | | | | | | | |
| | | | Miles. | Miles. | Miles. | Miles. | Miles. |
| Electric | | | 430.87 | 443.03 | 445.10 | 456.37 | 460.18 |
| Steam | | | 99.39 | 98.86 | 97.73 | 98.38 | 93.81 |
| Cable | | | 45.92 | 45.90 | 45.90 | 45.90 | 45.90 |
| Horse | | | 3.88 | 5.29 | 8.03 | 7.79 | 8.02 |
| Total | | | 580.06 | 593.08 | 596.76 | 608.44 | 607.91 |
| ACCORDING TO CONTROLLING AUTHORITY. | | | | | | | |
| Government | | | 325.23 | 393.60 | 397.98 | 403.75 | 448.65 |
| Municipal | | | 159.17 | 103.82 | 104.19 | 110.57 | 113.25 |
| Private | | | 95.66 | 95.66 | 94.59 | 94.12 | 46.01 |
| Total | | | 580.06 | 593.08 | 596.76 | 608.44 | 607.91 |
| ACCORDING TO GAUGE. | | | | | | | |
| Gauge— | | | | | | | |
| 5 ft. 3 in. | | | 5.16 | 5.16 | 5.16 | 5.16 | 5.18 |
| 4 ft. 8½ in. | | | 473.28 | 484.57 | 486.42 | 495.70 | 490.85 |
| 3 ft. 6 in. | | | 84.47 | 86.20 | 88.03 | 90.67 | 94.50 |
| 2 ft. 0 in. | | | 17.15 | 17.15 | 17.15 | 16.91 | 17.38 |
| Total | | | 580.06 | 593.08 | 596.76 | 608.44 | 607.91 |

The mileage of electric tramways has steadily increased during the period dealt with above. It may be noted that the transfer in 1920 from municipal to Government control of the principal Melbourne and suburban systems was responsible for the increase in Government-controlled mileage in that year. On 1st January, 1923, the tramways formerly owned by a private company were taken over by the Queensland Government.

(iii.) *Cost of Construction and Equipment.* The table hereunder shows, as far as information is available, the total cost of construction and equipment of all tramways to the 30th June, 1923, classified according to the nature of the motive power and the controlling authority.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1922-23.

| Nature of Motor Power. | New South Wales. | Victoria. | Queensland. | South Australia. | Western Australia. | Tasmania. | Australia. |
|------------------------|------------------|-------------|-------------|------------------|--------------------|-----------|--------------|
| GOVERNMENT. | | | | | | | |
| Electric | £ 8,680,161 | £ 2,460,672 | £ 1,640,127 | £ .. | £ 850,965 | £ .. | £ 13,631,925 |
| Steam .. | 1,294,870 | .. | .. | .. | 72,329 | .. | 1,367,199 |
| Cable .. | .. | 2,357,751 | .. | .. | .. | .. | 2,357,751 |
| Horse .. | .. | 4,000 | .. | .. | 15,899 | .. | 19,899 |
| Total .. | 9,975,031 | 4,822,423 | 1,640,127 | .. | 939,193 | .. | 17,376,774 |
| MUNICIPAL. | | | | | | | |
| Electric | .. | .. | .. | 2,512,048 | 133,811 | 517,983 | 3,163,842 |
| Steam .. | .. | .. | 53,129 | .. | .. | .. | 53,129 |
| Total | .. | .. | 53,129 | 2,512,048 | 133,811 | 517,983 | 3,216,971 |

(a) For year 1921.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1922-23—*continued*.

| Nature of Motor Power. | New South Wales. | Victoria. | Queensland. | South Australia. | Western Australia. | Tasmania. | Australia. |
|------------------------------|------------------|-----------|-------------|------------------|--------------------|-----------|-------------|
| PRIVATE. | | | | | | | |
| Electric | £ .. | £ 334,875 | £ .. | £ .. | £ 457,318 | £ .. | £ 792,193 |
| Steam .. | (a) .. | .. | .. | .. | .. | .. | (a) .. |
| Total .. | (a) .. | 334,875 | .. | .. | 457,318 | .. | (b) 792,193 |
| ALL CONTROLLING AUTHORITIES. | | | | | | | |
| Electric | 8,680,161 | 2,795,547 | 1,640,127 | 2,512,048 | 1,442,094 | 517,983 | 17,587,960 |
| Steam .. | 61,294,870 | .. | 58,129 | .. | 72,329 | .. | 61,420,328 |
| Cable ... | .. | 2,357,751 | .. | .. | .. | .. | 2,357,751 |
| Horse .. | .. | 4,000 | .. | .. | 15,899 | .. | 19,899 |
| Total .. | 69,975,031 | 5,157,298 | 1,693,256 | 2,512,048 | 1,530,322 | 517,983 | 621,385,938 |

(a) Not available.

(b) Incomplete.

2. New South Wales.—(i) *Government Tramways.* (a) *General.* The tramways, with but few comparatively unimportant exceptions, are the property of the Government, and are under the control of the Railway Commissioners. In Sydney and suburbs the Government tramways are divided into distinct systems. There were in June, 1923, seven such systems in operation within the metropolitan area, five of which are operated by electricity and two by steam.

(b) *Particulars of Working.* The subjoined statement gives particulars of the working of the electric and steam tramways in Sydney, and of other tramways under Government control in 1922-23 :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—RETURNS FOR 1922-23.

| Line. | Mileage Open for Traffic. | | Total Cost of Construction and Equipment. (a) | Gross Revenue. | Working Expenses. | Net Earnings. (b) | Interest. | Profit or Loss. (a) | Percentage of Working Expenses on Gross Revenue. | Percentage of Net Earnings on Capital Cost. (b) |
|------------------------------|---------------------------|--------|--|----------------|-------------------|----------------------|-----------|------------------------|--|--|
| | Route. | Track. | | | | | | | | |
| | Miles. | Miles. | £ | £ | £ | £ | £ | £ | % | % |
| Sydney and Suburban—Electric | 158.99 | 283.23 | 8,680,161 | 3,375,923 | 2,759,914 | 616,009 | 436,842 | 179,167 | 81.75 | + 7.09 |
| Steam | 8.19 | 9.62 | 53,820 | 24,189 | 37,792 | — 13,603 | 2,774 | — 16,377 | 153.23 | — 25.27 |
| Total | 167.18 | 292.90 | 8,733,981 | 3,400,112 | 2,797,706 | 602,406 | 439,616 | 162,790 | 82.28 | + 6.90 |
| Parramatta—Steam | 2.12 | 2.12 | 23,345 | 10,285 | 14,798 | — 4,513 | 1,652 | — 6,165 | 143.87 | — 1.93 |
| Sutherland to Cronulla—Steam | 7.40 | 7.40 | 52,255 | 19,543 | 24,167 | — 4,624 | 2,696 | — 7,320 | 123.66 | — 8.85 |
| Newcastle—Steam | 34.09 | 44.67 | 1,037,685 | 145,168 | 220,759 | — 75,591 | 49,729 | — 125,320 | 152.07 | — 7.28 |
| East to West Maitland—Steam | 4.06 | 4.06 | 35,215 | 8,060 | 9,571 | — 1,511 | 1,817 | — 3,328 | 118.74 | — 4.30 |
| Broken Hill—Steam | 10.05 | 11.44 | 92,550 | 14,946 | 25,305 | — 10,359 | 4,764 | — 15,123 | 169.30 | — 11.19 |
| Total | 224.90 | 332.59 | 9,975,031 | 3,598,114 | 3,092,306 | 505,808 | 500,274 | 5,534 | 85.94 | + 5.07 |

(a) Includes Stores Advance Account.

(b) + indicates a profit ; — indicates a loss.

(c) *Capital Cost.* The capital cost shown in the preceding table was made up as follows:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—CAPITAL COST, 1923.

| Permanent Way. | Rolling Stock. | Power-houses, Sub-stations, and Plant. | Machinery. | Work-shops. | Furniture. | Store Advances Account. | Total. |
|----------------|----------------|--|------------|-------------|------------|-------------------------|-----------|
| £ | £ | £ | £ | £ | £ | £ | £ |
| 5,119,459 | 2,069,241 | 2,042,774 | 195,369 | 258,796 | 2,392 | 287,000 | 9,975,031 |

The average cost per mile open was £22,763 for permanent way and £21,590 for all other charges, making a total of £44,353 per mile.

During the year 1922–23, one new extension, 0.20 miles in length, was opened for traffic.

(d) *Summary, Government Tramways.* The following table gives a summary of the operations of all Government tramways for the years 1919 to 1923:—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—SUMMARY, 1919 TO 1923.

| Year ended 30th June— | Mileage Open for Traffic. (Route.) | Total Cost of Construction and Equip-ment. | Gross Revenue. | Working Expenses. | Net Earn-ings. | Interest | Per-centage of Work-ing Expen-ses on Gross Reve-nue. | Per-centage of Net Earn-ings on Capital Cost. | Passen-gers carried. | Persons em-ployed. |
|-----------------------|------------------------------------|--|----------------|-------------------|----------------|----------|--|---|----------------------|--------------------|
| | Miles. | £ | £ | £ | £ | £ | % | % | No. '000 | No. |
| 1919 .. | 225.54 | 8,568,138a | 2,237,701 | 1,850,724 | 386,977 | 368,529 | 82.71 | 4.52 | 268,798 | 9,028 |
| 1920 .. | 225.81 | 8,768,548a | 2,881,797 | 2,486,121 | 395,676 | 404,125 | 86.27 | 4.51 | 324,885 | 8,970 |
| 1921 .. | 227.29 | 9,060,757a | 3,471,737 | 2,943,251 | 528,486 | 421,814 | 84.78 | 5.83 | 337,600 | 9,018 |
| 1922 .. | 229.26 | 9,505,732a | 3,610,135 | 3,015,616 | 594,519 | 467,328 | 83.53 | 6.26 | 330,939 | 9,734 |
| 1923 .. | 224.90 | 9,975,031a | 3,598,114 | 3,092,306 | 505,808 | 500,274 | 85.04 | 5.08 | 331,002 | 9,897 |

(a) £47,455 of this sum has been paid from the Consolidated Revenue, and no interest is payable thereon.

The net result in 1923, after providing for all working expenses and £500,274 for interest on the capital invested, was a profit of £5,534 as compared with a profit of £127,191 in the preceding year. During the year 1922–23, 331,001,822 passengers were carried, an increase of 63,255 as compared with the previous year.

(e) *Sydney Tramways.* Official Year Book No. 15, p. 589, gives a short account of the progress of the Sydney Tramway System. Owing to limitations of space this information cannot be repeated, but the subjoined table shows certain important particulars for the years 1919 to 1923 inclusive.

ELECTRIC TRAMWAYS.—SYDNEY.—SUMMARY, 1919 TO 1923.

| Particulars. | Year ended 30th June— | | | | |
|---|-----------------------|-------------|-------------|-------------|-------------|
| | 1919. | 1920. | 1921. | 1922. | 1923. |
| Mileage open for traffic— | | | | | |
| Route miles | 154.56 | 155.35 | 156.81 | 158.78 | 158.99 |
| Track miles | 274.75 | 276.00 | 278.75 | 283.07 | 283.28 |
| Total cost of construction and equipment £ | 7,779,227 | 7,842,549 | 8,009,611 | 8,342,096 | 8,680,161 |
| Current used for traction purposes kilowatt hours | 83,780,703 | 92,074,950 | 97,193,560 | 99,477,210 | 88,655,678 |
| Tram miles run No. | 23,298,238 | 25,394,701 | 27,112,029 | 27,768,543 | 28,592,113 |
| Passengers carried No. | 250,706,503 | 304,986,683 | 315,847,363 | 310,037,935 | 312,930,225 |
| Gross revenue £ | 2,063,055 | 2,676,748 | 3,216,358 | 3,353,768 | 3,375,923 |
| Working expenses £ | 1,673,536 | 2,246,674 | 2,649,132 | 2,700,686 | 2,759,914 |
| Net revenue £ | 389,519 | 430,074 | 567,226 | 653,082 | 616,009 |
| Percentage of working expenses on gross revenue % | 81.12 | 83.93 | 82.36 | 80.53 | 81.75 |
| Cars in use | 1,393 | 1,394 | 1,414 | 1,427 | 1,531 |
| Persons employed | 8,610 | 8,440 | 8,352 | 9,177 | 9,150 |

The current for the operation of the City and Suburban tramways is generated at the power-houses at Ultimo and White Bay, erected at a total cost of £2,042,774, including the cost of the sub-stations and plant. The total output of the power-houses, for both lighting and traction purposes, during the year 1922-23 was 136,576,711 kilowatt-hours, of which the direct-current supply numbered 64,353.

(ii) *Private Tramways.* A private steam tramway passes through the township of Parramatta. Commencing at the park gates, it runs as far as the Duck River, a distance of $3\frac{1}{2}$ miles, where it connects with the Parramatta River steamers which convey passengers and goods to and from Sydney. This line, which has a gauge of 4 ft. $8\frac{1}{2}$ in., was opened for traffic in 1883. In 1923 the number of tram-miles run was 18,200, and the number of passengers conveyed 115,003.

3. *Victoria.*—(i) *General.* In Melbourne there are several tramway systems carried on under the control of various authorities, the most important being the cable and electric systems worked by the Melbourne and Metropolitan Tramway Board, to which reference will be made further on. There were also, at 30th June, 1923, two lines of electric tramways, viz.:—(a) St. Kilda to Brighton, and (b) Sandringham to Black Rock, both of which belong to and are operated by the Railway Commissioners; In addition there are systems of electric tramways at Ballarat, Bendigo, and Geelong, constructed and run by private companies.

Numerous tramways have been constructed for special purposes in various parts of the State under the provisions of the Tramway Act 1890. These, however, are of the nature of the private railways referred to in sub-section 1 hereof. A tramway to the Zoological Gardens, with horse traction, is operated by the Melbourne and Metropolitan Tramways Board. The rolling stock and car barn were destroyed by fire in November, 1923, and at the present time this line is not in operation.

(ii) *Melbourne and Metropolitan Tramways Board.* (a) *General.* A short account of the formation of the Melbourne Tramway and Omnibus Company, and of the Tramway Board, will be found in earlier issues of this work.

(b) *Cable and Horse Tramways.* (1) *Services.* The complete system consists of 45.90 miles of double track connecting the City of Melbourne with the nearer suburbs, and 0.63 miles of horse tramway at Royal Park. The gauge of track is 4 ft. $8\frac{1}{2}$ in.

(2) *Particulars of Working.* A summary for the years 1919 to 1923 is given hereunder:—

CABLE TRAMWAYS.—MELBOURNE.—SUMMARY, 1919 TO 1923.

| Year ended 30th June— | Mileage Open (Route). | | | Mileage Run during Year. | | | Number of Passengers Carried. | | |
|--------------------------|--------------------------|--------|--------|--------------------------|--------|------------|-------------------------------|---------|-------------|
| | Cable. | Horse. | Total. | Tram. | | Total. | Tram. | | Total. |
| | | | | Cable. | Horse. | | Cable. | Horse. | |
| | | | | | | | | | |
| Miles. | Miles. | Miles. | Miles. | Miles. | Miles. | No. | No. | No. | |
| 1919(a) .. | 43.68 | 0.63 | 44.31 | 13,138,992 | 10,645 | 13,149,637 | 118,043,604 | 259,177 | 118,302,781 |
| 1920(b) .. | 45.90 | 0.63 | 46.53 | 13,424,488 | 10,648 | 13,435,136 | 133,378,390 | 296,651 | 133,675,041 |
| 1921 .. | 45.90 | 0.63 | 46.53 | 14,058,575 | 10,406 | 14,068,981 | 148,755,005 | 293,676 | 149,048,681 |
| 1922 .. | 45.90 | 0.63 | 46.53 | 14,624,684 | 10,134 | 14,634,818 | 150,962,255 | 239,508 | 151,201,763 |
| 1923 .. | 45.90 | 0.63 | 46.53 | 14,832,416 | 9,808 | 14,842,224 | 155,617,351 | 202,802 | 155,820,153 |

| Year ended 30th June— | Traffic Revenue. | | | Working Expenses. | | | Percentage of Working Expenses on Revenue. | No. of Employees at end of Year. |
|--------------------------|------------------|--------|-----------|-------------------|--------|---------|--|---|
| | Tram. | | Total. | Tram. | | Total. | | |
| | Cable. | Horse. | | Cable. | Horse. | | | |
| | | | | | | | | |
| £ | £ | £ | £ | £ | £ | % | No. | |
| 1919(a) .. | 945,286 | 513 | 945,799 | 577,736 | 1,154 | 578,890 | 61.21 | 2,400 |
| 1920(b) .. | 1,075,236 | 606 | 1,075,842 | 722,482 | 1,564 | 724,046 | 67.30 | 2,786 |
| 1921 .. | 1,146,955 | 792 | 1,147,747 | 843,333 | 1,100 | 844,433 | 73.60 | 2,836 |
| 1922 .. | 1,232,415 | 916 | 1,233,331 | 943,415 | 1,184 | 944,599 | 76.59 | 2,864 |
| 1923 .. | 1,260,043 | 869 | 1,260,912 | 923,564 | 1,225 | 924,789 | 73.34 | 3,035 |

(a) Exclusive of Northcote Cable Tramway.
2nd February, 1920, to 30th June, 1920.

(b) Inclusive of Northcote Cable Tramway from

(c) *Electric Tramways.* (1) *Services Operated.* The system controlled by the Melbourne and Metropolitan Tramway Board at 30th June, 1923, consisted of six services, viz., (a) The Prahran and Malvern Tramways; (b) The Hawthorn Tramways; (c) The Melbourne, Brunswick and Coburg Tramways; (d) The Fitzroy, Northcote and Preston Tramways; (e) The Footscray Tramways; and (f) the North Melbourne-Essendon Tramway, all of 4 ft. 8½ in. gauge. The last-mentioned tramway was purchased from a private company and operated by the Tramway Board as from 1st August 1922.

(2) *Particulars of Working.* A summary of operations for the year 1922-23 is given hereunder:—

MELBOURNE TRAMWAY BOARD.—ELECTRIC SERVICES.—OPERATIONS, 1922-23.

| Year. | Mileage. | Total Cost of Construction and Equipment | Current used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Interest. | Net Profit. |
|---------|----------|--|-------------------------------------|-----------------|---------------------|----------------|-------------------|-----------|-------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | No. | £ | £ | £ |
| 1922-23 | 71.51 | 2,185,275 | 15,863,159 | 6,742,428 | 70,811,393 | 661,486 | 503,166 | 80,129 | 78,191 |

(3) *Future Development.* A comprehensive construction scheme has been prepared for submission to Parliament in connexion with the extension of existing lines, the linking-up of lines already constructed in different suburbs, and the opening up of new routes. The total mileage involved in this scheme is 10.40 miles (route).

(iii) *Other Government Tramways.* The Victorian Railway Department owns and operates two lines of electric street railways, viz., St. Kilda to Brighton (5.18 miles of 5 ft. 3 in. gauge) and Sandringham to Black Rock (2.41 miles of 4 ft. 8½ in. gauge), a total route mileage of 7.59 miles.

Particulars of the operations of these tramways for the years 1918-19 to 1922-23 are contained in the tables hereunder.

ELECTRIC TRAMWAY.—ST. KILDA-BRIGHTON.—1919 TO 1923.

| Year ended 30th June— | Total Cost of Construction and Equipment. | Current used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Interest. | Net Profit or Loss. |
|-----------------------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|-----------|---------------------|
| | £ | Kilowatt-hours. | No. | No. | £ | £ | £ | £ |
| 1919 .. | (a) 164,347 | 932,010 | 527,305 | 4,945,627 | 40,048 | 27,207 | 6,574 | 6,267 |
| 1920 .. | 150,128 | 1,381,821 | 551,307 | 6,805,892 | 50,494 | 42,813 | 6,005 | 1,676 |
| 1921 .. | 153,581 | 1,487,928 | 552,772 | 5,572,454 | 47,005 | 63,921 | 6,143 | — 23,059 |
| 1922 .. | 172,661 | 1,550,469 | 538,495 | 5,488,034 | 55,372 | 51,501 | 6,906 | — 3,035 |
| 1923 .. | 188,423 | 1,377,116 | 504,098 | 5,750,912 | 54,194 | 42,598 | 8,893 | 2,703 |

(a) Inclusive of cost of Rolling Stock for Sandringham-Black Rock electric street railway.
(—) Indicates loss.

ELECTRIC TRAMWAY.—SANDRINGHAM-BLACK ROCK.—1919 TO 1923.

| Year ended 30th June— | Total Cost of Construction. | Current used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Interest. | Net Profit or Loss. |
|-----------------------|-----------------------------|-------------------------------------|-----------------|---------------------|----------------|-------------------|-----------|---------------------|
| | £ | Kilowatt-hours. | No. | No. | £ | £ | £ | £ |
| 1919(a) .. | (b) 42,706 | 38,650 | 29,008 | 616,746 | 3,751 | 1,792 | 529 | 1,430 |
| 1920 .. | 67,910 | 161,370 | 113,405 | 2,433,162 | 11,597 | 7,898 | 2,316 | 1,383 |
| 1921 .. | 59,973 | 172,920 | 121,575 | 1,232,796 | 9,140 | 8,802 | 2,399 | — 2,061 |
| 1922 .. | 72,735 | 231,600 | 127,348 | 1,278,571 | 11,398 | 9,844 | 2,909 | — 1,355 |
| 1923 .. | 86,974 | 245,130 | 125,274 | 1,411,885 | 12,531 | 9,607 | 4,783 | — 1,859 |

(a) Period, 11th March to 30th June. (b) Exclusive of Rolling Stock. (—) Indicates loss.

(iv) *Private Tramways.* Two systems of tramways are owned and operated by private companies, viz., Ballarat and Bendigo (21.25 miles) and Geelong (6.44 miles); giving a total route mileage of 27.69 miles. Electrical traction is used on each of these lines which are constructed to the 4 ft. 8½ in. gauge.

(v) *Summary for all Electric Tramways.* The following table gives particulars of the working of all electric tramways in Victoria for each year from 1919 to 1923 inclusive :—

ELECTRIC TRAMWAYS.—VICTORIA.—SUMMARY, 1919 TO 1923.

| Year ended 30th June— | Mileage Open for Traffic (Route). | Total Cost of Construction and Equipment. | Current Used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Cars in Use. | Persons Employed. |
|-----------------------|-----------------------------------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|--------------|-------------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | £ | £ | No. | No. |
| 1919 | 94.58 | 2,027,057 | 13,955,124 | 6,832,873 | 60,753,278 | 463,320 | 344,220 | 274 | 1,318 |
| 1920 | 105.26 | 2,442,746 | 15,758,101 | 7,302,713 | 74,359,826 | 553,507 | 418,462 | 294 | 1,554 |
| 1921 | 105.26 | 2,528,665 | 17,618,387 | 8,102,393 | 79,807,665 | 647,067 | 539,652 | 302 | 1,795 |
| 1922 | 109.50 | 2,675,023 | 18,755,105 | 8,471,039 | 82,444,219 | 790,494 | 585,434 | 309 | 1,836 |
| 1923 | 106.79 | 2,795,547 | 19,114,007 | 8,585,756 | 86,027,005 | 816,984 | 624,852 | 310 | 2,190 |

4. *Queensland.*—(i) *General.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the Brisbane Tramway Trust Act 1922, appointed a Trust to control and operate the system. The total length of the Brisbane tramways was 42.60 route miles at the end of the year 1923. A steam tramway having a length of 6.65 route miles is in operation at Rockhampton.

(ii) *Brisbane Electric Tramways.* These tramways are run on the overhead trolley system, the voltage of the line current being 550. Cost of construction and equipment to the end of the year 1921 (the latest available) was £1,640,127, the gauge of line being 4 ft. 8½ in. The following table gives a summary for the calendar years 1918 to 1922 :—

ELECTRIC TRAMWAYS.—BRISBANE.—SUMMARY, 1918 TO 1922.

| Year ended 31st Dec.— | Mileage Open for Traffic (Route). | Total Cost of Construction and Equipment. | Current Used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Cars in Use. | Persons Employed. |
|-----------------------|-----------------------------------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|--------------|-------------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | £ | £ | No. | No. |
| 1918 | 41.58 | a1,435,414 | 9,453,441 | 4,379,679 | 57,456,832 | 412,569 | 264,858 | 173 | 1,103 |
| 1919 | 42.60 | a1,435,414 | 10,309,249 | 4,600,482 | 61,415,350 | 445,333 | 295,697 | 174 | 1,078 |
| 1920 | 42.60 | a1,435,414 | 11,000,875 | 4,934,043 | 69,236,690 | 527,264 | 387,456 | 178 | 1,130 |
| 1921 | 42.60 | 1,640,127 | 11,413,745 | 4,994,357 | 68,056,309 | 544,823 | 411,180 | 178 | 1,142 |
| 1922 | 42.60 | b1,640,127 | 12,143,194 | 5,102,527 | 71,529,033 | 575,088 | 446,472 | 181 | 1,179 |

(a) To 31st December, 1917.

(b) To 31st December, 1921.

(iii) *Rockhampton Municipal Tramway.* This tramway was opened for traffic in 1909, the motive power being steam. The length of line is 6.65 route miles, and the gauge 3 ft. 6 in. The capital cost to 31st December, 1922, was £53,129. During the year 1,686,143 passengers were carried, the revenue being £16,150 and working expenses £16,412. The number of the staff at the end of year was 46.

(iv) *Sugar-Mill Tramways.* In various parts of Queensland there are tramways used in connexion with the sugar-milling industry, chiefly for the purpose of hauling cane. Some of these lines are of a permanent nature, running through sugar-cane plantations, while others are portable lines running to various farms. Particulars of these lines are given in Transport and Communication Bulletin No. 15, but lack of space precludes the publication of such information in this volume.

5. *South Australia.*—(i) *Electric Tramways.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to this year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1923, the Tramways Trust operated a total route mileage of 71.71 miles of 4 ft. 8½ in. gauge. A summary for the years 1919 to 1923 is given in the subjoined table :—

ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY, 1919 TO 1923.

| Year ended 31st July— | Mileage Open for Traffic (Route). | Total Cost of Construction and Equipment. | Current Used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Cars in Use. | Persons Employed. |
|-----------------------|-----------------------------------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|--------------|-------------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | £ | £ | No. | No. |
| 1919 | 65.66 | 1,789,487 | 10,730,307 | 5,176,264 | 45,882,376 | 423,477 | 284,993 | 185 | 1,337 |
| 1920 | 66.03 | 1,793,298 | 11,261,046 | 5,407,654 | 50,815,848 | 505,303 | 339,166 | 190 | 1,270 |
| 1921 | 66.40 | 1,890,067 | 12,096,515 | 5,785,148 | 55,323,737 | 555,421 | 392,824 | 190 | 1,264 |
| 1922 | 69.45 | 2,190,147 | 12,542,540 | 5,960,082 | 56,787,339 | 580,505 | 405,230 | 198 | 1,287 |
| 1923 | 71.71 | 2,512,048 | 13,700,385 | 6,155,033 | 59,618,362 | 612,839 | 430,474 | 218 | 1,422 |

(ii) *Horse Tramways.* There are also 19.86 miles of Government horse-tramways in country districts, worked in connexion with the railway system, of which 17.36 miles are used for passenger service, and 2.50 miles for special purposes.

6. *Western Australia.*—(i) *Government Tramways.* (a) *General.* Apart from the electric tramways, there are several Government tramways, with a total length of 25.14 miles. The lines are under the control of the Department of the North-West, and the most important is that between Roebourne and Cossack, constructed on a 2-ft. gauge, with a length of 12.50 miles, and worked by steam. The remaining 12.64 miles are made up of several short lengths worked by steam or horses in connexion with the jetties at certain ports, and providing communication between the jetties and the goods sheds or warehouses.

(b) *Steam and Horse Tramways.* The capital cost of the Government steam or horse tramways up to the 30th June, 1923, was £88,228, the gross revenue for 1922–23 being £5,840, and the working expenses £2,030.

(c) *Perth Electric Tramways.* These tramways were opened for traffic by a private company on the 24th September, 1899, and the system was subsequently extended to many of the suburbs. Control was taken over by the Government on the 1st July, 1913, and the tramways are now worked in conjunction with the Government railways. The gauge of line is 3 ft. 6 in. The following table shows particulars of working for the year ended 30th June, 1923 :—

ELECTRIC TRAMWAYS.—PERTH.—1923.

| Mileage. | Total Cost of Construction and Equipment. | Current Used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Cars in Use. | Persons Employed. |
|----------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|--------------|-------------------|
| | £ | Kilowatt-hours. | No. | No. | £ | £ | No. | No. |
| 30.38 | 850,965 | 7,285,200 | 2,770,518 | 25,093,983 | 262,689 | 213,928 | 103 | 551 |

(ii) *Private Tramways.* Electric tramways with a route mileage at 31st August, 1923, of 8.61 miles, and controlled by the municipal authorities, are in operation in Fremantle. In Kalgoorlie and Boulder a private company controls the electric tramways, and at the end of 1923 the length of line was 14.82 miles (route). All the foregoing lines are of 3 ft. 6 in. gauge.

(iii) *Summary, all Electric Tramways.* The subjoined table gives a summary for all electric tramway systems in the State for the years 1919 to 1923 :—

ELECTRIC TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY, 1919 TO 1923.

| Year. | Mileage Open for Traffic (Route). | Total Cost of Construction and Equipment. | Current Used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Cars in Use. | Persons Employed. |
|-------|-----------------------------------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|--------------|-------------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | £ | £ | No. | No. |
| 1919 | 50.22 | 1,150,018 | 5,922,421 | 2,951,653 | 20,954,579 | 209,664 | 170,261 | 130 | 545 |
| 1920 | 50.66 | 1,175,597 | 7,724,522 | 3,612,417 | 27,322,826 | 278,117 | 221,045 | 136 | 629 |
| 1921 | 50.90 | 1,227,304 | 8,412,175 | 3,472,632 | 33,377,124 | 313,195 | 276,607 | 136 | 728 |
| 1922 | 50.38 | 1,364,177 | 8,745,935 | 3,540,886 | 32,954,755 | 338,353 | 277,971 | 160 | 826 |
| 1923 | 53.81 | 1,442,094 | 9,326,907 | 3,637,126 | 33,838,351 | 350,412 | 281,566 | 166 | 722 |

7. Tasmania.—(i) *Electric Tramways.* In Hobart there is a system of electric tramways consisting of 16.14 route miles of 3 ft. 6 in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates tramways in Launceston having a length of 10.14 route miles of 3 ft. 6 in. gauge.

The following table gives a summary of the working of the two systems for the years 1919 to 1923 :—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY, 1919 TO 1923.

| Year. | Mileage Open for Traffic (Route). | Total Cost of Construction and Equipment. | Current Used for Traction Purposes. | Tram Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Cars in Use. | Persons Employed. |
|-------|-----------------------------------|---|-------------------------------------|-----------------|---------------------|----------------|-------------------|--------------|-------------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | £ | £ | No. | No. |
| 1919 | 23.25 | 400,375 | 2,396,717 | 1,215,663 | 10,070,263 | 97,459 | 63,561 | 60 | 288 |
| 1920 | 23.13 | 413,060 | 2,192,420 | 1,257,911 | 11,961,256 | 112,023 | 83,385 | 63 | 362 |
| 1921 | 23.13 | 443,872 | 2,610,504 | 1,428,696 | 14,766,819 | 142,500 | 108,684 | 67 | 428 |
| 1922 | 25.64 | 490,476 | 2,697,680 | 1,504,634 | 15,315,969 | 155,129 | 122,622 | 68 | 448 |
| 1923 | 26.28 | 517,983 | 3,447,310 | 1,747,974 | 16,499,999 | 177,057 | 132,011 | 74 | 438 |

(ii) *Other Tramways.* There are several lines of privately-owned steam tramways. These are dealt with in § 5, Private Railways, as they do not come within the category of street tramways for the conveyance of passengers.

8. Electric Tramways, Australia.—(i) *Summary for 1923.* The subjoined table gives details regarding all electric tramways in Australia. The returns for tramways in Hobart, in Ballarat and Bendigo, in Kalgoorlie, and in Brisbane are for the calendar year 1923 ; for other tramways they refer generally to the financial year 1922–23.

ELECTRIC TRAMWAYS.—AUSTRALIA.—SUMMARY, 1922–23.

| State. | Mileage open for Traffic (Route). | Cost of Construction and Equipment. | Current used for Traction purposes. | Tram-Miles Run. | Passengers Carried. | Gross Revenue. | Working Expenses. | Percentage of Working Expenses on Gross Revenue. | Cars, Motors and Trailers. | Persons Employed. |
|--------------|-----------------------------------|-------------------------------------|-------------------------------------|-----------------|---------------------|----------------|-------------------|--|----------------------------|-------------------|
| | Miles. | £ | Kilowatt-hours. | No. | No. | £ | £ | % | No. | No. |
| N.S.W. ... | 158.99 | 8,680,161 | 88,655,678 | 28,562,113 | 312,930,225 | 3,375,923 | 2,759,914 | 81.75 | 1,531 | 9,150 |
| Victoria ... | 106.79 | 2,795,547 | 19,114,007 | 8,585,756 | 86,027,005 | 816,984 | 624,852 | 76.48 | 310 | 2,190 |
| Q'land ... | 42.60 | 1,640,127 | 12,143,194 | 5,102,527 | 71,529,033 | 575,088 | 446,472 | 77.64 | 188 | 1,179 |
| S. Aust. ... | 71.71 | 2,512,048 | 13,700,385 | 6,155,033 | 59,648,362 | 612,839 | 430,474 | 70.24 | 218 | 1,422 |
| W. Aust. ... | 53.81 | 1,442,094 | 9,326,907 | 3,637,126 | 33,838,351 | 350,412 | 281,566 | 80.35 | 166 | 722 |
| Tasmania | 26.28 | 517,983 | 3,447,310 | 1,747,974 | 16,499,999 | 177,057 | 132,011 | 74.56 | 74 | 438 |
| All States | 460.18 | 17,587,960 | 146,387,481 | 53,790,529 | 580,472,975 | 5,908,303 | 4,675,289 | 79.13 | 2,487 | 15,101 |

(a) To 31st December, 1921.

The percentage of working expenses on gross revenue for all electric tramways in Australia was 79.13, ranging from 70.24 in the case of South Australia to 81.75 in the case of New South Wales.

(ii) *Summary for Years 1919 to 1923.* The following table gives particulars of the operations of electric tramways in Australia for the years 1919 to 1923 :—

ELECTRIC TRAMWAYS.—AUSTRALIA.—1919 TO 1923.

| Particulars. | 1919. | 1920. | 1921. | 1922. | 1923. |
|---|-------------|-------------|-------------|-------------|-------------|
| Mileage open for Traffic (Route) Miles. | 430.87 | 443.03 | 445.10 | 456.35 | 460.18 |
| Total Cost of Construction and Equipment £ | 14,581,578 | 15,110,405 | 15,239,646 | 16,703,046 | 17,587,960 |
| Current used for Traction Purposes Kil. hrs. | 127,094,621 | 140,011,914 | 149,344,886 | 154,361,664 | 146,387,481 |
| Tram-miles run No. | 44,075,173 | 47,909,439 | 50,895,255 | 52,347,711 | 53,790,529 |
| Passengers carried „ | 449,782,349 | 538,683,129 | 567,179,017 | 569,067,250 | 580,472,975 |
| Gross Revenue £ | 3,707,307 | 4,652,962 | 5,419,369 | 5,703,337 | 5,908,303 |
| Working Expenses £ | 2,832,268 | 3,696,188 | 4,378,079 | 4,538,415 | 4,675,289 |
| Percentage of Working Expenses on Gross Revenue £ | 76.40 | 79.44 | 80.78 | 78.33 | 79.13 |
| Cars, Motors and Trailers No. | 2,216 | 2,255 | 2,287 | 2,343 | 2,487 |
| Persons Employed „ | 13,171 | 13,385 | 13,709 | 14,753 | 15,101 |

During the five years included in the above table the percentage of working expenses on the gross revenue of all electric tramways in Australia reached a maximum of 80.78 in 1921 and a minimum of 76.40 in 1919, the average over the whole period being 79.24.

D. AIRCRAFT.

1. *General.*—A short review of the progress of civil aviation in Australia up to the date of foundation of the Department of Civil Aviation was given in *Official Year-Book*, No. 16, pp., 334–5, but limitations of space preclude its repetition in the present volume.

2. *Foundation of Civil Aviation Department.*—In December, 1920, the Commonwealth Parliament passed the Air Navigation Act, the objects of which were :—(i) To carry out the provisions of the Convention on Air Navigation, signed in Paris on the 13th October, 1919. (ii) To apply the principles of the Convention not only to international flying, but to internal flying in Australia, and generally to legislate by regulation on the subject matter.

Regulations were drawn up under this Act to provide, *inter alia*, for the registration and periodical inspection of aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and in upkeep of machines, prohibition of trick flying, rules of the air, etc. Penalties are prescribed for breaches of these regulations.

The date of commencement of the Act was fixed by proclamation as the 28th March, 1921, and the Regulations, issued in the previous month, came into force on the same date.

A Controller of Civil Aviation was appointed on the 16th December, 1920, to administer the Act and Regulations.

3. *Activities of Civil Aviation Department.*—(i) *Aerodromes and Landing Grounds.* Amongst the earliest activities were the acquisition and preparation of civil aviation landing grounds, which have been established over the following approved routes :—(a) Perth to Derby (1,442 miles); (b) Adelaide to Sydney (760 miles); (c) Sydney to Brisbane (550 miles); and (d) Charleville to Cloncurry (Queensland), (580 miles).

Landing facilities on the direct route from Melbourne to Charleville, via Cootamundra, Narromine, Bourke, and Cunnamulla (924 miles), are in preparation.

Preliminary surveys of the following routes also have been made, but no expenditure has yet been incurred in the preparation of landing grounds in connexion therewith :—(a) Melbourne to Perth (2,000 miles); (b) Adelaide to Port Lincoln, via Yorke Peninsula (for seaplanes), (200 miles); (c) Melbourne to Hay (New South Wales), (340 miles); and (d) Derby to Wyndham, via Hall's Creek (600 miles).

The Royal Australian Air Force surveyed and prepared for use a service route from Cloncurry to Port Darwin, via Camooweal, Anthony's Lagoon, and Newcastle Waters (1,250 miles).

Up to the present 87 landing grounds have been acquired or leased, and prepared for civil aviation purposes.

(ii) *Aerial Services.*—(a) *General.* It was considered that the granting of contracts for aerial services over approved routes was likely to afford the greatest assistance in the development of civil aviation in Australia. The hope was expressed that under such arrangements post-war types of machines would be introduced, and from the flying and ground personnel necessary for the maintenance of the services a technical reserve would be created, available for air defence in case of war. The services over the routes at present in operation afford a regular and speedy means of transport and delivery of mails, and are greatly appreciated by the residents of the districts served.

The Department provides landing-grounds over the subsidized routes, but the contractor must provide hangars and workshops at specified points, a nominal rental being charged by the Department for the use of the area occupied. All contracts provide for a service once weekly in each direction. Provision is made for the deduction of a proportion of the subsidy in the event of failure to complete any flights. The contractor must carry up to 100 lbs. of mail free on each trip, and letters for transmission by aerial mail are charged an extra 3d. per $\frac{1}{2}$ ounce. The extra amount so received by the Postmaster-General's Department, less any additional expenditure incurred by that Department in the handling of the aerial mails, is paid to the Defence Department as a credit to revenue. All pilots and mechanics employed on these services must join the Air Force Reserve when the Reserve is constituted.

(b) *Aerial Mail Services.* Up to the present tenders have been accepted for the following :—

(1) *Geraldton to Derby, Western Australia.*

This service, covering a distance of 1,200 miles, is carried out by the Western Australian Airways Limited. Landing places for mails are—Geraldton, Carnarvon, Onslow, Roebourne, Port Hedland, Broome, and Derby. The first contract was for a period of twelve months from the 5th December, 1921, and the amount of subsidy, £25,000, but a fresh contract was let to the same Company for the maintenance of the service for a further twelve months to the 5th December, 1923, with a similar subsidy. The contract was renewed for three years on the 5th December, 1923, and contains provision for the following extensions of the original service :—South—from Geraldton to Perth (250 miles), and North-east—from Derby to Wyndham (600 miles).

The extended service from Perth to Derby, the subsidy for which is at the rate of £30,000 per annum, was inaugurated on the 17th January, 1924, and the machines now fly 2,884 miles each week, leaving Perth on Thursdays, and returning on Tuesdays. With the exception of a serious accident at its inception, this service has been carried on successfully, and the facilities it has provided have been readily availed of by the residents. The number of letters carried during the first month's operations was 577, but it has now increased to about 15,000 per month.

(2) *Charleville to Cloncurry, Queensland.*

This service is operated by the Queensland and Northern Territory Aerial Services Limited. The route covers 560 miles, and links up the western terminals of three main railway lines in Western Queensland, viz., Charleville, Longreach, and Cloncurry. The landing places for mails are—Charleville, Tambo, Blackall, Longreach, Winton, McKinlay, and Cloncurry.

The original contract provided for a weekly (return) service for twelve months from the 2nd November, 1922, with a subsidy of £12,000. The agreement was renewed for a further twelve months from the 2nd November, 1923, at the same subsidy.

The service has been maintained successfully, and is greatly appreciated by residents of Western Queensland, who previously had to rely on horse or motor conveyance for their transport between the above-named rail heads.

(3) *Adelaide-Sydney, and Sydney-Brisbane Services.*

Contracts were accepted in 1921 for the maintenance of weekly return aerial services between Adelaide and Sydney, 760 miles, and Sydney and Brisbane, 550 miles, for a period of twelve months, with subsidies of £17,500 and £11,000 respectively. The successful tenderers were the Larkin Aircraft Supply Company Limited, for the former service, and Mr. F. L. Roberts for the latter. The 18th April, 1922, was fixed as the latest date for inauguration of the services. Approval was subsequently given for the assignment of Mr. Roberts' contract to the Larkin Aircraft Supply Company Limited.

Owing to various causes, delays occurred in the commencement of the services, but it is hoped that very shortly a through service—~~in~~ in each direction—will be in operation between Adelaide and Brisbane, via Mildura, ~~by~~ Narrandera, Cootamundra, Sydney, Newcastle, Grafton, and Ballina.

From 2nd June, 1924, the contractors were permitted to maintain an interim service, once weekly in each direction (for mails only) between Sydney and Adelaide, with their reserve machines..

(4) Future Services.

The following proposals have been submitted to the Department, but as sufficient funds have not been made available for further development, no action is being taken at the present juncture :—

- (a) Townsville, Queensland, and Rabaul, Territory of New Guinea.
- (b) Brisbane and Charleville, linking Brisbane with the Charleville-Cloncurry Service.
- (c) Adelaide and Port Lincoln (Eyre's Peninsula).
- (d) Oodnadatta and Alice Springs, South Australia.

4. Training of Air Pilots.—Four civilian cadets have graduated as pilots as the result of their training at No. 1 Station, R.A.A.F. (1923 Course), and the results obtained by them in the various subjects of instruction have been communicated to the operating companies, with a view to their employment as pilots when vacancies occur.

Three additional civilian cadet-pupils commenced their training on 29th January, 1924 (1924 Course). These cadets are nominated in the first instance by the Controller of Civil Aviation, and receive pay whilst undergoing training for a period of about twelve months. Their pay, uniform, cost of training, etc., is borne from Royal Australian Air Force Funds.

Qualified pilots who are employed or about to be employed in commercial aviation enterprises are accepted on the recommendation of the Controller of Civil Aviation for short refresher courses of flying instruction at the Flying Training School, Point Cook. No charge is made for this refresher instruction, the cost of which is also borne by Royal Australian Force Funds.

5. Statistical Summary.—The collection and compilation of aircraft statistics were undertaken by the Commonwealth Bureau of Census and Statistics on the 1st July, 1922. The subjoined table gives a summary of operations for the year ended 30th June, 1923 :—

AIRCRAFT.—SUMMARY, YEAR ENDED 30th JUNE, 1923.

| Particulars. | State in which Aeroplanes are Located. | | | | | Total. |
|---|--|--------------|--------------|------------------|--------------------|----------------|
| | New South Wales. | Victoria. | Queensland. | South Australia. | Western Australia. | |
| Companies or persons owning aircraft .. No. | 12 | 9 | 5 | 1 | 2 | 29 |
| Aeroplanes .. No. | 19 | 20 | 9 | 1 | 8 | 57 |
| Staff employed(a)— | | | | | | |
| Certificated pilots .. No. | 5 | 12 | 4 | .. | 5 | 26 |
| Others .. No. | 5 | 21 | 6 | .. | 17 | 49 |
| Flights carried out .. No. | 927 | 2,169 | 762 | 6 | 863 | 4,727 |
| Hours flown .. | 286 h. 05m. | 610 h. 48 m. | 776 h. 35 m. | 5 h. 30 m. | 1592 h. 55 m. | 3,271 h. 53 m. |
| Approx. mileage .. miles | 18,606 | 43,377 | 55,561 | 360 | 126,207 | 244,111 |
| Passengers carried— | | | | | | |
| Paying .. No. | 1,251 | 1,421 | 211 | .. | 394 | 3,277 |
| Non-paying .. No. | 205 | 687 | 185 | 3 | 632 | 1,712 |
| Total .. No. | 1,456 | 2,108 | 396 | 3 | 1,026 | 4,989 |
| Goods, weight carried lbs. | 156 | 40 | 6,196 | .. | 5,425 | 11,817 |
| Mails, letters carried No. | .. | .. | (b) 8,811 | .. | 109,999 | (c) 118,810 |
| Accidents involving | | | | | | |
| Injuries to personnel No. | .. | 1 | .. | .. | 2 | 3 |
| Damage to aircraft No. | 5 | 3 | 2 | 1 | 5 | 16 |
| Injuries— | | | | | | |
| Killed— | | | | | | |
| Passengers .. No. | .. | .. | .. | .. | 1 | 1 |
| Injured— | | | | | | |
| Staff .. No. | .. | 3 | .. | .. | 1 | 4 |

(a) Monthly average. (b) For eight months only. (c) Includes Queensland for eight months only.

6. **Customs Regulations.** During the 1923 session of the Commonwealth Parliament an Act to amend the Customs Act 1901-1922 was passed for the purpose of treating aircraft in the same manner as merchant shipping in regard to Customs entries and clearances.

E. MOTOR VEHICLES.

1. **Registration.**—The arrangements for the registration of motor-vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Particulars regarding methods of registration, licences, fees payable, etc., in each State were given in Official Year Book No. 16, pp. 337-340, but limits of space preclude the repetition of this information in the present volume.

2. **Public Vehicles.**—In all the capital cities of the States and in many of the most important provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. In addition, there is a considerable number of motor-omnibuses operating between the capital cities and their suburbs. As most of these omnibuses are independently controlled by a number of individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

3. **Motor-Vehicles Registered, etc.**—Particulars of the registration of motor-vehicles, etc., for the year 1922-23 are contained in the subjoined table:—

MOTOR VEHICLES.—SUMMARY, 1922-23.

| State. | Motor Vehicles Registered. | | | | Drivers' and Riders' Licences issued. | Revenue derived from— | | |
|-----------------------|----------------------------|---------------|----------------------|--------------------|---------------------------------------|--------------------------------------|--------------------------------|---------|
| | Motor Cars. | Motor Cycles. | Commercial Vehicles. | Total. | | Vehicle Registrations and Motor Tax. | Drivers' and Riders' Licences. | Total. |
| | No. | No. | No. | No. | No. | £ | £ | £ |
| New South Wales .. | 39,695 | 13,184 | 7,156 | 60,035 | 91,377 | 234,559 | 23,451 | 258,010 |
| Victoria .. | 36,773 | 14,864 | 3,000 | 54,637 | 57,371 | 151,566 | 7,171 | 158,737 |
| Queensland .. | 14,537 | 2,630 (b) | 959 | 18,126 | 7,819 | 64,370 | 2,825 | 67,195 |
| South Australia .. | 17,328 | 8,251 | 1,800 | 27,379 | 33,230 | 75,920 | 6,726 | 82,646 |
| Western Australia .. | (a) 4,532 | (a) 1,695 | (a) 323 | (a) 6,550 | 11,168 | 28,494 | 2,792 | 31,286 |
| Tasmania .. | 3,776 | 2,016 (c) | 189 | 5,981 | 7,333 | 20,274 | 1,270 | 21,544 |
| Northern Territory .. | 17 | 9 | 11 | 37 | 78 | 15 | 14 | 29 |
| All States .. | 116,658 | 42,649 | 13,438 | 172,745 126,491 | 208,376 | 575,198 | 44,249 | 619,447 |

(a) Includes particulars for year 1921-22 in respect of area outside Metropolitan Traffic District.

(b) Vehicles with one or more solid rubber tyres; other commercial vehicles included with motor cars.

(c) Vehicles using solid rubber tyres only.

130,096

4. **Comparative Motor Vehicle Statistics, 1923.**—The following statement, which has been extracted from the issue of the "Automotive Industries" of 21st February, 1924, shows the number of motor cars and trucks, and motor-cycles in several of the most important countries of the world. The figures are in some instances approximate, being based on estimates supplied by Trade Commissioners or representative motor trade organizations in the various countries.

COMPARATIVE MOTOR VEHICLE STATISTICS, 1923.

| Country. | Date. | Motor Cars and Trucks. | Motor Cycles. |
|--------------------------------|----------------|------------------------|---------------|
| Australia.. .. | June, 1923 .. | 130,096 | 42,649 |
| Argentina | Jan., 1924 .. | 100,000 | 2,000 |
| Belgium | Nov., 1923 .. | 61,300 | 35,700 |
| Brazil | Jan., 1924 .. | 32,000 | 650 |
| Canada | " " .. | 642,571 | 23,400 |
| Cuba | " " .. | 30,000 | 350 |
| Denmark | " " .. | 25,400 | 16,500 |
| France | " " .. | 460,000 | 84,732 |
| Germany.. .. | July, 1923 .. | 152,968 | 59,409 |
| India | Mar., 1923 .. | 48,629 | 15,517 |
| Italy | June, 1923 .. | 82,357 | 50,000 |
| Mexico | Jan., 1924 .. | 30,000 | 500 |
| Netherlands | Oct., 1923 .. | 18,489 | 26,208 |
| New Zealand | Jan., 1924 .. | 44,864 | 12,000 |
| British South Africa | " " .. | 40,200 | 14,000 |
| Spain | June, 1923 .. | 60,194 | 7,000 |
| Sweden | Sept., 1923 .. | 36,625 | 19,296 |
| United Kingdom | Aug., 1923 .. | 655,318 | 430,138 |
| United States of America | Jan., 1924 .. | 15,222,658 | 176,630 |

The estimated total number of motor-vehicles in 1923, as disclosed by the publication referred to, was 18,241,477 cars and trucks, and 1,079,981 motor-cycles.

The figures quoted for Australia have been compiled from data supplied by the responsible registration authorities in the several States, and differ slightly from those contained in "Automotive Industries."

F. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. Posts.

1. The Commonwealth Postal Department.—In previous issues of the Year Book some account was given of the procedure in connexion with the transfer to the Federal Government of the postal, telegraphic, and telephonic facilities of the separate States. (See Year Book No. 15, p. 601.)

Under the provisions of the Commonwealth Post and Telegraph Act 1901 the Commonwealth Postal Department was placed under the control of a Postmaster-General, a responsible Minister with Cabinet rank, and of a Secretary having chief control of the Department under the Postmaster-General, whilst a principal officer in each State was provided for under the style of Deputy Postmaster-General.

2. Postal Matter Dealt With.—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1919 to 1923. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers dispatched are included in the table following, which consequently gives the number of distinct articles handled.

POSTAL MATTER DEALT WITH.—AUSTRALIA, 1918-19 TO 1922-23.

| Year ended 30th June— | Letters and Post-cards. | | Newspapers. | | Packets. | | Parcels. | | Registered Articles. | |
|-----------------------|-------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|
| | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. |

POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.

| | | | | | | | | | | |
|---------|---------|---------|---------|--------|--------|--------|-------|-------|-------|-------|
| 1919 .. | 485,452 | 96,502 | 122,116 | 24,275 | 39,039 | 7,760 | 4,863 | 967 | 4,741 | 942 |
| 1920 .. | 526,261 | 100,297 | 119,448 | 22,765 | 38,140 | 7,269 | 5,434 | 1,036 | 5,313 | 1,013 |
| 1921 .. | 512,021 | 94,603 | 117,824 | 21,770 | 47,567 | 8,789 | 6,633 | 1,226 | 5,664 | 1,046 |
| 1922 .. | 507,239 | 91,099 | 126,165 | 22,659 | 56,622 | 10,169 | 8,234 | 1,488 | 5,516 | 991 |
| 1923 .. | 535,596 | 94,161 | 138,137 | 23,934 | 73,267 | 12,881 | 9,158 | 1,610 | 5,766 | 1,014 |

OVERSEA RECEIVED.

| | | | | | | | | | | |
|---------|--------|-------|--------|-------|-------|-----|-----|----|-----|-----|
| 1919 .. | 38,708 | 7,695 | 7,194 | 1,430 | 2,582 | 513 | 428 | 85 | 510 | 101 |
| 1920 .. | 36,493 | 6,955 | 7,799 | 1,486 | 2,119 | 404 | 339 | 65 | 425 | 81 |
| 1921 .. | 35,804 | 6,615 | 8,931 | 1,650 | 2,440 | 451 | 371 | 69 | 415 | 77 |
| 1922 .. | 30,912 | 5,552 | 9,770 | 1,755 | 2,674 | 480 | 339 | 61 | 410 | 74 |
| 1923 .. | 32,961 | 5,795 | 10,274 | 1,806 | 2,891 | 508 | 437 | 77 | 453 | 79 |

OVERSEA DISPATCHED.

| | | | | | | | | | | |
|---------|--------|-------|-------|-------|-------|-----|-----|-----|-----|----|
| 1919 .. | 29,550 | 5,874 | 7,360 | 1,463 | 1,907 | 379 | 770 | 153 | 281 | 56 |
| 1920 .. | 20,705 | 3,946 | 3,838 | 731 | 1,495 | 285 | 163 | 31 | 270 | 51 |
| 1921 .. | 21,519 | 3,976 | 4,128 | 763 | 1,402 | 259 | 188 | 35 | 305 | 57 |
| 1922 .. | 23,822 | 4,278 | 4,542 | 816 | 1,299 | 233 | 176 | 32 | 286 | 51 |
| 1923 .. | 25,722 | 4,522 | 4,734 | 832 | 1,671 | 294 | 183 | 32 | 303 | 53 |

TOTAL POSTAL MATTER DEALT WITH BY THE COMMONWEALTH POSTAL DEPARTMENT.

| | | | | | | | | | | |
|---------|---------|---------|---------|--------|--------|--------|-------|-------|-------|-------|
| 1919 .. | 553,710 | 110,071 | 136,670 | 27,168 | 43,528 | 8,652 | 6,061 | 1,205 | 5,532 | 1,099 |
| 1920 .. | 583,459 | 111,198 | 131,085 | 24,982 | 41,754 | 7,958 | 5,936 | 1,132 | 6,008 | 1,145 |
| 1921 .. | 569,344 | 105,194 | 130,883 | 24,183 | 51,409 | 9,499 | 7,192 | 1,330 | 6,384 | 1,180 |
| 1922 .. | 561,973 | 100,929 | 140,477 | 25,230 | 60,595 | 10,882 | 8,799 | 1,581 | 6,212 | 1,116 |
| 1923 .. | 594,279 | 104,478 | 151,145 | 26,572 | 77,829 | 13,683 | 9,778 | 1,719 | 6,522 | 1,146 |

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1922-23 under the classification adopted in the preceding paragraph, with the exception of registered articles, which are dealt with separately hereinafter. The returns given for South Australia in this and all succeeding tables include those for the Northern Territory, while the returns for the Federal Capital Territory are included in those for New South Wales.

POSTAL MATTER DEALT WITH.—STATES, 1922-23.

| State. | Letters and Post-cards. | | Newspapers. | | Packets. | | Parcels. | |
|--------|------------------------------|-------------------------------------|------------------------------|-------------------------------------|------------------------------|-------------------------------------|------------------------------|-------------------------------------|
| | Number (,000 omitted). | Per 1,000 of Popula- tion. | Number (,000 omitted). | Per 1,000 of Popula- tion. | Number (,000 omitted). | Per 1,000 of Popula- tion. | Number (,000 omitted). | Per 1,000 of Popula- tion. |

POSTED FOR DELIVERY WITHIN AUSTRALIA.

| | | | | | | | | |
|-------------------|---------|---------|---------|--------|--------|--------|-------|-------|
| New South Wales | 224,765 | 102,509 | 60,827 | 27,741 | 28,546 | 13,019 | 4,018 | 1,832 |
| Victoria .. | 157,552 | 98,005 | 33,120 | 20,602 | 11,947 | 7,431 | 2,072 | 1,288 |
| Queensland .. | 60,395 | 74,965 | 21,537 | 26,733 | 14,406 | 17,881 | 1,678 | 2,083 |
| South Australia | 40,711 | 78,240 | 8,335 | 16,018 | 11,875 | 22,822 | 683 | 1,313 |
| Western Australia | 28,557 | 82,032 | 5,407 | 15,531 | 4,582 | 13,162 | 523 | 1,502 |
| Tasmania .. | 23,616 | 110,469 | 6,911 | 32,327 | 1,911 | 8,938 | 184 | 858 |
| Australia .. | 535,596 | 94,161 | 136,137 | 23,934 | 73,267 | 12,881 | 9,158 | 1,610 |

OVERSEA RECEIVED.

| | | | | | | | | |
|-------------------|--------|-------|--------|-------|-------|-------|-----|----|
| New South Wales | 11,830 | 5,395 | 3,285 | 1,498 | 637 | 290 | 161 | 73 |
| Victoria .. | 14,103 | 8,772 | 2,775 | 1,726 | 589 | 366 | 123 | 76 |
| Queensland .. | 2,767 | 3,434 | 2,210 | 2,743 | 605 | 751 | 80 | 99 |
| South Australia | 1,425 | 2,738 | 484 | 930 | 295 | 567 | 28 | 54 |
| Western Australia | 2,004 | 5,755 | 1,176 | 3,377 | 502 | 1,441 | 32 | 91 |
| Tasmania .. | 832 | 3,893 | 344 | 1,609 | 263 | 1,231 | 13 | 64 |
| Australia .. | 32,961 | 5,795 | 10,274 | 1,806 | 2,891 | 508 | 437 | 77 |

OVERSEA DISPATCHED.

| | | | | | | | | |
|-------------------|--------|-------|-------|-------|-------|-----|-----|----|
| New South Wales | 15,180 | 6,923 | 2,536 | 1,156 | 1,114 | 508 | 94 | 43 |
| Victoria .. | 5,246 | 3,263 | 1,368 | 851 | 310 | 192 | 54 | 33 |
| Queensland .. | 1,797 | 2,230 | 369 | 457 | 90 | 112 | 14 | 17 |
| South Australia | 798 | 1,534 | 178 | 342 | 78 | 150 | 8 | 15 |
| Western Australia | 1,408 | 4,046 | 168 | 484 | 34 | 97 | 11 | 32 |
| Tasmania .. | 1,293 | 6,047 | 115 | 537 | 45 | 210 | 2 | 11 |
| Australia .. | 25,722 | 4,522 | 4,734 | 832 | 1,671 | 294 | 183 | 32 |

3. *Postal Facilities.*—(i) *Relation to Area and Population.* The subjoined statement shows the number of post and receiving offices, the area in square miles and the number of inhabitants to each post office (including receiving offices) in each State and in Australia at the end of the year 1922-23. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office, as well as the number of inhabitants per office, should be taken into account.

POSTAL FACILITIES.—RELATION TO AREA AND POPULATION, 30th JUNE, 1923.

| State. | N.S.W. | Vic. | Qland. | S.A. | W.A. | Tas. | Aus- tralia. |
|--|--------|-------|--------|-------|-------|------|-----------------|
| Number of post and receiving offices | 2,599 | 2,595 | 1,245 | 804 | 732 | 519 | 8,494 |
| Number of square miles of territory | 119 | 34 | 488 | 1,124 | 1,333 | 50 | 350 |
| Number of offices in State .. | 843 | 619 | 647 | 647 | 475 | 412 | 669 |
| Number of inhabitants to each office | 706 | 1,829 | 120 | 57 | 35 | 815 | 191 |
| Number of inhabitants per 100 square miles | .. | .. | .. | .. | .. | .. | .. |

(ii) *Number of Offices.* The following table shows the numbers of post and receiving offices in each year from 1918-19 to 1922-23 inclusive :—

POST AND RECEIVING OFFICES AT 30th JUNE, 1919 TO 1923.

| State. | Year ended 30th June— | | | | | |
|----------------------|-----------------------|--------------------|---------------|--------------------|---------------|--------------------|
| | 1919. | | 1920. | | 1921. | |
| | Post Offices. | Receiving Offices. | Post Offices. | Receiving Offices. | Post Offices. | Receiving Offices. |
| New South Wales .. | 2,037 | 562 | 2,034 | 559 | 2,031 | 578 |
| Victoria .. | 1,715 | 854 | 1,707 | 829 | 1,712 | 864 |
| Queensland .. | 640 | 643 | 645 | 637 | 658 | 604 |
| South Australia .. | 666 | 125 | 674 | 118 | 670 | 127 |
| Western Australia .. | 402 | 201 | 402 | 209 | 405 | 222 |
| Tasmania .. | 406 | 83 | 405 | 83 | 409 | 89 |
| Australia .. | 5,866 | 2,468 | 5,867 | 2,425 | 5,885 | 2,484 |
| | | | | | 5,911 | 2,470 |
| | | | | | 5,960 | 2,534 |

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States is given in the appended table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS, 1919 TO 1923.

| State. | Year ended 30th June— | | | | | |
|----------------------|-----------------------|-------------------|------------|-------------------|------------|-------------------|
| | 1919. | | 1920. | | 1921. | |
| | Employees. | Mail Contractors. | Employees. | Mail Contractors. | Employees. | Mail Contractors. |
| Central Office .. | 84 | 1,964 | 83 | 1,912 | (a) 139 | 2,046 |
| New South Wales .. | 11,732 | 1,112 | 11,362 | 1,069 | 11,693 | 1,091 |
| Victoria .. | 8,469 | 787 | 8,409 | 753 | 8,428 | 780 |
| Queensland .. | 4,289 | 380 | 4,678 | 427 | 4,728 | 389 |
| South Australia .. | 2,768 | 264 | 2,679 | 266 | 2,856 | 302 |
| Western Australia .. | 2,226 | 227 | 2,110 | 227 | 2,111 | 223 |
| Tasmania .. | 1,173 | 227 | 1,156 | 227 | 1,250 | 1,229 |
| Australia .. | 30,803 | 4,704 | 30,102 | 4,664 | 30,810 | 4,851 |
| | | | | | 32,207 | 4,963 |
| | | | | | 34,474 | 4,629 |

(a) Includes "radio staff."

4. *Rates of Postage.*—(i) *General.* Under the provisions of the Postal Rates Act of 1910, which became operative from 1st May, 1911, the rates of postage were made uniform in all States. An amendment to this Act operative from the 1st October, 1923

provided for the rates quoted hereunder for mail matter posted in Australia for internal delivery and for despatch overseas in respect of the various classes of mail matter. (a) First-class mail matter consists of letters, lettercards, and post-cards. (b) Second-class mail matter—Commercial and printed papers; patterns, samples, and merchandise; books, and catalogues. (c) Third-class mail matter—Newspapers registered for transmission as such, and magazines. (d) Fourth-class mail matter—Parcels forwarded by parcels post and articles irregularly posted as second-class matter and which are officially treated as parcels.

(ii) *Postal Rates.* (a) *First, Second, and Third-class Mail Matter.* The tabular statement hereunder gives the postage rates for first, second, and third-class mail matter posted in Australia for inland delivery and for dispatch overseas:—

POSTAL RATES, 1923.

| Postal Article. | Rates of Postage. | | |
|--|--|---|---|
| | For Inland Delivery. | For Dispatch Overseas. | |
| | | British Empire. | Foreign Countries. |
| Letters | 1½d. per ounce | 1½d. per ounce | First ounce 3d., additional ounce 1½d. |
| Lettercards | 1½d. each | 1½d. each | 3d. each |
| Postcards | 1d. each | 1d. each | 1½d. each |
| Commercial Papers .. | 1d. per 2 ounces | New Zealand and Fiji, 1d. per 2 ounces; other parts, 1d. per 2 ounces (minimum 3d.) | 1d. per 2 ounces (minimum 3d.) |
| Printed Papers .. | 1d. per 4 ounces | 1d. per 4 ounces | 1d. per 2 ounces |
| Patterns and Samples | 1d. per 2 ounces | 1d. per 2 ounces | 1d. per 2 ounces (minimum 2d.) |
| Merchandise .. | 1d. per 2 ounces | New Zealand and Fiji, 1d. per 2 ounces; other parts at parcel rates | Parcel rates |
| Newspapers printed and published in Australia | For each newspaper (a) 1d. per 10 ounces | New Zealand and Fiji(a), 1d. per 10 ounces United Kingdom— (i) Via France(a), 1d. per 4 ounces, 1½d. for 4 to 10 ounces, 1d. for each additional 4 ounces (ii) Wholly by sea, each newspaper exceeding 8 ounces, 1½d. every 16 ounces (iii) Via America, 1d. per 4 ounces (iv) Other parts, 1d. per 4 ounces | United States of America, each newspaper, 1d. per 4 ounces; other countries, 1d. per 2 ounces |
| Newspapers printed and published outside Australia | 1d. per 4 ounces | 1d. per 4 ounces | 1d. per 2 ounces |
| Magazines and Books printed in Australia | 1d. per 8 ounces | } 1d. per 4 ounces | 1d. per 2 ounces |
| Magazines and Books printed outside Australia | 1d. per 4 ounces | | |
| Catalogues wholly set up and printed in Australia | 1d. per 4 ounces | .. .. | .. |

(a) Provided that the postage on a package containing more than one newspaper shall not be higher than that chargeable on a package of printed papers of the same weight.

(b) *Fourth-class Mail Matter.* Parcels may not exceed 11 lbs. in weight, 3 ft. 6 in. in length, or 6 feet in length and girth combined. The rate for the inland postage of parcels is 6d. up to 1 lb., and then 3d. for every additional pound. For Inter-State, New Zealand, Fiji, and Papua the rate is 8d. up to 1 lb., and then 6d. per lb., and for transmission to the United Kingdom the rate is 1s. 4d. up to 1 lb., and 6d. for every additional pound. Various rates are charged for the conveyance of parcels to other parts of the world.

5. *Registered Letters, Packets, etc.*—(i) *General.* Under section 38 of the *Post and Telegraph Act 1901*, provision is made for the registration of any letter, packet, or newspaper upon payment of a fee of 3d., and any person who sends a registered article by post may obtain an acknowledgment of its due receipt by the person to whom it is addressed by paying an additional fee of 3d. in advance at the time of registration.

(ii) *Number of Registered Articles.* The subjoined table shows the number of registered articles posted in each State, classified according to the places to which they were dispatched for delivery, also the number of registered articles received in each State from overseas during the year 1922-23 :—

REGISTERED ARTICLES POSTED AND RECEIVED, 1922-23.

| State. | Posted in each State for Delivery within Australia. | | Posted in each State for Delivery Overseas. | | Total Posted. | | Received in each State from Overseas. | |
|----------------------|---|--------------------------|---|--------------------------|------------------------|--------------------------|---------------------------------------|--------------------------|
| | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. | Number (,000 omitted). | Per 1,000 of Population. |
| New South Wales .. | 2,093 | 954 | 135 | 62 | 2,228 | 1,016 | 194 | 88 |
| Victoria .. | 1,566 | 974 | 82 | 51 | 1,648 | 1,025 | 133 | 83 |
| Queensland .. | 890 | 1,105 | 37 | 45 | 927 | 1,150 | 43 | 54 |
| South Australia .. | 511 | 982 | 20 | 38 | 531 | 1,020 | 31 | 59 |
| Western Australia .. | 448 | 1,286 | 24 | 68 | 472 | 1,355 | 43 | 124 |
| Tasmania .. | 258 | 1,207 | 5 | 22 | 263 | 1,229 | 9 | 45 |
| Australia .. | 5,766 | 1,014 | 303 | 53 | 6,069 | 1,067 | 453 | 79 |

6. *Value-Payable Parcel and Letter Post.*—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, and also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment. In addition to the ordinary postage, commission on the value of the articles transmitted at the rate of 2d. on sums not exceeding 10s., and 1d. for each additional 5s. or part thereof, must be prepaid by postage stamps affixed to the articles, distinct from the postage, and marked "commission." The registration fee (3d.) and the proper postage must also be prepaid. If the addressee refuse delivery, the parcel is returned to the sender free of charge. Any article that can be sent by parcel-post may be transmitted as a value-payable parcel. Letters may also be sent as value-payable parcels, if prepaid at the letter rate of postage and handed to the parcels clerk, in the same manner as in the case of parcels.

(ii) *Summary of Business.* The next statement gives particulars of the number and value of parcels sent through the Value-Payable Post in each State during the years 1919 to 1923 :—

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1919 TO 1923.

| Year ended 30th June— | | | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australia. |
|---------------------------|----|----|---------|-----------|---------|----------|----------|-----------|------------|
| NUMBER OF PARCELS POSTED. | | | | | | | | | |
| | | | No. | No. | No. | No. | No. | No. | No. |
| 1919 | .. | .. | 28,544 | 1,579 | 68,601 | 588 | 24,211 | 22 | 123,545 |
| 1920 | .. | .. | 38,713 | 2,134 | 94,733 | 666 | 29,628 | 76 | 165,950 |
| 1921 | .. | .. | 53,829 | 3,192 | 120,045 | 689 | 36,125 | 155 | 214,035 |
| 1922 | .. | .. | 93,621 | 4,092 | 171,848 | 606 | 48,187 | 111 | 318,465 |
| 1923 | .. | .. | 134,703 | 5,329 | 207,162 | 1,604 | 56,572 | 113 | 405,483 |

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1919 TO 1923—*continued.*

| Year ended 30th June— | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australia. |
|-----------------------|--------|-----------|---------|----------|----------|-----------|------------|
|-----------------------|--------|-----------|---------|----------|----------|-----------|------------|

VALUE COLLECTED.

| | £ | £ | £ | £ | £ | £ | £ |
|------------|---------|--------|---------|-------|--------|-----|---------|
| 1919 | 54,876 | 3,003 | 98,882 | 1,492 | 38,244 | 72 | 196,569 |
| 1920 | 85,055 | 3,804 | 137,976 | 2,555 | 46,964 | 336 | 276,690 |
| 1921 | 124,502 | 6,105 | 177,662 | 2,027 | 57,170 | 711 | 368,177 |
| 1922 | 172,258 | 8,086 | 238,047 | 1,694 | 81,370 | 444 | 501,899 |
| 1923 | 237,209 | 10,826 | 279,508 | 2,485 | 87,508 | 439 | 617,975 |

REVENUE, INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.

| | £ | £ | £ | £ | £ | £ | £ |
|------------|--------|-----|--------|-----|-------|----|--------|
| 1919 | 3,917 | 223 | 9,637 | 82 | 3,275 | 4 | 17,138 |
| 1920 | 5,435 | 331 | 13,076 | 106 | 4,000 | 15 | 22,963 |
| 1921 | 8,502 | 446 | 16,102 | 103 | 4,966 | 32 | 30,151 |
| 1922 | 12,144 | 549 | 22,214 | 177 | 6,259 | 47 | 41,390 |
| 1923 | 18,586 | 667 | 29,602 | 248 | 7,365 | 52 | 56,520 |

The number of parcels forwarded in Queensland is in excess of the combined transactions of all the other States, chiefly owing to the fact that the system has been established in that State for some years, but was only extended to the whole Commonwealth with the advent of Federal control of the post office. The system has also found favour for a number of years in Western Australia, and continues to make marked progress in New South Wales, but the amount of business transacted in South Australia and Tasmania remains negligible. The Victorian business has more than trebled itself during the period under review.

The average value collected in each of the States for the year 1922–23 was New South Wales £1 15s. 3d., Victoria £2 0s. 5d., Queensland £1 7s. 0d., South Australia £1 11s. 0d., Western Australia £1 10s. 11d., Tasmania £3 17s. 8d., and for Australia £1 10s. 6d.

7. Sea-borne Mail Services.—(i) *Summary.* In previous issues of this work statements regarding the development of the principal sea-borne mail services were included, but owing to the restrictions of space this information cannot be repeated. The following tabular summary, however, contains the latest available information in respect of sea-borne mail services :—

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES, 1924.

| Description of Service. | Frequency of Service. | Ports between which Service is maintained. | Particulars regarding Subsidies. |
|--|-----------------------|---|--|
| 1. <i>To and from Ports in New South Wales—</i> | | | |
| (i) NORTHERN PORTS— | | | |
| (a) North Coast S.N. Co. | Once weekly | Sydney and Clarence River, Byron Bay, and Richmond River | Poundage rates |
| (b) " " | Fortnightly | Sydney and South Solitary Island | " " |
| (ii) SOUTH COAST PORTS— | | | |
| Illawarra and S. Coast S.N. Co. | Fortnightly | Sydney, Montague Island | " " |
| 2. <i>To and from Northern Ports of Queensland—</i> | | | |
| (a) Australasian United Steam Navigation Co. Limited | Weekly | From Townsville to Cooktown via Lucinda, Mourilyan, Cairns, and Port Douglas | Subsidized by agreement dated 6th Dec., 1923, for one year at subsidy of £10,742, exclusive of Port and Light dues |
| (b) John Burke and Sons .. | Ten trips a year | Brisbane, Townsville, Cairns, Cooktown, Thursday Island, Normanston and Burketown | Subsidized from 18th November, 1921. Amount of subsidy, £2,000 per annum |
| (c) Other steamers .. | Irregularly | Various .. | Poundage rates |

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

| Description of Service. | Frequency of Service. | Ports between which Service is maintained. | Particulars regarding Subsidies. |
|---|--|--|---|
| 3. To and from Ports in South Australia— | | | |
| (a) Coast Steamship Co. Ltd. | Weekly | Port Adelaide and Kingscote | Subsidized to 31st December, 1925. Amount of subsidy, (a) £900; (b) £400; (c) £500; (d) £400 |
| (b) " " " | Twice a week | Port Adelaide and Edithburgh | |
| (c) " " " | " | Port Adelaide and Stansbury | |
| (d) " " " | " | Port Adelaide and Port Vincent | |
| (e) Adelaide Steamship Co. . . | Weekly | Port Adelaide and Port Lincoln | Subsidized for three years from 1st January, 1923. Amount of subsidy, £3,000 |
| (f) Adelaide Steam Tug Co. . . | As required | Port Pirie and Whyalla | Subsidized without agreement. Amount of subsidy, £120 |
| 4. Western Australia— | | | |
| (i) TO AND FROM PORTS ON N.W. COAST— | | | |
| (a) State Steamship Service | Monthly . . | Fremantle and Derby . . | Subsidized by agreement dated 28th February, 1913, for three years. Later extended to a date three months after expiration of war. Subsequently extended for indefinite period. Amount of subsidy, £5,500 Poundage rates |
| (b) " " " | Once each sixty days | Fremantle and Darwin | |
| (c) West Australian S.N. Co. | About fortnightly | Fremantle and Singapore, via N.W. Ports | |
| (d) Aus'n. United S. Navigation Co., State S.S. Co. and Melbourne S.S. Coy. | Irregularly, during the cattle season | Fremantle, Derby, and Wyndham | |
| (ii) TO AND FROM PORTS ON S. COAST— | | | |
| (a) State Steamship Service | Fortnightly | Albany and Esperance . . | Subsidized by agreement for three years, dating from 1st July, 1921. Amount of subsidy, £1,500 |
| (b) " " " | Quarterly | Albany and Eucla, via intermediate ports | |
| 5. Tasmania— | | | |
| (a) Tasmanian Steamers Pty. Ltd. | Three times a week summer; twice a week winter | Melbourne and Launceston | Subsidy, £30,000 per annum from 1st May, 1921, under contract for twelve months, and thereafter terminable on twelve months' notice by either party to the agreement |
| (b) " " " | Twice a week | Melbourne and Burnie | |
| (c) Union S.S. Co. and Huddart Parker Ltd. | Irregularly | Sydney, Hobart, and Wellington | Poundage rates |
| (d) Union Steamship Co. . . | " | Sydney, Launceston, and Devonport | " " |
| (e) Shipping and Trading Agency Pty. Ltd. | " | Launceston | " " |
| (f) " " " | " | Melbourne, Burnie, etc. | " " |
| (g) Huon Channel and Peninsular Co. | Twice a week | Hobart and Kelly's Point, via Pearson's Point | Subsidized by agreement dated 1st January, 1922, for three years. Amount of subsidy, £50 per annum |
| (h) Tasmanian Government Shipping Department | Every two weeks | Launceston and Furneaux group of islands | Subsidized by agreement dated 1st January, 1922, for three years. Amount of subsidy, £350 per annum |
| (i) " " " | Fortnightly | Launceston and Currie, King Island | Subsidized by agreement dated 1st January, 1922, for three years. Amount of subsidy, £400 per annum |
| (j) Holyman Bros. Pty. Ltd. | Weekly . . | Burnie and Melbourne, via Fraser River and King Island | Poundage rates |

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—continued.

| Description of Service. | Frequency of Service. | Ports between which Service is maintained. | Particulars regarding Subsidies. |
|--|------------------------------|---|--|
| 6. <i>To and from Northern Territory—</i> | | | |
| (a) Burns, Philp and Co. .. | Monthly .. | To and from Adelaide and Sydney, via Queensland ports | Poundage rates |
| (b) State Steamship Service of Western Australia | Once each sixty days | Fremantle and Darwin | See Item 4 (b) |
| 7. <i>To and from New Zealand—</i> | | | |
| (a) Conjointly by Union S.S. Co. and Huddart, Parker Ltd. | Weekly | Sydney and Wellington, Sydney and Auckland | Poundage rates |
| (b) Other steamers .. | Irregularly, when convenient | Sydney, Wellington, Auckland, Lyttelton, and other Ports | " " |
| (c) " " .. | About every three weeks | Melbourne, Wellington, or Bluff | " " |
| 8. <i>Pacific Islands—</i> | | | |
| (a) Burns, Philp and Co. .. | Every five weeks | Sydney to Lord Howe and Norfolk Islands and New Hebrides | Subsidized by Commonwealth |
| (b) " " .. | Irregularly | Sydney to Nauru and Ocean Islands, Gilbert and Ellice Groups | " " |
| (c) " " .. | " | Sydney to Marshall Islands | " " |
| (d) " " .. | Monthly | Sydney to Papua and Rabaul, via Queensland Ports | " " |
| (e) " " .. | Every three weeks | Sydney to Rabaul .. | " " |
| (f) " " .. | Twice in six weeks | Sydney to Solomon Islands, via Queensland Ports | " " |
| 9. <i>New Caledonia and New Hebrides—</i> | | | |
| (a) Messageries Maritimes .. | Monthly | Sydney and Noumea and to Vila (New Hebrides) | Postal Union rates |
| (b) Other steamers .. | About twice a month | Sydney and Noumea .. | Poundage rates |
| 10. <i>Fiji, Friendly Islands, and Samoa—</i> | | | |
| (a) Union S.S. Co. .. | Every four weeks | Sydney and Suva .. | " " |
| (b) " " .. | " | Sydney, Suva, Tonga, and Samoa | " " |
| (c) A.U.S.N. Co. .. | " | Sydney and Suva .. | " " |
| 11. <i>To Eastern Ports—</i> | | | |
| (a) Burns, Philp and Co. .. | Monthly | Melbourne and Sydney to Java and Singapore, via Queensland Ports and Darwin | Subsidized by Commonwealth Govt. Mails at poundage rates |
| (b) China Navigation, Eastern and Ausn., and China Australian Line | About once a month | Melbourne and Sydney to Hong Kong, Manila, etc., via Queensland Ports | Poundage rates |
| (c) Nippon Yusen Kaisha .. | Every four weeks | Melbourne and Sydney to Manila, China, and Japan, via Queensland Ports | Postal Union rates |
| (d) Royal Dutch Packet S.N. Co. | Monthly | Melbourne to Java and Singapore, via Sydney and Queensland Ports | Poundage rates |
| (e) Various other steamers | About monthly | Sydney or Newcastle and ports in Borneo, Java, Sumatra, and Malay Peninsula | " " |
| (f) W.A.S.N. Co. .. | About fortnightly | W.A. Ports, Java, and Singapore | " " |
| (g) Commonwealth Government line of steamers | Monthly | Sydney, Melbourne, Adelaide, Fremantle, Java, and Singapore | " " |
| 12. <i>South Africa—</i> | | | |
| White Star, P. and O. Branch Service, and other Companies | Irregularly | Sydney, Melbourne, Adelaide, and Fremantle to Durban and Capetown | " " |

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

| Description of Service. | Frequency of Service. | Ports between which Service is maintained. | Particulars regarding Subsidies. |
|--|-----------------------|---|--|
| 13. <i>To and from Europe, via Suez—</i> (a) Orient Steam Navigation Co. | Every four weeks | Brisbane, Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez | Subsidy, £130,000. Commenced 20th September, 1921. Terminable on twelve months' notice by either party |
| (b) Peninsular and Oriental S.N. Co. Ltd. | Every four weeks | Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez | Postal Union rates |
| 14. <i>To and from Europe, via Vancouver—</i> (a) Union Steamship Co. . . | Every four weeks | Sydney and Vancouver, B.C., via Auckland, Fiji, Honolulu | Poundage rates |
| 15. <i>To and from Europe, via San Francisco—</i> (a) Union Steamship Company | Twice in nine weeks | Sydney, Wellington, Raratonga, Tahiti, and San Francisco | Subsidized by New Zealand Govt. Mails from Aust. at Postal Union rates |
| (b) Oceanic Steamship Co. . . | " | Sydney, Pago Pago (Samoa), Honolulu, and San Francisco | Poundage rates |
| 16. <i>North America—</i> (a) Various steamers . . | Irregularly | Sydney or Newcastle to San Francisco | " " |
| (b) " " . . | " | Sydney to Guaymas (Mexico) | " " |
| (c) Union S.S. Co. . . | Twice in nine weeks | Sydney, Wellington, Tahiti, and San Francisco | " " |
| (d) " " . . | Every four weeks | Sydney, Auckland, Fiji, Honolulu, and Vancouver | " " |
| (e) Oceanic S.S. Co. . . | Twice in nine weeks | Sydney, Pago Pago (Samoa), and San Francisco | " " |
| 17. <i>South America—</i> (a) { Oceanic S.S. Co. } { Union S.S. Co. } . . | Twice a month | Sydney, via San Francisco to ports in Chile, Brazil, Peru, Uruguay, and Argentina | " " |
| (b) Various other steamers | Irregularly | Via Newcastle and Sydney to various ports | " " |

(a) Carries also mails to Canada and United States.

(ii) *Average and Fastest Time of Mails to and from London.* (a) *Via Suez Canal.* During the European war steamers of the Orient S.N. Co. were diverted from the Suez Canal to the Cape route, but the former route has since been resumed by that company and by the Peninsular and Oriental S.N. Co.

In the 1921 mail contracts, Fremantle was made the mail port in Australia, and letters arriving from the United Kingdom are now landed there instead of as formerly at Adelaide. By this arrangement a saving of approximately 67 hours is effected. A service equal to that of pre-war days is not yet available, but a regular fortnightly service is assured, however, under the terms of contracts entered into between the Commonwealth Government and the Orient Steam Navigation Company, and between the Imperial Government and the Peninsular and Oriental Company. Particulars of these contracts, which date from September, 1921, will be found in Year Book No. 15.

An arrangement was made towards the end of 1923 by the above-mentioned companies to increase the speed of their vessels, so as to enable the mails to reach Fremantle from London two days earlier, viz., on Tuesdays instead of Thursdays, and for those for London to leave Fremantle on Mondays instead of the previous Fridays.

The subjoined table shows the average and the fastest times occupied in the conveyance of mails from London to Fremantle and vice versa during the year 1922-23 :—

AVERAGE AND FASTEST TIME.—MAILS VIA SUEZ CANAL, LONDON TO FREMANTLE, AND VICE VERSA, DURING 1922-23.

| Period. | London to Fremantle. | | | | Fremantle to London. | | | |
|-------------------------------|----------------------|--------|---------------|--------|----------------------|--------|---------------|--------|
| | Average Time. | | Fastest Time. | | Average Time. | | Fastest Time. | |
| | Days. | Hours. | Days. | Hours. | Days. | Hours. | Days. | Hours. |
| 19.10.22 to 18.10.23 incl. .. | 27 | 15½ | 27 | 12 | 28 | 19 | 28 | — |
| 19.10.23 to 30.12.23 .. | 25 | 23 | 25 | 12 | 26 | 21 | 26 | — |

(b) *Via America.* The average and fastest times occupied in the conveyance of mails between London and Sydney via America during 1922-23 were :—

AVERAGE AND FASTEST TIME.—MAILS VIA AMERICA, DURING 1922-23.

| Service. | | | | Average Time. | | Fastest Time. | |
|------------------|-----------------------------|----|----|---------------|--------|---------------|--------|
| | | | | Days. | Hours. | Days. | Hours. |
| London to Sydney | via Vancouver | .. | .. | 39 | — | 39 | — |
| | via San Francisco (Oceanic) | .. | .. | 43 | 5½ | 35 | — |
| Sydney to London | via Vancouver | .. | .. | 39 | 7 | 37 | — |
| | via San Francisco (Oceanic) | .. | .. | 34 | 21½ | 31 | — |

(iii) *Amount of Mail Subsidies Paid.* The following table shows the amounts of subsidies paid by the Commonwealth Postal Department for ocean and coastal mail services during the year ended 30th June, 1923 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1922-23.

| Service. | Orient S. N. Co. | Queens- land Ports. | South Australian Ports. | Western Australian Ports. | Tas- manian Ports. |
|----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|--------------------------|
| Annual subsidy | £ 129,600 | £ 25,107 | £ 5,320 | £ 6,875 | £ 30,750 |

During the year 1922-23 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £35,244; by road services, £592,510; and by railway services, £332,446. The total expenditure in 1923 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,159,699.

8. *Transactions of the Dead Letter Offices.*—(i) *General.* Under sections 45 to 53 of the Post and Telegraph Act 1901, the Postmaster-General may cause to be opened all unclaimed and undelivered postal articles originally posted within Australia which have been returned from the places to which they were forwarded. Every unclaimed letter and postal article must be kept for the prescribed period at the office to which it has been

transmitted for delivery, and must then be sent to the General Post Office. Letters and packets originally posted overseas are returned to the proper authorities in the country of origin, or if originally posted in Australia are returned to the General Post Office in the State where posted. Unclaimed or undelivered newspapers may be forthwith sold, destroyed, or used for any public purpose. Opened postal articles not containing valuables are returned to the writer or sender if his name and address can be ascertained, but may otherwise be destroyed forthwith. As regards an opened letter or packet containing valuable or saleable enclosures, a list and memorandum of the contents are kept, and a notice is sent to the person to whom the letter or packet is addressed if he be known, or otherwise to the writer or sender thereof if he be known. Upon application within three months of the date of such notice the letter or packet may be claimed by the addressee, or, failing him, by the writer or sender. If unclaimed within three months, the letter and contents may be destroyed or sold, and the proceeds paid into the Consolidated Revenue Fund.

(ii) *Summary.* The following table shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Inter-State, and International, dealt with by the Dead Letter Offices in 1922–23, and the methods adopted in the disposal thereof.

DEAD LETTER OFFICES—SUMMARY, 1922–23.

| Particulars. | N.S.W. | Vic. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
|--|-----------|---------|---------|----------|----------|--------|------------|
| LETTERS, POSTCARDS, AND LETTERCARDS. | | | | | | | |
| Returned direct to writers or delivered | 653,439 | 352,807 | 183,330 | 86,181 | 142,632 | 53,178 | 1,471,567 |
| Destroyed in accordance with Act | 90,438 | 51,306 | 16,945 | 13,257 | 10,272 | 8,832 | 191,050 |
| Returned to other States or Countries as unclaimed | 109,499 | 61,032 | 40,732 | 20,748 | 24,087 | 13,530 | 269,628 |
| Total | 853,376 | 465,145 | 241,007 | 120,186 | 176,991 | 75,540 | 1,932,245 |
| PACKETS AND CIRCULARS. | | | | | | | |
| Returned direct to writers or delivered | 755,842 | 225,651 | 94,932 | 62,306 | 76,380 | 8,022 | 1,223,133 |
| Destroyed in accordance with Act | 146,686 | 131,751 | 29,194 | 47,235 | 299 | .. | 355,165 |
| Returned to other States or Countries as unclaimed | 14,267 | 20,117 | 40,198 | 12,732 | 5,419 | 10,326 | 103,059 |
| Total | 916,795 | 377,519 | 164,324 | 122,273 | 82,098 | 18,348 | 1,681,357 |
| Grand total (letters, packets, etc.) | 1,770,171 | 842,664 | 405,331 | 242,459 | 259,089 | 93,888 | 3,613,602 |

During the year 1922–23 money and valuables to the amount of £142,116 were found in undeliverable postal articles, while 19,885 postal articles were posted without address, including 348 which contained money and valuables to the extent of £2,075.

9. *Money Orders and Postal Notes.*—(i) *General.* The issue of money orders and postal notes is regulated by sections 74 to 79 of the Post and Telegraph Act 1901. A money order may be issued for payment of sums up to £20 within Australia, and not exceeding £40 (in some cases £30, £20, or £10) in places abroad. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings. Money orders are sent direct from Australia to the United Kingdom, and to most of the British colonies and possessions, to the British Solomon Islands Protectorate and the Gilbert and Ellice Islands Protectorate, to Italy, to Norway, and to the United States of America. Money orders payable in Japan and China are sent via Hong Kong; orders payable in other countries, with a few exceptions, are sent through the General Post Office in London, where new orders are issued and forwarded to the addresses of the payees, less twopence for each £1 or fraction of £1, with a minimum charge of fourpence. To secure payment of the full amount of the original order to the payee this extra commission must be paid by the sender.

(ii) *Rates of Commission on Money Orders.* The rates of commission chargeable for the issue of money orders are as follows :—

RATES OF COMMISSION, MONEY ORDERS.

| Orders Payable in— | Rates of Commission. |
|--|---|
| Australia | 6d. for each £5 or fraction of £5. |
| New Zealand | 3d. for each £1 or fraction of £1, with minimum of 6d. |
| Papua, Rabaul (New Guinea), Nauru, Fiji, New Caledonia | 4d. for each £1, or fraction of £1, with minimum of 6d. |
| United Kingdom, Canada, Union of South Africa, India, Ceylon, Dutch East Indies, Egypt, Federated Malay States, Gilbert and Ellice Islands, Hong Kong, Italy, Mauritius, North Borneo, Norway, Solomon Islands, Straits Settlements, Tonga United States of America (including Hawaii) | 4d. for each £1, or fraction of £1 for first £6 and 3d. for each additional £1 or fraction of £1, with minimum of 9d. |
| Philippine Islands | 9d. for each 5s. or fraction of 5s. |

(iii) *Telegraph Money Orders.* Remittances may also be made by telegraph to and from money order offices in Australia which are also telegraph or telephone offices, and to New Zealand. The charge for a telegraph money order is the cost of the telegram of advice in addition to the ordinary commission. Where payment is to be made within Australia the remitter must also send a telegram advising the transmission of the money, which telegram must be produced by the payee when applying for payment. In the case of New Zealand a second telegram is not required, but an additional charge of sixpence is made by the Department to cover the cost of notifying the payee.

A telegraph money order service between the United Kingdom and Australia via the Pacific Cable was inaugurated on 31st July, 1921, by agreement between the London Postal Authorities, the Commonwealth Postal Department, and the Pacific Cable Board. Under the arrangement made, a telegraph money order may be drawn by the United Kingdom on any money order office in Australia whether it is a telegraph or telephone office or not, while a telegraph money order may be drawn by Australia on any place whatsoever in the United Kingdom. An order may not be issued for a sum in excess of the maximum for a single money order to and from the United Kingdom, viz., £40.

(iv) *Rates of Poundage on Postal Notes.* The values of the notes issued have been so arranged that any sum of shillings and sixpences up to £1 can be remitted by not more than two of these notes. The poundage or commission charged on notes of different denominations is as follows :—

POUNDAGE RATES, POSTAL NOTES.

| Denomination of Note .. | 6d. to 1s. 6d. | 2s. to 4s. 6d. | 5s. | 5s. 6d. | 7s. 6d. | 10s. to 20s. |
|-------------------------|----------------|----------------|------|---------|---------|--------------|
| Poundage charged .. | ½d. | 1d. | 1½d. | 1½d. | 2d. | 3d. |

(v) *Value of Orders Issued and Paid and of Notes Sold, 1922-23.* The following table shows the value of money orders issued and paid, and of postal notes sold in each State and in Australia during the year 1922-23, together with the amount of commission on money orders and poundage on postal notes received by the Postal Department.

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1922-23.

| State. | Value of Money Orders Issued. | Value of Money Orders Paid. | Net Money Order Commission Received. | Value of Postal Notes Sold. | Poundage Received on Postal Notes. |
|----------------------|-------------------------------|-----------------------------|--------------------------------------|-----------------------------|------------------------------------|
| | £ | £ | £ | £ | £ |
| New South Wales .. | 6,218,071 | 6,301,904 | 42,549 | 1,701,819 | 33,112 |
| Victoria .. | 2,771,531 | 2,909,516 | 19,330 | 1,240,935 | 24,575 |
| Queensland .. | 2,397,033 | 2,085,691 | 17,405 | 550,292 | 10,606 |
| South Australia .. | 862,653 | 778,737 | 6,115 | 279,955 | 5,679 |
| Western Australia .. | 1,331,958 | 1,154,112 | 9,224 | 261,924 | 5,053 |
| Tasmania .. | 539,444 | 475,761 | 3,520 | 124,610 | 2,518 |
| Australia .. | 14,120,690 | 13,705,721 | 98,143 | 4,159,535 | 81,543 |

The figures in the foregoing table show a general increase over the corresponding particulars for the year 1921-22.

(vi) *Money Orders and Postal Notes—Summary, Australia, 1919 to 1923.* The following table shows the total number and value of money orders and postal notes issued and paid in Australia from 1918-19 to 1922-23 :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA,
1918-19 TO 1922-23.

| Year ended 30th June. | Money Orders. | | | | Postal Notes. | | | |
|-----------------------|---------------|-----------|-------------|-----------|---------------|-----------|-------------|-----------|
| | Issued. | | Paid. | | Issued. | | Paid. | |
| | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. |
| | No. (,000). | £ (,000). | No. (,000). | £ (,000). | No. (,000). | £ (,000). | No. (,000). | £ (,000). |
| 1919 .. | 2,300 | 11,697 | 2,214 | 11,370 | 9,830 | 3,277 | 9,775 | 3,244 |
| 1920 .. | 2,352 | 12,382 | 2,258 | 12,094 | 10,163 | 3,389 | 10,127 | 3,409 |
| 1921 .. | 2,543 | 13,675 | 2,439 | 13,181 | 10,849 | 3,674 | 10,821 | 3,671 |
| 1922 .. | 2,761 | 13,803 | 2,632 | 13,412 | 11,631 | 3,968 | 11,522 | 3,909 |
| 1923 .. | 2,873 | 14,121 | 2,724 | 13,706 | 12,512 | 4,160 | 12,455 | 4,148 |

(vii) *Classification of Money Orders Issued and Paid.* (a) *Orders Issued.* The following table shows the number and value of money orders issued in each State during the year 1922-23, classified according to the country where payable :—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1922-23.

| State in which Issued. | Where Payable. | | | | Total. |
|------------------------|----------------|-----------------|----------------------|---------------------|------------|
| | In Australia. | In New Zealand. | In the United K'dom. | In Other Countries. | |
| NUMBER. | | | | | |
| New South Wales .. | 1,165,211 | 10,748 | 74,067 | 14,187 | 1,264,213 |
| Victoria .. | 496,526 | 6,172 | 48,190 | 11,198 | 562,086 |
| Queensland .. | 455,746 | 1,770 | 27,491 | 9,356 | 494,363 |
| South Australia .. | 161,456 | 999 | 15,562 | 3,988 | 182,005 |
| Western Australia .. | 228,714 | 1,058 | 20,666 | 3,807 | 254,245 |
| Tasmania .. | 107,990 | 1,672 | 5,346 | 1,137 | 116,145 |
| Australia .. | 2,615,643 | 22,419 | 191,322 | 43,673 | 2,873,057 |
| VALUE. | | | | | |
| | £ | £ | £ | £ | £ |
| New South Wales .. | 5,856,365 | 50,515 | 229,419 | 81,772 | 6,218,071 |
| Victoria .. | 2,548,961 | 27,573 | 145,212 | 49,785 | 2,771,531 |
| Queensland .. | 2,224,397 | 7,972 | 78,721 | 85,943 | 2,397,033 |
| South Australia .. | 790,547 | 4,390 | 49,728 | 17,988 | 862,653 |
| Western Australia .. | 1,245,950 | 4,723 | 62,154 | 19,131 | 1,331,958 |
| Tasmania .. | 515,953 | 7,637 | 12,613 | 3,241 | 539,444 |
| Australia .. | 13,182,173 | 102,810 | 577,847 | 257,860 | 14,120,690 |

(b) *Orders Paid.* The next table gives the number and value of money orders paid in each State during the year 1922-23, classified according to the country where issued :—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1922-23.

| State in which Paid. | Where Issued. | | | | Total. |
|----------------------|---------------|-----------------|----------------------|---------------------|------------|
| | In Australia. | In New Zealand. | In the United K'dom. | In Other Countries. | |
| NUMBER. | | | | | |
| New South Wales .. | 1,191,127 | 32,981 | 16,651 | 9,808 | 1,250,567 |
| Victoria .. | 526,099 | 17,913 | 9,975 | 4,434 | 558,421 |
| Queensland .. | 425,989 | 2,989 | 5,166 | 2,429 | 436,573 |
| South Australia .. | 154,268 | 1,279 | 2,931 | 945 | 159,423 |
| Western Australia .. | 211,585 | 1,981 | 4,814 | 1,250 | 219,630 |
| Tasmania .. | 93,036 | 3,286 | 1,462 | 1,625 | 99,409 |
| Australia .. | 2,602,104 | 60,429 | 40,999 | 20,491 | 2,724,023 |
| VALUE. | | | | | |
| | £ | £ | £ | £ | £ |
| New South Wales .. | 6,040,792 | 140,683 | 81,710 | 38,719 | 6,301,904 |
| Victoria .. | 2,784,578 | 60,749 | 48,353 | 15,836 | 2,909,516 |
| Queensland .. | 2,040,365 | 14,721 | 23,292 | 7,313 | 2,085,691 |
| South Australia .. | 758,191 | 5,075 | 11,506 | 3,965 | 778,737 |
| Western Australia .. | 1,119,037 | 6,559 | 23,564 | 4,952 | 1,154,112 |
| Tasmania .. | 456,858 | 9,550 | 5,713 | 3,640 | 475,761 |
| Australia .. | 13,199,821 | 237,337 | 194,138 | 74,425 | 13,705,721 |

In the above tables money orders payable or issued in foreign countries which have been sent from or to Australia through the General Post Office at London are included in those payable or issued in the United Kingdom.

(viii) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1922-23, classified according to the State in which they were issued.

Particulars regarding the total number and value of postal notes issued and paid in each of the last five years have been given previously.

POSTAL NOTES PAID.—STATE OF ISSUE, 1922-23.

| Particulars. | Postal Notes Paid in— | | | | | | |
|---------------------------|-----------------------|-----------|-----------|----------|----------|-----------|------------|
| | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
| NUMBER. | | | | | | | |
| Issued in same State .. | 3,468,970 | 2,456,462 | 1,284,658 | 578,422 | 605,329 | 288,141 | 8,681,982 |
| Issued in other States .. | 475,727 | 353,203 | 599,842 | 61,732 | 27,392 | 2,254,665 | 3,772,561 |
| Total .. | 3,944,697 | 2,809,665 | 1,884,500 | 640,154 | 632,721 | 2,542,806 | 12,454,543 |
| VALUE. | | | | | | | |
| | £ | £ | £ | £ | £ | £ | £ |
| Issued in same State .. | 1,331,512 | 879,054 | 450,029 | 193,302 | 228,162 | 91,834 | 3,173,893 |
| Issued in other States .. | 177,183 | 134,432 | 135,374 | 25,397 | 11,210 | 490,283 | 973,879 |
| Total .. | 1,508,695 | 1,013,486 | 585,403 | 218,699 | 239,372 | 582,117 | 4,147,772 |

The number and value of postal notes paid in Australia during the year showed an increase of 8.09 and 6.12 per cent. respectively over the corresponding figures for the year 1921-22.

10. **Gross Revenue, Postmaster-General's Department.**—(i) *Total.* The following table shows the gross revenue of the Postmaster-General's Department for the years ended 30th June, 1919 to 1923 inclusive, under three heads, viz., the Postal, the Telegraph, and the Telephone branches. In the Postal branch is included the revenue derived from money-order commissions, poundage on postal notes, private boxes and bags, and miscellaneous sources. The following figures and also those for expenditure are supplied by the Treasury, and represent the actual collections and payments for the periods mentioned :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., 1919 TO 1923.

| Year ended 30th June— | | | | Postal Branch. | Telegraph Branch. | Telephone Branch. | Total. |
|-----------------------|----|----|----|----------------|-------------------|-------------------|-----------|
| | | | | £ | £ | £ | £ |
| 1919 | .. | .. | .. | 3,129,932 | 1,103,664 | 1,876,929 | 6,110,525 |
| 1920 | .. | .. | .. | 3,310,778 | 1,274,527 | 2,159,450 | 6,744,755 |
| 1921 | .. | .. | .. | 4,574,618 | (a)1,381,974 | 2,431,981 | 8,388,573 |
| 1922 | .. | .. | .. | 5,194,523 | (b)1,401,583 | 2,724,554 | 9,320,660 |
| 1923 | .. | .. | .. | 5,395,829 | (c)1,413,375 | 2,983,069 | 9,792,273 |

(a) Includes £12,052 radio receipts.

(b) Includes £25,998 radio receipts.

(c) Includes £7,711 radio receipts.

As compared with the corresponding figures for the previous year, an increase of 5.06 per cent. is shown. The figures for the Postal, Telegraph, and Telephone Branches increased by 3.88, 0.84 and 9.49 per cent. respectively.

(ii) *Analysis for States.* The following table gives an analysis of the actual collections of the Postal Department in each State and in Australia during the year ended 30th June, 1923 :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., ANALYSIS 1922-23.

| Particulars. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australia. |
|----------------------------------|------------------|------------------|------------------|----------------|----------------|----------------|------------------|
| | £ | £ | £ | £ | £ | £ | £ |
| Postage | 1,914,210 | 1,417,267 | 716,277 | 413,644 | 277,872 | 168,892 | 4,913,162 |
| Telegraphs (ordinary) .. | 499,042 | 301,898 | 225,814 | 207,717 | 121,077 | 50,016 | 1,405,664 |
| Telegraphs (radio) .. | 1,045 | 2,094 | 2,623 | 558 | 1,206 | 185 | 7,711 |
| Telephones | 1,173,123 | 846,610 | 404,982 | 306,658 | 165,927 | 85,769 | 2,983,089 |
| Money order commission .. | 75,834 | 42,837 | 23,529 | 11,893 | 14,277 | 6,201 | 179,571 |
| Poundage on postal notes | | | | | | | |
| Private boxes and bags .. | 16,267 | 8,908 | 9,062 | 5,334 | 2,973 | 1,998 | 44,542 |
| Miscellaneous | 90,734 | 78,637 | 35,630 | 19,630 | 24,298 | 9,575 | 258,554 |
| Total | 3,770,255 | 2,698,251 | 1,423,017 | 970,484 | 607,630 | 322,636 | 9,792,273 |

Increased revenue derived from Postage (£230,197) and Telephones (£258,515) contributed the major portion of the increase of £671,613 over the total for 1921-22.

11. **Expenditure, Postmaster-General's Department.**—(i) *Total.* The next table gives the actual payments made as shown by records kept for Treasury purposes in respect of the Postal Department for each of the years ended 30th June, 1919 to 1923 inclusive. The figures given include certain items of expenditure, such as rent, repairs and maintenance of buildings, fittings and furniture, sanitation, water supply, new buildings and additions and interest on transferred properties.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT., 1919 TO 1923.

| Expenditure. | Year ended 30th June— | | | | |
|----------------------|-----------------------|------------------|------------------|-------------------|-------------------|
| | 1919. | 1920. | 1921. | 1922. | 1923. |
| | £ | £ | £ | £ | £ |
| Total | 5,826,049 | 6,649,432 | 8,268,725 | 10,026,593 | 10,752,373 |

(ii) *Distribution.* The following table shows, as far as possible, the distribution of expenditure on various items in each State during the year ended 30th June, 1923. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT.—DISTRIBUTION, 1922-23.

| Particulars. | Central Office. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
|--|-----------------|------------------|------------------|------------------|----------------|----------------|----------------|-------------------|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| Salaries and contingencies— | | | | | | | | |
| Salaries .. | 33,519 | 1,852,679 | 1,198,504 | 640,477 | 421,209 | 367,913 | 156,584 | 4,670,975 |
| Conveyance of mails .. | .. | 416,102 | 205,687 | 213,524 | 81,348 | 75,156 | 38,230 | 1,030,047 |
| Contingencies .. | 3,317 | 606,381 | 369,157 | 373,038 | 165,722 | 109,589 | 81,038 | 1,708,242 |
| Cables .. | 3,985 | .. | .. | .. | .. | .. | .. | 3,985 |
| Ocean mails .. | 129,600 | .. | .. | .. | .. | .. | .. | 129,600 |
| Miscellaneous .. | 964 | 16,598 | 21,697 | 4,416 | 4,152 | 2,596 | 919 | 51,342 |
| Pensions and retiring allowances .. | .. | 31,002 | 45,309 | 256 | .. | 7,490 | .. | 84,957 |
| Rent, repairs, maintenance .. | 132 | 55,039 | 25,279 | 19,050 | 10,533 | 10,090 | 2,064 | 122,187 |
| Supervision of works .. | .. | 470 | 344 | 171 | 111 | 74 | 47 | 1,217 |
| Proportion of Audit Office expenses .. | .. | 3,973 | 2,905 | 1,444 | 944 | 627 | 400 | 10,293 |
| Unforeseen expenditure .. | .. | 34 | 26 | 7 | 4 | 3 | 2 | 76 |
| New works— | | | | | | | | |
| Telegraph and telephone .. | 1,557 | 839,238 | 559,128 | 300,861 | 251,914 | 175,587 | 45,370 | 2,173,655 |
| New buildings, etc. .. | .. | 198,661 | 26,219 | 9,514 | 3,453 | 94,443 | 4,403 | 336,693 |
| Interest on transferred properties .. | .. | 80,292 | 42,493 | 32,151 | 12,208 | 19,169 | 7,109 | 193,422 |
| Other .. | 236,582 | .. | .. | .. | .. | .. | .. | 236,582 |
| Total .. | 409,656 | 4,100,469 | 2,496,838 | 1,594,909 | 951,598 | 862,737 | 336,166 | 10,752,373 |

(a) Particulars of apportionment to each State not available.

Compared with the total for the preceding year the expenditure for 1922-23 rose by £775,780, or 7.8 per cent., the principal increases being in salaries, with £405,000, and new works, £722,000, in excess of the figures for 1921-22.

12. Balance Sheet of the Postmaster-General's Department.—(i) *General.* The first complete balance sheet and profit and loss account of the Postmaster-General's Department was presented in November, 1913, for the year ending 30th June, 1913.

PROFITS, POSTMASTER-GENERAL'S DEPT., 1919 TO 1923.

| Items. | Year ended 30th June— | | | | |
|---------------------------|-----------------------|------------------|------------------|------------------|------------------|
| | 1919(a). | 1920(a). | 1921. | 1922. | 1923. |
| | £ | £ | £ | £ | £ |
| Total earnings .. | 6,158,571 | 6,732,096 | 8,511,494 | 9,347,656 | 9,898,158 |
| Total working expenses .. | 5,043,891 | 5,633,752 | 6,724,543 | 7,103,536 | 7,651,864 |
| Surplus .. | 1,114,680 | 1,098,344 | 1,786,951 | 2,244,120 | 2,246,294 |
| Interest on capital .. | 590,035 | 610,390 | 643,183 | 703,039 | 780,235 |
| Total surplus .. | 524,645 | 487,954 | 1,143,768 | 1,541,081 | 1,466,059 |

(a) Excluding Wireless Telegraphy Branch, which was transferred to the Department of the Navy as from 1st July, 1915.

As will be seen from the figures of the General Profit and Loss Account above, the year 1922-23, after providing for depreciation, pensions and retiring allowances, closed with a surplus of £2,246,294. From this amount £780,235, interest on capital, was deducted, leaving a profit of £1,466,059, or £75,022 less than that of 1921-22.

(ii) *Results for each State.* The next table gives the results for each State during the five years 1918–19 to 1922–23 :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPT., STATES, 1919 TO 1923.

| State. | Year ended 30th June— | | | | |
|----------------------|-----------------------|-------------|---------------|---------------|---------------|
| | 1919. | 1920. | 1921. | 1922. | 1923. |
| | £ | £ | £ | £ | £ |
| New South Wales .. | (+) 155,159 | (+) 95,285 | (+) 334,395 | (+) 508,474 | (+) 487,835 |
| Victoria .. | (+) 254,013 | (+) 259,507 | (+) 516,860 | (+) 644,824 | (+) 608,203 |
| Queensland .. | (+) 60,103 | (+) 61,311 | (+) 143,844 | (+) 186,185 | (+) 168,172 |
| South Australia .. | (+) 132,772 | (+) 151,984 | (+) 189,936 | (+) 218,528 | (+) 226,155 |
| Western Australia .. | (-) 81,460 | (-) 81,391 | (-) 62,397 | (-) 30,764 | (-) 22,638 |
| Tasmania .. | (+) 4,058 | (+) 1,258 | (+) 21,130 | (+) 13,834 | (-) 1,668 |
| Australia .. | (+) 524,645 | (+) 487,954 | (+) 1,143,768 | (+) 1,541,081 | (+) 1,466,059 |

(+) Denotes profit. (−) Denotes loss.

(iii) *Profit or Loss of Branches.* The following table shows the profit or loss on the various branches during the five years 1918–19 to 1922–23 :—

PROFIT OR LOSS, BRANCHES, POSTMASTER-GENERAL'S DEPT., 1919 TO 1923.

| Year ended 30th June— | Postal. | | Telegraph. | | Telephone. | | All Branches. | |
|--------------------------|---------|-----------|------------|---------|------------|---------|---------------|-----------|
| | Loss. | Profit. | Loss. | Profit. | Loss. | Profit. | Loss. | Profit. |
| | £ | £ | £ | £ | £ | £ | £ | £ |
| 1919 .. | .. | 239,337 | .. | 63,133 | .. | 222,175 | .. | 524,645 |
| 1920 .. | .. | 81,217 | .. | 95,636 | .. | 311,101 | .. | 487,954 |
| 1921 .. | .. | 929,605 | 8,312 | .. | .. | 222,475 | .. | 1,143,768 |
| 1922 .. | .. | 1,258,286 | .. | 1,809 | .. | 280,986 | .. | 1,541,081 |
| 1923 .. | .. | 1,365,064 | 78,460 | .. | .. | 179,455 | .. | 1,466,059 |

In the period of five years covered by the foregoing table it will be observed that in only two instances (Telegraph Branch in 1921 and 1923) was there a loss.

§ 2. Telegraphs.

1. *General.*—A review of the development of the Electric Telegraph Services in Australia was given in a previous issue of this work (see Year Book No. 15), but limitations of space preclude the repetition of this information in the present issue.

2. *Telegraph Offices, Length of Lines and Wire.*—(i) *Summary for Australia.* The following table shows the number of telegraph offices and the length of telegraph lines and of telegraph wire available for use in Australia in each year from 1919 to 1923.

TELEGRAPHS.—AUSTRALIA, SUMMARY, 30th JUNE, 1919 TO 1923.

| Particulars. | 1919. | 1920. | 1921. | 1922. | 1923. |
|-------------------------------------|--------|--------|--------|--------|--------|
| Number of offices | 6,219 | 6,251 | 6,366 | 6,641 | 6,987 |
| Length of wire (miles)— | | | | | |
| Telegraph purposes only | 63,148 | 63,458 | 63,295 | 62,781 | 62,619 |
| Telegraph and telephone purposes .. | 78,004 | 79,930 | 82,234 | 84,855 | 91,461 |
| Length of Line (miles)— | | | | | |
| Conductors in Morse cable | 2,153 | 2,152 | 2,133 | 2,139 | 2,139 |
| Conductors in submarine cable | 1,705 | 1,736 | 1,851 | 2,067 | 2,193 |
| Pole routes (miles) | 60,275 | 60,693 | 60,580 | 62,489 | 66,648 |

(ii) *Particulars for each State.* The following table gives corresponding particulars for each State for the year 1922–23 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1923.

| Particulars. | N.S.W. | Victoria. | Q'land. | S. Aust. | W.Aust. | Tas. | Aus- tralia. |
|--|--------|-----------|---------|----------|---------|-------|-----------------|
| Number of offices | 2,411 | 1,858 | 958 | 632 | 642 | 486 | 6,987 |
| Length of wire (miles)— | | | | | | | |
| Telegraph purposes only | 21,544 | 6,183 | 13,793 | 11,951 | 9,012 | 136 | 62,619 |
| Telegraph and Telephone purposes | 32,564 | 19,298 | 17,238 | 7,856 | 8,968 | 5,537 | 91,461 |
| Length of line (miles)— | | | | | | | |
| Conductors in Morse cable | 722 | 1,058 | 324 | .. | 21 | 14 | 2,139 |
| Conductors in submarine cable (statute miles) | 1,571 | 440 | 56 | 71 | 5 | 50 | 2,193 |
| Pole routes (miles) | 26,486 | 9,099 | 11,232 | 8,052 | 8,764 | 3,015 | 66,648 |

It will be noticed that 154,080 miles of wire are available for telegraph purposes, of which 91,461 miles are also used for telephone purposes.

These figures show a decrease of 162 and an increase of 6,606 miles respectively over the corresponding mileages for the previous year.

3. **Number of Telegrams Dispatched.**—(i) *Total for Australia.* The following table shows the number of telegrams dispatched to destinations within Australia in each of the years 1919 to 1923.

TELEGRAMS DISPATCHED.—AUSTRALIA, 1919 TO 1923.

| Telegrams. | Year ended 30th June— | | | | |
|-------------------|-----------------------|------------|------------|------------|------------|
| | 1919. | 1920. | 1921. | 1922. | 1923. |
| Number(a) | 15,461,034 | 17,934,998 | 16,723,111 | 15,796,022 | 15,828,629 |

(a) Including interstate cablegrams.

(ii) *Totals for each State.* The following table shows the number of telegrams dispatched in each State in 1922–23 for delivery in that State, the number dispatched in each State for delivery in other States, and the total number of telegrams—exclusive of cablegrams for places outside Australia—dispatched in each State :—

TELEGRAMS DISPATCHED.—STATES, 1922-23.

| State, etc. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Australia. |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Inland .. | 4,086,632 | 2,687,030 | 2,046,184 | 1,011,913 | 1,324,556 | 341,983 | 11,498,298 |
| Interstate (a) .. | 1,364,699 | 1,227,522 | 664,902 | 494,604 | 346,553 | 232,051 | 4,330,331 |
| Total .. | 5,451,331 | 3,914,552 | 2,711,086 | 1,506,517 | 1,671,109 | 574,034 | 15,828,629 |

(a) Including interstate cablegrams.

The figures in the foregoing table show a small increase in the total volume of telegraph business as compared with the corresponding figures for the previous financial year.

4. Rates for Transmission of Telegrams.—The original rates for the transmission of telegrams within Australia were fixed by section 7 of the Post and Telegraph Rates Act 1902, and came into force on the 1st November, 1902. Under this Act "ordinary" and "press" telegrams are charged different rates. "Press" telegrams are defined to mean those the text of which consists of political, commercial, etc., information, and of news intended for publication in a newspaper. The telegram must be sent by an authorized correspondent, and must be addressed to a registered newspaper or recognized news agency. The charges imposed by the amending Act which came into operation on 1st October, 1920, are given in the appended statements.

TRANSMISSION CHARGES.—ORDINARY TELEGRAMS.

| Particulars. | Town and Suburban, within prescribed limits, or within 15 miles from the sending station. | Other Places within the State, except Town and Suburban. | Interstate. |
|----------------------------------|---|--|--------------|
| | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i> |
| Including address and signature— | | | |
| Not exceeding 16 words | 0 9 | 1 0 | 1 4 |
| Each additional word | 0 1 | 0 1 | 0 1 |

Double the foregoing rates are imposed for the transmission of telegrams on Sunday, Christmas Day, and Good Friday, also between the hours of 8 p.m. and 9 a.m., and for telegrams lodged for "urgent" transmission.

The charges for press telegrams are given hereunder :—

TRANSMISSION CHARGES.—PRESS TELEGRAMS.

| Particulars. | Within any State. | Interstate. | Relating to Parlia- mentary, Executive, Departmental, and other Common- wealth Proceedings as may be prescribed.(a) |
|---------------------------------|----------------------|--------------|---|
| | <i>s. d.</i> | <i>s. d.</i> | <i>s. d.</i> |
| Not exceeding 25 words | 0 8 | 1 4 | 1 4 |
| From 26 to 50 words | 0 11 | 1 10 | 1 8 |
| From 51 to 100 words | 1 9 | 3 6 | 2 0 |
| Every additional 50 words | 0 8 | 1 4 | 0 8 |

(a) Within Australia.

5. Letter-telegrams.—Letter-telegrams are accepted at any hour at telegraph offices which are open for business after 7 p.m., subject to the condition that delivery is effected by posting at the letter-telegram office of destination. The rates charged

throughout Australia are one shilling and threepence for the first 30 words, and one halfpenny for each additional word, double these rates being charged on Sundays. On the 1st April, 1923, the service applied to 101 offices.

6. **Wireless Telegraphy and Telephony.**—(i) *General.* In Year Book No. 15 a résumé was given of the activities in Australia in connexion with wireless telegraphy and telephony. Since the publication of that issue, the Radio Service which had hitherto been administered under the Wireless Telegraphy Act 1905 by the Postmaster-General's Department—with the exception of the period September, 1915, to June, 1920, during which it was controlled by the Navy Department—was placed under the Prime Minister's Department as the Wireless Branch from 1st December, 1922, on which date the Wireless Telegraphy Regulations 1922 became operative.

On 1st March, 1923, the Wireless Branch was re-transferred to the Postmaster-General's Department, under the control of the Chief Manager of Telegraphs and Wireless.

The Radio Stations handed over to the control of Amalgamated Wireless (Australia) Ltd. in accordance with the agreement of 28th March, 1922 (see Year Book No. 15, 1922, pp. 628–9), are situated in Sydney, Melbourne, Brisbane, Cooktown, Rockhampton, Thursday Island, Townsville, Adelaide, Broome, Esperance, Geraldton, Perth, Wyndham, Flinders Island, Hobart, King Island, Darwin, Port Moresby, and Samarai, all formerly under the control of the Postmaster-General's Department, and Aitape, Kavieng, Kieta, Madang, Manus, Morobe, and Rabaul, previously under the control of the Administrator of the Territory of New Guinea.

Radio-telegraphic stations have been erected at Suva, Ocean Island, Tulagi, and Vila under the control of the High Commissioner of the Pacific, while the New Zealand Government has erected high-power stations at Awanui (Auckland), Awarua (Bluff), and Apia (Samoa), and low-power stations at Auckland, Chatham Islands, Raratonga (Cook Islands), and Wellington.

The following rates per word are applicable to radio-telegrams transmitted either way :—Between any telegraph office in Australia and Australian or New Zealand ships, 6d., allocated as follows: Coast station 3d., ship station 2d., landline 1d.: British and foreign ships, 11d., allocated: Coast station 6d., ship station 4d., landline 1d. Between Australia and Port Moresby or Samarai the rate is 6d., and between the mainland and Flinders Island, King Island, or Maria Island, 2d. Between Australia and Rabaul, 6d., other late German New Guinea stations, 1s.; Nauru and Ocean Islands and Tulagi, 1s. 7d.; Willis Island, 3d.; and Caroline Islands, 1s. 7d.

(ii) *Licence Fees.* The Regulations provide for the issue of the following licences, for which the respective fees per annum, payable in advance, are as shown, viz.:—(a) Coast Station, £1; (b) Ship Station, £1; (c) Land Station, £1; (d) Broadcasting Station, £15; (e) Broadcasting (receiving) Station, 10s.; (f) Dealers Licences, £1; (g) Experimental Station (i) Transmitting and Receiving, £1, (ii) Receiving only, 10s.; (h) Portable Station, £1; (i) Aircraft Station, £1. Licences remain valid for a period of twelve months from date of issue, but may be renewed from time to time.

(iii) *Licences Issued.* The following table shows the number of each class of licence in force at 31st December, 1922; 30th June, and 31st December, 1923.

WIRELESS LICENCES, 1922 and 1923.

| Station Licence. | At— | | |
|------------------------------------|------------------|------------------|------------------|
| | 31st Dec., 1922. | 30th June, 1923. | 31st Dec., 1923. |
| Coast | 28 | 27 | 27 |
| Ship | 128 | 133 | 140 |
| Land | .. | .. | 3 |
| Broadcasting | .. | .. | 6 |
| „ (Receiving) | .. | .. | 100 |
| „ Dealers | .. | .. | 330 |
| Experimental— | | | |
| Transmitting and Receiving | 32 | 140 | 278 |
| Receiving only | 724 | 1,800 | 4,864 |
| Portable | .. | .. | 10 |
| Aircraft | .. | .. | .. |
| Total | 912 | 2,100 | 5,758 |

Licences previously issued by the Minister for the Navy under the Naval Defence Act 1910-1918, or by the Postmaster-General under the Act, and which were in force on 1st December, 1922, are not prejudiced by these Regulations.

(iv) *Unauthorized Stations.* In order that an adequate check may be kept on unauthorized stations, dealers in wireless apparatus or accessories are compelled to keep a register and record therein all sales of wireless telegraphy or telephony apparatus; such register must be made available for inspection at any time. It is provided in the Regulations that no person or firm shall sell or supply apparatus or accessories to any person unless that person is the holder of, or is about to obtain, a licence.

(v) *Proficiency Certificates.* Proficiency certificates for wireless operators and watchers are issued by the Minister to individuals who pass the specified tests. Fees of 10s. and 5s. respectively are imposed on candidates for either class of certificate on each occasion when they sit for examination.

Every ship-station and coast-station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

At 31st December, 1923, 802 first-class and 29 second-class proficiency certificates in addition to 28 watchers' certificates had been issued.

7. **Revenue and Expenditure.**—Particulars as to the revenue from the telegraph systems for the years 1918-19 to 1922-23 were given in earlier pages.

§ 3. Submarine Cables.

1. **First Cable Communication with the Old World.**—In earlier issues of the Year Book will be found a detailed account of the connexion of Australia with the old world by means of submarine cables. (See No. 6, p. 770.)

2. **The Tasmania-Victoria Cables.**—On the 28th February, 1908, the Postmaster-General entered into an agreement with Messrs. Siemens Brothers and Company Ltd., of London, for the manufacture and laying of two submarine cables between Tasmania and Victoria, the contract price being £52,447. The cables were taken over on the 24th March, 1909, and opened to the public on the 1st May, 1909, the day following the expiration of the agreement with the Eastern Extension Company. Their aggregate length is approximately 350 nautical miles of main cable, and 20 nautical miles each of intermediate and shore-end cable, making a total of 390 nautical miles.

3. **The Eastern Extension Company's Cables.**—In addition to the first Tasmania-Victoria cable and the original cable from Darwin (see Year Book No. 6, p. 770), the Eastern Extension Company has constructed several other cables connecting with various places in Australia., viz., Darwin to Banjoewangie (two lines); Fremantle to Durban; Fremantle to Adelaide; Java to Cocos Island, which provides another route between Australia and South Africa; and a cable partly owned by this Company connecting the Darwin-Singapore cable with London *via* Hong Kong, Shanghai, Possiet Bay (Pacific Russia), Libau (Latvia), and Newbiggin (London).

4. **The Pacific Cable.**—(i) *Cable Lines.* The Pacific Cable lines are controlled by the Pacific Cable Board, consisting of three representatives of the Imperial Government, two each from Canada, and Australia, and one from New Zealand. The main cable route known as the "All Red" runs from Southport in Queensland to Bamfield in British Columbia, thence overland to Montreal. From this point messages are transmitted across the Atlantic over the cables of the Anglo-American and Commercial Companies, or, if so desired, the Marconi Wireless System between Canada and the

United Kingdom may be availed of for either homeward or outward messages at a reduction of twopence on the through cable rate of three shillings per word. Cable stations are established at Norfolk Island, Fiji, and Fanning Island. A branch cable approximately 600 miles long runs from Norfolk Island to Doubtless Bay, North Island of New Zealand.

The assent of each of the Governments interested was obtained for the duplication of the system south of Fiji, and a contract for the submarine cables was placed with the Telegraph Construction and Maintenance Company, of Greenwich, and the laying of the Sydney-Southport cable was completed on 11th July, 1923, and the Auckland-Suva cable on 12th August, 1923. There has been, however, a delay in the delivery of the land cables and some essential apparatus, in consequence of which the new cables are not yet available for traffic.

During the year 1922-23 the cables worked without interruption, and no repairs were necessary.

(ii) *Financial Summary.* The receipts for the year exceeded the ordinary expenses by £256,299. After payment of the annuity of £77,545 in respect of interest and repayment of the capital of £2,000,000, and of the annuity of £9,150 to the Renewal Fund for interest and Sinking Fund on £177,254 borrowed from the fund for the purposes of the Auckland-Sydney cable, there remained a surplus of £169,603, which, in view of the question of the duplication of the northern cables, was employed to strengthen the Reserve and Renewal Fund. The following table shows particulars of the revenue, expenditure, total profit, and the proportion thereof payable to Australia for the years ended 31st March, 1919 to 1923.

PACIFIC CABLE—FINANCIAL SUMMARY, 1919 TO 1923.

| Year ended 31st March— | Revenue. | Expenditure (including Annuities and Renewal Fund). | Profit. | Australian Proportion of Profit. |
|---------------------------|----------|---|---------|--|
| | £ | £ | £ | £ |
| 1919 .. | 564,097 | 554,516 | 9,581 | 3,193 |
| 1920 .. | 664,986 | 654,552 | 10,434 | 3,478 |
| 1921 .. | 633,343 | 629,866 | 3,477 | 1,159 |
| 1922 .. | 528,428 | 507,666 | 20,762 | 6,921 |
| 1923 .. | 529,228 | 529,228 | .. | .. |

5. *New Zealand Cables.*—A submarine cable, 1,191 miles in length, from New Zealand to Australia, was laid in 1876. The Australian shore-end of the cable is at Botany Bay, while the New Zealand terminus is at Wakapuaka near Nelson in the Middle Island, from which place another cable, 109 miles in length, is laid to Wanganui, in the North Island. For a period of ten years after its opening the cable was subsidized by the New South Wales and New Zealand Governments, the total contributions amounting to £10,000 a year. During 1911 a scheme for providing a second cable between New Zealand and Australia (Auckland to Sydney) was adopted by the various Governments concerned, and the laying of the new cable was completed on the 24th December, 1912, the cable being opened for traffic on the 31st December, 1912.

6. *The New Caledonia Cable.*—In April, 1892, a French Company, known as the Compagnie Française des Câbles Télégraphiques, entered into an agreement with the French, the New South Wales, and the Queensland Governments to lay a submarine cable between New Caledonia and Queensland in return for guarantees by the French Government to the extent of £8,000, and by the Governments of New South Wales and Queensland to the amount of £2,000 each annually for a period of 30 years. The cable

was opened for use in October, 1893, the Australian shore-end being at Burnett Heads, near Bundaberg. The guarantees of the Governments of New South Wales and Queensland have since been transferred to the Commonwealth Government.

7. **Lengths of Cable Routes.**—The following table gives the lengths of various cable routes :—

LENGTHS OF CABLE ROUTES.

| Via Darwin. | | | Via South Africa. | | |
|---------------------------|----|--------|-------------------------|----|--------|
| | | Miles. | | | Miles. |
| Adelaide to Darwin .. | .. | 2,134 | Perth to Mauritius .. | .. | 4,417 |
| Darwin to Banjoewangie .. | .. | 1,150 | Mauritius to Durban .. | .. | 1,785 |
| Banjoewangie to London .. | .. | 9,841 | Durban to Cape Town .. | .. | 800 |
| | | | Cape Town to Madeira .. | .. | 5,715 |
| | | | Madeira to Penzance .. | .. | 1,341 |
| | | | Penzance to London .. | .. | 260 |
| Total .. | .. | 13,125 | Total .. | .. | 14,319 |

| Via Vancouver. | | | Via Russia. | | |
|---|----|--------|---------------------------------|----|--------|
| | | Miles. | | | Miles. |
| Southport (Queensland) to Norfolk Island .. | .. | 963 | Sydney to Darwin .. | .. | 2,992 |
| Norfolk Island to Suva (Fiji) .. | .. | 1,129 | Darwin to Hong Kong .. | .. | 4,237 |
| Suva to Fanning Island .. | .. | 2,351 | Hong Kong to Possiet Bay .. | .. | 2,647 |
| Fanning Island to Bamfield (Canada) .. | .. | 3,980 | Possiet Bay to Libau .. | .. | 6,399 |
| Across Canada .. | .. | 3,450 | Libau to Newbiggin (England) .. | .. | 1,657 |
| Canada to Ireland .. | .. | 2,450 | | | |
| Total .. | .. | 14,323 | Total .. | .. | 17,932 |

8. **Number of Cablegrams Received and Dispatched.**—(i) *Australia.* The subjoined table shows the number of cablegrams received and dispatched in Australia from 1920-21 to 1922-23 :—

CABLEGRAMS.—AUSTRALIA, 1920-21 TO 1922-23.

| Cablegrams. | Cablegrams Received. | | | Cablegrams Dispatched. | | | Total Cablegrams Received and Dispatched. | | |
|-------------|----------------------|----------|----------|------------------------|----------|----------|---|----------|-----------|
| | 1920-21. | 1921-22. | 1922-23. | 1920-21. | 1921-22. | 1922-23. | 1920-21. | 1921-22. | 1922-23. |
| Number .. | 477,137 | 499,104 | 533,977 | 473,533 | 499,634 | 539,926 | 950,670 | 998,738 | 1,073,903 |

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1922-23 is given hereunder :—

CABLEGRAMS.—STATES, 1922-23.

| Particulars. | N.S.W. | Vic. | Q'land. | S. Aust. | W. Aust. | Tas.(a) | Australia. |
|----------------------|---------|---------|---------|----------|----------|---------|------------|
| Number received .. | 282,953 | 175,429 | 22,020 | 25,173 | 21,228 | 7,174 | 533,977 |
| Number dispatched .. | 272,989 | 180,311 | 25,326 | 28,228 | 24,927 | 8,145 | 539,926 |
| Total .. | 555,942 | 355,740 | 47,346 | 53,401 | 46,155 | 15,319 | 1,073,903 |

(a) Exclusive of interstate cablegrams, which are included with interstate telegrams.

9. *Cable Rates.*—(i) *Ordinary Cablegrams.* The rates per word for ordinary cablegrams to some of the most important countries as at the 27th March, 1923, are shown in the appended statement:—

CABLE RATES, 1923.

| Country. | Route and Rate per Word. | |
|--|--------------------------|--------------|
| | Via Pacific. | Via Eastern. |
| Europe— | | |
| Great Britain (a), Belgium, France, Germany, Holland, Jugo-Slavia, Switzerland | 3/- | 3/- |
| Other European countries | 3/6 to 4/6 | 3/- to 3/6 |
| Asia— | | |
| China | 6/11 to 7/1½ | 2/6 to 2/11 |
| India | .. | 2/6 |
| Japan | 7/4½ | 3/5 |
| Netherlands East Indies | 6/10 | 2/6 |
| Philippine Islands | .. | 2/6 to 3/3 |
| Straits Settlements | .. | 2/6 |
| Other Asiatic Countries | 4/4 to 7/4½ | 2/6 to 5/11 |
| Africa— | | |
| Egypt | .. | 3/5 and 3/6 |
| Mauritius | .. | 2/5 |
| Portuguese East Africa | .. | 2/5 to 2/8 |
| South African Union | .. | 2/2 and 2/3 |
| Sierra Leone | .. | 4/8 to 4/11 |
| Other African countries | .. | 2/5 to 7/3 |
| North America— | | |
| Alaska | 3/7 | 5/7 |
| Canada | 2/4 to 3/6 | .. |
| Newfoundland | 2/7½ | .. |
| United States | 2/4 to 2/8 | 4/- to 4/6 |
| Central America | 2/8 to 4/10½ | 4/4 to 6/7 |
| West Indies | 3/- to 8/1½ | 4/8 to 10/- |
| South America— | | |
| Argentine | 4/9 | 4/9 |
| Brazil | 4/7 to 7/3 | 4/7 to 8/7 |
| Other | 4/7 to 8/1½ | 4/9 to 9/7 |
| New Zealand and Pacific Islands— | | |
| Fanning Island | 2/- | .. |
| Fiji | 8d. to 11d. | 8d. to 11d. |
| New Zealand | 4½d. | 4½d. |
| New Caledonia | 9d. (b) | .. |
| Norfolk Island | 3d. | .. |
| Ocean Island (via Suva-radio) | 1/8 | 1/8 |
| Sandwich Islands | 3/4½ to 4/- | 5/5 to 6/- |

(a) Pacific-Marconi 2s. 10d. per word.

(b) Via Queensland.

(ii) *Deferred Cablegrams.* Under this system a reduction of 50 per cent. in the ordinary cable charges is made, provided the message is written in plain language, and conveys no other meaning than that which appears on the face of it. Messages can only be transmitted after non-urgent private cablegrams and press cablegrams. Those which have

not reached their destination within a period of 24 hours from the time of handing in are transmitted in turn with cablegrams charged full rate. They may be sent via the Pacific or Eastern routes to nearly all countries to which the ordinary rate exceeds tenpence per word. This service, together with that of the week-end cable letters, has affected the ordinary cable business to a large extent. Deferred press cablegrams subject to a delay of eighteen hours may be exchanged between Australia and the United Kingdom at the rate of fourpence halfpenny per word, and between Australia and Vancouver at the rate of twopence halfpenny per word.

(iii) *Week-end Cable Letters.* Week-end cable letters may be exchanged between Australia and the United Kingdom, British North America, and Fanning Island at the rates indicated hereunder. Under this arrangement, messages written in plain language may be lodged at any post office in Australia or the United Kingdom in time to reach the forwarding cable office by post or telegraph by midnight on Saturday. The messages, which are deliverable by post on Tuesday morning, are charged at the rate of ninepence per word, plus ordinary telegraph rate, if forwarded by land telegraph in either the country of dispatch or destination.

The rates to the countries named, including the United Kingdom, are as follows :—

RATES FOR WEEK-END CABLE LETTERS.

| Country. | Rate per Word. | Minimum Charge per Telegram. (20 Words.) |
|--|----------------|--|
| United Kingdom | 9d. | 15/- |
| Canada (ordinary rate 2s. 4d.) | 7d. | 11/8 |
| Other parts of Canada | 8d. to 10d. | 12/11 to 16/8 |
| Newfoundland | 8½d. | 13/9 |
| Fanning Island | 6d. | 10/- |

(iv) *Rates to New Zealand.* As a result of the completion of the New Zealand branch of the Pacific cable in 1902, the rates charged for cablegrams between Australia and New Zealand, except to and from Tasmania, were uniformly reduced to fourpence halfpenny a word. Between New Zealand and Tasmania the charge was fixed at fivepence halfpenny a word, but it has since been reduced to fourpence halfpenny. The charge for ordinary cablegrams from New Zealand to Great Britain was reduced from the 1st June, 1902, from five shillings and twopence to three shillings and fourpence a word, and has since been further reduced to three shillings a word.

10. *Cable Subsidies Paid.*—The following table shows the amount of subsidy paid in each of the years 1919 to 1923 :—

CABLE SUBSIDIES, 1919 TO 1923.

| Subsidies. | Year ended 30th June— | | | | |
|-------------|-----------------------|-------|-------|-------|-------|
| | 1919. | 1920. | 1921. | 1922. | 1923. |
| Amount .. £ | 3,756 | 3,797 | 3,749 | 3,840 | 3,985 |

As the agreement in connexion with the Tasmanian cable expired in 1909, and as new cables were laid by the Commonwealth Government, the guarantees were, in the course of the year 1910, reduced to those in connexion with the New Caledonia and Pacific cables. From 1915–16 onwards the only cable subsidy paid by Australia was in respect of the New Caledonian cable guarantee.

§ 4. Telephones.

1. Telephone Services.—(i) *Mileage, etc., Australia.* The following table shows the mileage of lines, etc., for telephone purposes, giving trunk lines separately, on 30th June, 1922 and 1923 :—

TELEPHONE LINES—AUSTRALIA, 30th JUNE, 1922 AND 1923.

| Particulars. | 1922. | 1923. |
|--|---------|---------|
| Ordinary Lines— | | |
| Conduits duct miles | 2,926 | 3,146 |
| Conductors in aerial cables loop mileage | 35,627 | 34,986 |
| Conductors in underground cables „ | 260,349 | 312,224 |
| Conductors in cables for junction circuits „ | 43,193 | 49,493 |
| Open conductors single wire mileage | 205,354 | 221,832 |
| Trunk Lines— | | |
| Telephone trunk lines only miles | 33,175 | 40,851 |
| Telegraph and telephone purposes „ | 84,855 | 91,461 |

(ii) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1921 to 1923 will be found in the following table :—

TELEPHONE SERVICES.—SUMMARY, 1921 TO 1923.

| Particulars. | Year (30th June.) | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tas. | Australia. |
|---|-------------------------|-----------|-----------|-----------|-----------|-----------|----------|-------------|
| No. of Exchanges .. | 1921 | 921 | 750 | 398 | 218 | 122 | 144 | 2,553 |
| | 1922 | 960 | 814 | 421 | 221 | 133 | 154 | 2,703 |
| | 1923 | 1,026 | 708 | 448 | 241 | 169 | 233 | 2,825 |
| No. of Telephone Offices (Including Exchanges) | 1921 | 2,142 | 1,609 | 756 | 481 | 335 | 416 | 5,739 |
| | 1922 | 2,185 | 1,678 | 798 | 513 | 390 | 428 | 5,992 |
| | 1923 | 2,274 | 1,739 | 902 | 572 | 461 | 454 | 6,402 |
| No. of lines connected .. | 1921 | 74,490 | 52,791 | 23,855 | 15,984 | 10,438 | 5,805 | 183,363 |
| | 1922 | 80,042 | 55,986 | 25,575 | 17,402 | 10,624 | 6,257 | 195,886 |
| | 1923 | 87,352 | 61,201 | 27,612 | 19,306 | 11,590 | 6,917 | 213,978 |
| No. of instruments connected | 1921 | 96,710 | 72,068 | 29,637 | 21,480 | 13,412 | 7,180 | 240,507 |
| | 1922 | 104,108 | 77,744 | 31,878 | 23,248 | 13,748 | 7,751 | 258,477 |
| | 1923 | 113,645 | 84,452 | 34,634 | 25,663 | 14,793 | 8,516 | 281,703 |
| (a) No. of subscribers' instruments | 1921 | 93,467 | 70,319 | 28,392 | 20,705 | 12,827 | 6,854 | 232,564 |
| | 1922 | 100,747 | 75,914 | 30,561 | 22,421 | 13,151 | 7,418 | 250,212 |
| | 1923 | 110,200 | 82,508 | 33,241 | 24,832 | 14,144 | 8,024 | 272,949 |
| (b) No. of public telephones | 1921 | 1,693 | 1,410 | 835 | 473 | 355 | 206 | 4,972 |
| | 1922 | 1,787 | 1,469 | 888 | 523 | 368 | 213 | 5,248 |
| | 1923 | 1,815 | 1,480 | 942 | 567 | 407 | 373 | 5,584 |
| c) No. of other local instruments | 1921 | 1,550 | 359 | 410 | 302 | 230 | 120 | 2,971 |
| | 1922 | 1,574 | 361 | 429 | 304 | 229 | 120 | 3,017 |
| | 1923 | 1,630 | 404 | 451 | 264 | 242 | 119 | 3,170 |
| Instruments per 100 of population | 1921 | 4.60 | 4.69 | 3.85 | 4.28 | 4.03 | 3.39 | 4.41 |
| | 1922 | 4.84 | 4.95 | 4.06 | 4.57 | 4.05 | 3.63 | 4.64 |
| | 1923 | 5.19 | 5.28 | 4.35 | 5.00 | 4.25 | 3.98 | 4.97 |
| Earnings .. | 1921 | £ 964,981 | £ 695,409 | £ 339,116 | £ 235,269 | £ 142,906 | £ 73,300 | £ 2,450,981 |
| | 1922 | 1,086,908 | 777,388 | 375,541 | 271,881 | 154,799 | 79,548 | 2,746,065 |
| | 1923 | 1,184,035 | 850,182 | 411,523 | 304,061 | 166,338 | 87,268 | 3,003,407 |
| Working expenses .. | 1921 | 788,671 | 443,522 | 243,135 | 150,960 | 122,896 | 59,438 | 1,808,622 |
| | 1922 | 856,255 | 479,304 | 281,414 | 170,360 | 133,048 | 71,150 | 1,991,531 |
| | 1923 | 959,836 | 574,487 | 326,389 | 197,520 | 141,958 | 83,352 | 2,283,542 |
| Percentage of working expenses on earnings | 1921 | 81.73 | 63.78 | 71.70 | 64.16 | 86.00 | 81.09 | 73.79 |
| | 1922 | 78.78 | 61.66 | 74.93 | 62.66 | 85.95 | 89.44 | 72.52 |
| | 1923 | 81.06 | 67.57 | 79.31 | 64.96 | 85.34 | 95.51 | 76.03 |

In Australia there were 213,978 telephone lines connected to 2,825 exchanges at 30th June, 1923, an increase of 13,092 and 122 respectively over the corresponding figures for the preceding year.

(iii) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban, and country telephone exchanges in the several States for the year 1922-23 :—

TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1922-1923.

| State. | Central Exchanges. | | Suburban Exchanges. | | Country Exchanges. | | Total. | |
|-------------------|---------------------|---------------------------------------|---------------------|---------------------------------------|---------------------|---------------------------------------|---------------------|---------------------------------------|
| | Subscribers' Lines. | Average Outward Calls Daily per line. | Subscribers' Lines. | Average Outward Calls Daily per line. | Subscribers' Lines. | Average Outward Calls Daily per line. | Subscribers' Lines. | Average Outward Calls Daily per line. |
| New South Wales | 10,915 | 7.70 | 39,814 | 2.90 | 33,631 | 1.50 | 84,360 | 2.96 |
| Victoria .. | 10,838 | 8.85 | 27,820 | 3.62 | 21,073 | 1.52 | 59,731 | 3.82 |
| Queensland .. | 7,291 | 7.69 | 4,083 | 3.16 | 15,830 | 2.61 | 27,204 | 4.05 |
| South Australia | 7,297 | 7.90 | 6,035 | 4.80 | 5,792 | 1.60 | 19,124 | 5.01 |
| Western Australia | 4,297 | 6.34 | 2,536 | 4.27 | 4,381 | 2.34 | 11,214 | 4.30 |
| Tasmania .. | 2,362 | 4.39 | 319 | 2.16 | 4,128 | 1.60 | 6,809 | 2.59 |
| Australia .. | 43,000 | 7.70 | 80,607 | 3.34 | 81,835 | 1.76 | 208,442 | 3.60 |

A comparison of the daily calling rates for each class of exchange shows that Victoria registered the greatest number per line at central exchanges, South Australia at suburban exchanges, and Queensland at country exchanges. Taking the figures for Australia, it will be observed that the average number of calls per line at central exchanges was more than double the number registered at suburban exchanges, while the average for suburban exchanges was slightly less than double the number shown for country exchanges.

(iv) *Trunk Line Calls and Revenue.* In the following table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1920-21 to 1922-23 :—

TELEPHONES.—TRUNK LINE CALLS AND REVENUE FOR THE YEARS 1920-21 TO 1922-23.

| Particulars. | New South Wales. | Victoria. | Queensland. | South Australia. | Western Australia. | Tasmania. | Australia. |
|---------------------------|------------------|-----------|-------------|------------------|--------------------|-----------|------------|
| | No. | No. | No. | No. | No. | No. | No. |
| Total Calls for Year— | | | | | | | |
| 1920-21 .. | 5,042,929 | 3,363,971 | 2,130,234 | 1,148,882 | 525,642 | 699,298 | 12,910,956 |
| 1921-22 .. | 5,267,870 | 3,699,176 | 2,307,804 | 1,350,946 | 582,340 | 780,033 | 13,968,169 |
| 1922-23 .. | 5,985,820 | 4,000,672 | 2,616,344 | 1,587,645 | 707,159 | 849,197 | 15,746,837 |
| Total Revenue for Year— | £ | £ | £ | £ | £ | £ | £ |
| 1920-21 .. | 178,704 | 124,721 | 102,748 | 52,162 | 24,938 | 23,508 | 506,781 |
| 1921-22 .. | 197,295 | 138,643 | 112,396 | 64,973 | 26,911 | 24,921 | 565,139 |
| 1922-23 .. | 220,458 | 157,062 | 128,364 | 73,601 | 33,363 | 28,368 | 641,216 |
| Average Revenue per Call— | Pence. | Pence. | Pence. | Pence. | Pence. | Pence. | Pence. |
| 1920-21 .. | 8.50 | 8.89 | 11.57 | 10.89 | 11.38 | 8.07 | 9.42 |
| 1921-22 .. | 8.98 | 8.99 | 11.69 | 11.54 | 11.09 | 7.87 | 9.71 |
| 1922-23 .. | 8.84 | 9.42 | 11.77 | 11.13 | 11.32 | 8.02 | 9.77 |

The rapid growth in connexion with subscribers' services in bringing about increased trunk line traffic. Extensive works are in progress to meet the growing demand and to improve the trunk line system generally.

2. Telephone Rates.—(i) *Ground Rent and Local Calls.* On the 10th December, 1915, revised charges for telephone services came into operation. Under the new scale, ground rent for telephones is calculated on the number of subscribers connected with the exchange or network, instead of being based on the total population residing within the telephone network, as formerly. The smallest and greatest rental charges remain the same as under the old system, but between these a more gradual scale was introduced.

Previously the charge for calls made by a subscriber was at the rate of two calls for one penny up to 2,000 calls per half-year; above that number, three calls for one penny. This charge was increased to one penny per call, without any progressive reduction. At the same time, the public telephone charge per call was increased from one penny to twopence. On the 1st October, 1920, telephone charges were again increased, and the rates in the following table are now in force :—

TELEPHONES, AUSTRALIA.—RENTAL CHARGES, 1st MAY, 1924.

| Exchanges or Networks with Subscribers' Lines Connected, as shown hereunder. | Radius of Network with Main Exchange as Centre. | Annual Ground Rent, within Two-mile Radius. | | |
|--|---|---|---|---|
| | | For an Exclusive Service. | For each Subscriber or Instrument on a Two-party Service. | For each Subscriber or Instrument on a Three or more party Service. |
| | Miles. | £ s. d. | £ s. d. | £ s. d. |
| From 1 to 300 | 5 | 3 0 0 | 2 10 0 | 2 0 0 |
| „ 301 to 600 | 5 | 3 5 0 | 2 10 0 | 2 0 0 |
| „ 601 to 1,500 | 5 | 4 7 6 | 3 7 6 | 2 15 0 |
| „ 1,501 to 4,000 | 10 | 4 12 6 | 3 15 0 | 3 2 6 |
| 4,001 and upwards | 10 | 5 0 0 | 3 15 0 | 3 2 6 |

It is provided that for each effective call originating from a subscriber's instrument the charge shall be one penny in respect of exchanges or networks with 600 subscribers or less, and one penny farthing in respect of exchanges or networks with more than 600 subscribers.

In the near future telephone subscribers will be permitted to make calls at the local call fee rate to their correspondents on exchanges within a five mile radius of the exchange to which they are connected instead of being charged trunk line fees as at present. This concession will benefit numerous subscribers, particularly those in country districts.

(ii) *Trunk Line Calls.*—In some country areas the mileage of wire, etc., utilized between certain points is greatly in excess of the distance in a direct line. The existing trunk line tariff hereunder bases the charge on the length of circuit occupied for the connexion. It is intended to introduce a new system whereby payment for trunk line calls will be made on the basis of distance in a straight line, irrespective of the route followed in establishing the connexion, thus eliminating existing anomalies in the rates.

TELEPHONES, AUSTRALIA.—TRUNK LINE CHARGES, 1st MAY, 1924.

| Period. | Distance not exceeding— | | | | | | | | | | | |
|-----------------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Miles. | | | | | | | | | | | |
| | 10. | 20. | 30. | 50. | 75. | 100. | 150. | 200. | 300. | 400. | 600. | 800. |
| | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. | s. d. |
| Between 8 a.m. and 7 p.m.— | | | | | | | | | | | | |
| First three minutes .. | 0 2 | 0 4 | 0 6 | 0 8 | 1 0 | 1 4 | 1 10 | 2 4 | 3 4 | 4 4 | 5 0 | 5 8 |
| Every additional three minutes .. | 0 2 | 0 4 | 0 6 | 0 6 | 0 9 | 1 0 | 1 4 | 1 9 | 2 6 | 3 3 | 3 9 | 4 3 |
| Between 7 p.m. and 8 a.m.— | | | | | | | | | | | | |
| First three minutes .. | 0 2 | 0 4 | 0 4 | 0 4 | 0 6 | 0 8 | 0 11 | 1 2 | 1 8 | 2 2 | 2 6 | 2 10 |
| Every additional three minutes .. | 0 2 | 0 3 | 0 4 | 0 4 | 0 5 | 0 6 | 0 8 | 0 11 | 1 3 | 1 8 | 1 11 | 2 2 |

3. Revenue from Telephones.—Particulars regarding the revenue from telephone services are included in the paragraph dealing with the revenue of the Postmaster-General's Department.